Lythraceae J.St.-Hil.

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This treatment is composed of the following taxa: Lythraceae, *Adenaria*, *Ammannia*, *Crenea*, *Cuphea*, *Diplusodon*, *Heimia*, *Lafoensia*, *Lagerstroemia*, *Lythrum*, *Physocalymma*, *Pleurophora*, *Punica*, *Rotala*.

HOW TO CITE

Cavalcanti, T.B., Graham, S.A.T., Facco, M.G., Brauner, L.M. 2020. Lythraceae *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB153.

Has as synonym
heterotypic *Punicaceae* L.

DESCRIPTION

Trees, shrubs or herbs, younger stems often quadrangulate. Leaves opposite, less often whorled or subalternate, simple, entire, estipulate, colleters present in leaf axils; blades membranous or coriaceous, venation brochidodromous. Inflorescences indeterminate, racemes, cymes, or clusters, rarely flowers solitary; pedicels with prophylls (bracteoles). Flowers actinomorphic or zygomorphic, perfect, perigynous, (4)- 4-6 -(16)-merous; floral tube campanulate to tubular, often conspicuously veined, persistent except in Lafoensia; sepals valvate, petals (0)-4-6(-24), inserted on the inner rim of floral tube, alternating with sepals, crinkled, pinnately veined, caducous (rare persistent in some species of Cuphea); stamens diplostemonous, sometimes reduced to a single whorl, anthers dorsifixed rare basifixed; gynoecium syncarpous, nectariferous tissue present or absent; style simple, slender, commonly exserted, stigma capitate or punctiform; ovary superior, septa incomplete at apex or vestigial, reduced to thin threads, placentation axile, or globose and nearly free -central. Fruits dry, thin or thick-walled capsules enclosed by persistent floral tube, dehiscing loculicidally, septicidally, or splitting irregularly. Seeds 2-numerous, obpyramidal, or oblong, obovoid to orbicular and concave-convex, or bilaterally lenticular-compressed, winged or not, with inverted epidermal trichomes in seed coat; embrio straight, cotyledons planar, auriculate or cordate, oily. x = 8.

COMMENTS

Based on molecular evidence, the Combretaceae is sister to the Lythraceae and the Onagraceae. The three families constitute a major lineage of the Myrtales.
Recent molecular work has led to the expansion of the family to include the satellite families Sonneratiaceae, Duabangaceae, Punicaceae and Trapaceae.

Life Form

Herb, Shrub, Subshrub, Tree

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest, Pampa, Pantanal

Vegetation Types
Anthropic area, Caatinga (stricto sensu), Amazonian Campinarana, High Altitude Grassland, Flooded Field (Várzea), Grassland, Highland Rocky Field, Carrasco Vegetation, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonally Deciduous Forest, Seasonal Evergreen Forest, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest, Mangrove, Coastal Forest (Restinga), Amazonian Savanna, Aquatic vegetation, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)
Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)
Possible ocurrences
North (Amazonas, Rondônia, Tocantins)
Northeast (Bahia, Maranhão, Sergipe)
Central-west (Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais)
South (Paraná, Rio Grande do Sul)

IDENTIFICATION KEY

1. Floral tubes cylindrical, elongated, at least twice as long as wide.
  2. Floral tubes slightly to strongly zygomorphic, bilateral; capsules indehiscent or dehiscent dorsally by a longitudinal slit together with floral tube.
    3. Stamens attached near base of floral tube, anthers basifixed; capsules indehiscent, placenta and seeds retained within …..... *Pleurophora*
    3. Stamens attached at midlevel or higher in floral tube, anthers dorsifixed; capsules dehiscent dorsally by a longitudinal slit together with floral tube,
      placenta and seeds exserted ….....…. *Cuphea*
  2. Floral tubes actinomorphic; capsules dehiscing from the apex …….....….. *Lythrum*
1. Floral tubes campanulate, about as long as wide, to slightly longer than wide.
  4. Seeds encircled by a broad, thin wing.
    5. Leaves with apical pore; floral tubes caducous, distally pleated, 8-16-merous …….……..... ….. *Lafoensia*
    5. Leaves without apical pore; floral tubes persistent, distally smooth, 6- or 8-merous.
      6. Trees; flowers 8-merous; placenta appearing free-central ….....….. *Physocalymma*
      6. Shrubs and subshrubs; flowers 6-merous; placenta bipartite ……..... *Diplusodon*
  4. Seeds not winged.
    7. Flowers tetramerous; petals cream-coloured, rose, purple, or white.
      8. Plants more than 20cm; capsules indehiscent or splitting irregularly, wall not striated.
        9. Leaf base auriculate; stamens dorsifixed ……..... *Ammannia*
        9. Leaf base not auriculate; stamens basifixed
          10. Small trees or shurbs; leaves orange to black-glandular-punctate; flowers in compact umbelliform clusters ……. …….……. *Adenaria*
          10. Annual or perennial herbs; leaves not orange or black-glandular-punctate; flowers solitary ……. ……..... *Crenea*

8. Plants commonly less than 20 cm; capsules septicidally dehiscent; wall microscopically (10x) transversely striated ……...……. *Rotala*

7. Flowers hexamerous; petals yellow ……..…….…….....……. *Heimia*

REFERENCE

Cavalcanti, T.B. 2006. Lythraceae. In: Barbosa, M.R.V.; Sothers, C.; Mayo, S.; Gamarra-Rojas, C.F.L. & Mesquita, A.C. (eds.). Checklist das plantas do Nordeste Brasileiro: Angiospermas e Gymnospermas, Brasília, v. 1, pp. 99-100.

Cavalcanti, T.B. 2008. Lythraceae, In: Mendonça, R.C.; Felfili, J.M.; Walter, B.M.T.; Silva-Júnior, M.C.; Rezende, A.V.; Filgueiras, T.S.; Nogueira, P.E.; Fagg, C.W. (eds.). Flora vascular do bioma Cerrado: um checklist com 12.356 espécies. In: Sano, S.M.; Almeida, S.P.; Ribeiro, J.F. (eds.) Cerrado: ecologia e flora. Brasília: Embrapa Informação Tecnológica.

Cavalcanti, T.B. 2009. Lythraceae, In: Stehmann, J.R.; Forzza, R.C.; Sobral, M., Salino, A. & Kamino, L.H.Y. (eds.). Plantas de Floresta Atlântica. Jardim Botânico do Rio de Janeiro. http://www.icb.ufmg.br/bot/mataatlantica

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Graham, S. A. 2013. Fossil Records in the Lythraceae. Bot. Rev. (2013) 79:48–145.

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Koehne, E. 1903. Lythraceae. Das Pflanzenreich Regni Vegetabilis Conspectus, 4, 216. 326p.

Martins, L., Costa, M.A.S. & Cavalcanti, T. B. 1999. Lythraceae. In: Ribeiro, J.E.L.S.; Hopkins, M.J.G. et al. Flora da Reserva Ducke: Guia de Identificação das Plantas Vasculares de uma Floresta de Terra-Firme na Amazônia Central. China: Midas Printing Ltd., v.1. p. 415.

Saint-Hilaire, A. 1833. Salicariae. Flora Brasiliae Meridionalis 3: 94-169. Paris.

Adenaria Kunth

This treatment is composed of the following taxa: *Adenaria*, *Adenaria floribunda*.

HOW TO CITE

Cavalcanti, T.B., Facco, M.G., Graham, S.A.T. 2020. Adenaria *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8727.

DESCRIPTION

Small trees or tall shrubs. Flowers actinomorphic, white, weakly and incipiently dioecious; ovary superior, stipitate with stipe to #1.0 mm, ovary obovoid to orbicular, 2 (3) locular; placental stipe present, 1–1.4 mm, placenta globose, lobes protruding into the locules; septa thin, ceasing at ovary apex; placenta free-basal at maturity; ovules #70–80. Capsules, 3–7 mm # 3–4 mm, globose, light brown to brown, externally bearing sessile, globose, black resin-filled trichomes, sometimes also pubescent on distal half of capsule; pericarp moderately thick, indurated, brittle, fruit well exserted from the persistent floral cup at maturity, irregularly splitting. Seeds 7–20 per capsule, 0.9–1.3 mm x 0.8–1.2 mm, golden brown, covering globose surface of placenta, tightly packed; seed shape obpyramidal when immature, becoming subglobose, slightly bilateral, 3–5 (6) faceted, raphal face 2 faceted or slightly flattened, raphe inconspicuous on seed surface, antiraphal face typically convex, 3–4 faceted or rounded; seed outline obovate to suborbicular, apex rounded or obtuse; seed surface smooth; raphal face irregularly reticulate, cells irregularly rectangular to polygonal, anticlinal walls prominent, periclinal walls depressed; antiraphal faces irregularly reticulate, cells smaller and more polygonal/hexagonal than on raphal face, anticlinal walls less prominent, periclinal walls smooth, slightly depressed; epidermal cell internal trichomes absent.

COMMENTS

Southern Mexico to Argentina, occurring in evergreen forests, disturbed secondary forests.

Life Form
Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Pantanal

Vegetation Types
Seasonal Evergreen Forest, Ombrophyllous Forest (Tropical Rain Forest), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Rondônia)
Northeast (Maranhão)
Central-west (Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais)

REFERENCE

Kunth, K.S. Nova Genera et Species Plantarum, 6: 147. 1823.

Adenaria floribunda Kunth

This treatment is composed of the following taxa: *Adenaria floribunda*, .

Has as synonym
homotype *Adenaria floribunda* Kunth var. *floribunda*
heterotypic *Adenaria floribunda* var. *grisleoides* (Kunth) Koehne
heterotypic *Adenaria floribunda* var. *purpurata* Kunth
heterotypic *Adenaria grisleoides* Kunth

DESCRIPTION

Small trees or tall shrubs. Flowers actinomorphic, white, weakly and incipiently dioecious; ovary superior, stipitate with stipe to #1.0 mm, ovary obovoid to orbicular, 2 (3) locular; placental stipe present, 1–1.4 mm, placenta globose, lobes protruding into the locules; septa thin, ceasing at ovary apex; placenta free-basal at maturity; ovules #70–80. Capsules, 3–7 mm # 3–4 mm, globose, light brown to brown, externally bearing sessile, globose, black resin-filled trichomes, sometimes also pubescent on distal half of capsule; pericarp moderately thick, indurated, brittle, fruit well exserted from the persistent floral cup at maturity, irregularly splitting. Seeds 7–20 per capsule, 0.9–1.3 mm x 0.8–1.2 mm, golden brown, covering globose surface of placenta, tightly packed; seed shape obpyramidal when immature, becoming subglobose, slightly bilateral, 3–5 (6) faceted, raphal face 2 faceted or slightly flattened, raphe inconspicuous on seed surface, antiraphal face typically convex, 3–4 faceted or rounded; seed outline obovate to suborbicular, apex rounded or obtuse; seed surface smooth; raphal face irregularly reticulate, cells irregularly rectangular to polygonal, anticlinal walls prominent, periclinal walls depressed; antiraphal faces irregularly reticulate, cells smaller and more polygonal/hexagonal than on raphal face, anticlinal walls less prominent, periclinal walls smooth, slightly depressed; epidermal cell internal trichomes absent.

Life Form
Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Pantanal

Vegetation Types
Seasonal Evergreen Forest, Ombrophyllous Forest (Tropical Rain Forest), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Rondônia)
Northeast (Maranhão)
Central-west (Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

J.G. Kuhlmann, 752, RB, 43773, (RB00208512), Acre
A. Krapovickas, 29826, MO, Mato Grosso
S.R. Lowrie, 391, MO, Acre
E.P. Heringer, 829, MO, UB, Mato Grosso do Sul
C.B. Toledo, 144, MO, Rondônia
G.E. Schatz, 762, MO, Maranhão
G. Hatschbach, 65393, SPSF, UPCB, Mato Grosso
A. Rosas, 314, MO, Amazonas

Ammannia L.

This treatment is composed of the following taxa: *Ammannia*, *Ammannia auriculata*, *Ammannia latifolia*, *Ammannia robusta*.

HOW TO CITE

Graham, S.A.T., Cavalcanti, T.B., Facco, M.G. 2020. Ammannia *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8729.

Has as synonym
heterotypic *Nesaea* Comm. ex Kunth

DESCRIPTION

Annual or perennial herbs of aquatic or marshy habitats. Leaves decussate, sessile, linear to lanceolate or oblanceolate, cordate to auriculate, sometimes attenuate at base, membranaceous, sometimes slightly fleshy. Flowers solitary, sessile, or in pedunculate axillary cymes, 1-3(-15) per node, regular, 4 (-5)-merous; bracteoles 3, opposite, linear; floral tube campanulate to urceolate, becoming globose in fruit, 1.5-6 mm long, greenish to rose, 8-nerved with 4 nerves; sepals 4(5), short and broad. epicalyx segments shorter than sepals or lacking; petals 0 or 1-4, small, deep rose, pink or white, caducuous; stamens 4(-8), included to exserted; gynoecium without a disc at base, stigma capitate, style thin, longer than ovary, exserted or thick, shorter than ovary and included, ovary incompletely 2-4(-5)-locular, septa incomplete. Capsule membranaceous, irregularly dehiscent, outer wall smooth, not striate; seeds many, obovoid, concave-convex, ca. 1 mm, golden-brown.

COMMENTS

It is quite possible that both A. coccinea and A. baccifera L could show up in Brazil because they occur in neighboring countries on the border with Brazil.

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna, Atlantic Rainforest, Pantanal

Vegetation Types
Grassland, Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Ceará, Paraíba, Pernambuco)
Central-west (Mato Grosso do Sul, Mato Grosso)
Southeast (Rio de Janeiro)
South (Santa Catarina)

IDENTIFICATION KEY

1. Style thick, ca. 0.5 mm long or less, much shorter than ovary, included within floral tube at anthesis; petals lacking or 1-4 .....……..…….. *A. latifolia*
1. Style slender, usually 1 mm or longer, equal to half length of ovary or longer, well exserted at anthesis. Petals 4-5.
2. Plant delicate, slender. Cymes long-pedunculate, multiflowered, simple or compound; peduncle nearly filiform, 3-9 mm long; flowers 3 or more per axill; fruits mostly 2.5 mm or less in diam. ..... *A. auriculata*

2. Plant robust. Cymes a sessile or short-to long-pedunculate, 1-to many-flowered; peduncle, when present, stout, 4(-9) mm long; fruits mostly 3.5 mm or more in diam. ……..…… *A. robusta*

Ammannia auriculata Willd.

This treatment is composed of the following taxa: *Ammannia auriculata*, .

Has as synonym
heterotypic *Ammannia arenaria* Kunth
heterotypic *Ammannia auriculata* var. *arenaria* (Kunth) Koehne
heterotypic *Ammannia auriculata var. arenaria* f. *brasiliensis* (A. St. Hil.) Koehne
heterotypic *Ammannia racemosa* Roth.
heterotypic *Ammannia senegalensis* var. *brasiliensis* A. St.-Hil.
heterotypic *Ammannia senegalensis* var. *brasiliensis* A.St.-Hil.

DESCRIPTION

Stem: habit delicate. **Inflorescence: cyme** long - pedunculate; **peduncle** filiform. **Flower: floral tube** not with 4 ridge or winged; **pedicel** 3 - 15 long (mm); **petal** pink/purple; **petal** 1 - 4; **style** exserted floral tube in the at the anthesis; **style** 1 - 2.5 long (mm). **Fruit: size** 3 or less diam. (mm).

ADDITIONAL DESCRIPTION

Herbs, annual, glabrous, 1-8 cm, unbranched to pyramidally mutibranched, the branches ascending, generally shorter than stem, progressively shorter toward top of stem. Leaves narrowly linear-lanceolate to linear-oblong, the largest ones 17-64x2-10mm, equaling or surpassing internode above, apex acute, base auriculate-cordate, clasping, occasionaly cuneate on lowermost leaves only. Cymes axillary, long-pedunculate, simple or compound, multiflowered; flowers pedicellate, (1-)3-12(-15) per cyme, commonly 7, lateral pedicels 1-3(-6) mm long, emerging from bracteoles of shorter-pedicellate central flower of cyme; peduncle 3-9 mm long; pedicels and peduncle nearly filiform; bracteoles 0.5-1 mm long; floral tube campanulate to urceolate in bud, globose in fruit, 1-3 mm long at anthesis; sepals triangular, alternating with minute, thickened epicalyx segments to 1 mm long at anthesis, rarely absent; petals 4, obovate, usually ca. 1.5x1.5 mm, deep rose-purple; stamens 4(-8), well exserted; style filigform, exserted at same level as stamens, as long as to 1/3 longer than ovary; ovary incompletely 2-(4) locular. Capsule at maturity equal to or mostly well exceeding sepals, usually1.5-3 mm in diameter; seeds numerous, ca. 1 mm long. n=15,16 (Graham 1985).

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest, Pantanal

Vegetation Types
Grassland, Cerrado (lato sensu), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Ceará, Pernambuco)
Central-west (Mato Grosso do Sul, Mato Grosso)

HERBARIUM MATERIAL

A.M. Giulietti, 1763, CEN, HUEFS, Bahia
G. Hatschbach, 22036, NY, 940551, (NY00940551), Mato Grosso do Sul
G. Hatschbach, 62500, MBM, Mato Grosso

G. Hatschbach, 38635, NY, 940550, (NY00940550), MBM, Mato Grosso
E.B. Souza, 1611, HUEFS, Ceará
W.A. Archer, s.n., CEN, Mato Grosso do Sul
G. Gardner, 1001, Pernambuco
Herb Willdenow, 3081, B, **Typus**

REFERENCE

Graham, S.A. 1985. A revision of Ammannia (Lythraceae) in the western hewmisphere. Journal of the Arnold Arboretum, 66(4): 395-409.

Ammannia latifolia L.

DESCRIPTION

Stem: habit robust. **Inflorescence: cyme** sessile - short pedunculate; **peduncle** when present thick. **Flower: floral tube** not with 4 ridge or winged; **pedicel** 0 - 2.5 long (mm); **petal** pale/white; **petal** 0/1 - 4; **style** included floral tube in the at the anthesis; **style** up to 0.5 long (mm). **Fruit: size** 3.5 or more diam. (mm).

ADDITIONAL DESCRIPTION

Herbs, robust, annual, unbranched or sparsely branching mainly from lower portions of stem, the branches ascending, shorter than stem. Leaves mostly linear-lanceolate to oblong, elliptic or spathulate, 15-70(-100)x4-15(-21) mm, usually equal to or longer than internode above, mature leaves mostly uniform in size, not significantly smaller toward apex of stem, apex obtuse to subacute, base strongly to moderately auriculate and rarely cuneate on middle and upper leaves, cuneate on lower ones. Cymes axillary, short-pedunculate or sessile, closely flowered cymes; flowers (1-)3 to 10 per cyme; peduncle, when present, to 2.5 mm long; floral tube 4-merous, urceolate in bud, globose and 4-6 mm in diameter in fruit, subtended by linear bracteoles, 1-1.5 mm long; lobes of fruiting calyx broad, apex very small or mucronate (occasionally slightly cucculate), disappearing with enlargement of capsule; epicalyx segments short, thick; petals lacking or 1-4(-6), obovate, to 1 mm long, pale pink to white; stamens 4(8), included; style thick, 0.5mm long, much shorter than ovary. Capsule incompletely 2-4-locular, included to barely exserted. n=24 (Graham 1985).

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Ombrophyllous Forest (Tropical Rain Forest), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Ceará, Paraíba, Pernambuco)

HERBARIUM MATERIAL

E. Melo, 2446, CEN, HUEFS, Bahia
E. Melo, 11053, ALCB, Paraíba
F. Drouet, 2247, GH, Ceará
G. Gardner, 999, NY, Pernambuco
F. França, 2006, CEN, HUEFS, Bahia
F. Allemão, s.n., R, Ceará
R.M. Harley, 20026, UEC, 39235, (UEC093730), Bahia
V.M. Cotarelli, 2312, HVASF, Pernambuco

Ammannia robusta Heer & A.Regel

Has as synonym
heterotypic *Ammannia sanguinolenta* subsp. *robusta* (Heer) & Regel) Koehne

DESCRIPTION

Stem: habit robust. **Inflorescence: cyme** sessile - short pedunculate; **peduncle** when present thick. **Flower: floral tube** prominent 4 ridge to slightly winged; **pedicel** 0 - 2.5 long (mm); **petal** pale/pink; **petal** 4 - 8; **style** exserted floral tube in the at the anthesis; **style** 1 - 2.5 long (mm). **Fruit: size** 3.5 or more diam. (mm).

ADDITIONAL DESCRIPTION

Herbs, robust, annual, to 1 m tall, unbranched or branching from base, the lowest pair of branches decumbent, often equaling height of main stem, the upper branches fewer, shorter. Leaves linear-lanceolate, less often elliptic to spathulate, 15-80x4-15 mm, usually 1-3 times length of internode above, tending to be fleshy, apex obtuse to generally acute, base auriculate-cordate, clasping, occasionally cuneate on lowermost leaves. Cymes axillary, sessile, 1-3-(5) flowered; floral tube urceolate, frequently prominent 4-ridged or subalate, averaging 3.5x2mm, subtended by 2 linear bracteoles ½ height of tube; sepals broadly triangular with acute apex, alternating with thickened epicalyx segments equal to lobes in length; epicalyx segments usually erect in bud; petals 4(-8), obovate, usually 2.5x3 mm, pale lavender, sometimes with deep rose spot at base of midvein or with rose-purple midvein; stamens 4(5-12), exserted, anthers pale yellow to yellow. Style long, slender, slightly exserted at anthesis; ovary incompletely 2-(4)-locular. Capsule 4-6 mm diam. at maturity, enclosed in or equal to sepals, rarely exceeding lobes. n=17 (Graham 1985).

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Ombrophyllous Forest (Tropical Rain Forest), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Southeast (Rio de Janeiro)
South (Santa Catarina)

HERBARIUM MATERIAL

L.B. Smith, 5950, MO, US, Santa Catarina
R. Freitas, s.n., SP, Rio de Janeiro
A.F.M. Glaziou, 8340, R, 186, (R000000186), Rio de Janeiro, **Typus**

Crenea Aubl.

This treatment is composed of the following taxa: *Crenea*, *Crenea maritima*.

HOW TO CITE

Graham, S.A.T., Cavalcanti, T.B., Facco, M.G. 2020. Crenea *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8733.

Has as synonym
heterotypic *Crena* Scop.
heterotypic *Crenaea* Schreb.
heterotypic *Dodecas* L.f.
heterotypic *Faya* Neck.

DESCRIPTION

Subshrubs or shrubs, 0.4–2 m, glabrous, much branched; primary roots and elongate rhizomes woody, with abundant thin, fibrous, pinnately-branched or unbranched, adventitious rootlets; stems green, red-brown to wine-coloured, erect, young stems quadrangular, 4-ridged to 4-flanged, ridges not extended as thin tissue, flanges of thin tissue to 1 mm wide, enlarged and bract-like at bases of petioles. Leaves decussate, sessile or petiolate, mostly narrowly to broadly spatulate to broadly lanceolate-elliptic, sometimes oblong to nearly linear or sublanceolate, blades subfleshy to membranaceous, appearing uni-nerved or pinnately-veined. Inflorescences with flowers solitary from reduced cymes or –5-flowered cymes; flowers rhomboid in including narrow epipodium subtended by paired bracteoles; peduncle persistent; floral tube persistent, sepals deltoid, epicalyx absent; petals 4, ovate, obovate to orbicular, white, style and stamens long exserted, caducous, stamens 9-–15, 3 or more sometimes sterile with anthers undeveloped, anthers basifixed, biloculate with narrow, connective, yellow; ovary globose, 4-locular, placenta basal, 4-lobed, septa incomplete, ceasing distal to free-basal placenta, ovules in 4 clusters. Capsules green to wine-coloured, wall moderately thick, irregularly dehiscent; seeds 100–500 per capsule, fusiform or narrowly obovoid, slightly trigonal.

COMMENTS

The American *Crenea* (Lythraceae) is a ditypic genus of subshrubs occurring in mangrove vegetation on the coasts of northeastern and western South America.

Life Form
Herb

Substrate
Aquatic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Atlantic Rainforest

Vegetation Types
Mangrove

Geographic Distribution
Confirmed ocurrences
North (Amapá, Pará)
Northeast (Bahia)
Southeast (São Paulo)

REFERENCE

Aublet, J.B.C.F. 1775. Histoire des Plantes de la Guiane Françoise 1: 523, t. 209.

Crenea maritima Aubl.

Has as synonym
heterotypic *Crenea surinamensis* (L.f.) Koehne
heterotypic *Dodecas maritimus* (Aubl.) Griseb.

DESCRIPTION

Subshrubs or shrubs, 0.4–2 m, glabrous, much branched; primary roots and elongate rhizomes woody, with abundant unbranched, adventitious rootlets. Stems green to wine-coloured, erect, youngest stem growth quadrangular, 4-ridged, ridges not extended as thin tissue. Leaves decussate, sessile, mostly narrowly to broadly spatulate, sometimes oblong to nearly linear (Trinidad) or sublanceolate, 40–55 mm long, 5–15 mm wide, widest above the middle, leaf base attenuate, apex rounded or obtuse, blades subfleshy, shining, appearing uni-nerved, midvein visible ab- and adaxially, secondary veins obscure, smaller spatulate leaves 13–24 mm long, 5–8 mm wide, often present proximally on the stem or on branchlets. Inflorescences more often with flowers solitary from reduced cymes, less often in 2–5-flowered cymes. Flowers rhomboid in bud, 6–9(–10.5) mm long including narrow epipodium 1.0–3.5 mm long subtended by paired bracteoles to 1 mm long; pedicel 2 mm long subtended by paired bracteoles; peduncle slender, 5–10 mm long, persistent; floral cup persistent, 2.5–4.5 mm long, 2.5–5 mm wide, sepals 2.5–4 mm long, 2.5–4 mm wide, deltoid, spreading and recurved at anthesis, apices mostly acute, rarely acuminate and deflexed; epicalyx absent. Petals 4, ovate to orbicular, 6 mm long, 3.5–4 mm wide, white, crinkled, caducous. Style and stamens long exserted, caducous, style falling away at ca. 5 mm above the base in fruit; stigma subcapitate; stamens (9––)12(–15), 3 or more sometimes sterile with anthers undeveloped, normal anthers 1.2–2.5 mm long, avg. 1.8 mm long, basifixed, biloculate with narrow, longitudinal connective, yellow, oblong or slightly wider at base than apex, quadrangular, dehiscing [AS1] full length of each locule. Ovary globose, 4-locular, placenta basal, 4-lobed, septa incomplete, ceasing distal to free-basal placenta, ovules developing in 4 clusters. Capsules green to wine-coloured, 5.5 mm long 5.0 mm wide, wall moderately thick, irregularly dehiscent. Seeds 100–500 per capsule, 5 mm long, 0.3–0.5 mm wide, fusiform or narrowly obovoid, slightly trigonal, antiraphal face red-brown, convex, 2 raphal faces translucent, forming an aerenchymatous float, initially convex, collapsing to concave on drying.

Life Form
Herb

Substrate
Aquatic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Atlantic Rainforest

Vegetation Types
Mangrove

Geographic Distribution
Confirmed ocurrences
North (Amapá, Pará)
Northeast (Bahia)
Southeast (São Paulo)

HERBARIUM MATERIAL

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FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Crenea maritima* Aubl.



Figure 2: *Crenea maritima* Aubl.



Figure 3: *Crenea maritima* Aubl.

Cuphea P.Browne

This treatment is composed of the following taxa: *Cuphea*, *Cuphea acicularis*, *Cuphea acinos*, *Cuphea adenophylla*, *Cuphea alatosperma*, *Cuphea anagalloidea*, *Cuphea anamariae*, *Cuphea annulata*, *Cuphea antisyphilitica*, *Cuphea arenarioides*, *Cuphea bahiensis*, *Cuphea blackii*, *Cuphea bolivariensis*, *Cuphea brachiata*, *Cuphea brachypoda*, *Cuphea calophylla*, *Cuphea campestris*, *Cuphea campylocentra*, *Cuphea carajasensis*, *Cuphea carthagenensis*, *Cuphea cipoensis*, *Cuphea circaeoides*, *Cuphea confertiflora*, *Cuphea corisperma*, *Cuphea cuiabensis*, *Cuphea cunninghamiifolia*, *Cuphea curiosa*, *Cuphea cylindracea*, *Cuphea dactylophora*, *Cuphea diosmifolia*, *Cuphea disperma*, *Cuphea egleri*, *Cuphea ericoides*, *Cuphea exilis*, *Cuphea ferruginea*, *Cuphea filiformis*, *Cuphea flava*, *Cuphea froesii*, *Cuphea fruticosa*, *Cuphea fuchsiifolia*, *Cuphea gardneri*, *Cuphea glareosa*, *Cuphea glauca*, *Cuphea glaziovii*, *Cuphea glutinosa*, *Cuphea grandiflora*, *Cuphea harleyi*, *Cuphea hatschbachii*, *Cuphea hirsutissima*, *Cuphea hybogyna*, *Cuphea hyssopifolia*, *Cuphea hyssopoides*, *Cuphea ignea*, *Cuphea iguazuensis*, *Cuphea impatientifolia*, *Cuphea inaequalifolia*, *Cuphea ingrata*, *Cuphea laricoides*, *Cuphea linarioides*, *Cuphea lindmaniana*, *Cuphea linifolia*, *Cuphea loefgrenii*, *Cuphea lucens*, *Cuphea lutescens*, *Cuphea lysimachioides*, *Cuphea melampyrifolia*, *Cuphea melvilla*, *Cuphea micrantha*, *Cuphea mimuloides*, *Cuphea myrtifolia*, *Cuphea odonellii*, *Cuphea paralarix*, *Cuphea paranensis*, *Cuphea pascuorum*, *Cuphea pohlii*, *Cuphea polymorpha*, *Cuphea potamophila*, *Cuphea pseudovaccinium*, *Cuphea pterosperma*, *Cuphea pulchra*, *Cuphea punctulata*, *Cuphea racemosa*, *Cuphea radiaticaulis*, *Cuphea ramosissima*, *Cuphea repens*, *Cuphea retrorsicapilla*, *Cuphea rigidula*, *Cuphea rionegrensis*, *Cuphea rubescens*, *Cuphea rubrovirens*, *Cuphea rupestris*, *Cuphea sabulosa*, *Cuphea santos-limae*, *Cuphea schwackei*, *Cuphea sclerophylla*, *Cuphea scolnikiae*, *Cuphea sessiliflora*, *Cuphea sessilifolia*, *Cuphea sincorana*, *Cuphea sperguloides*, *Cuphea spermacoce*, *Cuphea strigulosa*, *Cuphea teleandra*, *Cuphea tenuissima*, *Cuphea thymoides*, *Cuphea tuberosa*, *Cuphea urbaniana*, *Cuphea vesiculosa*, *Cuphea xanthopetala*.

HOW TO CITE

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Has as synonym
heterotypic *Parsonsia* P. Browne

DESCRIPTION

Herbs, sub-shrubs, shrubs, annual or perennial, often viscous, xylopodium sometimes present, stems erect, decumbent to procumbent, usually branched, green, reddish, sometimes purplish, glabrous, pubescent, strigose, hirsute, hirtellous or hispid, composed of simples and/or glandular trichomes. Leaves opposite-crossed, verticillate to fasciculate, rarely sub-opposite or subalternate; camptodromous, broquidodromous, rare, hyphodromous; sessile or petiolate, colleters filiform at the base of the petioles. Recemes simple to compound, leafy, leafy-bracteose to bracteose; bracts distinct of the vegetative leaves or not; flowers zygomorphic, alternate, opposite or verticillate, interpeciolar, rare axillary, pedicellate; bracteoles 2 or 0, with collecters at the base; floral tubes glabrous, pubescent, strigose, hirsute, spur horizontal, deflexed, saccate, galeate, truncate, ascending or minute; nectar guides 2, yellow, white or purple; sepals 6, subequal to unequal, triangular; epicalyx segments 6; petals 6 or 0, subequal to unequal, pink, purple, dark-purple, lilac, white, cream, yellow or red, deciduous or persistent in the fruit; stamens 11, rare 9, included or exserted, subequal or unequal; infraestaminal vesicles present or absent; ovary superior, elliptic, rare with a gibbous unilaterally at the apex, sessile, unilocular, vestigial septa reduced to two threadlike structures that connect the placenta to the ovary wall at the apex; placentation pseudo-central-free; ovules (2-)3-numerous, dorsal gland at the ovary base deflexed, horizontal to erect, sometimes cupuliform. Capsules with a thin wall, cylindrical, fusiform, rectangular or pyriform, dehiscence longitudinal-dorsal through which the placenta erupts allowing the release of seeds; seeds 1-numerous, orbicular, oboval, elliptical to broad-elliptical, winged or not, margin sharp, obtuse, thickened or rarely inflated, caruncle sometimes present, surface smooth, sometimes foveolate or wrinkled.

COMMENTS

Cuphea is American and is the largest of the 28 genera of the family with about 260 species. Its representatives are predominantly subshrubby and some herbaceous representatives. Most species of *Cuphea* occupy open mesophytic environments, swampy areas, and other humid habitats. They also inhabit the savannahs and fields of white sand, rocky outcrops of limestone and seasonally burnt fields, or swamps. Its representatives are characterized by hexameric and zygomorphic flowers, an elongated, cylindrical floral tube, persistent in the fruit and clamped at the base, bicarpellar, unilocular, with dorsal or cupuliform glandular disc at the base. It is the only genus in the family in which the floral tube is persistent in the capsule fruit, which opens through a longitudinal

slit through which the placenta takes the reflex position and releases the seeds. Other synapomorphies of the genus are 11 stamens, disc at the base of the ovary, ovary septa reduced to two strands, oilseeds where the composition of fatty acids varies between species.
In the most recent phylogenetic analysis carried out for the family, using morphology and molecular sequences (Graham et al. 2005; Barber et al. 2010), the genus is monophyletic and closely related to *Adenaria, Pehria, Koehneria, Woodfordia* with the sister genus *Pleurophora*.
It has two centers of genetic diversity, one in North America, mainly in the western and southern regions of Mexico, and another in South America, mainly in the mountains of eastern Brazil.
The genus has grown by about 40% since 1903 and new species continue to be discovered (Cavalcanti & Graham 2005).
The names in Cuphea are being revised by taxonomic sections and the molecular phylogeny of the genus is being finalized, from which a new classification for the genus will be presented.

Life Form
Herb, Shrub, Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest, Pampa, Pantanal

Vegetation Types
Anthropic area, Caatinga (stricto sensu), Amazonian Campinarana, High Altitude Grassland, Flooded Field (Várzea), Grassland, Highland Rocky Field, Carrasco Vegetation, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Seasonal Evergreen Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest, Coastal Forest (Restinga), Amazonian Savanna, Aquatic vegetation, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)
Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)
Possible ocurrences
North (Amazonas, Rondônia, Tocantins)
Northeast (Sergipe)
Central-west (Mato Grosso)
Southeast (Minas Gerais)
South (Paraná, Rio Grande do Sul)

IDENTIFICATION KEY

Key to the species of Cuphea from the North region

1. Floral tubes (11-)13-32 mm long, red, red-orange, red-purple, purple, yellow-green to green.
2. Petals 6, white to purple, persistent in the floral tube in fructification, curling into the tube.
3. Floral tubes 13-17 mm long, purple in the dorsal region and green ventrally; petals purple ..... *C. fuchsiifolia*
3. Floral tubes 21-27 mm long, red-vinaceous; petals white ..... *C. gardneri*
2. Petals 0-6, red, caducous.
4. Racemes bracteose; leaves abruptly reduced in size in the inflorescence; ovules 35-100 or more ..... *C. melvilla*
4. Racemes frondose; leaves gradually reduced in size in the inflorescence; ovules 3-20.
5. Floral tubes entirely yellow or yellow-green.

6. Floral tubes 11-13 mm; petals 0; epicalyx segments shorter than sepals, 0.5 mm … ……..... *C. sabulosa*
6. Floral tubes 19-20 mm; petals 6, red, rudimentary, < 2 mm; epicalyx segments equal or exceeding sepals, 1-1.5 mm ..... *C. cylindracea*
5. Floral tubes red, red-orange, or red-yellow, apex red or contrasting yellow or green.
7. Leaves subfleshy, 5-24 x 4-8 mm; petioles flattened ..... *C. froesii*
7. Leaves coriaceous, 10-75 x 5-25 mm; petioles cylindrical.
8. Petals 0 or 6; epicalyx segments equal to or exceeding sepals; stems and floral tubes glabrous or infrequently puberulous with occasional longer glandular trichomes; floral tubes variously red-orange with yellow apex, yellow with red apex, or red dorsally and yellow ventrally with green apex, internally at ovary level fully surrounded by flattened hyaline trichomes ..... *C. annulata*
8. Petals 2-4; epicalyx segments shorter than sepals; stems and floral tubes densely glandular-hirsute/hispid; floral tubes diffuse red dorsally, pale yellow ventrally with red apex, internally at ovary level indumented dorsally only by flattened hyaline trichomes ..... *C. egleri*
1. Floral tubes 2.5-9(-14) mm long, cream colored, yellow-green, green ventrally and purple dorsally or atro-violaceous.
9. Leaves linear to narrow, 6-12 times longer than wide, up to 7 mm wide.
10. Plants with malpighiaceous trichomes, bi or uni-armed or cystolitic on the branches.
11. Leaves 3-4(-6) verticillate, at least in the middle to apical portion of the branches.
12. Herbs procumbent; leaves 2-8 mm long; stamens included, filaments free in the median portion of the floral tube; xylopodium absent ..... *C. repens*
12. Subshrubs non-procumbent; leaves 15-53 mm long; stamens exserted or subexserted, filaments free in the apical portion of the floral tube; xylopodium present …….....….. *C. retrorsicapilla*
11. Leaves opposite.
13. Floral tubes 4 mm long; spur poorly developed, 0.2 mm long, or non-spurred … ..... *C. bolivariensis*
13. Floral tubes 6.5-8 mm long; spur strongly developed, 1-1.5 mm long, deflexed ..... *C. odonellii*
10. Plants with other types of trichomes on the branches.
14 . Pedicels without bracteoles.
15. Flowers alternate; floral tube 4-5 mm long; seeds margin rounded .... *C. anagalloidea*
15. Flowers opposite; floral tubes 6-10 mm long; seeds margin thinned .... *C. fruticosa*
14. Pedicels bibracteolate.
16. Leaves 3-verticillate; petals yellow; floral tubes yellow-green .... *C. paralarix*
16. Leaves opposite; petals pink, purple to red; floral tubes purple or vinaceous in the dorsal region and green ventrally or totally dark purple.
17. Racemes bracteose, distinct, elongated, vegetative leaves abruptly reduced to small bracts of the racemes.
18. Leaf margin plane, rarely subrevolute; stem with pubescent indumentum or glabrescent; ovary densely villose in the dorsal region ... *C. carajasensis*
18. Leaf margin strongly revolute to midvein; stem with strigose and hirsute indumentum; ovary glabrous, rarely pilose ..... *C. tenuissima*
17. Racemes frondose, indistinct, vegetative leaves gradually transitioning to bracts of the racemes.
19. Floral tube with a horizontal spur; nectary at base of ovary oblique; xylopodium present ……..... ..... *C. exilis*
19. Floral tube with a deflexed spur; nectary at base of ovary strongly deflexed, concave ventrally; xylopodium absent ..... *C. rionegrensis*
9. Leaves ovate, obovate, oblong, lanceolate, elliptic, 1-3 times longer than wide.
20. Plants with malpighiaceous trichomes bi or uni-armed or cystolitic on the branches.
21. Floral tube inner surface with 4-10 infrastaminal vesicles below the stamens; xylopodium present (vesicles sometimes poorly developed in *C. retrorsicapilla*).
22. Leaves usually 3-verticillate at midstem; anthers of the two dorsalmost short

stamens absent or, if present, atrophied; stem white strigose and sometimes also sparsely glandular-hirsute, the strigose trichomes malpighiaceous appearing retrorse .... *C. retrorsicapilla*
22. Leaves opposite; anthers of the two dorsalmost short stamens normally developed; stems densely rusty brown hirsute …….....….. *C. myrtifolia*
21. Floral tube inner surface without infrastaminal vesicles below the stamens; xylopodium absent.
23. Racemes frondose, indistinct; floral tubes (5.5-)6-9 mm long, with a well-developed, horizontal to deflexed spur.
24. Nectarifeous gland at base of ovary subhorizontal; seeds subretangular, with remarkably thickened lateral margins, presenting 4 very acute angles .. *C. scolnikiae*
24. Nectarifeous gland at base of ovary strongly deflexed or reflexed over dorsal side of ovary; seeds sub-circular to elliptic, margin obtuse, not thickened.
25. Ovules 3; nectariferous gland strongly deflexed into base of tube …… .....…….. *C. odonellii*
25. Ovules 6 or 7; nectariferous gland reflexed over dorsal side of ovary .... *C. dactylophora*
23. Racemes bracteose, distinct, terminal; floral tubes 2.5-6 mm long, with a poorly developed, horizontal spur or non-spurred floral tube.
26. Nectariferous gland at base of ovary horizontal or deflexed into base of tube; seed margin acute, winged ..... *C. blackii*
26. Nectariferous gland at base of ovary erect or reflexed over the ovary; seed margin obtuse.
27. Branching monopodial; ovules 5-9; leaf adaxial surface exclusively bifid-strigose, or glabrous ..... *C. curiosa*
27. Branching dichotomous; ovules 9-10; leaf adaxial surface bifid-strigose and abundantly brown-setose ..... *C. rigidula*
20. Plants with other types of trichomes on the branches.
28. Stamens free in the middle third of the floral tube, deeply included (rarely in *C. inaequalifolia*); floral tubes 4-6 mm long.
29. Ovules 5-9; seed margin acute, winged ..... *C. carthagenensis*
29. Ovules 3; seed margin obtuse ..... *C. micrantha*
28. Stamens free in the upper third of the floral tube, exserted to subexserted; floral tubes 6-14 mm long.
30. Petals yellow; floral tubes yellow-green.
31. Racemes bracteose, distinct, terminal; pedicels 5-10 mm long; xylopodium present …….....….. *C. xanthopetala*
31. Racemes frondose, indistinct; pedicels 2-4 mm long; xylopodium absent .... *C. flava*
30. Petals pink, purple, lilac, white to red; floral tubes purple to vinaceous in the dorsal region and green ventrally or totally dark purple.
32. Floral tubes with base rounded, not spurred, neck contracted; ovules 16; seeds with margin broad, conspicuously inflated in appearance ..... *C. alatosperma*
32. Floral tubes with a well-developed, neck not contracted; ovules 2-3; seeds with obtuse to thick margin, never inflated.
33. Floral tubes 2-4 mm wide; pedicels 7-20 mm long; infrastaminal vesicles present; leaves mostly 3-4-verticillate; xylopodium present …….....….. *C. spermacoce*
33. Floral tubes 1-2 mm wide; pedicels 0-3.5 mm long; infrastaminal vesicles absent; leaves opposite; xylopodium absent.
34. Racemes bracteose, distinct, terminal; ovary densely villose in the dorsal region; leaves 0.5-8 mm wide ..... *C. carajasensis*
34. Racemes frondose. indistinct; ovary glabrous; leaves 7-10 mm wide.
35. Petiole 5-10 mm long; petals persistent in the floral tube in fructification, curling into the tube; nectariferous gland horizontal ..... *C. lutescens*
35. Petiole 0.5-2 mm long; petals caducous in fructification; nectariferous gland deflexed.
36. Bracts asymmetrical along the raceme, one of the bracts in the pair strongly reduced ..... *C. inaequalifolia*
36. Bracts subequal along the raceme.
37. Leaves ovate to ovate-lanceolate, base cordate to subcordate ...

..... *C. sessilifolia*
37. Leaves oblong to oblanceolate, base obtuse ... *C. antisyphilitica*

Key to the species of Cuphea from the Northeast Region

1. Floral tubes 20–40x3–5 mm, red, red-orange, red-purple, purple.
2. Leaf base subcordate to cordate or obtuse; petals persistent in the floral tube in fructification, curling into the tube.
3. Floral tubes 13-17 mm long, purple in the dorsal region and green ventrally; petals purple; leaf base obtuse ..... *C. fuchsiifolia*
3. Floral tubes 21-27 mm long, red-vinaceous; petals white; leaf base cordate to subcordate .....…….…….. *C. gardneri*
2. Leaf base acute to attenuate; spur horizontal to descending; petals caducous.
4. Racemes bracteose; petals 0; epicalyx segments twice as long as sepals ……. *C. melvilla*
4. Racemes frondose; petals 6, pale-red; shorter than sepals ….……..... *C. loefgrenii*
1. Floral tubes 3-13x1–2 mm, greenish, beige, yellow, rose, purple, atroviolaceus, green ventrally and purple dorsally.
5. Pedicel without bracteoles
6. Flowers alternate; floral tube 4-5 mm long; seeds margin obtuse ……. *C. anagalloidea*
6. Flowers opposite; floral tubes 6-10 mm long; seeds margin acute.
7. Leaves ovate, 10-35 mm wide …….…….....… *C. racemosa*
7. Leaves oblong to narrow-oblong, 2-5 mm wide ..... *C. fruticosa*
5. Pedicel bibracteolate.
8. Leaves linear to narrow, 5-12 times longer than wide, up to 7 mm wide.
9. Leaves 3-4(-6) verticillate, or opposite and 3-verticillate from midstem to stem apex.
10. Herbs amphibious, prostrate, forming rhizomatous mats to 25 cm in diameter; malpighiaceous trichomes present; floral tube 3-4.5 mm long; stamens included, filaments free in the median portion of the floral tube .....……..……. *C. repens*
10. Subshrubs terrestrial, erect; malpighiaceous trichomes absent; floral tube 5-8 mm long; stamens exserted or subexserted, filaments free in the apical portion of the floral tube.
11. Brachyblasts present (short branches with very short internodes, starting from the axile of the stem leaves); petals yellow, white or pale lilac
12. Petals pale lilac to white; plants usually decumbent …….. *C. laricoides*
12. Petals yellow; plants erect …….....……. *C. paralarix*
11. Brachyblasts absent; petals purple, or pink.
13. Pedicelos 2-5 mm long; infrastaminal vesicles absent; ovules 3; nectariferous gland strongly deflexed ….....……... *C. ericoides*
13. Pedicel 10-30; infrastaminal vesicles present; ovules (3)5-6; nectariferous gland semi-cupping …….....… *C. hyssopoides*
9. Leaves opposite, not verticillate.
14. Pedicel 6-30 mm long; infrastaminal vesicles presente; xylopodium presente.
15. Floral tube 7-9 mm long ..... *C. hyssopoides*
15. Floral tube 6-8 mm long ..... *C. sincorana*
14. Pedicel 1-5 mm long; infrastaminal vesicles absent; xylopodium absent.
16. Ovary with a gibbous unilaterally at the apex; petals with two colors, the dorsal rose to purple, the ventral pale lilac to white ……..……. *C. campestris*
16. Ovary without a gibbous, petals concolor.
17. Ovules 5-16; seed margin acute, winged, stamens exserted or subexserted, filaments free in the apical portion of the floral tube ……. *C. rubescens*
17. Ovules 3. Seed margin obtuse, not winged, stamens included, filaments free in the middle portion of the floral tube …….…….……. *C. tenuissima*
8. Leaves ovate, obovate, oblong, lanceolate, elliptic, 1-3 times longer than wide; never linear or narrow, 3-50 mm wide.
18. Racemes bracteose, distinct, elongated, vegetative leaves abruptly reduced to small bracts of the racemes.
19. Petiole 3-25 mm long; floral tube 5-5.5 mm long, pedicels persistent, forming an angle of 90° degrees; fruit piriform; seed margin acute …… *C. circaeoides*
19. Petiole absent; floral tube 8-10 mm long, pedicels not persistent, straight; fruit tubular;

seeds margin obtuse ..... *C. bahiensis*
18. Racemes frondose, indistinct, vegetative leaves gradually transitioning to bracts of the racemes.
20. Floral tubes yellow to yellow-green; petals yellow.
21. Leaf blade strigose with sparse glandular trichomes; floral tubes 5-7.2 mm long, pubescent and short-glandular ..... *C. brachiata*
21. Leaf blade glabrous; floral tube glabrous or only with glandular trichomes; floral tube 7-9 mm long ..... *C. flava*
20. Floral tubes greenish, beige, rose, purple, atroviolaceus, green ventrally and purple dorsally.
22. Pedicel without bracteoles.
23. Petals with two colors, the dorsal purple, the ventral cream; leaf base cordate ……..……..…… *C. pascuorum*
23. Petals concolors; leaf base acute.
24. Nectariferous gland subhorizontal, not cupping base of ovary; petiole 1.5-4 mm long ….....……. *C. punctulata*
24. Nectariferous gland cupping base of ovary; petiole 0-1 mm long ……
.....……..…… *C. mimuloides*
22. Pedicel bibracteolate.
25. Pedicel 7-20 mm long; floral tube 7-10; xylopodium present.
26. Floral spur horizontal; blades distinctly discolorous, abaxial surface whitish, leaf margin thick .....*C. glareosa*
26. Floral spur elevated dorsally and descending; blades not discolorous, leaf margin not thick ..... *C. brachypoda*
25. Pedicel 0-5 mm long; floral tube 4-9; xylopodium absent.
27. Stamens included, filaments free in the in the middle third of the floral tube.
28. Ovules 5-13; seed margin acute, winged.
29. Floral tube 6–9 mm long, pubescent and sparsely glandular-hispid; floral tube in fructification tubular; bracteoles linear-subulate .
..... *C. strigulosa*
29. Floral tube 5-6 mm long, glabrous between the veins, with long and sparse glandular trichomes on the veins; bracteoles ovate, floral tube in fructification globose with narrow neck; bracteoles ovate .....
..... *C. carthagenensis*
28. Ovules 3; seed margin obtuse ..... *C. micrantha*
27. Stamens exserted to subexserted, filaments free in the in the apical third of the floral tube. Floral tube 5-9 mm long.
30. Petals persistent in fructification, winding up into the floral tube.
31. Petiole 0-3 mm long; petals with trichomes on the central vein; leaves 6-12 mm long ..... *C. sessiliflora*
31. Petiole 5-7 mm; petals without trichomes on the central nerve.
32. Racemes bracteose; leaf base base abruptly attenuated; seeds black
.....…. *C. impatientifolia*

32. Racemes frondose; leaf base obtuse; seeds not black ….....
..... *C. lutescens*
30. Petals caducous in fructification.
33. Ovules 4-11; floral tube dorsally concave, mouth upturned, slightly oblique horizontal to semi-deflexed.
34. Petals discolorous, the 2 dorsal petals deeper purple, the 4 ventral petals lilac; seed margin acute, slightly winged; pedicel caducous
..... …..……..…… *C. glutinosa*
34. Petals concolor; seed margin obtuse; pedicel persistent in the branches.
35. Floral tube red-purple dorsally, veins with long red glandular-hirsute, erect; leaf base obtuse to subcordate …….. *C. acinos*
35. Floral tube green to rose dorsally, strigose, trichomes white, strongly appressed; leaf base obtuse to attenuate … *C. harleyi*
33. Ovules 3; floral tube not concave; nectariferous gland strongly deflexed.
36. Leaves ovate to ovate-lanceolate, base cordate to subcordate .....
..... *C. sessilifolia*
36. Leaves oblong to oblanceolate, base obtuse ….. *C. antisyphilitica*

Key to the species of Cuphea from the Mid-West Region

1. Floral tube 19-30 mm long, intense-red, green and reddish ventrally and dorsally or yellow-green.
2. Racemes bracteose, leaves abruptly reduced in size in the inflorescence.
3. Leaves narrowly oblong, 4-12 mm wide, 3-verticillate at midstem, often opposite at base and apex of stem, petiole c. 4 mm ……..…… *C. cuiabensis*
3. Leaves lanceolate, elliptic, or ovate, 11-80 mm wide, opposite, rarely 3-verticillate at midstem, petiole 5-10 ……..……. *C. melvilla*
2. Racemes frondose; leaves gradually reduced in size in the inflorescence.
4. Floral tubes entirely yellow, yellow-green ……..…. *C. cylindracea*
4. Floral tubes green and reddish ventrally and dorsally, red, red-orange, or red-yellow and apex red, yellow or green.
5. Leaves subfleshy, obovate or oblong to elliptic, 4-8 mm wide, margin plane, glabrous or sparsely glandular-ciliate; petioles flattened ……..……..… *C. froesii*
5. Leaves not subfleshy, chartaceous to coriaceous, lanceolate to lanceolate-linear, oblong, or ovate, 10-25 mm wide; petioles absent or cylindrical.
6. Floral tube red, red-orange, or red-yellow, apex red or contrasting yellow or green.
7. Petals bright red, caducous in fruit ….....…… *C. grandiflora*
7. Petals white, persistent in the floral tube in fruit, curling into the tube .... *C. gardnerii*
6. Floral tube green, reddish ventrally and dorsally ..... *C. potamophila*
1. Floral tube 4-14 mm long, greenish, beige, yellow, rose, purple, atroviolaceus, green ventrally and purple dorsally.
8. Leaves 5-20 times longer than wide, up to 6 mm wide, linear to narrow, up to 6 mm wide.
9. Pedicel bibracteolate.
10. Plants with malpighiaceous trichomes on the branches, bi-uni-armed or cystolytic, sometime with xylopodium.
11. Herbs procumbent; leaves 2-8 mm long; stamens included, filaments free in the median portion of the floral tube ……..... *C. repens*
11. Subshrubs not procumbent; leaves 10-60 mm long; stamens not included, filaments free in the apical portion of the floral tube.
12. Floral tube inner surface with 4-10 infrastaminal vesicles below the stamens. Leaves frequently 3-4 verticillate.
13. Seed margin acute, winged. Petiole 1.5-10 mm long ..... *C. pterosperma*
13. Seed margin obtuse, thick. Petiole 0-1 mm long.
14. Leaf blade consisting primarily of a thick midvein, the blade scarcely developed; the two dorsal stamens not atrophied, anthers normal and fertile; floral tube inner surface villous …….……..….... *C. filiformis*
14. Leaf blade 1-3 mm wide; the two dorsal stamens with anthers atrophied and sterile or absent; floral tube inner surface glabrous ..... *C. retrorsicapilla*
12. Floral tube inner surface without infrastaminal vesicles below the stamens. Leaves opposite.
15. Flowers sessile to subsessile, petals pink; stylus glabrous; nectariferous gland of the ovary base deflexed ..... *C. odonellii*
15. Flowers pedicellate, pedicel 3-9 mm long, petals white to pale rose; stylus pilose; nectariferous gland of the ovary base horizontal ..... *C. acicularis*
10. Plants with other types of trichomes on the branches; xylopodium absent.
16. Leaves with golden glands; spur of the floral tube inconspicuous. ……. *C. arenarioides*
16. Leaves without golden glands; spur of the floral tube conspicuous.
17. Petals yellow, white or rare pale rose.
18. Petals yellow; racemes 5-20 cm long, flowers arranged along the inflorescence branches.
19. Leaves fasciculate, 3-10x0.5-2 mm long. Racemes frondose …. *C. paralarix*
19. Leaves opposite, 20-30x4x6 mm long. Racemes bracteose .. *C. xanthopetala*
18. Petals white; racemes 1.5-4 cm long, flowers concentrated at the apex of the branches ….....…..... *C. cunninghamifolia*
17. Petals intense rose, pink, lilac, purple.
20. Floral tubes with a long ascending spur, spur 2-3 mm long.
21. Leaves linear, base acute to obtuse, usually glabrous or with glandular

trichomes ..... *C. linifolia*
21. Leaves ovate to elliptic, base obtuse to cordate, pubescent to glandular .....
..... *C. linarioides*
20. Floral tubes with a short horizontal or deflexed spur, spur 0.5-1.5 mm long.
22. Pedicel 5-30 mm long; ovules 3-6; xylopodium present.
23. Leaf secondary venation not visible even on broadest leaves; ovules 5-6;
.....pedicel 10-30 …. *C. hyssopoides*
23. Leaf secondary venation visible on widest leaves; ovules 3-4; pedicel 5-9
.....…… *C. rupestris*
22. Pedicel 0.2-5 mm long; ovules 3; xylopodium absent ……
.....…….. *C. tenuissima*
9. Pedicel without bracteoles.
24. Flowers alternate; floral tube 4-5 mm long; seeds margin obtuse ..... *C. anagalloidea*
24. Flowers opposite; floral tubes 6-10 mm long; seeds margin acute .....
..... *C. fruticosa*
8. Leaves 1-4 times longer than wide, ovate, obovate, oblong, lanceolate, elliptic, never linear or narrow, 3-50 mm wide.
25. Pedicel without bracteoles ..... *C. racemosa*
25. Pedicel bibracteolate.
26. Pedicel 5-20 mm compr. Plants usually cespitose or few branched or prostrate (*C. polymorpha*); xylopodium sometimes present.
27. Branches with malpighiaceous trichomes, bi or uni-armed.
28. Floral tube 8-13 mm long, infrastaminal vesicles absent; seed margin acute, winged
.....…….. *C. lysimachioides*
28. Floral tube 6-8, infrastaminal vesicles present; seed margin obtuse .....
..... *C. retrorsicapilla*
27. Branches with other types of trichomes, without malpighiaceous trichomes.
29. Floral tube inner surface with infrastaminal vesicles.
30. Plants decumbent, prostrate. Floral tube 7.5-8.5 mm long, with rectangular shape in fructification; seed margin thick ..... *C. polymorpha*
30. Plants erect. Floral tube 8-14 mm long, with tubular shape in fructification, seed margin obtuse. ……..... *C. spermacoce*
29. Floral tube inner surface without infrastaminal vesicles.
31. Plants usually reddish-brown when dry, hirsute, glandular trichomes reddish; floral tube spur short, horizontal to deflexed; seed margin marked and slightly thickened …….... *C. ferruginea*
31. Plantas não marrom-avermelhadas quando secas. Tubo floral com cálcar longo, ascendente; Sementes com margem afinada ..... *C. linarioides*
26. Pedicel 0,5-5 mm long, plants erect, branching distributed along the stem.
32. Stamens totally included, filaments free in the middle third of the floral tube; ruderal plants.
33. Flowers perpendicular, forming angle of almost 90# degrees in relation to the pedicel; floral tube spurred; usually racemes frondose, indistinct, sometimes bracteose (*C. micrantha*).
34. Ovules 5-12; seeds 6, margin acute, with a thin wing.
35. Floral tube 6–9 mm long, pubescent and sparsely glandular-hispid; floral tube in fructification tubular; bracteoles linear-subulate; ……..….... *C. strigulosa*
35. Floral tube 5-6 mm long, glabrous between the veins, with long and sparse glandular trichomes on the veins; bracteoles ovate, floral tube in fructification globose with narrow neck; bracteoles ovate ..... *C. carthagenensis*
34. Ovules 3-4, seeds 2-3, obtuse margin, without wing …..... *C. micrantha*
33. Flowers erect with respect to the pedicel, not forming an angle; floral tube not spurred; racemes bracteose, distinct ..... *C. calophylla*
32. Stamens reaching apex of sepals or exserted, filaments free in the superior third of the floral tube; plants not ruderal.
36. Petals caducous in fructification.
37. Racemes bracteose, inflorescence detached, bracts distinct from vegetative leaves, abruptly reduced in size.
38. One of the bracts of the pair much smaller in size, reduced to scales; floral tube 6-7 mm long, pubescent; infrastaminal vesicles absent; ovules 3; seed margin obtuse ..... *C. inaequalifolia*

38. Bracts of the pair of the same size to each other; floral tube 8-12 mm long, hirsute; infrastaminal vesicles present; ovules 16-19; seed margin acute, winged …..... *C. campylocentra*
37. Racemes frondose, inflorescence not detachedn bracts not distinct from vegetative leaves, gradually reducing in size in the inflorescence.
39. Leaf blade discolorous, apex obtuse sometimes acuminate, secondary and tertiary veins usually evident in both surfaces ..... *C. pohlii*
39. Leaf blade not discolorous, apex acute, secondary and tertiary veins not evident.
40. Stems with white, appressed, malphighiaceous trichomes, bifid or cytolytic, mixed with other types of trichomes.
41. Ovules 6-11; seed margin obtuse or thick; floral tube 5.5-9 mm long; leaves 4-18 mm wide;
42. Leaf margin not ciliate; pedicel 0.5-1 mm long; seed apex and base distinctly retuse forming 2 projections at each end, margin thick, ca. 1 mm wide ….....…. *C. scolnikiae*
42. Leaf margin of young leaves sparsely ciliate by long thin rusty brown trichomes; pedicel 2-3 mm long; seed apex, base and margin obtuse .....…… *C. myrtifolia*
41. Ovules 3; seed margin acute; floral tube 7-12 mm long; leaves 1-5 mm wide ..... *C. radiaticaulis*
40. Stems without malphighiaceous trichomes.
43. Ovules 6-10; seed margin acute; leaf base acute to attenuate sometimes obtuse ……...……... *C. corisperma*
43. Ovules 3; seed margin obtuse.
44. Leaf base cordate to subcordate, blades oval to oval-lanceolate . ..... *C. sessilifolia*
44. Leaf base obtuse, blade narrow-ovate to oblong .... *C. antisyphilitica*
36. Petals persistent in fructification, winding up into the floral tube.
45. Petiole 0-3 mm long; petals with trichomes on the central vein; leaves 6-12 mm long ..... *C. sessiliflora*
45. Petiole 5-7 mm; petals without trichomes on the central nerve; leaves 15-22 mm long ..... *C. lutescens*

Key to the species of Cuphea from the South Region

1. Floral tubes 18-32 mm long, outer surface red-orange to deep red, apex green to yellow-green, or violet-purple.
2. Floral tubes violet-purple; petals 6, violet-purple; leaves linear or narrowly elliptic .... *C. glaziovii*
2. Floral tubes red, orange-red, apex green to yellow-green; petals 0; leaves ovate or lanceolate .... *C. melvilla*
1. Floral tubes 4-15 mm long, outer surface purple to vinaceous in the dorsal region and greenish ventrally or totally dark-purple.
3. Pedicels without bracteoles; flowers opposite.
4. Floral tubes 4-6 mm long; the 2 dorsal petals, purple, smaller than the 4 ventral petals, white (rarely all white) …….....……...… *C. lindmaniana*
4. Floral tubes 6-11 mm long; the 2 dorsal petals larger than the 4 ventral petals, concolorous.
5. Leaves oblong to narrow-oblong, 2-5 mm wide ..... *C. fruticosa*
5. Leaves ovate to narrowly ovate, 5-35 mm wide.
6. Plants densely hirsute, on the stem, leaves and floral tubes ..... *C. hirsutissima*
6. Plants without trichomes hirsute or not everywhere ..... *C. racemosa*
3. Pedicels bibracteolate; flowers alternate to verticillate, rarely opposite.
7. Stamens free in the middle third of the floral tube, deeply included.
8. Flowers erect with respect to the pedicel, not forming an angle; floral tube not spurred, base rounded, horizontal; floral tube in fructification tubular seed margin obtuse …..... *C. calophylla*
8. Flowers perpendicular, forming angle of almost 90# degrees in relation to the pedicel; floral tube spurred, spur curved, descending; floral tube in fructification globose with narrow neck; seed margin acute, winged …..... *C. carthagenensis*
7. Stamens free in the upper third of the floral tube, exserted to subexserted.
9. Floral tubes with a long ascending spur, spur 2-3 mm long.

10. Leaves linear, base acute to obtuse, glabrous to glandular ..... *C. linifolia*
10. Leaves ovate to elliptic, base obtuse to cordate, indumentum strigose, pubescent to glandular.
11. Floral tubes ca. 5 mm long, with the mouth enlarged; stems hirsute and pubescent .. *C. hatschbachii*
11. Floral tubes 6-9 mm long, with narrow mouth; stems pubescent, with sparse glandular trichomes . ..... *C. linarioides*
9. Floral tube with short, horizontal to deflexed spur.
12. Petals persistent in the floral tube in fructification, curling into the tube …..... *C. lutescens*
12. Petals caducous, not present in the floral tube in fructification.
13. Branches with malpighiaceous trichomes, bi or uni-armed or cystolitic; petals white to pale lavender.
14. Leaves opposite; seeds with prominent caruncule, margin obtuse, thickened …..... ..... *C. urbaniana*
13. Leaves 3-4 verticillate at midstem; seed margin acute, winged, caruncule absent .... *C. lysimachioides*
13. Branches without malpighiaceous trichomes, with other types of trichomes or glabrous.
15. Floral tube 9-15x2-4 mm, plants with a xylopodium or rhizomatous.
16. Floral tube spur horizontal to subdescending, 0.75-1 mm seed margin obtuse, not winged; infrastaminal vesicles absent.
17. Petioles 5-18 mm long; racemes frondose; ovules 14-16 …...…. *C. tuberosa*
17. Petioles 0-4 mm long; racemes bracteose, bracts of the inflorescence ± abruptly reduced in size from the stem leaves; ovules 5-10 …..... *C. confertiflora*
16. Floral tube spur strongly incurved, 2-4 mm wide; seed margin acute, winged; infrastaminal vesicles present …….……. *C. campylocentra*
15. Floral tube 5-9x1-2 mm, plants without a xylopodium or rhizomatous.
18. Leaves imbricate, closely appressed to the stem, dimorphic, those on primary stems, cordate-ovate, distinctly larger than those of the lateral branches, narrowly elliptic to linear-oblong; seeds margin obtuse ..... *C. paranensis*
18. Leaves not imbricate, not appressed to the stem, not dimorphic; seed margin acute, winged or thickened.
19. Pedicels 7-18 mm long; with rectangular shape in fructification; seed margin thickened; plants decumbent; infrastaminal vesicles present ….. *C. polymorpha*
19. Pedicel 1-6 mm long; floral tube tubular in fructification; seed margin acute, winged or light in color; plants erect; infrastaminal vesicles absent.
20. Leaves often fasciculate, 2-8 mm long, linear, narrowly oblong to narrowly elliptic, appearing uninerved ……..…..... *C. thymoides*
20. Leaves opposite, 6-18 mm long, ovate, elliptic or lanceolate, rarely obovate, 4-5 pairs of secondary veins.
21. Leaves 1.5-5 mm wide; seed apex carunculate; floral tube with retrorse strigose trichomes and sometimes sparse glangular trichomes …..... ..... *C. iguazuensis*
21. Leaves 5-13; seed apex not carunculate; floral tube glabrous veins glabrous or glandular trichomes only on the ribs.
22. Floral tube straight, mouth not upturned; petals concolorous, near white to lilac ..... *C. ingrata*
22. Floral tube dorsally slightly concave, mouth upturned, slightly oblique; the 2 dorsal petals purple and the 4 ventral petals pink ..... *C. glutinosa*

Key to the species of Cuphea from the Southeast Region

1. Floral tubes 13-32 mm long, red, red-orange, red-purple, violet-purple, yellow-green to green or purple in the dorsal region and green ventrally.
2. Racemes bracteose, terminal, leaves abruptly reduced in size in the inflorescence; flowers concentrated in the apex of the inflorescence; ovules 30–100 or more.
3. Floral tube violet-purple; petals 6, violet-purple; leaf blade linear or narrowly elliptic ….…….. *C. glaziovii*
3. Floral tube red; petals 0; leaf blade lanceolate to broadly lanceolate or elliptic …..……..…. *C. melvilla*
2. Racemes frondose; leaves gradually reduced in size in the inflorescence; flowers distributed along the inflorescence; ovules 3–21.
4. Floral tubes entirely yellow or yellow-green …….....…… *C. lucens*

4. Floral tubes red, red-orange, or red-yellow, apex red or contrasting yellow or green or purple in the dorsal region and green ventrally.
5. Petals persistent in the floral tube in fructification, curling into the tube; floral tube purple in the dorsal region and green ventrally ……..…… *C. fuchsiifolia*
5. Petals caducuous in the floral tube in fructification; floral tube red, red-orange, or red-yellow, apex red or contrasting yellow or green.
6. Floral tubes actinomorphic or nearly so, pedicel attached basally; epicalyx segments absent . *C. santos-limae*
6. Floral tubes zygomorphic, pedicel attached ventrally; epicalyx segments present, shorter to longer than sepals.
7. Ovules 3; floral tubes 13–19x2-3 mm; floral tube 13-19 mm long.
8. Floral tubes 13–15 mm long; petals bright red or red with dark purple apex, 4.0–6.0 mm long; leaves orbicular or broadly elliptic or ovate; the 2 short dorsalmost more deeply inserted than others, at ca. 5 mm from tube margin …….....……. *C. rubrovirens*
8. Floral tubes 15–19 mm long; petals red-purple, 3.0–4.0 mm long; leaves oblong or broadly elliptic to obovate; the 2 short dorsalmost inserted deeply in lower third of floral tube at 1–5 mm above base of tube …….....…… *C. teleandra*
7. Ovules 5–21 mm; floral tubes 19–40x4–5 mm; floral tube 19-32 mm long.
9. Leaf base subcordate; floral tube base rounded, scarcely spurred, 0.5-1.0 mm; ovary prominently enlarged dorsally (gibbose) …….....……. *C. hybogyna*
9. Leaf base acute; floral tube base distinctly spurred, spur 1–2 mm, descending; ovary equally enlarged on all sides, non-gibbous …….....……..… *C. grandiflora*
1. Floral tubes 2.5-9 mm long, cream colored, yellow-green, green ventrally and purple dorsally or atroviolaceous, if 10-14, never red.
10. Pedicel without bracteoles.
11. Flowers alternate; floral tube 4-5 mm long; nectariferous gland cupuliform ..... *C. anagalloidea*
11. Flowers opposite; floral tubes 6-10 mm long; nectariferous gland dorsal.
12. Leaves ovate to elliptic, 8-35 mm wide.
13. Leaf base obtuse to acute; dorsal petals not larger than ventral …….....…….…… *C. racemosa*
13. Leaf base cordate; dorsal petals much larger than ventral …….……. *C. schwackei*
12. Leaves oblong, oblong-lanceolate to narrow-oblong, 2-7 mm wide.
13. Subshrubs, robust, 30-60 cm tall ..... *C. fruticosa*
13. Herbs, annual, delicate, 15-130 cm tall ..... *C. ramosissima*
10. Pedicel bibracteolate.
14. Leaves linear to narrow, 5-12 times longer than wide, up to 7 mm wide.
15. Plants with malpighiaceous trichomes on the branches, bi-uni-armed or cystolytic.
16. Herbs procumbent; leaves 2-8 mm long; stamens included, filaments free in the median portion of the floral tube; xylopodium absent …..…..... *C. repens*
16. Subshrubs not procumbent; leaves 10-60 mm long; stamens not included, filaments free in the apical portion of the floral tube; xylopodium present.
17. Seed margin acute, winged. Petiole 1.5-10 mm long ……...…. *C. pterosperma*
17. Seed margin obtuse, thick. Petiole 0-1 mm long; the two dorsal stamens with anthers atrophied and sterile or absent ..... *C. retrorsicapilla*
15. Plants with other types of trichomes on the branches.
18. Leaves verticillate.
19. Leaf margin inrolled to the midvein ….....…… *C. sperguloides*
19. Leaf margin plane or subrevolute; never inrolled to the midvein.
20. Leaves with golden glands; pedicel 8-30 mm long; spur of the floral tube inconspicuous …. .... ……. *C. arenarioides*
20. Leaves without golden glands; pedicel 0-6 mm long; spur of the floral tube evident.
21. Brachyblasts present (short branches with very short internodes, starting from the axile of the stem leaves); petals yellow ….……..... *C. paralarix*
21. Brachyblasts absent; petals purple, or pink.
22. Leaves 10-30 mm long; ovules 5; floral tube rose- to vinaceous dorsally; nectariferous gland horizontal to semi cupping; petals white or pale lavender ..... *C. acicularis*
22. Leaves 3-10 mm long; ovules 3; floral tube atropurpureus to dark-purple, nectariferous gland strongly deflexed …….....…….. *C. ericoides*
18. Leaves opposite.
23. Leaf margin inrolled to the midvein …….....…… *C. sperguloides*

23. Leaf margin plane or subrevolute; never inrolled to the midvein.
24. Pedicel 7-30; infrastaminal vesicles present.
25. Nectariferous gland semi-cupping; xylopodium present; floral tube tubular in fructification ..... *C. hyssopoides*
25. Nectariferous gland horizontal; xylopodium absent; floral tube wide-retangular in fructification ……..……..... *C. vesiculosa*
24. Pedicel 0-5; infrastaminal vesicles absent (except in *C. sclerophylla*).
26. Ovules 3; stamens included, filaments free in the middle portion of the floral tube ……. .....……. *C. tenuissima*
26. Ovules 4-16; stamens exserted, filaments free in the apical portion of the floral tube.
27. Spur upward, narrow, acute; leaves 0,8-1 mm wide …..... *C. linifolia*
27. Spur horizontal, obtuse; leaves 1-5 mm wide.
28. Leaves 15-65x3-5 mm wide; opposite, never forming fascicles; plant not black when dried; seed margin obtuse.
29. Floral tube 7-10 mm long; infrastaminal vesicles present; leaves coriaceous, stiff …….....…. *C. sclerophylla*
29. Floral tube 5-6 mm long; infrastaminal vesicles absent; leaves membranaceous to chartaceous, not stiff …….. …… *C. rubescens*
28. Leaves 2-8(-12)x1-3 mm wide; opposite to subalternate, tending to form fascicles; plants black when dried; seed margin acute ……..…… *C. thymoides*
14. Leaves ovate, obovate, oblong, lanceolate, elliptic, 1-3 times longer than wide; never linear or narrow, 3-50 mm wide.
30. Stamens free in the middle third of the floral tube, deeply included (rarely in *C. inaequalifolia*); ruderal plants.
31. Flowers perpendicular, forming angle of almost 90# degrees in relation to the pedicel; floral tube spurred; usually racemes frondose, indistinct, sometimes bracteose (*C. micrantha*).
32. Ovules 5-12; seeds 6, margin acute, with a thin wing.
33. Floral tube 6–9 mm long, pubescent and sparsely glandular-hispid; floral tube in fructification tubular; bracteoles apex linear-subulate …..... *C. strigulosa*
33. Floral tube 5-6 mm long, glabrous between the veins, with long and sparse glandular trichomes on the veins; bracteoles apex not linear-subulate.
34. Petiole 10-25; leaf base asymmetric or obtuse; pedicel persistent, forming an angle of 90° degrees …….…….....…… *C. circaeoides*
34. Petiole 0-7 mm long; leaf base acute, not asymmetric; pedicel not persistent .... *C. carthagenensis*
32. Ovules 3-4, seeds 2-3, obtuse margin, without wing ….. *C. micrantha*
31. Flowers erect with respect to the pedicel, not forming an angle; floral tube not spurred; racemes bracteose, distinct ..... *C. calophylla*
30. Stamens free in the upper third of the floral tube, exserted to subexserted; plants not ruderal.
35. Racemes bracteose; petiole 10-25 mm long.
36. Leaf base abruptly attenuate; pedicel 1-3mm long, caducous; floral tube 6-7 mm long; seeds black, margin obtuse …….....…… *C. impatientifolia*
36. Leaf base asymmetric or obtuse; pedicel 2.5-4.6 mm long, persistent, forming an angle of 90° degrees; floral tube 4.5-5.5 mm long; seeds not black, margin acute ……..…. *C. circaeoides*
35. Racemes frondose; petiole 0-7 mm long.
37. Floral tubes yellow to yellow-green; petals yellow.
38. Leaf blade strigose with sparse glandular trichomes; floral tubes 5-7.2 mm long, pubescent and short-glandular ..... *C. brachiata*
38. Leaf blade glabrous; floral tube glabrous or only with glandular trichomes; floral tube 7-9 mm long ..... *C. flava*
37. Floral tubes greenish, beige, rose, purple, atroviolaceus, green ventrally and purple dorsally.
39. Floral tube spur long, 1.5-3 mm, upward …….....…… *C. linarioides*
39. Floral tube spur short, 0.5-1 mm long, horizontal to deflexed.
40. Pedicel 0-6 mm long.; flowers more delicate.
41. Petals persistent in fructification, winding up into the floral tube …..…..…. *C. lutescens*
42. Petiole 0-3 mm long; petals with trichomes on the central vein; leaves 6-12 mm long ..... *C. sessiliflora*
42. Petiole 5-7 mm; petals without trichomes on the central nerve; leaves 15-22 mm long …….....…. *C. lutescens*
41. Petals caducous in fructification.

43. Leaf blades 0.7–3.0 mm wide
44. Leaves not imbricate, 3-verticillate, if subalternate, plants black when dried.
45. Floral tube 5.5–7 mm long, hispid; seed margin acute …..... *C. thymoides*
45. Floral tube 3-4 mm long, hirsute; seed margin obtuse ..... *C. disperma*
44. Leaves imbricate, appressed to the stem, opposite ….……..……. *C. diosmifolia*
43. Leaf blades 4-30 mm wide.
46. Floral tube 11-13 mm long …….....…… *C. cipoensis*
46. Floral tube 5-9 mm long.
47. Pedicel interpetiolar, persistent ..... *C. acinos*
47. Pedicel axilar, caducous.
48. Leaf blade with secondary and terciary veins conspicuous in both surface; floral tube 8-9 mm long.
49. Leaves not discolorous, 2.5-15 mm wide; leaf base obtuse a subcordada .....……. *C. pseudovaccinium*
49. Leaves discolorous, 10-30 mm wide; leaf base obtusa a aguda …….
.....…. *C. pohlii*
48. Leaf blade with secondary and terciary veins not conspicuous in both surface; floral tube 5-7 mm long.
50. Ovules 3-4.
51. Leaf base acute to attenuate; leaf margin bearing several glandular trichomes; spur retuse ……...…….…… *C adenophylla*
51. Leaf base obtusa a subcordada a cordada; leaf margin without glandular trichomes; spur obtuse.
52. Bracts asymmetrical along the raceme, one of the bracts in the pair strongly reduced ..... *C. inaequalifolia*
52. Bracts subequal along the raceme.
53. Leaves ovate to ovate-lanceolate, base cordate to subcordate ..... *C. sessilifolia*
53. Leaves oblong, oblanceolate to narrow-lanceolate, base obtuse, when cordate, basal leaves retroflexed, 25-40 mm long.
54. Basal leaves retroflexed, 25-40 mm long …
..... *C. melampyrifolia*
54. Basal leaves not retroflexed 8-30 mm long.
55. Leaf blade glaucous …..... *C. glauca*
55. Leaf blade not glaucous..... *C. antisyphilitica*
50. Ovules 5-16
56. Petals discolorous, the 2 dorsal petals deeper purple, the 4 ventral petals lilac; floral tube dorsally slightly concave, mouth upturned, slightly oblique; the 2 dorsal petals purple and the 4 ventral petals pink …….....….....….. *C. glutinosa*
56. Petals concolorous, white to lilac; floral tube straight, mouth not upturned ..... *C. ingrata*
40. Pedicel 7-20 mm long; flowers in general more coarse, larger.
57. Infrastaminal vesicles present; ovules 11; plants decumbent, prostrate; floral tube with rectangular shape in fructification ……..….. *C. polymorpha*
57. Infrastaminal vesicles absent; ovules 3-7; plants erect; floral tube with tubular shape in fructification.
58. Blades narrowly lanceolate tending to become falcate; plants without xylopodium, not cespitose …..... *C. anamariae*
58. Blades not narrowly lanceolate or tending to become falcate; plants with xylopodium, usually cespitose.
59. Ovules 3; vesicles 8-10; spur strongly descending ..... *C. spermacoce*
59. Ovules 5-7; vesicles 0; spur slightly elevated …… .. *C. brachypoda*

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea* P.Browne



Figure 2: *Cuphea* P.Browne



Figure 3: *Cuphea* P.Browne



Figure 4: *Cuphea* P.Browne



Figure 5: *Cuphea* P.Browne



Figure 6: *Cuphea* P.Browne



Figure 7: *Cuphea* P.Browne

REFERENCE

Barber, J.C., Ghebretinsae, A. & Graham, S. A. (2010). An expanded phylogeny of Cuphea (Lythraceae) and a North American monophyly. Plant Systematics and Evolution 289(1–2): 35–44. https://doi.org/10.1007/s00606-010-0329-7
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Cavalcanti, T.B., Graham, S.A. & Silva, M.C. (2001). Lythraceae. In: Rizzo, J.A. (coord.). Flora dos Estados de Goiás e Tocantins. Goiânia: Editora UFG. vol. 28. (Coleção Rizzo). 150p.
Duré, R. & Molero, J. 2000. Notas nomenclaturales, taxonómicas y corológicas sobre el género Cuphea (Lythraceae) en el paraguay. Collectanea Botanica (Barcelona) 25: 232.
Facco, M.G. 2019. Revisão taxonômica de *Cuphea* P. Browne seção *Trispermum* Koehne (Lythraceae) e filogeografia de *Cuphea ericoides* Cham. & Schltd. Tese de Doutorado. Universidade de Brasília. 334 pp.
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Koehne, E. (1903). Lythraceae. In: Engler, A. (ed.). Das Pflanzenreich. IV. 216. Heft 17. Wilhelm Engelmann, Leipzig. 326p.
Lourteig, A. (1964) Lythraceae Austroamericanae. Addenda et corrigenda. Sellowia 16: 119–162.
Lourteig, A. (1987). Lythraceae Austroamericanae. Addenda et corrigenda II. Sellowia 39: 5–48

Cuphea acicularis Koehne

Has as synonym
heterotypic *Cuphea emarginata* Koehne

DESCRIPTION

Root: type rootstock. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** acute; **form of the limb** linear; **margin of the leaf** revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse/truncate; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** white/lilac/pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 5–10 dm tall, stems erect, slender, from an enlarged woody semi-globose to elongated xylopodium, unbranched or sparsely branched basally with numerous short branches distally; indumentum strigose and rarely also hirsute, strigose trichomes malpighiaceous (40×), white, longitudinally oriented, hirsute trichomes glandular, sparse to abundant, colorless or light red, to 1 mm; internodes mostly 1/2–2/3 length of subtending leaves. Leaves sessile; opposite basally, 3- or 4-verticillate distally, ascending, crowded and imbricate, gradually or not at all reduced in the inflorescence, uni-veined; blades narrowly linear, (4–)10–30 × 0.7–1 mm, typically ca. 15 × 1 mm at midstem, thickly membranous, base acute, apex acute-acuminate, margin slightly revolute, frequently glandular hirsute, midvein flat to slightly raised abaxially, flanked by longitudinal furrows; blade surfaces minutely strigose, trichomes malpighiaceous; distal leaves of stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy simple racemes, typically three to ten flowers per raceme, often clustered near stem apex; pedicels 3–9 mm; bracteoles 1.5–2.2 × 0.5 mm, linear, apex often reaching or surpassing base of floral tube. Floral tubes 5–9 × 2 mm including rounded to sub-truncate base, base extended 0.5 mm beyond pedicel; outer surface rose-purple, minutely strigose, with or without sparse to moderately abundant glandular hirsute trichomes on veins; inner surface densely white villous above stamens, glabrous to lightly villous below, vesicles 0; sepals equal, 1 × 1 mm, broadly deltate, apex minutely apiculate; epicalyx segments oblong-ovate thickenings, free at margin; petals 6, equal, 2.5–3 × 0.7–1 mm, narrowly obovate to sublinear, white, lavender or rose; stamens included, antesepalous stamens reaching or slightly exceeding the sinus between sepals, antepetalous stamens shorter; filaments villous, rose-purple, anthers creme-colored; pollen subtriangular, tricolporate, non-syncolpate, pores not protruding, exine psilate, grain diam. 21 µm; ovary apex and style base pilose to villous; style included, sometimes reaching apex of sepals as fruit enlarges; stigma punctiform; nectary oblique, ca. 0.5 × 0.5, subtriangular in dorsal view, semi-cupping base of ovary. Seeds 3–5, 2 × 1.5–1.7 mm, suborbicular to oblong, margin rounded. Chromosome number: n = 18.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A.F.M. Glaziou, 21433, P (P00647186), Minas Gerais, **Typus**
T.B. Cavalcanti, 2191, MO, CEN (CEN00026998), Goiás
J.F. Pastore, 750, CEN (CEN00053845), Distrito Federal

FIELD IMAGES / ILLUSTRATIONS

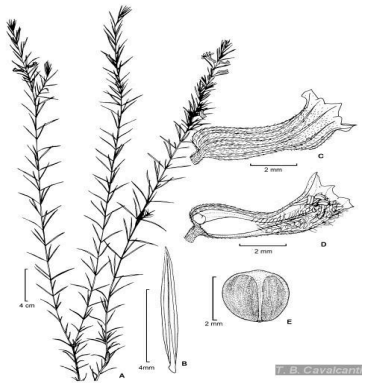


Figure 1: *Cuphea acicularis* Koehne



Figure 2: *Cuphea acicularis* Koehne

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea acinos A.St.-Hil.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** lanceolate/ovate; **margin of the leaf** sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** ascending; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs erect, 0.15–0.50 m, viscous; Lateral branches Upper lateral branches with smaller leaves than the central branches; indumentum consisting of short trichomes, and long purple glandular trichomes. Leaves decussate, spreading, sessile to subsessile, blades oval to oval-lanceolate, 6–50 mm compr., 3–23 mm larg., subcoriaceous, lateral ribs 4–6, apex acute to obtuse, slightly acuminate, margin subrevolute, escabra, base obtuse to subordinate; adaxial face with short trichomes and many long glandular trichomes; abaxial surface with abundant trichomes and rare glandular trichomes; petiole 2.5–7 mm length. Racemes; flowers solitary, infra–peciolar; pedicels 2.5–8 mm compr., persistent; bracteoles inserted in the apex of the pedicel, oval, apex acute, ciliate, with two glandular trichomes in the apex. Floral tube 5–7.5 mm long, including short, obtuse, slightly ascending spur of 1.5 mm long, externally with short, whitish trichomes and long and purple glandular trichomes, upper third facing upwards, internally glabrous, with hairiness accompanying only the two ribs of the dorsal region; sepals equal to each other, ca. 1 mm long, ciliated; corolla weakly zygomorphic, petals 6, deciduous, purple, oboval, the 4 ventral 3.6–4.5 mm long, 2–2.5 mm wide, the 2 dorsal 3.5–4.5 mm long, 1.6–2.5 mm wide; stamens 11 of which 5 opposite the sepals, fillets and anthers cream; infraestaminal vesicles absent; ovary glabrous, 2.1–3 x 1.5 mm, ovules 6-7; stylus glabrous, 1.8–2 mm long; dorsal disc, patent. Seeds 2–3 elliptic, 2-2.1 mm long, 1.5-2 mm wide, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

R.M. Harley, 20906, K, NY, CEPEC, Bahia
A. Saint-Hilaire, s.n., P, Minas Gerais, **Typus**
T.B. Cavalcanti, 2272, CEN (CEN00027026), Minas Gerais
R. Mello-Silva, 600, RB, 345409, (RB00208623), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea acinos* A.St.-Hil.



Figure 2: *Cuphea acinos* A.St.-Hil.

REFERENCE

Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.

Cuphea adenophylla T.B.Cavalc.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** elliptic/obovate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** glabrous; **form of the spur** truncate; **position of the spur** without spur; **petal** persistent on the fruit; **colour of the petal** lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrub 0 -5-1 m. Branches and branchlets leafless almost to their apices, puberulous. Leaves decussate, the blade narrowly obovate to elliptic, 6-12 x 2-5 mm, coriaceous, apex obtuse to acute, the margin plane but bearing several glandular trichomes, base acute to attenuate, the faces glabrous, the adaxial face with impressed nerves, the abaxial face with the central nerve prominent and the laterals inconspicuous: petiole 0,5-1 mm long. Flowering branches with bracts indistinct from the leaves; flowers alternate, not glandular, pedicel puberulous, 3,5-5 mm long, bracteoles variably positioned from middle to near apex of pedicel; hypanthium 7-9 mm long, green with violet nerves, glabrous externally, pilose internally on the nerves in the middle and basal portions; spur as long as wide, retuse, very conspicuous in fruit; petals 6, lilac, deciduous, obovate-oblong, c. 5 x 2,5 mm; stamens 11; ovary glabrous, c. 2 mm long, ovules 3, style glabrous, sometimes exserted, c. 4 mm long; disc dorsal, very reflexed. Throat of hypanthium expanding in fruit; seeds 2, obovate-elliptic, c. 2 x 1,9 mm, the margin thickened (retirado de Cavalcanti 1991).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2289, CEN (CEN00027042), MO, Minas Gerais
T.B. Cavalcanti, CFCR 10186, MBM, 141023 (MBM141023), SPF, 44651, (SPF00044651), RB, BHCB, 21230, Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS

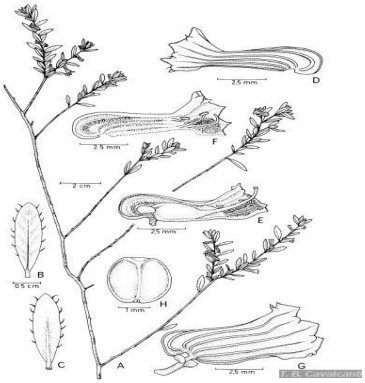


Figure 1: *Cuphea adenophylla* T.B.Cavalc.

REFERENCE

Cavalcanti, T.B. 1991. New species of Cuphea (Lythraceae) from Brazil. Kew Bulletin 46(2): 253-268.

Cavalcanti, T.B. et al. 2013. Lythraceae. In Martinelli, G. & Moraes, M.A. (orgs.) Livro Vermelho da Flora do Brasil. 1. ed. Rio de Janeiro: Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, p. 630-638.

Cuphea alatosperma T.B.Cavalc. & S.A.Graham

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** lanceolate/ovate/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** without spur; **position of the spur** without spur; **petal** absent on the fruit; **colour of the petal** lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** flask-shaped. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Perennial herbaceous subshrubs, ca. 40 cm tall, roots fibrous, stems lax, semi-decumbent, spreading, unbranched, red-brown, densely and minutely hispid to strigose, becoming more densely strigose toward stem apex, the trichomes white, eglandular, sharp-pointed; internodes equal to or longer than the subtending leaves. Leaves decussate, spreading to ascending, subsessile, petioles 1–2 mm; blades narrowly ovate-lanceolate to elliptic, 15–33 x 8–15 mm, membranous, base and apex acute, margin plane, slightly undulate; blade surfaces scabrous, the trichomes minute, white, strigose, midvein and secondary veins reddish brown; leaves scarcely to not at all reduced in size toward the stem apex. Inflorescences frondose, sparsely flowered, secund racemes; flowers interpetiolar, alternate; pedicels ca. 2 mm, persistent, attached subbasally; bracteoles suborbicular, leaf-like, 1–1.5 x 1.5–2 mm, at mid- point of pedicel. Floral tubes oriented at 45° to the stem or some erect and parallel to the stem, 8–8.5 x 2.5–3.5 mm at anthesis, base rounded, not spurred, neck contracted at 5–6 mm from the base, mouth ca. 3 mm diam. in lateral view, neither oblique nor flared, ampullaceous in fruit; outer surface of floral tube pale rose with darker veins, minutely white strigose-hispid as on stems, glandular setae infrequent on the veins; inner surface white, villous above the stamens, retrorsely villous along the veins below the 2 dorsal short stamens, the rest glabrous, vesicles 0; sepals equal, ca. 1 x 2 mm, broadly deltate, apex acute, margin not ciliated; epicalyx segments thickened calluses at the sinus of the sepals, shorter than the sepals, strigose, margin scarcely free; petals 6, subequal, 4–4.5 x ca. 0.5 mm, linear to linear-obovate, clear lilac, caducous, the 2 dorsal petals subtended by a thickened callus, callus free at the margin and extended briefly along the vein; stamens 11, included, 2 dorsalmost shortest and most deeply inserted, the others reaching the sinus of the sepals, densely white villous except the 3 ventral antesepalous stamens glabrous; style included, becoming subexserted in fruit, glabrous; ovary glabrous; ovules 16; nectariferous disc thick, horizontal, slightly cupping ovary, shallowly 3-lobed in dorsal view. Seeds oblong to obovate with winged margin conspicuously inflated; seed body ca. 2 x 1.5 mm, narrowly brown-marginate; outer inflated margin paler, undulate, encircling the seed body, irregularly interrupted, 0.1–0.4 mm wide.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Flooded Field (Várzea), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Amazonas, Rondônia)

HERBARIUM MATERIAL

E. Oliveira, 2909, UB, 17787, (UB0037160), IAN, Amazonas, **Typus**
G.T. Prance, 30114, MO, Amazonas
G. Pereira-Silva, 16677, CEN, 100304 (CEN00100304), Rondônia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea alatosperma* T.B.Cavalc. & S.A.Graham



Figure 2: *Cuphea alatosperma* T.B.Cavalc. & S.A.Graham

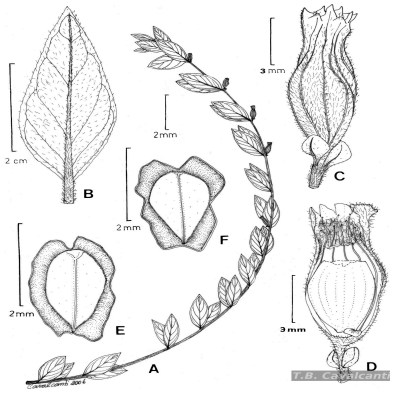


Figure 3: *Cuphea alatosperma* T.B.Cavalc. & S.A.Graham

REFERENCE

Cavalcanti, T.B. and Graham, S.A. 2008. New species, varieties, and combinations in *Cuphea* (Lythraceae) from Brazil. Novon 18: 298-314.

Cuphea anagalloidea A.St.-Hil.

This treatment is composed of the following taxa: *Cuphea anagalloidea*, .

Has as synonym
heterotypic *Cuphea anagalloidea* var. *dumosa* Koehne
heterotypic *Cuphea anagalloidea* var. *subsimplex* Koehne
heterotypic *Cuphea mimuloides* var. *guianensis* Koehne
heterotypic *Cuphea mimuloides* var. *hypericoides* (Klotzsch) Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** linear; **margin of the leaf** flat. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** purple/lilac; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** cupuliform. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Annual herbs up to 30 cm, branches thin, prostrate to decumbent, pubescent, tiny trichomes. Leaves opposite, sessile, blades 5-20 mm long, 0.5-1.5 mm wide, membranous to fleshy, linear, apex obtuse to retuse, margin flat, glandular, base acute. Raceme frondosous to bracteose. Flowers alternate; pedicel 4-9 mm, bracteoles 0; floral tube 4-5 mm, greenish, with vinaceous ribs, pubescent; spur short; petals 6, lilac to purple, deciduous in the fruit; dorsal stamens fertile, stamens free in the median portion of the tube; infraestaminal vesicles absent; stylus pilose; ovules ca. 35; nectariferous gland around the ovary. Seeds with a rounded margin.

COMMENTS

Plant that inhabits sandbanks, river banks, damp banks of lakes, moist grassy fields, paths. Used in aquariums

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Grassland, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Pará, Tocantins)
Northeast (Alagoas, Bahia, Piauí, Sergipe)
Central-west (Goiás, Mato Grosso)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

R.C. Mendonça, 1495, SPF, (SPF00078233), IBGE, CEN, Bahia
H.S. Irwin, 17556, NY, K, (K001066406), Goiás
G. Gardner, 1285, K, (K000532999), Alagoas
A.S. Ribeiro, 259, CEN, Sergipe
A. Saint-Hilaire, s.n., P, Minas Gerais, **Typus**
G. Pereira-Silva, 15377, CEN, Tocantins
L.C. Bernacci, 2340, UB, Mato Grosso
W.J. Burchell, 7783, K, (K001066411), NY, Goiás
J.A. Lombardi, 4806, CEN, BHCB, Minas Gerais
M.N. Silva, 177, NY, Pará
G. Gardner, 2581, K, P, Piauí

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cuphea anamariae T.B.Cavalc. & S.A.Graham

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** lanceolate/angustate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** truncate; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** pink/cream; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Perennial herbaceous subshrubs, ca. 35 cm tall, roots fibrous, stems erect, irregularly much branched, highly viscous and minutely glandular-hispid, the trichomes dense, translucent, erect; internodes mostly shorter than the subtending leaves. Leaves decussate, sessile; blades narrowly lanceolate tending to become falcate on distal branches, 10–35 x 3–10 mm, typically ca. 30 x 10 mm at midstem, distinctly smaller on the short secondary branches, chartaceous, base rounded, sometimes acute, apex acute, margin plane, younger leaves conspicuously ciliated by red glandular-viscous setae to 0.5 mm; blade surfaces minutely scabrous, appearing glabrous, with sparse red glandular setae as on the margin, prominent intramarginal vein visible on both surfaces; leaves gradually diminishing in size toward the apex of the stem. Inflorescences frondose, 6 terminal racemes; flowers interpetiolar, alternate; pedicels 8–9 mm, attached ventrally, persistent; bracteoles ovate, to 1 x 0.5 mm, persistent at the apex of the pedicel. Floral tubes ca. 9 x 2 mm at anthesis including a distinctly descending, truncated spur 1–1.5 mm long, the tube enlarged basally, narrowed at the neck, mouth blunt, slightly upturned; outer surface winecolored, sparsely glandular-hispid on the veins, mostly glabrous between veins, the trichomes 0.2–0.4 mm; inner surface pilose or pilose above the stamens and glabrous below them, vesicles 0; sepals equal, ca. 1.1 x 1 mm, deltate; epicalyx segments rounded thickenings, shorter than the sepals, ca. 0.5 mm, bearing 1 to a few short setae; petals 6, equal, ca. 4 x 2 mm, oblong-obovate, clear rose-colored, caducous; stamens 11, included, villous, 2 dorsalmost shortest and most deeply inserted, the others reaching the margin of the floral tube; pollen oval-triangular, tricolporate, syncolpate, pores strongly protruding, exine striate, grain diam. ca. 25 mm; style villous basally, included at anthesis; ovary glabrous; ovules 3; nectariferous disc ca. 0.8 x 0.6 mm, oblique, triangular in dorsal view. Seeds suborbicular to oblong, 2.1–2.2 x ca. 2 mm, thick, margin rounded, not distinctively rolled, thinned, or pale.

Life Form
Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

V.C. Souza, 22021, CEN (CEN00034009), ESA, 60020, Minas Gerais, **Typus**
G. Hatschbach, 66217, CEN (CEN00033921), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS

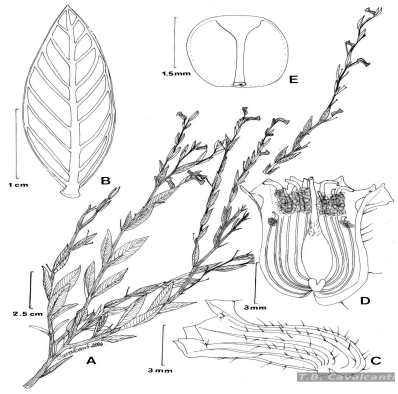


Figure 1: *Cuphea anamariae* T.B.Cavalc. & S.A.Graham

REFERENCE

Cavalcanti, T. B. and S. A. Graham. 2008. New species, varieties, and combinations in *Cuphea* (Lythraceae) from Brazil. Novon 18: 298-314.

Cuphea annulata Koehne

Has as synonym
heterotypic *Cuphea andersonii* S.A.Graham

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** linear/lanceolate/ovate/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** glabrous/ hirtellous; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Perennial subshrubs to shrubs, 0.5–4.0 m; stems erect or straggling, unbranched to much-branched; indumentum typically absent, stems infrequently puberulous or minutely eglandular hirsute with occasional longer, glandular-hirsute trichomes ca. 1 mm; internodes mostly half or less as long as subtending leaves. Leaves opposite, ascending, crowded along stem; petioles 1–2 mm, approx. cylindrical; blades lanceolate, lanceolate-linear, oblong or ovate, 10–75 × 5–25 mm, coriaceous, base acute or briefly attenuate, apex acute, margin plane; blade surfaces green, adaxially glabrous, shining, abaxially finely scabrous, margin smooth or sparsely glandular-setose on young leaves, secondary venation frequently obscure; leaves very gradually or not at all reduced in size in inflorescence. Inflorescences indistinct terminal simple leafy racemes, often sparsely flowered; flowers solitary, interpetiolar or on much reduced axillary branchlets; pedicels 1.5–3.5 mm; bracteoles narrowly ovate-lanceolate, ca.1 mm. Floral tubes 18–26 × 3–5 mm including a rounded, descending spur 1–2 mm, floral tubes dorsally straight or slightly convex, neck slightly contracted in fruit, mouth blunt to slightly oblique; outer surface variable in color and indument, red-orange with yellow apex, yellow with red apex, red with green apex, glabrous, infrequently puberulous, veins occasionally glandular-hispid; inner surface sparsely villous above stamens, glabrous between stamens and ovary, surrounded at ovary level by area of flattened hyaline trichomes ca. 1 mm; sepals equal, 0.5–0.7 × 1 mm, deltate, margin not ciliate; epicalyx segments 1 mm, equal to or exceeding sepals, cylindrical to slightly flattened, often with a terminal seta; petals 0 or 6, red, equal or 2 dorsals slightly larger, 0.7–1 × 0.4–0.7 mm, oblong or obovate, scarcely exserted; stamens 11, the 2 short dorsalmost included, other 9 long-exserted, filaments glabrous or lightly villous, red, anthers red; pollen diporate, grain length 23 µm; ovary glabrous; style glabrous, exserted to 8 mm; ovules 4–9; disc ca. 0.5–0.7 × 1.5 mm, concave around base of ovary. Seeds 2.5 × 3 mm, brown, bilateral, suborbicular, apex flattened to retuse, margin narrow, rounded.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Riverine Forest and/or Gallery Forest, Amazonian Savanna

Geographic Distribution
Confirmed ocurrences
North (Amazonas, Pará, Rondônia)

HERBARIUM MATERIAL

A.S.L. da Silva, 1791, INPA, NY, 2108178, (NY02108178), Pará
G. Martinelli, 6896, INPA, Pará
G. Pereira-Silva, 16188, CEN, Rondônia
G.T. Prance, 21044, INPA, NY, (NY02108184), Amazonas
C.F.P. Martius, 3164, M, **Typus**
G.T. Prance, 29771, MO, K (K001073972), SP, Amazonas

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea annulata* Koehne



Figure 2: *Cuphea annulata* Koehne

REFERENCE

Cavalcanti, T.B., Facco, M.G. & Brauner, L.M. (2016). Flora das cangas da Serra dos Carajás, Pará, Brasil: Lythraceae. Rodriguésia 67(5): 1411–1415. https://doi.org/10.1590/2175-7860201667539
Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea antisyphilitica Kunth

This treatment is composed of the following taxa: *Cuphea antisyphilitica*, .

Has as synonym
heterotypic *Cuphea acutissima* var. *radula* A.St.-Hil.
heterotypic *Cuphea acutissima* A.St.-Hil.
heterotypic *Cuphea antisyphilitica* var. *acutifolia* Benth.
heterotypic *Cuphea patula* A.St.-Hil.
heterotypic *Cuphea radula* (A.St.-Hil.) Koehne
heterotypic *Cuphea ramulosa* var. *hirta* Hoffmansegg ex Koehne
heterotypic *Cuphea ramulosa* var. *virgata* Hoffmansegg ex Koehne
heterotypic *Cuphea ramulosa* Mart. ex Koehne
Cuphea antisyphilitica Kunth var. *antisyphilitica*

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ obtuse; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** flat/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** cylindric. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, erect, rarely decumbent, 0.3-1 m tall, without xylopodium, viscous; branches hirsute, with many long and thin trichomes, intermixed with short, rigid and appressed trichomes. Leaves 6-21x3-12.3 mm, sessile to subsessile, oblong to oblong-lanceolate, rarely lanceolate to ovate, suberect, sometimes slightly reflexed, apex acute, margin flat to slightly subrevolute, base obtuse to slightly cordate, strigose, broquidodromous; petiole 0.2-0.8 mm long. Racemes compound, frondose; pedicel 1.2-2.2 mm long, interpetiolar, caducous; bracteoles ovate, in the final third of the pedicel; floral tube 5.3-6.8 mm long, ventrally green, dorsally vinaceous, outer surface hirsute, long glandular trichomes, sometimes vinaceous, intermixed with trichomes that are attached to the tube, inner surface villous above the stamens and sparse villous below them; spur obtuse, quite deflexed, rare, slightly saccate; petals 6, ovate, purple, deciduous on fruiting, the dorsal 2-3,8 mm long, the ventral 2,3-3,8 mm long; stamens free in the upper third of the floral tube, infra-staminal vesicles absent; ovary glabrous, stylus sparse-villous, ovule 3; dorsal nectariferous gland deflexed, convex in the dorsal portion and concave in the ventral portion. Fruit tubular, seeds 3, 1.6-1.8x1.4-1.8 mm, elliptic, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Grassland, Cerrado (lato sensu), Amazonian Savanna, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)

Northeast (Bahia, Ceará, Maranhão, Piauí, Sergipe)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

H.S. Irwin, 8427a, P, NY, Distrito Federal
H.S. Irwin, 6539, UB, Mato Grosso
T.B. Cavalcanti, 447, CEN, Goiás
C.A. Cid Ferreira, 4637, MO, Rondônia
A. Saint-Hilaire, s.n., P, Rio de Janeiro
G.T. Prance, 4243, INPA, Roraima
J.M. Pires, 1012, IAN, P, Amazonas
A. Sales, 7, CEN (CEN00065323), Sergipe
G. Gardner, 2582, NY, K, F, P, Piauí
A.M. Silva, 862, P, CEPEC, Bahia
Egler, 45976, NY, P, Amapá
R.M. Harley, 16986, RB, 197027, (RB00208477), Bahia
A. Fernandes, s.n., EAC, 0009783, Ceará
A.M. Assis, 294, CEN (CEN00098985), Espírito Santo
A. Allem, 221, CEN (CEN00000221), Mato Grosso do Sul
T.B. Cavalcanti, 3902, CEN, Minas Gerais
T.B. Cavalcanti, 2421, CEN, Bahia
F.W. von Humboldt & A.J.A. Bonpland, s.n., P (P00679424), **Typus**
R. Spruce, 380, P (P01901588), K, Pará

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea antisyphilitica* Kunth



Figure 2: *Cuphea antisyphilitica* Kunth

REFERENCE

Lourteig, A. 1987. Lythraceae Austroamericanae. Addenda et corrigenda II. Sellowia 39: 5-48.

Cuphea arenarioides A.St.-Hil.

This treatment is composed of the following taxa: *Cuphea arenarioides*, .

Has as synonym
heterotypic *Cuphea arenarioides* var. *muscosa* A.St.-Hil.
heterotypic *Cuphea arenarioides* var. *myriophylloides* A.St.-Hil.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** whorled; **base** acute; **form of the limb** linear; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** cupuliform. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Herbs, annual, procumbent, 5-15cm, delicate, branches pubescent with translucent trichomes mixed with inconspicuous golden glands. Leaves (3-)4-7-verticillate, sessile; blades 4-9x0.5-1 mm, linear, uni-nerved, with inconspicuous golden glands and sometimes mixed with sparse simple trichomes, apex obtuse. Leafy racemes, flowers alternate, sparse; pedicel 10-17mm, bi-bracteolate; floral tube 4,5-6mm, becoming rounded in the fruit and with narrow fauce, greenish, slightly purple in the dorsal to apical region, veins densely pubescent, between the veins with golden glands; spur short, horizontal; petals 6, rose to pink, caducous in the fruit; anthers not reaching the margin of the tube; infrastaminal vesicles absent; stylus glabrous; ovules 50-60; nectariferous gland cupuliform. Seeds with rounded margins.

COMMENTS

Rare

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Cerrado (lato sensu), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)
Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

R.G. Chacon, 572, CEN (CEN00075407), Minas Gerais
Riedel, 1598, K,  (K000532978), São Paulo
G. Hashimoto, 565, SP, CEN (CEN00027525), São Paulo

G. Pedralli, s.n., CEN (CEN00053735), Minas Gerais
De Haas, 138, P, 3381681 (P05167625), Goiás
M.C.C. Ferreira, 200, UEC, SPF, (SPF00213135), São Paulo
F.R. Mendonça, 3604, US, 3381681, (US03039239), Minas Gerais
A. Saint-Hilaire, s.n., P (P01901561), Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea arenarioides* A.St.-Hil.

REFERENCE

Cavalcanti, T.B. & Graham, S.A. (2002) Lythraceae. In: Wanderley, M.G.L.; Shepherd, G.J.; Giulietti, A.M.; Melhem, T.S.; Bittrich, V.; Kameyama, C. (eds.). Flora Fanerogâmica do Estado de São Paulo. Vol. 2. São Paulo: Hucitec. p. 163-180.

Cuphea bahiensis (Lourteig) T.B.Cavalc. & S.A.Graham

Has as synonym
basionym *Cuphea sessilifolia* subsp. *bahiensis* Lourteig

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** cordate or subcordate; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** flat/revolute. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse/galeate; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** rectangular/tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs 40-100 cm tall; stems decumbent, internodes 0.2-1- (3) cm long, pubescent and glandular, simple trichomes <0.5 mm long, erect or curved, glandular trichomes ca. 1 mm long; brachyblasts absent. Leaves opposite, rare 3-verticilate, chartaceous, sessile, blades 4-16 x 2-9 mm, narrow-oval to wide-oval, rare oval-oblong, apex acute, base cordate, margin flat to subrevolute, strigose and glandular-ciliate, strigose ib both leaf surface, simple, appressed trichomes, glandular trichomes concentrated on the ribs of the abaxial face, brochidodromous. Racemes 10-20 cm long, simple to compound, bracteose, lax, destacados; bracts 2-7 x 1.2-4 mm, pairs subequal, narrow-oval to oval; flowers alternate, rare opposite, pedicels 3-9 mm long, interpeciolar; bracteoles 0.6-0.7 x 0.7-0.8 mm, wide-oval; floral tubes 7-12 mm long; spur 1.5-2 mm long, obtuse to galeate, deflexed; outer surface purple on the dorsal and greenish ventrally, pubescent, short-glandular, 0.5-1 mm long; inner surface villous in the region of the stamens, dense-pilose around the ovary, pilose in the rest of the floral tube; petals 6, pink to lilac, subequal, the 2 dorsal 5-7.8 x 3.3-5.7 mm, obovate, the 4 ventrals 5-8 x 3-5 mm, obovate; stamens 11, villous, sometimes 3 glabrous episepalous, the 2 glabrous dorsal stamens, rarely sparsely hairy, filaments free in the upper third of the floral tube, the 5 epipetalous stamens, the 4 epipetalous subexserted; pistil 5.8-8 mm long, ovary 2-3 mm long, glabrous to sparsely pilose in the dorsal line, stylus 3.8-5 mm long, glabrous to sparsely pilose in the base, ovules 3; nectariferous gland 1-1.3 x 1 mm, deflexed. Seeds 2-3, 2-2.5 x 1.8-2.3 mm, broad-elliptical to suborbicular, apex obtuse, base obtuse, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

M.G.L. Wanderley, s.n., CEN, 27359 (CEN00027359), Bahia
G. Hatschbach, 39648, P (P01901822), MBM, Bahia, **Typus**

T.B. Cavalcanti, 2480, CEN (CEN00034171), MO, Bahia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea bahiensis* (Lourteig) T.B.Cavalc. & S.A.Graham

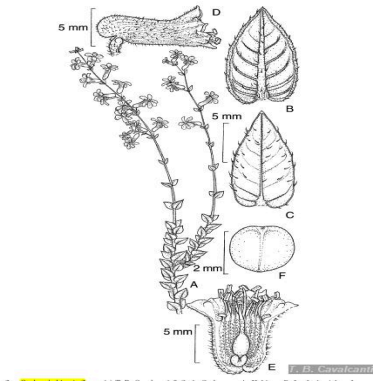


Figure 2: *Cuphea bahiensis* (Lourteig) T.B.Cavalc. & S.A.Graham



Figure 3: *Cuphea bahiensis* (Lourteig) T.B.Cavalc. & S.A.Graham



Figure 4: *Cuphea bahiensis* (Lourteig) T.B.Cavalc. & S.A.Graham



Figure 5: *Cuphea bahiensis* (Lourteig) T.B.Cavalc. & S.A.Graham



Figure 6: *Cuphea bahiensis* (Lourteig) T.B.Cavalc. & S.A.Graham



Figure 7: *Cuphea bahiensis* (Lourteig) T.B.Cavalc. & S.A.Graham

REFERENCE

Cavalcanti, T.B. & Graham, S.A. 2005. New taxa in Lythraceae from Latin America. Novon, v. 15, n. 1, p. 59-68.

Cuphea blackii Lourteig

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cuneate; **form of the limb** oblong/elliptic; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent/ malpighiaceous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** purple/ pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs 30–100 cm; stems erect, slender, from an erect to decumbent base with abundant fibrous roots, dichotomously branched; internodes half as long to longer than subtending leaves, much shorter on small branches; stem indumentum exclusively bifid-strigose, trichomes abundant, some appressed to the stem, others with semi-erect arms. Leaves spreading, ascending, abruptly reduced in size in the inflorescence; petioles 0.5–2.0 mm long; blades elliptic to oblong, 13–30 mm long, 2.0–8.5 mm wide, mostly ca. 20–25 mm long, 4–5 mm wide, membranaceous, base cuneate, apex acute, margin plane or narrowly incurved, ciliate in the inflorescence; surfaces dark green, paler abaxially, finely bifid-strigose adaxially, midvein and 3–5 sets of secondary veins visible, brown-red. Racemes distinct, terminal, bracteate, dichotomously branched or simple, 5–10 cm long; flowers paired at nodes, partially obscured by bracts, pedicels to 1 mm long, broadened at base, one slightly more distal than the other, abundantly bifid-strigose; bracteoles much reduced, obscured by indumentum. Floral tube, including a horizontal to subdescending, poorly developed spur, to 0.3 mm long, 2.5-4.0 mm long, 1.5 mm wide, ampullaceous in fruit, neck at 1/2 the length of floral tube, remainingwide in fruit, mouth flaring, 1.7–2.0 mm wide, slightly oblique; outer surface deep red-purple, abundantly bifid-strigose, sometimes also with thin erect trichomes to 0.5 mm long; inner surface lightly villous distal to stamen insertion, glabrous proximally; sepals equal, 0.5 mm long, 0.6 mm wide, shallowly deltate, apex apiculate; epicalyx segments thickened cylindric lobes, shorter than sepals, frequently with few long, thin trichomes. Petals 6, medium purple to pink with darker midvein, subequal, the 2 dorsals ca. 2 mm long, 0.8 mm wide, obovate, smaller than the ventrals, ca. 2.3 mm long, 0.9 mm wide, narrowly obovate. Stamens: 2 short dorsalmost inserted slightly deeper, other 9 inserted in a horizontal line at ca. 1/2 the length of tube, deeply included, none reaching sinuses of sepals; filaments very short, ca. 0.5 mm long, densely white villous, filaments and anthers pale; pollen oval-triangular, tricolporate, non-syncolpate, pores slightly protruding, exine low parallel rugulate, thickened at poles, grain diam 15 mm. Ovary glabrous; style glabrous, included; ovules 3–6. Disc horizontal to deflexed, sub-globose, 0.3–0.4 mm long, 0.3 mm wide, dark-red. Seeds 1.5–1.7 mm long, 1.4–1.5 mm wide, sub-circular to obovate, apex rounded, base obtuse to retuse, margin thinned, narrow, sub-marginal ridge present (Graham 2019).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Flooded Field (Várzea), Grassland

Geographic Distribution
Confirmed ocurrences
North (Amapá)

HERBARIUM MATERIAL

J.M. Pires, 48869, NY, IAN, P, RB, 145970, (RB00208794), Amapá
G.A. Black, 49-8243, UB, IAN, P (P01901552), Amapá, **Typus**

REFERENCE

Lourteig, A. 1986. Revision de dos secciones del genero Cuphea P. Browne (Lythraceae). Phytologia 60(1): 17-43.

Graham, S.A. 2019. A Revision of *Cuphea* Section *Amazoniana* s. s. (Lythraceae). Systematic Botany 44(1): 146-183. https://doi.org/10.1600/036364419X697994

Cuphea bolivariensis Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cuneate; **form of the limb** linear; **margin of the leaf** sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** malpighiaceous; **form of the spur** obtuse/without spur; **position of the spur** horizontal/without spur; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** unknown.

ADDITIONAL DESCRIPTION

Subshrubs to 30 cm; stems several from a woody primary root with many secondary fibrous roots, semi-decumbent, distally ascending, unbranched or sparsely branched; internodes less than half as long as subtending leaves; stem indumentum exclusively bifid-strigose, trichomes thin, appressed, very short, ca. 0.2 mm long. Leaves spreading and ascending, decussate proximally on the stem, irregularly arranged distally, not strictly distichous, similar in length along the vegetative stem, very gradually reduced in size in the inflorescence, crowded and imbricate; petioles 0.1–1.5 mm long, dark when dry; blades linear, appearing uni-nerved, 6.5–12.0 mm long, 1–2 mm wide, coriaceous, not rigid, base cuneate, apex obtuse, margin slightly incurved; surfaces adaxially green, glabrous, abaxially paler, finely bifid-strigose, midvein brown, prominent abaxially, secondary veins not clearly visible. Racemes indistinct, leafy, imple; flowers alternate, interpetiolar, crowded distally on the stem, partially obscured by leaves; pedicels 2.5 mm long; bracteoles linear, to 0.3 mm long. Floral tube, including a poorly developed spur to 0.2 mm long or non-spurred, 4 mm long, 1.9 mm wide, neck contracted at 1/2 length of floral tube, mouth flaring, 2.5–3.5 mm wide; outer surface color unknown, indumentum finely bifid-strigose as on stems, appearing nearly glabrous; inner surface densely villous distal to stamen insertion, the trichomes white or light purple, lightly pilose proximally; sepals equal, 1.2 mm long, 0.8–1.0 mm wide, deltate, with a central dark stripe, apex acute; epicalyx segments thickened lobes, 0.3 mm long, much shorter than the sepals, without setae. Petals 6, pink or light purple, oval to oblong, subequal, 2 dorsals 4.0 mm long, 2.4 mm wide, 4 ventrals 3.8–4.0 mm long, 2.0–2.2 mm wide. Stamens: 2 short dorsalmost deepest, other 9 inserted at ca. 1/2 length of the tube, all included, position with respect to floral tube margin unknown; filaments and anther color unknown; pollen oval-triangular, tricolporate, non-syncolpate, pores slightly protruding, exine rugulate, rugulae low, parallel, poles thickened and coarsely rugulate, grain diam 15–17mm. Ovary lightly pilose; style lightly pilose at base, included to exserted and well surpassing sepals; ovules 3. Disc horizontal to deflexed, sub-globose, ca. 0.3 mm long and wide. Seeds unknown (Graham 2019).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Amazonian Savanna

Geographic Distribution
Confirmed ocurrences
North (Roraima)

HERBARIUM MATERIAL

T.W. Henkel, 5694, P, NY, Roraima

A.L. Bernardi, 1415, MER, NY, 386500, (NY00386500), **Typus**

REFERENCE

Lourteig, A. (1986). Revisión de dos secciones del género Cuphea P. Browne (Lythraceae). Phytologia 60(1): 17–55.
Graham, S. A. (2019). A Revision of Cuphea section Amazoniana s. s. (Lythraceae). Systematic Botany 44(1): 146–183. https://doi.org/10.1600/036364419X697994

Cuphea brachiata Mart. ex Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** cordate or subcordate/obtuse; **form of the limb** ovate/elliptic; **margin of the leaf** flat/revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** yellow; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs 20-80 cm tall; stems erect to decumbent, internodes 0.5-1.5 cm long, indument pubescent and sparse-glandular, simple trichomes <0.5 mm long, curved to erect, short glandular trichomes, <0.5 mm long; brachyblasts absent. Leaves opposite, rare 3-5-verticillate, membranaceous to coriaceous, sessile to petiolate, petioles ca. 0.5 mm long, blades 3-17 x 1-6 mm, narrow-ovate to narrow-elliptic, apex acute, base obtuse to subcordate, margin flat to revolute, strigose on both leaf surfaces, appressed simple trichomes, mixed with sparse glandular trichomes 0.6-1 mm long, hyphodromous to brochidodromous. Racemes frondose to frondose-bracteose, 15-25 cm long, compound, lax, not detached; bracts leaf-like, pairs subequal; flowers alternate, pedicels 1.5-2.6 mm long, interpetiolar; bracteoles 0.9-1 x 0.5-0.6 mm long, ovate to elliptic; floral tubes 5-7.2 mm long; spur ca. 0.8 mm long, obtuse, deflexed; outer surface greenish-yellow, pubescent and short-glandular; inner surface villous in the region of the stamens, pilose in the lower third of the floral tube; petals 6, yellow, subequal, sometimes the dorsal petals slightly smaller than the ventral ones; stamens 11, the 2 villous lateral episepals, the other hairy to glabrescent ones, the 2 dorsal glabrous, filaments free in the upper third of the floral tube; pistil ca. 4 mm long, ovary ca. 2 mm long, glabrous, stylus ca. 2 mm long, sparsely pilose at the base, ovules 3- (5); nectariferous gland ca. 0.5 x 0.6 mm, deflexed. Seeds 2-3, ca. 2.1x1.9 mm, obovate, apex obtuse to slightly retuse, base slightly acute, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Southeast (Minas Gerais)
Possible ocurrences
Northeast (Sergipe)

HERBARIUM MATERIAL

T.B. Cavalcanti, 271, HUFU, NY, CEN (CEN00026786), Minas Gerais
C.F.P. Martius, s.n., P, M, Bahia, **Typus**
R.M. Harley, 27858, SPF, CEN (CEN00027372), Bahia
N. Roque, CFCR 14967, SPF, ESA, CEN, Bahia

T.B. Cavalcanti, 3903, CEN (CEN00088647), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea brachiata* Mart. ex Koehne



Figure 2: *Cuphea brachiata* Mart. ex Koehne



Figure 3: *Cuphea brachiata* Mart. ex Koehne



Figure 4: *Cuphea brachiata* Mart. ex Koehne

Cuphea brachypoda T.B.Cavalc.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ obtuse; **form of the limb** linear/lanceolate/ovate; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 1–6 dm tall, purple-brown or green when dried, stems semi-decumbent to weakly erect, spreading, usually three or more from an elongated xylopodium, unbranched or branched near base and in the inflorescence, or branching irregular; indumentum strigose and hirsute, strigose trichomes minute, <1 mm, sparse to abundant, white, sharp-pointed, eglandular, antrorsely oriented to erect, hirsute trichomes sparse to abundant, colorless or reddish, erect to lax, mostly long, conspicuous, 0.5–3 mm, plants occasionally only strigose; internodes longer to shorter than subtending leaves. Leaves sessile or subsessile with petioles 0–1.5 mm at midstem, opposite, spreading to semi-ascending, pinnately-veined; blades lanceolate-ovate, ovate-elliptic or ovate, 8–25 × 3–14 mm and typically ca. 20 × 10 mm at midstem, thickly membranous to chartaceous, base rounded to subcordate, apex acute, margin plane to slightly revolute; blade adaxial surface shining, sometimes nearly glabrous, dark green, glandular hirsute, trichomes few to abundant, colorless to reddish, 2–3 mm, abaxial leaf surface paler, hirsute and minutely scabrous; distal leaves of the stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy simple racemes, rarely compound with leafy branchlets ca 2 cm; flowers interpetiolar, alternate; pedicels 7–20 mm, persistent and conspicuous; bracteoles 0.5–0.75 × 0.4 mm, ovate. Floral tubes (6–)8–10 × ca. 2 mm including rounded horizontal to subdescending 1–1.5 mm spur; outer surface deep rose-purple dorsally and on veins, pale ventrally, densely hispid and hirsute as on stems; inner surface densely villous above stamens, lightly villous to glabrous below, vesicles 0; sepals equal, 1 × 1.5 mm, deltate, apex acute to acuminate; epicalyx segments thickened, strigose, sometimes hirsute; petals subequal, 4.5–7 × 1.5–3.5 mm, two dorsal petals slightly larger and wider, all petals oblong-linear to obovate, deep rose-purple, infrequently paler with darker purple vein; stamens included, antesepalous stamens reaching sinus between sepals, antepetalous stamens shorter, filaments of the two dorsalmost long stamens densely villous, the others villous to glabrous, anthers white; pollen oblate, subtriangular, tricolporate, non-syncolpate, pores not protruding, exine psilate, grain diam. 15 µm; ovary glabrous; style glabrous, included; stigma small-capitate; nectary erect to oblique, 1 × 1–1.5 mm, triangular in dorsal view, semi-cupping base of ovary. Seeds 5–7, 2–2.5 × 2–2.5 mm, orbicular, margin rounded, slightly thickened, brown.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

R.M. Harley, 27818, SPF, CEN, Bahia
H.S. Irwin, 23319, UB, NY, Minas Gerais
R.M. Harley, 26536, NY, P (P00552493), P (P00552492), CEPEC, MO, K, SPF, Bahia, **Typus**
T.B. Cavalcanti, 2337, MO, CEN (CEN00027090), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS

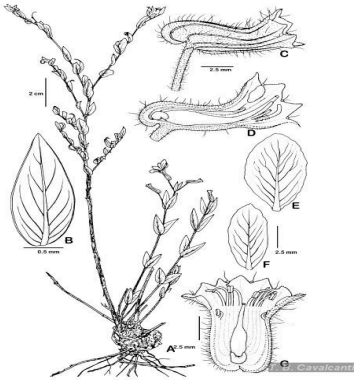


Figure 1: *Cuphea brachypoda* T.B.Cavalc.

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cuphea calophylla Cham. & Schltdl.

This treatment is composed of the following taxa: *Cuphea calophylla*, *Cuphea calophylla var. calophylla*, *Cuphea calophylla var. fuscinervis*, *Cuphea calophylla var. mesostemon*.

Has as synonym
basionym *Parsonsia calophylla* (Cham. et Schltdl) Standl.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/obtuse/acute; **form of the limb** ovate/elliptic; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose/pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** white/purple/pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/horizontal. **Fruit: form** flask-shaped. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Herbs or subshrubs, 15-80 cm; stems from fibrous roots, erect to lax and spreading, densely to sparsely branched, branches often of varying lengths, occasionally exceeding the main stem; internodes equal to or longer than subtending leaves, or internodes and leaves together uniformly graduated in size, diminishing distally; indumentum of two types: glandular-hirsute/hispid with trichomes sparse to abundant, white to dark red, 0.5–2.5 mm long; and puberulous with trichomes abundant, white or translucent, non-glandular, erect to falcate, uniformly distributed or concentrated in a longitudinal line along on one side of the internode. Leaves opposite, spreading, ascending, or imbricate distally on the stem, gradually or abruptly reduced in size in the inflorescence; petioles 0–3 mm long; blades broadly to narrowly ovate, elliptic, oblong, or lanceolate, 6–50 mm long, 2–25 mm wide, membranaceous, base acute to obtuse, rounded, subcordate or cordate, apex acute to short-acuminate, margin plane; surfaces green, adaxially minutely scabrous, sometimes with scattered setae to 1 mm long, abaxially glabrous to coarsely scabrous with sparse setae primarily concentrated on the veins, veins green, light brown or prominently reddish brown, margin short-ciliate or glabrous. Racemes distinct, terminal, leafy, simple or compound, flowers few to many and crowded, held ± erect, one solitary, interpetiolar, 1–3 additional flowers on axillary branchlets; pedicels 1.5–4 (–6) mm long, usually persistent, topped by persistent bracteoles; bracteoles lanceolate, 0.5–0.7 mm long. Floral tube, including a non-spurred rounded base, 4–9 mm long, 1–2.5 mm wide, dorsally horizontal, neck and mouth not strongly contracted in fruit; outer surface deep rose-purple dorsally and distally, less often entirely green or green ventrally with rose-purple veins dorsally, finely hirsute and usually also short-hispid, trichomes on the veins white or rose-purple, glandular-viscous, to 0.5 mm long; inner surface lightly villous distal to stamen insertion, glabrous proximally, vesicles 0; sepals equal, 0.4–0.5 mm long, 0.7–1 mm wide, deltate; epicalyx segments callus or small lobes at sinuses of sepals, shorter than sepals, with or without setae. Petals 6, pale to deep purple, sometimes with darker purple midvein, subequal, 3–6 mm long, 1–3 mm wide, narrowly subspatulate to obovate, elliptic or sublinear. Stamens 11: the 2 short dorsalmost inserted deepest, other 9 approx. uniseriate, alternately slightly unequal in length, all included; filaments cream-colored, 2 long dorsalmost villous to densely villous, other 9 lightly villous to glabrous, anthers cream-colored, not reaching sinuses of sepals; pollen tricolporate, non-syncolpate, pores not protruding, exine finely rugulate, grain diam ca 28 µm. Ovary glabrous, style glabrous or lightly pilose, included to ultimately exserted 1–1.5 mm; ovules 4–6 (–11); disc 0.4–1 mm long, 0.1–0.4 mm wide, oblong to suborbicular, keeled or ca. trilobed in dorsal view, reflexed over dorsal side of ovary, less often erect. Seeds 1.6–1.9 mm long, 1.5–1.8 mm wide, brown, subcircular, circular, or oblong, apex obtuse to rounded, margin rounded, thick.

COMMENTS

Key to the varieties of Cuphea calophylla
1. Stems erect, branched; proximal leaves mostly widest at the middle.
2. Leaves spreading, ovate, elliptic or lanceolate, 10–50 mm long, 7–25 mm wide, base acute to rounded, abaxial venation green or light brown; racemes distinct, typically compound, occasionally simple ..... *C. calophylla* var. *calophylla*
2. Leaves imbricate distally on the stem, oblong to ovate or narrowly elliptic, 6–25 mm long, 2–17 mm wide, base on proximal leaves rounded to obtuse, abaxial venation prominently reddish brown; racemes indistinct, simple ..... *C. calophylla* var. *fuscinervis*

1. Stems semi-decumbent, sparsely branched or unbranched; proximal leaves widest below the middle, broadly ovate to ovate, ovate-oblong distally on the stem, 15–40 mm long, 10–20 mm wide, base on proximal leaves cordate to subcordate, abaxial venation green or light brown; racemes distinct, simple or compound ..... *C. calophylla* var. *mesostemon*

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types
Anthropic area, Grassland, Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

IDENTIFICATION KEY

Key to the Varieties of *Cuphea calophylla* (retirada de Graham 2017).
1. Stems erect, branched; proximal leaves mostly widest at the middle.
2. Leaves spreading, ovate, elliptic or lanceolate, 10–50mmlong, 7–25mmwide, base acute to rounded, abaxial venation green or light brown; racemes distinct, typically compound, occasionally simple. [Brazil,Central America to S. Mexico] ..... ***C. calophylla* var. *calophylla***
2. Leaves imbricate distally on the stem, oblong to ovate or narrowly elliptic, 6–25mmlong, 2–17mmwide, base on proximal leaves rounded to obtuse, abaxial venation prominently reddish brown; racemes indistinct, simple. [Brazil, Minas Gerais] ..... ***C. calophylla* var. *fuscinervis***
1. Stems semi-decumbent, sparsely branched or unbranched; proximal leaves widest below the middle, broadly ovate to ovate, ovate-oblong distally on the stem, 15–40 mm long, 10–20 mm wide, base on proximal leaves cordate to subcordate, abaxial venation green or light brown; racemes distinct, simple or compound. [Argentina, Paraguay, Bolivia, Brazil] ..... ***C. calophylla* var. *mesostemon***

HERBARIUM MATERIAL

H.K. Beyrich, s.n., K, (K000532975), JE, Rio de Janeiro, **Typus**

REFERENCE

Graham, S.A. (2017). A Revision of Cuphea Section Brachyandra s. s. (Lythraceae). Systematic Botany 42(4): 1–61. https://doi.org/10.1600/036364417X696528

Cuphea calophylla Cham. & Schltdl. var. *calophylla*

This treatment is composed of the following taxa: *Cuphea calophylla var. calophylla*, .

Has as synonym
homotype *Cuphea calophylla* Cham. & Schltdl. subsp. *calophylla*
heterotypic *Cuphea anisophylla* Hemsl.
heterotypic *Cuphea calophylla var. calophylla* f. *breuningii* Koehne
heterotypic *Cuphea calophylla var. calophylla* f. *breuningii* Koehne
heterotypic *Cuphea calophylla var. calophylla* f. *plumbaginea* (Mart.) Koehne
heterotypic *Cuphea plumbaginea* Mart.
heterotypic *Cuphea plumbaginea* Mart.
Cuphea calophylla var. *orthodisca* (Koehne) Koehne
Cuphea microstyla Koehne
Cuphea orthodisca Koehne

DESCRIPTION

Herbs or subshrubs, 15–80 cm; stems mostly erect, branched, internodes shorter to longer than leaves or internodes and leaves together graduated in size distally from stem base or stem mid-level to apex; leaves not crowded at the apex of the stem, spreading, ovate, elliptic, or lanceolate, 10–50 mm long, 7–25 mm wide, base acute to rounded, proximal leaves widest at the middle and longer than wide; abaxial venation green or light brown; racemes distinct, usually compound and highly floriferous, less often simple. (Graham 2017).

COMMENTS

Plant common in forest borders and in degraded areas. Ruderal.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Anthropic area, Grassland

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

V.C. Souza, 9008, CEN (CEN00027393), ESA, 26273, São Paulo

J.E.Q. Faria, 476, CEN (CEN00080233), Distrito Federal
J.P. Souza, 3293, CEN, 35482, São Paulo
M. Sanchez, 299828, UEC, 67930, São Paulo
J.R. Pirani, 2848, SPF, (SPF00081645), Rio de Janeiro
G. Pedralli, 3089, CEN, Santa Catarina
G. Pereira-Silva, 1154, CEN, Goiás
M.M. Arbo, 7754, CEN, Espírito Santo
L.S. Leoni, 678, CEN, 34528, Minas Gerais

REFERENCE

Graham, S. A. (2017). A Revision of Cuphea Section Brachyandra s. s. (Lythraceae). Systematic Botany 42(4): 1–61. https://doi.org/10.1600/036364417X696528

Cuphea calophylla var. *fuscinervis* (Koehne) S.A.Graham

Has as synonym
basionym *Cuphea fuscinervis* Koehne

DESCRIPTION

Subshrubs, 35 cm; stems erect, sparsely branched or unbranched, suffrutescent nearly to stem apex, youngest growth densely glandular-hispid and puberulous; leaves ascending, imbricate distally on the stem, 6–25 mm long, 2–17 mm wide, oblong to ovate or narrowly elliptic, widest at the middle, base rounded, venation abaxially prominently reddish brown; racemes indistinct, simple, leaves and bracts crowded.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

D.C. Zappi, CFSC 10007, K, 46739 (K001073673), SPF, 46739, (SPF00046739), Minas Gerais, **Typus**
A.M. Giulietti, CFSC 7314, SPF, 20139, (SPF00020139), Minas Gerais

REFERENCE

Graham, S. A. (2017). A Revision of Cuphea Section Brachyandra s. s. (Lythraceae). Systematic Botany 42(4): 1–61. https://doi.org/10.1600/036364417X696528

Cuphea calophylla var. *mesostemon* (Koehne) S.A.Graham

This treatment is composed of the following taxa: *Cuphea calophylla var. mesostemon*, .

Has as synonym
basionym *Cuphea mesostemon* Koehne
homotype *Cuphea calophylla* subsp. *mesostemon* (Koehne) Lourteig
heterotypic *Cuphea calophylla var. mesostemon* f. *ovali* Chodat
heterotypic *Cuphea mesostemon* f. *ovali* Chodat
heterotypic *Cuphea ovalifolia* (Chodat) Koehne

DESCRIPTION

Herbs or subshrubs,15-30 cm, semi-decumbent to erect, sparsely branched or unbranched, internodes mostly longer than the leaves; proximal leaves widest below the middle, broadly ovate to ovate, tending to ovate-oblong distally along the stem, 15–40 mm long, 10–20 mm wide, base cordate to subcordate, tending to rounded distally on the stem, abaxial venation green or light brown; racemes distinct, simple or compound.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types
Anthropic area, Grassland

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)
Southeast (Minas Gerais, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3827, MO, CEN (CEN00088571), São Paulo
M. Sobral, 14555, CEN (CEN00083774), Minas Gerais
A.C. Brade, 5660, CEN, 27396, São Paulo
B.M.T. Walter, 967, CEN, Goiás
G. Pedralli, 3002, CEN (CEN00016026), Paraná
G. Pedralli, 3138, CEN, 16199, Santa Catarina
G. Pedralli, 3143, CEN, Rio Grande do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea calophylla var. mesostemon* (Koehne) S.A.Graham



Figure 2: *Cuphea calophylla var. mesostemon* (Koehne) S.A.Graham



Figure 3: *Cuphea calophylla var. mesostemon* (Koehne) S.A.Graham



Figure 4: *Cuphea calophylla var. mesostemon* (Koehne) S.A.Graham



Figure 5: *Cuphea calophylla var. mesostemon* (Koehne) S.A.Graham



Figure 6: *Cuphea calophylla var. mesostemon* (Koehne) S.A.Graham

REFERENCE

Graham, S. A. (2017). A Revision of Cuphea Section Brachyandra s. s. (Lythraceae). Systematic Botany 42(4): 1–61. https://doi.org/10.1600/036364417X696528

Cuphea campestris Mart. ex Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute/cuneate; **form of the limb** linear/lanceolate/obovate/angustate; **margin of the leaf** flat. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse/saccate; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** white/purple/lilac/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** pyriform/fusiform. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs erect, 15-25 cm tall; stems pubescent, with short, rigid, and curved trichomes, sometimes appressed to the stem, mixed with sparse purplish glandular trichomes. Leaves 9-24 x 1.7-6 mm, subsessile, petiole 0.3-1 mm long, narrow-elliptic, narrow-lanceolate to slightly obovate, apex acute, base acute to cuneate, strigose, pinnately-veined. Racemes compound, frondose-bracteate; pedicel ca. 1 mm long, interpetiolar; bracteoles elliptic, in the final third of the pedicel; floral tube 4.4-6 mm long, spur obtuse, deflexed, sometimes saccate, outer surface ventrally green, dorsally pink, strigose, rarely glandular trichomes on the dorsal region of the tube, inner surface sparsely villous behind the stamens and in the ovary region; petals 6, obovate, deciduous on fruiting, two dorsal 3.3-3.4 mm long, pink to purple, four ventral 3.7-4 mm long, lilac to white; stamens in the upper third of the floral tube; vesicles 0; ovary pilose, gibbous unilaterally at the apex, style glabrous, ovules 3-6; nectary horizontal, deflexed. Seeds 4-5, ca. 2 x 1.8 mm, elliptic, margin thinned, with small wing.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga

Vegetation Types
Caatinga (stricto sensu), Grassland

Geographic Distribution
Confirmed ocurrences
Northeast (Alagoas, Bahia, Ceará, Paraíba, Pernambuco, Piauí, Rio Grande do Norte)

HERBARIUM MATERIAL

A.A. Roque, 948, CEN, Rio Grande do Norte
C.F.P. Martius, 2388, M, Bahia, **Typus**
R.R. Farias, 474, CEN, 45041, Piauí
A.M. Miranda, 6308, HSI, 18661, , , (HST018661), Ceará
G. Hatschbach, 65156, CEN (CEN00026260), MBM, Bahia
S.A. Graham, 940, RB, 379954, (RB00208542), Bahia
F. França, 5244, CEN, 70000, Pernambuco
R.P. Lemos, 626, MAC, SPF, Alagoas
A.C. Cavalcante, 244, CEN, Paraíba

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea campestris* Mart. ex Koehne

Cuphea campylocentra Griseb.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate; **form of the limb** ovate/elliptic/obovate; **margin of the leaf** flat/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs 16-64 cm tall; xylopodium present; stems erect to decumbent, strigose-antrorse and hirsute, formed by appressed and whitish trichomes and numerous long glandular trichomes, purplish to greenish, respectively, intermixed by few short and simple trichomes. Leaves opposite, scabrous; petiole 1-3 mm long; blades 9-43 x 3-20 mm, narrow-elliptical to elliptical, rarely obovate or ovate, apex acute to obtuse, rare acuminate, base cuneate to attenuated, margin flat to subrevolute; strigose in both surfaces, with or without long glandular trichomes, concentrated on the ribs on the abaxial face. Racemes simple or compound, frondose to bracteose; flowers alternate, rare opposite, interpetiolar, 1-2 flowers per node; pedicels 1-5 mm long; bracteoles ca. 0.3-1.5 x 0.2-1 mm, elliptic to wide elliptic, ovate to wide ovate, orbicular, rarely asymmetrical. Floral tubes 8-12 mm long, including a long spur, ca. 1.5-2 mm, rounded and deflexed, rare horizontal; outer surface yellowish-green in the ventral region and pinkish-purple in the dorsal, hirsute, formed by long glandular trichomes, purple to greenish, inserted over the ribs, glabrous between them; inner surface densely villous above the insertion of the stamens and pilose on the dorsal ribs, the rest glabrous; petals pink to purple, subequal to unequal; filaments free in the apical portion of the floral tube; infrastaminal vesicles present; ovary 3-4.5 mm long, glabrous; ovules 16-29; stigma capitate; stylus 2-3.5 mm long, pilose to glabrous; nectariferous gland deflexed, widely obovate. Seeds 4-26; suborbicular to elliptical; 1.9-2.3 x 1.6-2 mm; margin acute, winged, apex emarginated, rare slightly truncated; base obtuse truncated.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Pampa

Vegetation Types
Grassland, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso do Sul)
South (Rio Grande do Sul)

HERBARIUM MATERIAL

M.G. Facco, s.n., CEN, 79.840 (CEN00079840), Rio Grande do Sul
G. Hatschbach, 25167, RB, 326637, , (RB00208579), MBM, Mato Grosso do Sul
M.G. Facco, 129, ICN, Rio Grande do Sul
P.G. Lorentz, 545 p.p., GOET, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea campylocentra* Griseb.



Figure 2: *Cuphea campylocentra* Griseb.



Figure 3: *Cuphea campylocentra* Griseb.



Figure 4: *Cuphea campylocentra* Griseb.

REFERENCE

Koehne, E. 1903. Lythraceae. Das Pflanzenreich Regni Vegetabilis Conspectus 4(216): 1- 326
Rodas, R.D. & Briones, J.M. 2010. Lythraceae. In: Ramella, L. & Perret, P. (eds.). Flora del Paraguay. Genebra: Conservatoire et Jardin botaniques de la Ville de Genève. Vol.40. 152p.

Cuphea carajasensis Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute/truncate; **form of the limb** linear/ovate; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple/red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Shrubs 30-100 cm tall; stems erect, internodes 0.5-3 cm long, glabrescent to pubescent, simple trichomes <0.5 mm long, erect or curved, sometimes intermixed with scarce glandular trichomes <1 mm long, and simple appressed trichomes, sometimes the indument distributed in a longitudinal strip along the stem. Leaves opposite, cretaceous, sessile to subsessile, blades 5-35 x 0.5-8 mm, linear, narrow-ovate to ovate, apex acute, base acute, obtuse to truncated, margin flat rare cordate, to subrevolute, glabrous to strigose, rare, glandular, glabrous to sparse-strigose on both surfaces, hyphodromouss, rare secondary veins visible. Racemes 5-15 cm long, simple to compound, bracteose, rare frondose-bracteose, lax, detached; bracts 2-20 x 0.5-3 mm, pairs subequal, generally linear, similar to the leaves; flowers alternate, pedicels 1.3-3.4 mm long, interpetiolar; bracteoles 0.5-0.8 x 0.3-0.5 mm, ovate; floral tubes 6-9 mm long; spur 0.5-1.1 mm long, obtuse, horizontal to deflexed; outer surface vinaceous to purplish, rare reddish, pubescent, trichomes curved, intermixed with short glandular trichomes, <0.5 mm long; inner surface villous in the entire floral tube, sometimes only pilose in the lower third; petals 6, lilac, purple to red, subequal; stamens 11, pilose to villous; pistil 4-6 mm long, ovary 2-3 mm long, villous in the dorsal region, stylus 2-3.3 mm long, villous in the basal portion, stigma included in the anthesis, ovules 2-3; nectariferous gland 0.8 x 0.5 mm, horizontal to slightly deflexed. Seeds 1-2, 1.9-2.3 x 1.8-2.1 mm, broad-elliptical to suborbicular, apex obtuse, truncated to slightly rectangular, base obtuse, margin slightly thickened.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Pará)

HERBARIUM MATERIAL

P.L. Viana, 6183, CEN, MG, Pará
A.S.L. da Silva, 1778, P (P01901532), MG, NY, Pará, **Typus**
H.C. de Lima, 7108, RB, 506926, (RB00608289), Pará
C.R. Sperling, 5728, K, 506926 (K001073997), MG, 105744, Pará

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea carajasensis* Lourteig



Figure 2: *Cuphea carajasensis* Lourteig



Figure 3: *Cuphea carajasensis* Lourteig

REFERENCE

Lourteig, A. 1987. Lythraceae Austroamericanae. Addenda et corrigenda II. Sellowia 39: 5-48.

Cavalcanti, T.B., Facco, M.G. & Brauner, L.M. (2016). Flora das cangas da Serra dos Carajás, Pará, Brasil: Lythraceae. Rodriguésia 67(5): 1411–1415. <https://doi.org/10.1590/2175-7860201667539>

Cuphea carthagenensis (Jacq.) J.F.Macbr.

Has as synonym
heterotypic *Cuphea balsamona* Cham. & Schltdl.
heterotypic *Cuphea prunellifolia* A.St.-Hil.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate; **form of the limb** elliptic; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third medium of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** fusiform. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Perennial herbs or subshrubs, annual in northern part of range, 15 cm–1 m; stems from fibrous roots, erect to lax, frequently somewhat geniculate, much branched from near the base, internodes shorter to longer than subtending leaves, sturdy; indumentum of three types: puberulous with trichomes white, falcate, primarily concentrated along one side of the internodes; glandular-hirsute with trichomes sparse to abundant, erect, whitish or red-purple, to1 mm long; and less often, also hispid-setose. Leaves opposite, spreading, very gradually reduced in size in the inflorescence; petioles 0–7 mm long, longest on most proximal leaves; blades broadly to narrowly elliptic, less often elliptic-lanceolate to ovate, 8–60 mm long, 3–20 mm wide, commonly ca 30 mm long, 15 mm wide at midstem, usually larger on main stems than on branches, membranaceous, base acute to attenuate, rarely rounded, apex acute, margin plane; surfaces green, minutely scabrous, appearing glabrous, sometimes with scattered lax trichomes 1–2 mm long on one or both surfaces, abaxial surface paler, midvein and secondary veins prominent. Racemes indistinct, ± terminal, leafy, compound; flowers inconspicuous among leaves at the nodes, one solitary, interpetiolar, 1–3 additional flowers on axillary branchlets; pedicels 1–1.5 mm long, not persistent; bracteoles lanceolate-linear, to 0.5 mm long,. Floral tube, including a descending spur, approx. 0.5 mm long, 4–6 mm long, 0.8–1.5 mm wide, dorsally horizontal, in fruit ampullaceous with neck and mouth contracted, nearly closed, outer surface dorsally and distally rose-purple, ventrally green, or tube entirely green, veins always bearing a few erect short setae to 0.5 mm long, intercostal areas usually glabrous, infrequently finely hirsute, never strigose; inner surface glabrous distal and proximal to stamen insertion or pilose distal to stamens (in Pará), vesicles 0-8, inconspicuous; sepals equal, ca 0.5 mm long, 0.5 mm wide, deltate, apex acute; epicalyx segments calluses or small lobes at sinuses of sepals, shorter than sepals, glabrous or with a single seta to ca. 0.5 mm long. Petals 6, rose-purple to purple, subequal, 0.8–2.5 mm long, 0.3–1 mm wide, oblong, elliptic or subspatulate. Stamens 11: the 2 short dorsalmost inserted deepest, other 9 alternately slightly unequal in length, either inserted at nearly at same level or increasingly deeper in tube from dorsal to ventral side of tube, all included; filaments green or cream, glabrous, anthers yellow, not reaching sinuses of sepals; Ovary glabrous, style glabrous, included; ovules (4–)5–6; disc ca 0.4–0.6 mm long and wide, suborbicular, thick, slightly keeled, erect to reflexed over the ovary. Seeds 1.5–1.9 mm long, 1–1.5 mm wide, brown, obovate to elliptic or subcircular, apex obtuse to shallowly retuse, base retuse, margin acute, flattened, 0.1–0.2 mm wide (Graham 2017).

Life Form
Herb, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest, Pampa, Pantanal

Vegetation Types
Anthropic area, High Altitude Grassland, Grassland, Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Amapá, Pará, Rondônia, Tocantins)
Northeast (Alagoas, Bahia, Ceará, Pernambuco, Sergipe)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

T.B. Cavalcanti, 305, CEN, 13128, Bahia
F.J. Roldán, 1435, HUA, MO, **Typus**
T.B. Cavalcanti, 2134, CEN, 26951, Goiás
A. Lourteig, 3164, RB, 288439, (RB00208587), Paraná
S.A. Graham, 953, RB, 324109, (RB00208636), Paraná
V.J. Pott, 3501, CEN, 52665, Mato Grosso do Sul
G. Pedralli, 3092, CEN, 16183, Santa Catarina
G. Pedralli, 3139, CEN, 16200, Rio Grande do Sul
J.G. Faria, 36, CEN, 38286, Distrito Federal
L.B. Biachetti, 988, CEN, 44621, Acre
A.S.L. Silva, 1902, MG, 99409, Pará
J.M.A. Braga, 5496, CEN (CEN00082714), Rio de Janeiro
M. Nee, 43013, NY, Amazonas
A. Lourteig, 1801, US, Amapá
G. Pedralli, 3012, CEN, Paraná
T.B. Cavalcanti, 2587, CEN (CEN00035469), Minas Gerais
T.B. Cavalcanti, 2355, CEN, 27107, Mato Grosso
M. Oliveira, 3691, CEN, 78332, Pernambuco
L. Kollmann, 5239, CEN, 64211, Espírito Santo
A.S.F. Castro, 1062, EAC, 30917, Ceará
B.M.T. Walter, 568, CEN, 26309, Rondônia
M. Oliveira, 2209, HVASF, 2120, Alagoas
A.P. Prata, 2608, JPB, 49370, ASE, 21392, Sergipe
J.A. Rizzo, 9478, UFG, 9478, Tocantins

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea carthagenensis* (Jacq.) J.F.Macbr.



Figure 2: *Cuphea carthagenensis* (Jacq.) J.F.Macbr.

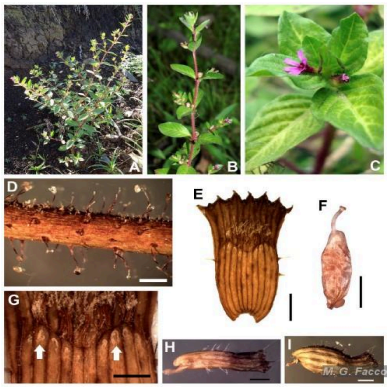


Figure 3: *Cuphea carthagenensis* (Jacq.) J.F.Macbr.

REFERENCE

Graham, S. A. (2017). A Revision of Cuphea Section Brachyandra s. s. (Lythraceae). Systematic Botany 42(4): 1–61. https://doi.org/10.1600/036364417X696528

Cuphea cipoensis T.B.Cavalc.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** ovate/elliptic/obovate; **margin of the leaf** sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm)/13 to 30 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrub 0.7-1.5 m, sticky, branches with a covering of white, nonglandular hairs and wine-red viscous glandular hairs. Leaves decussate, suberect, discolorous, petiolate, obovate to ovate-elliptic, rarely orbiculate, (1-)2-5.2 x 0.9-2.4 cm, chartaceous, lateral nerves 5-8, apex acute to obtuse, acuminate, the margin subrevolute, scabrous, ciliate and with winered glandular hairs, the base acute to attenuate, the adaxial face greyish green to glaucous green, glabrous or rarely with some hairs on the central nerve, the lateral nerves inconspicuous, the abaxial face olive-green, villous, sparse glandular hairs on the nerves, the nerves frequently wine-red or rustcoloured, prominent; petiole 4-8 mm long. Flowering branches with bracts indistinct from the leaves; flowers solitary, axillary, alternate; pedicel 2-3 mm long; bracteoles inserted on the middle region of the pedicel or lower, orbiculate to ovate, the apex markedly acuminate, glabrous, c. 1.5 mm long; tube of the hypanthium 11-14 mm long, greenish-cream coloured, wine-red on the underside, with a covering of white, non-glandular hairs and longer wine-red glandular hairs externally, and with a whitish pilosity internally, the hairs becoming scarce in the middle and lower regions; spur horizontal, c. 2 mm long; corolla weakly zygomorphic, petals 6, deciduous, pink magenta, obovate to elliptic, 5-7 x 2.5-3.5 mm; stamens 11; ovary glabrous, c. 3 mm long, ovules 3-4, style glabrous, included within the flower, c. 4 mm long, slightly exserted in fruit, 6-7 mm long, disc dorsal, horizontal, wine-red. Seeds 3, chestnut brown-coloured, oblong-elliptic, c. 2.2 x 2 mm, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G.L. Esteves, CFCR 5979, K, SPF, (SPF00035039), Minas Gerais, **Typus**
W.R. Anderson, 35889, NY, 940174, (NY00940174), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea cipoensis* T.B.Cavalc.

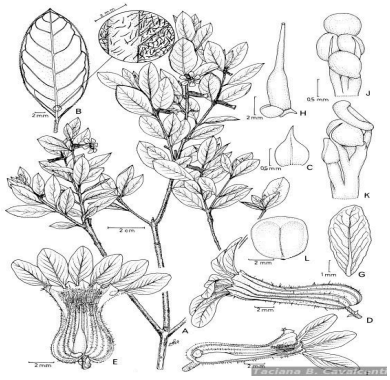


Figure 2: *Cuphea cipoensis* T.B.Cavalc.

REFERENCE

Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.

Cavalcanti, T. B. (1991). New Species of Cuphea (Lythraceae) from Brazil. Kew Bulletin 46(2): 253–268. https://doi.org/10.2307/4110592

Cuphea circaeoides Sm. ex Sims

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** without spur; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** pyriform/fusiform. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Shrubs, erect, 0.25-1.5 m tall, without xylopodium, very viscous; branches hirtellous, with long glandular trichomes, intermixed with short and curved simple trichomes. Leaves 11,2-49x4,5-19 mm, petiolate, brochidodromous, elliptic to broad-elliptic, apex acute, margin flat, base asymmetric or obtuse, strigose, simple trichomes short, appressed, intermixed with few glandular trichomes; petiole 3-25mm long. Recemes bracteose, inflorescence evident, bracts 1.5-3x0.5-0.7 mm; pedicel 2.5-4.6 mm long, interpeciolar to axillary, patent, forming a 90° angle, persistent; bracteoles elliptic, in the middle third of the pedicel; floral tube 4.9-5.5 mm long, ventrally vinaceous, dorsally purplish, externally hirsute, glandular trichomes long on the ribs, glabrous between the ribs, internally villous above the stamens, the rest glabrous; spur obtuse, small; petals 6, narrow-oval, purplish, deciduous in fructification, dorsal petal c. 1.3 mm long, ventral petal c. 1.1 mm long; stamens in the middle third of the floral tube, infrastaminal vesicles absent; ovary glabrous, stylus glabrous, ovules 5; nectariferous gland dorsal, erect. Fruit fusiform to piriform, seeds 4, 1.7-1.8x1.4-1.6 mm, broad-elliptical, margin acute.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Caatinga (stricto sensu), Carrasco Vegetation, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Alagoas, Bahia, Ceará, Paraíba, Pernambuco, Sergipe)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2453, MO, CEN, 34145 (CEN00034145), Bahia
M. Oliveira, 5689, CEN, 78271, Pernambuco
J.A.S. Filho, 2218, HUEFS, 152865, Paraíba
R.A. Silva, 780, CEN, 40847, Sergipe
S.A. Mori, 9967, RB, 232100, (RB00209751), Bahia
R.A. Silva, 822, CEN, 40853, Alagoas
L.W.L. Verde, 577, CEN, 46216, Ceará
V.C. Souza, 28296, ESA, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea circaeoides* Sm. ex Sims

REFERENCE

Koehne, E. 1903. Lythraceae. Das Pflanzenreich Regni Vegetabilis Conspectus 4(216): 1- 326

Cuphea confertiflora A.St.-Hil.

Has as synonym
heterotypic *Cuphea tuberosiformis* Koehne ex Bacig.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** lanceolate/ovate; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm)/13 to 30 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** ascending/horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 1.5–5 dm tall, stems erect, robust, one to several from an enlarged, globose to elongated xylopodium, unbranched below the inflorescence, much branched distally in the compound inflorescence of fully mature plants; indumentum hispid and glandular setose, hispid trichomes abundant, minute, <1 mm, white, sharp-pointed, erect or variously oriented, setose trichomes coarse, purple-black or red-purple, glandular, 0.5–2.0 mm, erect, sometimes also hirsute indumentum of thin, glandular trichomes; internodes below the inflorescence 1/3 to 1/2 times longer than the subtending leaves. Leaves sessile or subsessile, petioles 0–2 mm or to 5 mm on basal or near basal leaves, leaves opposite, spreading, pinnately-veined; blades narrowly ovate-lanceolate to oblong, rarely broadly ovate to suborbicular, 30–55 × 12–30 mm, thickly membranous, secondary venation distinct abaxially, base acute to rounded, apex acute to obtuse, margin plane; blade adaxial surface scabrous, sparsely strigose, abaxial suface coarsely scabrous, trichomes white, sharp-pointed, erect, prominent on the veins; distal leaves of stem + abruptly reduced in size to form bracts of the inflorescences. Inflorescences bracted simple and compound terminal racemes, flowering branches ultimately long, slender, multi-flowered; flowers interpetiolar, alternate; pedicels 2–7 mm; bracteoles ca. 0.2 × 0.2 mm, ovate. Floral tubes 9–15 × 2–4 mm including rounded horizontal or subdescending 0.75–1.0 mm, spur; outer surface purple-black to red-purple dorsally and on veins, paler ventrally, veins and intercostal areas red-purple setose, often also hispid and sparsely to abundantly hirsute, hispid trichomes white, hirsute trichomes, thin, white or red; inner surface densely villous above stamens, lightly villous over entire surface below stamens; vesicles 0; sepals equal, 1 × 2 mm, broadly deltate, apex acuminate; epicalyx segments dark purple thickenings, glabrous or with short setae, margin scarcely free; petals 6, subequal, 4–6 × 1.5–4 mm, two dorsals broadly obovate, sometimes slightly larger than the four ventrals, ventrals cuneate-oblong, narrower than the dorsals, all petals pale pink to rose; stamens with five antesepalous stamens exserted, the others included, the two long dorsal stamens densely villous, the others lightly villous or glabrous, filaments pale, anthers purple; pollen oblate, oval-triangular, tricolporate, syncolpate, pores protruding, exine finely striate, grain diam. 26–30 µm; ovary glabrous; style glabrous to densely villous, exserted; stigma small-capitate; nectary oblique, ca. 1 × 0.7 mm, triangular in dorsal view, semi-cupping base of ovary. Seeds 5–10, 2.5 × 2.5 mm, orbicular, margin rounded.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Anthropic area, Flooded Field (Várzea), Grassland

Geographic Distribution

Confirmed ocurrences
South (Paraná, Rio Grande do Sul)

HERBARIUM MATERIAL

S.A. Graham, 934, RB, 331448, (RB00208536), MBM, MO, Paraná
R.A. Frosi, 359, HAS, 88234, Rio Grande do Sul
A. Saint-Hilaire, C1-1492, SI, P, Paraná, **Typus**
T.B. Cavalcanti, 3718, MO, CEN (CEN00062004), Paraná

FIELD IMAGES / ILLUSTRATIONS

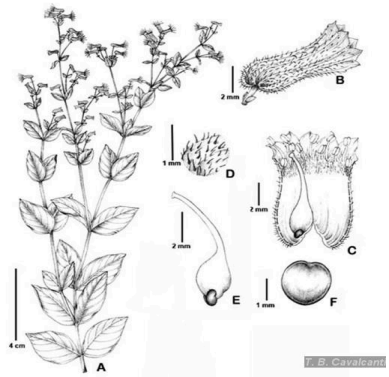


Figure 1: *Cuphea confertiflora* A.St.-Hil.

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. *Euandra* subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea corisperma Koehne

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** lanceolate/oblong/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose/glabrous; **form of the spur** obtuse/acute; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** lilac/violet; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrub, 30-60 cm tall, decumbent, branched, pubescent, with sparse glandular trichomes, glabrescent, branches with thin and whitish trichomes, most abundant at the apex, long, purple, with sparse glandular trichomes. Leaves 7-15x2-4 mm, smaller than the internodes, subsessile, elliptic, lanceolate to oblong, asymmetrical, base acute, apex acute, sometimes mucronated, margin sometimes ciliate, pubescent, sparse glandular trichomes on both sides. Racemes frondose, pauciflorous, bracteoles oval, acute or acuminate, sometimes ciliate; floral tube 9-10 mm long, slightly curved, outer surface glabrous with some glandular trichomes on the nerves, inner surface glabrous, woolly-pubescent under the stamens, infrastaminal vesicles 8, inconspicuous; petals 6, violet, 4-6 x 1-2.5 mm, the dorsal slightly larger; stamens inserted in the upper third of the floral tube, ovary glabrous, stylus glabrous; ovules 6-12; nectariferous gland thick, horizontal. Fruit tubular, seeds sometimes foveolate, margin acute, slightly winged.

Life Form
Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Pantanal

Vegetation Types
Grassland, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso do Sul)
Possible ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Pott, 3744, CEN, 52678, Minas Gerais
A.K.D. Salomão, 365, CEN, 87983, Mato Grosso do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea corisperma* Koehne



Figure 2: *Cuphea corisperma* Koehne



Figure 3: *Cuphea corisperma* Koehne

Cuphea cuiabensis Mart. ex Koehne

DESCRIPTION

Root: type axial/rhizomatose. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** attenuate; **form of the limb** linear/lanceolate; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse/saccate; **position of the spur** deflexed; **petal** apetalous; **colour of the petal** petal absent; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** bulged/tubular. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, ca. 1 m; stems erect, several from adventitiously rooted rhizomes, unbranched, highly viscous; internodes to six times shorter than leaves; indumentum a mix of two types: densely strigose with minute, simple or incipiently to fully bifid, slender, longitudinally oriented, white trichomes < 0.5 mm long; and hirsute with erect, white or red-purple trichomes # 0.5 mm long. Leaves mostly 3-verticillate, opposite or subopposite toward base and apex of stem, sometimes crowded at top of stem, spreading to ascending, abruptly reduced in size in the inflorescence to hypsophylloid bracts; petioles ca. 4 mm long, ± terete; blades narrowly linear-lanceolate, 50–120 mm long, 4–15 mm wide, typically ca. 100 mm long, 10 mm wide, thickly membranaceous, base narrowly attenuate, apex acute, margin plane; surfaces glaucous, strigose, the trichomes bifid as on stems. Racemes distinct, terminal, hypsophylloid, simple; flowers opposite or 3-verticillate, interpetiolar; pedicels 3–5 mm long; bracteoles minute, scarcely developed. Floral tube, including 2–2.5-mm-long, oblong, descending spur, 23–30 mm long, 5–6 mm wide, thick-walled, dorsally convex, neck scarcely contracted in fruit, mouth blunt to slightly oblique; outer surface medium to deep red with lighter red to yellow-green apex,viscous, simple- or bifid-strigose and hirsute as on stems; inner surface glabrous overall or puberulous surrounding the ovary, vesicles 0; sepals equal, 0.5 mm long, 2.0 mm wide, shallowly deltate, scarcely visible between prominent epicalyx segments, glabrous, margins not ciliate; epicalyx segments 1.5 mm long, 0.5–1.0 mm wide, ca. twice as long as sepals, cylindrical, oblong, coarsely setose, setae red-purple, bulbous-based, 1–2 mm. Petals 0. Stamens: 2 short dorsalmost included, 9 exserted ventrally; filaments glabrous to sparsely pilose, white or rose, anthers cream-colored; pollen oval-triangular to triangular in polar view, tricolporate, syncolpate, pores slightly protruding, exine low-rugulate, rugulae slightly sinuous, oriented mostly parallel to equator, grain diameter 30 µm. Ovary non-gibbous, glabrous or sparsely puberulous; style glabrous or lightly pilose, exserted to 6 mm; ovules 30–35; disc 1.5 mm long,1.0 mm wide, oblong, semi-deflexed. Seeds 2 mm long, 2 mm wide, brown, obdeltoid to bilateral, sub-obtriangular to obovoid, apex obtuse, margin rounded, slightly thickened.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso)

HERBARIUM MATERIAL

C.F.P. Martius, obs 870, G, K, (K000533099), M, BM, NY, Mato Grosso, **Typus**

T.B. Cavalcanti, 2383, MO, CEN (CEN00027135), Mato Grosso
G. Hatschbach, 62726, CEN (CEN00033929), Mato Grosso

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. Brittonia 42(1): 12-32.

Cuphea cunninghamiifolia T.B.Cavalc.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** linear; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse/saccate; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** white; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs, 30-100 cm tall; stems erect, internodes 0.5-1 cm long, strigose, pubescent and glandular, intermixed with simple trichomes, short, <0.5 mm long, ca. 1 mm long. Leaves opposite, coriaceous, petioles c. 1 mm long, blades 15-45 x 1.5-4 mm, linear, apex acute, base acute, margin flat to subrevolute, strigose and glandular-ciliate, or glabrous, strigose instrument on both surfaces, sometimes sparse glandular trichomes over the main vein on the abaxial face, hyphodromous, secondary veins rare visible. Racemes 1.5-4 cm long, bracteose to frondose-bracteose, contracted at the apex of the branches; bracts 3-20 x 0.8-2 mm, subequal, linear, rare narrow-ovate, similar to the leaves; flowers alternate, pedicels 4-6 mm long, interpetiolar; bracteoles 0.7-1 x 0.5-0.6 mm, ovate; floral tubes 7-9 mm long; spur 1-2 mm long, obtuse to saccate, horizontal to deflexed; outer surface purplish in the dorsal region, greenish ventrally, strigose, intermixed with short glandular trichomes, <0.5 mm long; inner surface villous in the region of the stamens, pilose in the lower third of the floral tube; petals 6, white, the dorsal smaller than the ventral; stamens 11, villous, the 2 dorsal stamens glabrous, filaments free in the upper third of the floral tube; pistil 5-7.3 mm long, ovary 2-3 mm long, glabrous, rare slightly pilose, stylus 3-4.3 mm long, pilose in the basal portion to glabrous, ovary 3-4; nectariferous gland ca. 0.8 x 1.2 mm, deflexed. Seeds 2-4, 1.7-2.1 x 1.6-2 mm, broad-obovate, apex slightly retuse, base acute, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field, Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

J.R. Pirani, 1667, SPF, 48539, (SPF00048539), K, MBM, UB, NY, 386507, Goiás, **Typus**
T.B. Cavalcanti, 3621, MO, CEN, 61910 (CEN00061910), Goiás

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea cunninghamiifolia* T.B.Cavalc.



Figure 2: *Cuphea cunninghamiifolia* T.B.Cavalc.

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cuphea curiosa Lourteig

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cuneate; **form of the limb** linear/elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose/malpighiaceous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** white/purple/pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs to 50 cm; stems erect, ascending from a woody, decumbent, rhizomatous base with abundant secondary fibrous roots, much branched distally; internodes less than half as long as subtending leaves; stem indumentum of two types: exclusively bifid-strigose, trichomes relatively abundant, thin, silky, to 0.5 mm long on young growth; or bifid-strigose mixed with simple thin to coarse, reddish-brown trichomes, erect or lax, 0.5–1 mm long. Leaves spreading, distal leaves ascending, imbricate, abruptly reduced in size in the inflorescence; petioles to 0.5 mm long; blades narrowly elliptic to lanceolate-linear, 5–30 (–40) mm long, 1–5 (–8 mm) wide, thinly membranaceous, base cuneate, apex acute or subacute, margin plane; surfaces green, adaxially glabrous or with some bifid trichomes, abaxially moderately to abundantly bifid-strigose, midvein and 1–6 sets of thin, red-brown secondary veins, visible on both surfaces. Racemes distinct, terminal, bracteate, simple or compound; bracts elliptic to oval, membranaceous, 2–4 cm long; flowers alternate, crowded distally on the stem, not obscured by bracts; pedicels 0.5–1.5 mm long; bracteoles narrowly ovate, 0.3–0.5 mm long. Floral tube, including a poorly developed spur to 0.3 mm long, 4.0–5.5 (–7.0) mm long, 1.5 mm wide, neck at 2/3 length of floral tube, mouth widely flaring, neck and mouth open in fruit, ca 2 mm wide; outer surface violet or green, finely bifid-strigose, almost glabrous, or mixed with thinner, longer trichomes; inner surface villous distal to stamen insertion, pilose proximally; sepals subequal, dorsalmost sepal largest, widest, 0.4–0.7 mm long, 0.6–0.8 mm wide, the others ca 0.6 mm long, 0.6 mm wide, deltate, apex acute; epicalyx segments thickened lobes, half as long to as long as sepals, green or dark-colored, erect to recurved, glabrous or with some bifid trichomes. Petals 6, white, pink, pale purple, white with purple midvein or purple base, or dorsals darker than pink ventrals (fide Lourteig, 1986), subequal, 2 dorsals larger and wider than the ventrals, 1.7–1.8 mm long, 0.5–0.8 mm wide, 4 ventrals 1.7 mm long, 0.4–0.6 mm wide, all spatulate to obovate. Stamens: 2 short dorsalmost deepest, other 9 inserted in a horizontal line at 2/3 length of floral tube, antesepalous stamens extending nearly to sepal apices, antepetalous ones shorter, not reaching sinuses of sepals; filaments sparsely villous, filament and anther color unknown; pollen triangular, tricolporate, syncolpate, colpi convergent at poles in a triangle enclosing a remnant of exine, pores non-protruding, exine psilate, grain diam. 23–24 µm. Ovary and style sparsely pilose, style extending to apices of the sepals or exserted ca 1 mm; ovules 5–9, at distal end of a flattened placenta. Disc erect to strongly reflexed over ovary, cylindric with obtuse apex, 0.7–1.0 mm long, 0.4 mm wide, thick, dark red. Seeds 0.9–1.0 mm long, 0.8–0.9 mm wide, obovate, apex rounded, margin rounded (Graham 2019).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Amazonian Savanna

Geographic Distribution

Confirmed ocurrences
North (Amazonas)

HERBARIUM MATERIAL

J.A. Steyermark, 97835, VEN, P, **Typus**
Silva & Brazão, 60641, MO, NY, (NY02108249), Amazonas
W. Rodrigues, 9828, INPA, 71987, Amazonas

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea curiosa* Lourteig



Figure 2: *Cuphea curiosa* Lourteig



Figure 3: *Cuphea curiosa* Lourteig



Figure 4: *Cuphea curiosa* Lourteig

REFERENCE

Graham, S. A. (2019). A Revision of Cuphea section Amazoniana s. s. (Lythraceae). Systematic Botany 44(1): 146–183. https://doi.org/10.1600/036364419X697994
Lourteig, A. (1986). Revisión de dos secciones del género Cuphea P. Browne (Lythraceae). Phytologia, 60(1): 17–55.

Cuphea cylindracea S.A.Graham

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** ovate/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** pubescent/hirtellous; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** unknown.

ADDITIONAL DESCRIPTION

Subshrubs, 0.8 m; stems erect, branched; internodes shorter than to as long as subtending leaves; indumentum sparsely to moderately puberulous with white, erect, eglandular trichomes 0.1–0.2 mm long. Leaves opposite, ascending, crowded toward stem apex, gradually reduced in size in the inflorescence; petioles 1–4 mm long, ± terete; blades ovate to oblong, 10–40 mm long, 5–15 mm wide, at midstem ca. 25 mm long, 13 mm wide, coriaceous, base obtuse, apex acute, margin plane, minutely scabrous; surfaces green, adaxially glabrous, shining, abaxially paler, scabrous. Racemes distinct, terminal, leafy, compound; flowers solitary, interpetiolar or on very short axillary branchlets; pedicels 2–3 mm long; bracteoles leaf-like, narrowly lanceolate, 1 mm long, with acuminate apex. Floral tube, including 1–1.5-mm-long, obtuse, descending spur, 19–20 mm long, 4 mm wide, dorsally straight or slightly convex, uniformly cylindrical, neck not or slightly constricted in fruit, mouth blunt to slightly oblique; outer surface yellow-green, puberulous/puberulent, rarely with longer erect trichomes on veins; inner surface sparsely villous distal to stamen insertion, subglabrous between stamens and ovary, at ovary level bearing flattened, hyaline trichomes ca. 1 mm long, vesicles 0; sepals equal, ca. 0.5 mm long, 1 mm wide, broadly deltate, margin not ciliate; epicalyx segments 1 mm long, equal to slightly exceeding the sepals, oblong, green, puberulous. Petals 6, red, equal, rudimentary, ca. 0.5 mm long, 0.7–1.0 mm wide, cuneate-oblong, scarcely exserted. Stamens: 2 short dorsalmost included, inserted at nearly same level as the other 9, 5 antesepalous stamens long-exserted, 4 antepetalous stamens included to subexserted; filaments lightly villous to glabrous, color unknown, anther color unknown; pollen diporate, grain length 25 µm. Ovary non-gibbous, glabrous, style sparsely pilose, exserted to 4 mm; ovules 5 or 6; disc ca. 0.7 mm long, 1 mm wide, semi-deflexed, concave around base of ovary. Seeds obtriangular, apex obtuse

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu), Seasonal Evergreen Forest

Geographic Distribution
Confirmed ocurrences
North (Pará)
Central-west (Mato Grosso)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2369, CEN (CEN00027121), MO, Pará
A.S. Lima, 7831, SP, Mato Grosso
G.T. Prance, 25296, K, (K000533142), US, NY, MO, INPA, Pará, **Typus**

G. Pereira-Silva, 17133, CEN (CEN00109110), Mato Grosso

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea cylindracea* S.A.Graham



Figure 2: *Cuphea cylindracea* S.A.Graham

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. Brittonia 42(1): 12-32.

Cuphea dactylophora Koehne

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cuneate; **form of the limb** linear/angustate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** malpighiaceous; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs to 45 cm; stems erect, ascending, one or more arising from a small woody rhizome bearing abundant fibrous roots, branched along the length of the stem; internodes onethird or less as long as subtending leaves, leaves and internodes very gradually diminishing in length toward the stem apex; stem indumentum bifid-strigose, trichomes short, closely appressed. Leaves loosely spreading; petioles 0–2 mm long; blades narrowly elliptic-lanceolate to lanceolate-linear, 10–45 mm long, 2–8 mm wide, thinly membranaceous, base cuneate, apex subacute, margin plane; surfaces adaxially deep green, abaxially pale green drying yellow- to red-brown, both surfaces strigose, the bifid trichomes very thin, short, 0.2–0.3 mm long, arms equal, midvein and 3 pairs of secondary veins visible on proximal leaves, dark red-brown. Racemes indistinct, terminal, leafy, simple; flowers solitary, sparse, alternate, obscured among leaves; pedicels slender, increasing in length with age of flower, 1–7 mm long; bracteoles orbicular, 0.5 mm long. Floral tube, including a well-developed, horizontal to descending spur 0.4–1 mm long, 6–9 mm long, 1.3–1.5 mm wide, neck strongly contracted at 2/3 length of floral tube, mouth widely flaring, 2.5–3.0 mm wide; outer surface bifid-strigose, dark purple, at least distally, inner surface light purple to white, villous distal to stamen insertion, lightly pilose proximally; sepals subequal, dorsalmost sepal scarcely larger, ca. 1.2 mm long, 1.2 mm wide, the others 0.7–1.0 mm long, 0.7–1.3 mm wide, or 3 dorsal sepals slightly larger than 3 ventrals, all dark purple, deltate, apex acute; epicalyx segments thickened lobes, 0.3 mm long, shorter than sepals, dark purple. Petals 6, pale purple with dark purple base, or white with dark purple midvein, obovate to ovate, unequal, 2 dorsals 2.7–3.7 mm long, 0.8–2.0 mm wide, 4 ventrals 3.5–5.0 mm long, 2.0–3.0 mm wide. Stamens: 2 dorsalmost very short, inserted at ca. same level as the other in a horizontal line, all included, antesepalous stamens extending nearly to apices of sepals, antepetalous ones proximal to or at sinuses of sepals; filaments white villous, filament and anthers pale; pollen triangular in polar view, tricolporate, syncolpate, colpi convergent at the poles in a triangle enclosing a remnant of exine, pores non-protruding, exine psilate or finely scabrate, grain diam 18–20 mm. Ovary lightly pilose; style lightly pilose, included at anthesis, ultimately exserted ca. 1 mm; ovules 6 or 7 at distal end of a flattened placenta. Disc reflexed over dorsal side of ovary, 1.0–1.7 mm long, 0.2–0.3 wide, cylindric to oblong, thick, dark red. Seeds 1.3 mm long, 1.5 mm wide, sub-circular, apex rounded, margin rounded.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Unknown

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Amazonas)

HERBARIUM MATERIAL

N.T. Silva, 60641, NY, (NY02108248), Amazonas
M.R. Schomburgk, 1556a, K, (K000533053), **Typus**

REFERENCE

Graham, S.A. (2019). A Revision of Cuphea section Amazoniana s. s. (Lythraceae). Systematic Botany 44(1): 146–183. https://doi.org/10.1600/036364419X697994

Cuphea diosmifolia A.St.-Hil.

Has as synonym
homotype *Cuphea diosmaefolia* A.St-Hil.
heterotypic *Cuphea pseudericoides* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** fasciculate; **base** obtuse; **form of the limb** lanceolate/ovate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirtellous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs 60-100 cm tall; stems pubescent, often glandulose in the apical portion. Leaves opposite to 3-verticillate at the apex, sessile, coriaceous, often imbricate, blades 4-8 x 1.5-4 mm, ovate, oblong, oblong-lanceolate, apex acute, base obtuse to subcordate, margin plane to slightly revolute, usually glabrous, sometimes adaxial surface scabrous, margin rarely sparsely glandular ciliate; uni-veined. Racemes leafy; pedicels 1.5-5 mm long, interpetiolar; floral tubes ca. 7 mm long; spur obtuse, broad; outer surface glandular, puberulous at the base; inner surface villous behind the stamens; petals pink, oblong-lanceolate, the two dorsal slightly smaller than the four ventral ones; stamens free in the upper third of the floral tube; vesicles 0; style glabrous; nectary horizontal, suborbicular; ovules 3. Seeds margin obtuse (adapted from Koehne 1877).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

S.A. Graham, 958, MO, RB, 379962, (RB00209202), Minas Gerais
A. Saint-Hilaire, s.n., P, Minas Gerais, **Typus**
T.B. Cavalcanti, 3108, MO, CEN (CEN00046940), Minas Gerais
S.A. Graham, 967, MO, NY, (NY00940308), Minas Gerais
C.A.W. Schwacke, 8257, RB, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea diosmifolia* A.St.-Hil.

Cuphea disperma Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** fasciculate/opposite; **base** obtuse; **form of the limb** linear/oblong; **margin of the leaf** revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs 30-100 cm tall; stems erect, glabrescent in the lower portion, sparsely pubescent and strigose, glandular-hirsute in the apical portion; branches with short internodes, forming axillary fascicles. Leaves opposite to 3-verticillate, sessile, blades ca. 6-8 x 1 mm, lanceolate to linear, rarely oblong, apex acute, base obtuse, margin strongly revolute, scabrous, with sparse long glandular trichomes; uni-veined. Racemes leafy; pedicels 1-2 mm long, interpetiolar or infrapetiolar; bracteoles rounded; floral tubes 5-6 mm long; spur obtuse, horizontal; outer surface reddish in the dorsal region, green ventrally, hirsute, long and purplish glandular trichomes; inner surface villous behind the stamens; petals pink to purple, two dorsal obovate, smaller than the four ventral petals, cuneate-oblong; stamens free in the upper third of the floral tube; vesicles 0 or inconspicuous; style glabrous; nectary deflexed, subglobose; ovules 2(-3). Seeds suborbicular, margin obtuse (adapted from Koehne 1877).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

H.S. Irwin, 22536, NY, 940319, Minas Gerais
T.B. Cavalcanti, CFCR 8704, NY, 940332, Minas Gerais
T.B. Cavalcanti, 247, SPF, CEN (CEN00013082), Minas Gerais
C.F.P. Martius, s.n., M, Minas Gerais, **Typus**
H.S. Irwin, s.n., RB, 251558, (RB00209702), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea disperma* Koehne



Figure 2: *Cuphea disperma* Koehne

Cuphea egleri Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/attenuate/acute; **form of the limb** ovate/oblong; **margin of the leaf** flat/revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** acute/obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 0.5 m; stems erect, irregularly much branched, young growth especially viscous; internodes longer to shorter than subtending leaves, very short toward stem apex; indumentum densely glandular-hirsute, with clear, erect trichomes, 0.2–0.5 mm long. Leaves opposite, ascending, crowded toward stem apex, gradually reduced in size in the inflorescence; petioles (1–) 2–4 mm long, ± terete; blades ovate to oblong, 10–40 mm long, 5–15 mm wide, at mid-stem mostly ca. 30 mm long, 15 mm wide, coriaceous, base attenuate, acute, or slightly obtuse, apex acute, margin plane to slightly revolute; surfaces adaxially dark green, minutely scabrous, occasionally with scattered long trichomes, abaxially yellow-green, puberulous or hirsute along veins. Racemes indistinct, terminal, leafy, compound, sparsely flowered; flowers solitary, interpetiolar and on short axillary branchlets; pedicels 1–4 mm long; bracteoles linear, fragile, 1 mm wide, subtended by 1-few coarse setae. Floral tube, including 1–1.5-mm-long, obtuse, descending spur, 20–25 mm long, 3–4 mm wide, dorsally straight, neck slightly or not contracted in fruit, mouth blunt to slightly oblique; outer surface diffuse red dorsally, pale yellow ventrally, apex red, glandular-hirsute/hispid, trichomes erect, clear or red-purple, 0.5–2.5 mm long, also lightly puberulous; inner surface villous distal to stamen insertion, glabrous between stamens and ovary, at ovary level bearing abundant, flattened, hyaline trichomes ca. 1 mm, vesicles 0; sepals equal, 1.0 mm long, 1.2 mm wide, deltate, margin not ciliate; epicalyx segments 0.5 mm long, shorter than sepals, sometimes terminated by a seta. Petals 2–4, red, ventral, equal, rudimentary, 1.0 mm long, 0.5–0.8 mm wide, elliptic. Stamens: 2 short dorsalmost included, inserted at ca. same level as other 9, 5 antesepalous stamens long-exserted, 4 antepetalous stamens subexserted to long-exserted; filaments lightly villous or glabrous, red or yellow, anther color unknown; pollen diporate, grain length 25 µm. Ovary non-gibbous, glabrous; style sparsely pilose or glabrous, exserted 8–12 mm; ovules 5; disc ca. 1 mm long, 1 mm wide, semi-deflexed, concave around base of ovary. Seeds ca. 2.0 mm long, 2.2 mm wide, brown, bilateral, suborbicular, apex obtuse, margin rounded, narrow. Chromosome number: $n = 7$.

COMMENTS

This species was placed in subsection *Pachycalyx*, series 2, between *C. gardneri* and *C. grandiflora* but differs from both by the combination of short, fine glandular hairs on the stem and ring of flattened hyaline hairs appearing internally at the base of the hypanthium. Ovule number, not previously recorded, is 5; seeds are 2 mm long with a broad, retuse apex. The type is from sandy-rocky soils in the cerrado.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types

Riverine Forest and/or Gallery Forest, Seasonal Evergreen Forest

Geographic Distribution
Confirmed ocurrences
North (Pará)
Possible ocurrences
North (Amazonas, Rondônia)

HERBARIUM MATERIAL

J.M. Pires, 6125, IAN, P (P01901684), NY, (NY00039378), Pará, **Typus**
T.B. Cavalcanti, 2363, CEN, MO, Pará
G.T. Prance, P24780, NY, (NY02108103), Pará

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea egleri* Lourteig

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea ericoides Cham. & Schltdl.

This treatment is composed of the following taxa: *Cuphea ericoides*, .

Has as synonym
homotype *Cuphea ericoides* Cham. & Schltdl. var. *ericoides*
heterotypic *Cuphea ericoides* var. *juniperifolia* A.St.-Hil.
heterotypic *Cuphea ericoides* var. *laxa* Koehne
heterotypic *Cuphea ericoides* var. *oxycedrina* Koehne
heterotypic *Cuphea ericoides* var. *pithyusa* A.St.-Hil.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** whorled; **base** obtuse/truncate; **form of the limb** linear; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose/pubescent; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs to shrubs, 40-150 cm tall; stems erect, internodes 0.2-2 cm long, pubescent, simple trichomes <0.5 mm long, curved, intermixed with short glandular trichomes, <0.5 mm long; brachyblasts absent. Leaves 3-(5)-verticillate, coriaceous, sessile, blades 3-10-(16)x0.5-2 mm, linear to narrow-oval, apex acute, base obtuse to truncated, margin flat, sparsely strigose, strigose in both surface intermixed with few glandular trichomes, glabrous, hyphodromous. Racemes 10-20 cm long, simple to compound, frondose, contracted at the apex of the branches; bracts leaf-like, pairs subequal; flowers alternate, pedicels 2-5 mm long, interpetiolar; bracteolas ca. 1.2x1 mm, ovate; floral tubes 6-10 mm long; spur 1.2-1.5 mm long, obtuse, deflexed, rare horizontal; outer surface atroviolaceous to dark vinaceous, sometimes greenish ventrally, pubescent, glandulous and strigose; inner surface villous in the region of the stamens, pilose in the rest of the floral tube; petals 6, pink to purple, subequal, 2 dorsal 4.4-5.2 x 1.4-3.4 mm long, narrow-obovate to obovate, 4 ventrals 5-5.3 x 2.4- 3.1 mm, obovate; stamens 11, filaments free in the upper third of the floral tube; pistil 5-8 mm long, ovary 2-4 mm long, slightly pilose, stylus 3-4 mm long, glabrous to pilose, ovules 3-(4); nectariferous gland ca. 0.7 x 0.7 mm, deflexed. Seeds 2-3, 1.6-1.9 x 1.6-1.9 mm, broad-elliptical to suborbicular, apex truncated, base obtuse, margin obtuse.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Pernambuco)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

L.M. Nascimento, 313, CEN, Pernambuco
G. Pereira-Silva, 17190, CEN (CEN00109136), Pernambuco
S.A. Graham, 870, MO, NY, 940354, Minas Gerais
W. Ganev, 1372, CEN, 28674, Bahia
T.B. Cavalcanti, 2328, MO, CEN (CEN00027081), Minas Gerais
T.B. Cavalcanti, 339, CEN, SPF, Bahia
T.B. Cavalcanti, 294, CEN, Bahia
F. Sellow, s.n., M, K, **Typus**
T.B. Cavalcanti, 248, NY, 445516, CEN (CEN00013083), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea ericoides* Cham. & Schltdl.



Figure 2: *Cuphea ericoides* Cham. & Schltdl.



Figure 3: *Cuphea ericoides* Cham. & Schltdl.



Figure 4: *Cuphea ericoides* Cham. & Schltdl.



Figure 5: *Cuphea ericoides* Cham. & Schltdl.



Figure 6: *Cuphea ericoides* Cham. & Schltdl.

REFERENCE

Koehne, E. 1903. Lythraceae. Das Pflanzenreich Regni Vegetabilis Conspectus 4(216): 1- 326

Cuphea exilis T.B.Cavalc. & S.A.Graham

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/truncate; **form of the limb** linear/lanceolate; **margin of the leaf** flat/incrassate. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 2 to 4 dm tall, stems erect, wiry, red-brown, one or more most likely from an enlarged xylopodium, unbranched below, unbranched or sparsely branched in the inflorescence, branches varying in length, 1–18 cm; stems appearing nearly glabrous, indumentum minutely hispid and glandular hirsute, hispid trichomes white, sharp, erect, hirsute trichomes to 0.2 mm; internodes mostly equal to or shorter than subtending leaves. Leaves sessile, opposite to subopposite, closely appressed to stem, not imbricate, uni-veined, secondary venation not visible on either surface; blades linear-lanceolate, 3–12 × 1–3 mm, thickly membranous, base rounded to subtruncate, apex acute, margin thick and plane, sparsely white punctate or short white glandular ciliate; blade surfaces gray-green, glaucous, glabrous except margin of youngest leaves sparsely ciliate, trichomes minute, white, glandular; distal leaves of stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy simple terminal racemes; flowers interpetiolar, alternate; pedicels 1–6 mm; bracteoles ca. 0.7 × 0.2 mm, lanceolate-ovate. Floral tubes 6–8 × 1.2–1.5 mm including rounded horizontal 0.5–0.7 mm spur, spur slightly enlarged dorsally; outer surface deep red-purple, hispid indumentum of minute white or wine trichomes, glandular hirsute indumentum of trichomes ca. 0.1 mm; inner surface glabrous above stamens, densely white villous in two lines below the two dorsalmost short stamens, otherwise lightly pilose to glabrous below stamens, vesicles 0; sepals equal, 1 × 1 mm, deltate, apex acuminate; petals subequal, 2 × 1 mm, linear or narrowly obovate, light purple; stamens included, nine reaching sinus between sepals, all filaments densely white villous, anther color unrecorded; pollen oblate, oval-triangular, tricolporate, syncolpate, pores strongly protruding, exine striate, three or four coarse striae flanking pores, rest of exine finely striate to psilate, grain diam. 18–20 µm; ovary glabrous; style included, glabrous; stigma small-capitate; nectary oblique, ca. 1 × 1 mm, slightly trilobed in dorsal view, semi-cupping base of ovary. Seeds 3, 3 × 2.5 mm, oblong, margin thick, rounded, pale. Chromosome number: unknown.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
North (Pará)

HERBARIUM MATERIAL

J.M. Pires, 6117, UB, 145869, (UB0037161), IAN, Pará, **Typus**
G.T. Prance, 25233, RB, (RB00209631), K (K001073808), MO, U, Pará

FIELD IMAGES / ILLUSTRATIONS

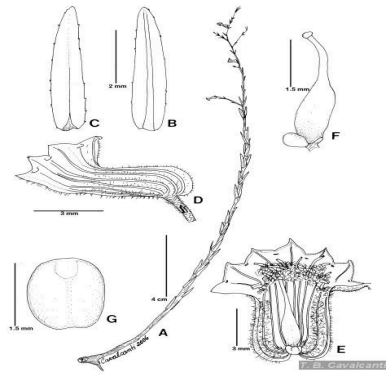


Figure 1: *Cuphea exilis* T.B.Cavalc. & S.A.Graham

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea ferruginea Pohl ex Koehne

This treatment is composed of the following taxa: *Cuphea ferruginea*, .

Has as synonym
heterotypic *Cuphea burchellii* Koehne
heterotypic *Cuphea decipiens* Koehne
heterotypic *Cuphea ferruginea* var. *acuminata* Koehne

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** obtuse/acute; **form of the limb** lanceolate/oblong/elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 1.5–8 dm tall, stems erect, usually one from a woody elongated or globose xylopodium, unbranched or sparsely branched below, unbranched to much-branched in the inflorescence, all parts rusty-brown when dry; indumentum strigose and glandular hirsute, strigose trichomes abundant, white, eglandular, erect to mainly antrorse, hirsute trichomes abundant, golden or rusty brown, erect, conspicuous, 0.5–3 mm; internodes mostly shorter than subtending leaves. Leaves sessile or with petioles to 1 mm, opposite to subopposite basally and distally, 3-verticillate at midstem, spreading to semi-ascending, slightly imbricate, pinnately-veined, abaxial venation prominent; blades lanceolate, narrowly lanceolate, elliptic, or oblong, 12–50 × 5–20 mm, typically ca. 30 x 10 mm at midstem, membranous to chartaceous, base acute to rounded, apex acute or short-acuminate, rarely long-acuminate on longest leaves, margin plane; blade surfaces adaxially dark green, abaxially olive green, hirsute and strigose, hirsute trichomes lax, 2 mm, strigose trichomes prominent on adaxial leaf surface and leaf margin, rust-colored, infrequently malpighiaceous and mainly transversely oriented; distal leaves of stem gradually or not at all reduced in size to form bracts of simple inflorescences, + abruptly reduced to bracts on branches of compound inflorescences. Inflorescences leafy simple racemes or bracted compound racemes, branchlets ca. 2–10 cm; flowers interpetiolar, alternate, subopposite or opposite at verticillate-leaved nodes; pedicels 3–10 mm, slender, persistent, conspicuous; bracteoles 0.75 × 0.5 mm, elliptic to ovate. Floral tubes (5.5–) 8–10 × 1–2 mm including rounded horizontal to subdescending 1 mm spur; outer surface diffused rose-purple with darker veins or green with rose-purple veins, minutely hispid and hirsute as on stems; inner surface densely villous above stamens, sparsely villous to glabrous for a short distance below the two dorsal short stamens, sparsely villous around ovary base; vesicles 0; sepals equal, ca. 1 × 1.25 mm, deltate, apex acute; epicalyx segments thickened, strigose and sometimes hirsute, margin free; petals subequal, 2.5–5 × 1.5–2 mm, two dorsals slightly shorter than the four ventrals, all oblong to obovate, purple with darker purple midvein; stamens included, antesepalous stamens nearly reaching sinus between sepals, antepetalous ones shorter, filaments of the two dorsalmost long stamens densely villous, the others lightly villous to glabrous, anther color unrecorded; pollen oblate, subtriangular, tricolporate, non-syncolpate, pores not protruding, exine psilate, grain diam. 21 µm; ovary glabrous; style glabrous, included; stigma punctiform; nectary oblique, 0.5 × 1.0 mm, triangular in dorsal view, semi-cupping base of ovary. Seeds 3–8, 2 × 2 mm, orbicular, margin narrow, rounded, thick, pale. Chromosome number: 2n = 18 (Graham & Cavalcanti 2001, 2007; Cavalcanti et al. 2490, published as C. spermacoce in 2007).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2388, CEN, MO, Distrito Federal
T.B. Cavalcanti, 2495, CEN, MO, Goiás
J.B.E. Pohl, 3731=D970, K, (K000533031), K, (K000533032), W, K, Goiás, **Typus**
T.B. Cavalcanti, 475, NY, 940392, (NY00940392), CEN, Goiás

FIELD IMAGES / ILLUSTRATIONS

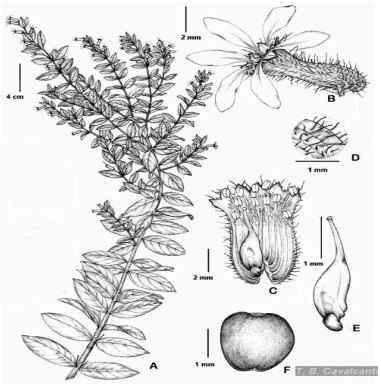


Figure 1: *Cuphea ferruginea* Pohl ex Koehne

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea filiformis T.B.Cavalc. & S.A.Graham

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** attenuate; **form of the limb** linear; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose/pubescent; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, perennial, 3–6 dm tall, stems erect from a globose xylopodium, unbranched or sparsely branched distally; indumentum minutely eglandular hispid and glandular hirsute, in some specimens strigose toward the base of the stem, hispid trichomes colorless, erect to antrorse, hirsute trichomes sparser, scarcely longer, erect, or indumentum entirely minutely hispid; internodes shorter than subtending leaves. Leaves sessile, 3- or 4-verticillate at midstem, opposite to subopposite basally and distally, ascending, spreading, not appressed, uni-veined; blades narrowly linear, 20–55 × 0.7–1.5 mm, consisting primarily of a thick midvein, blade scarcely developed, base attenuate, apex acute, margin plane; blade surfaces finely scabrous, gray-green, appearing glabrous, but with abundant microscopic strigose trichomes; distal leaves of stem gradually reduced in size to form bracts of the inflorescence. Inflorescences leafy simple racemes; flowers interpetiolar, alternate or paired at the nodes; pedicels 4–7 mm; bracteoles ca. 0.5 × 0.3 mm, ovate. Floral tubes 7–9 × 2–3 mm including rounded, distinctly descending 1–1.5 mm spur; outer surface red-purple dorsally with dark red-purple veins, paler ventrally, appressed strigose and sparsely finely glandular-hispid and pubescent; inner surface white, villous above stamens, densely to sparsely villous below, vesicles 8 to 10, prominent between stamen bases; sepals equal, 1.5 × 1.5 mm, deltate; epicalyx segments thick, hispid, scarcely free at margin; petals 6, subequal, 4.5–6 × 1.5–2 mm, narrowly oblong, rose; stamens included, antesepalous stamens reaching sinus of sepals, antepetalous stamens shorter, filaments purple, densely to sparsely white villous, except three ventral antesepalous filaments sparsely villous to glabrous, anthers white; pollen oblate, oval-triangular, tricolporate, syncolpate, pores protruding, exine finely striate, grain diam. ca. 20 µm; ovary apex pilose; style pilose at base, included; stigma punctiform; nectary oblique, 0.5–1 × 0.5 mm, semi-cupping base of ovary. Seeds 3, 3 × 2.7 mm, suborbicular, raphe prominent, margin thick, rounded.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Flooded Field (Várzea), Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)

HERBARIUM MATERIAL

R.C. Mendonça, 2051, CEN, 46238, (CEN00046238), Distrito Federal

L. Coradin, 2371, K, MO, SPF, BHCB, W, CEN (CEN00037310), Distrito Federal, **Typus**
E.P. Heringer, 10081, CEN (CEN00061097), Distrito Federal

FIELD IMAGES / ILLUSTRATIONS

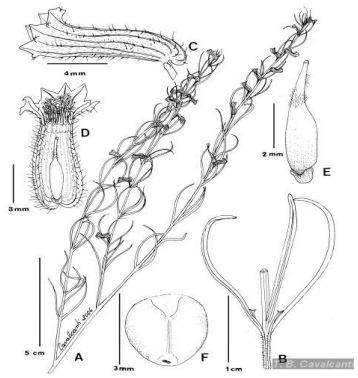


Figure 1: *Cuphea filiformis* T.B.Cavalc. & S.A.Graham

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea flava Spreng.

This treatment is composed of the following taxa: *Cuphea flava*, .

Has as synonym
heterotypic *Cuphea flava* var. *pseudobrachiata* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** cordate or subcordate/obtuse; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** flat/revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent/almost glabrous; **form of the spur** obtuse/saccate; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** yellow; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 30-80 cm tall; stems erect to decumbent, internodes 0.5-2 cm long, pubescent, simple trichomes <0.5 mm long, curved, sometimes sparse to dense hirsute, or glabrescent; brachyblasts absent. Leaves opposite, sometimes 3-verticillate, chartaceous to coriaceous, sessile to petiolate, petioles ca. 0.5 mm long, blades 6-15 x 2-8 mm, wide-oval to oval-oblong, rare narrow-oval, apex acute, base obtuse, subcordate to cordate, margin flat to revolute, strigose and ciliate-glandulose , glabrous on both surfaces, rare with glandular trichomes, brochidodromous, sometimes secondary veins inconspicuous. Racemes 8-15 cm long, compound, frondose, lax; bracts 3-15 x 1-7 mm, pairs subequal, shape and indument similar to the leaves; flowers alternate, pedicels 2-4 mm long, interpetiolar, rare axillary; bracteoles 0.4-0.9 x 0.3-0.6 mm, oval to suborbicular; floral tubes 7-9 mm long; 1-1.5 mm long, spur obtuse to saccate, deflexed; outer surface yellowish-green, usually glabrous, rare, slightly pubescent and glandular; inner surface villous in the region of the stamens, densely pilose around the ovary, the rest of the floral tube glabrous, rare totally pilose; petals 6, yellow, subequal; stamens 11, filaments free in the upper third of the floral tube, pistil 5-6.8 mm long, ovary 2.3 mm long, glabrous, stylust 2.5-4.5 mm long, glabrous, ovules 3; nectariferous gland 0.6-0.7 x 0.7-0.8 mm, deflexed. Seeds 3, 1.6-2 x 1.5-1.8 mm, oblong to elliptical, apex slightly truncated to obtuse, base slightly acute, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Coastal Forest (Restinga), Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Pará)
Northeast (Alagoas, Bahia, Paraíba, Pernambuco, Rio Grande do Norte, Sergipe)
Southeast (Espírito Santo, Rio de Janeiro)

HERBARIUM MATERIAL

W. Hoehne, 5641, CEN (CEN00027361), Rio de Janeiro
V.C. Souza, 26591, CEN (CEN00051489), CEN, 51489, Paraíba
T.C. Pergentino, 40, CEN, Sergipe

J.R. Pirani, 6052, CEN (CEN00074378), Espírito Santo
M.A. Silva, 5976, CEN, 69926, Rio Grande do Norte
M.S. Ferrucci, 1134, CEN, 26239, Pernambuco
J.H. Kirkbride, 4619, INPA, 204870, Alagoas
D.A. Lobato, 10, MG, Pará
G. Davidse, 17808, MG, Pará
T.B. Cavalcanti, 2410, CEN (CEN00034103), MO, Bahia
N. Lima, 80, NY, 445307, Rio Grande do Norte

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea flava* Spreng.

Cuphea froesii Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** fasciculate/opposite; **base** obtuse/attenuate; **form of the limb** oblong/elliptic/obovate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/glabrous; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs, 0.2–1.3 m; stems ± erect, irregularly much branched; internodes as long as to slightly shorter than subtending leaves; indumentum absent or sparsely puberulous with trichomes 0.2–0.5 mm long. Leaves opposite, spreading to ascending, often clustered in axillary fascicles, very gradually or not at all reduced in size in the inflorescence; petioles 0–1 mm long, 0.8–1.0 mm wide, flattened, broadly attached at the node; blades elliptic to oblong or obovate, 5–24 mm long, 4–8 mm wide, subfleshy, base obtuse, infrequently attenuate, , apex acute to obtuse, margin plane, glabrous or sparsely glandular-ciliate; surfaces green, glabrous, shining, only midvein apparent on adaxial surface, abaxial midvein occasionally sparsely glandular-hirsute. Racemes indistinct, terminal, leafy, compound; flowers 1–3 per node on short axillary branchlets, or one flower interpetiolar or supranodal and the others on axillary branchlets; pedicels 1.5–4.0 mm long; bracteoles leaf-like, lanceolate-linear, 0.5–1.0 mm long, flanked by glandular setae, apex acuminate. Floral tube, including 1–2-mm-long, obtuse, horizontal to slightly descending spur, 15–21 mm long, 2–3 mm wide, dorsally slightly convex, strongly convex in fruit, neck contracted in fruit, mouth blunt to oblique; outer surface red-orange or red with yellow apex, glabrous except dorsal veins sometimes sparsely glandular-hirsute, the trichomes colorless or red-purple, 0.5–0.7 mm long; inner surface villous distal to stamen insertion, glabrous between stamens and ovary, dorsally at ovary level with flattened, hyaline trichomes ca. 1 mm long, vesicles 0; sepals equal, ca. 0.5 mm long, 1.0 mm wide, deltate, margin not ciliate; epicalyx segments 1.0–1.5 mm long, , cylindrical or semi-compressed, oblong, each terminated by a coarse seta, 2 dorsal segments longer than other 4, all equal to or longer than sepals. Petals 0–4, red, rudimentary, equal, to 1 mm long, to 0.5 mm wide. Stamens: 2 short dorsalmost included, 5 antesepalous exserted, villous, 4 antepetalous included to exserted, glabrous; filaments red, anthers red; pollen diporate, grain diameter ca. 25 µm. Ovary non-gibbous, glabrous; style glabrous, exserted 3 mm; ovules 3–5; disc ca. 1.0 mm long, 1.5 mm wide, semi-deflexed, concave around base of ovary. Seeds 2.5 mm long, 2.2 mm wide, brown, bilateral, broadly orbicular, apex obtuse, margin rounded, narrow, light brown. Chromosome number unknown.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu), Amazonian Savanna

Geographic Distribution
Confirmed ocurrences
North (Amazonas, Pará)
Central-west (Mato Grosso)

HERBARIUM MATERIAL

G. Vieira, 184, MO, NY, Amazonas
I.L. Amaral, 954, INPA, NY, K (K001073975), RB, Pará
G.T. Prance, 24779, RB, MO, NY, K (K001073978), Pará
N.A. Rosa, 1976, NY, INPA, MO, Mato Grosso
J.M. Pires, 6123, P (P01901675), IAN, NY, Pará, **Typus**

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea fruticosa Spreng.

Has as synonym
heterotypic *Cuphea commersoniana* (A.St.-Hil.) Koehne
heterotypic *Cuphea ligustrina* subsp. *fruticosa* Koehne
heterotypic *Cuphea ligustrina* subsp. *hilaireana* Koehne
heterotypic *Cuphea ligustrina* var. *chamaedendrum* A.St.-Hil.
heterotypic *Cuphea ligustrina* var. *commersoniana* A.St.-Hil.
heterotypic *Cuphea ligustrina* var. *epilobioides* A.St.-Hil.
heterotypic *Cuphea ligustrina* var. *rosmarinifolia* A.St.-Hil.
heterotypic *Cuphea ligustrina* var. *silenoides* A.St.-Hil.
heterotypic *Cuphea ligustrina* Cham. & Schltdl.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** linear/elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** truncate; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Perennial shrubs, 30-60 cm, branches thin, pubescent, with short trichomes, sometimes with sparse to dense glandular trichomes. Leaves opposite, petiolate; petiole 1-2mm; blades 14-25x2-5mm, membranaceous, elliptical to linear-elliptical, apex acute to obtuse, margin flat, base acute to attenuate, glabrous or short trichomes on the ribs. Raceme bracteose, flowers opposite, axillary; pedicel ca. 4mm, bracteole 0; floral tube 6-6,5mm, purple to atro-purple on the back and ribs, with short, white and purple glandular trichomes; spur short, squared, horizontal; petals 6, rose, deciduous in the fruit; fillets free in the apical portion of the tube; vesicles absent; stylus glabrous; ovules 15-20; nectariferous gland dorsal, erect to horizontal, oblong; seeds orbicular, margin acute and lighter.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Grassland, Cerrado (lato sensu), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Northeast (Bahia)
Central-west (Goiás)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

A.F.M. Glaziou, 11951, R, Rio de Janeiro
A.F.M. Glaziou, 21430, P (P00647187), Goiás, **Typus**
G. Hatschbach, 46774, CEPEC, 40700, Espírito Santo
T.B. Cavalcanti, 3721, MO, CEN, 62007, Paraná
P. Fiaschi, 2363, NY, 1112599, Bahia
J.R. Stehmann, s.n., CEN, 19120, Minas Gerais
J.E. Roumbouts, s.n., IAC, 2698, São Paulo
J.G. Jardim, 127, MO, CEN, Bahia

Cuphea fuchsiifolia A.St.-Hil.

Has as synonym
homotype *Cuphea fuchsiaefolia* A.St.-Hil.
heterotypic *Cuphea warmingii* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** ovate; **margin of the leaf** flat. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirtellous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs to shrubs 100-150 cm tall; stems hirsute and pubescent, long purplish glandular trichomes, short white trichomes. Leaves opposite, petioles 2-6 mm long, blades 17-30 x 8.5-15 mm, ovate, apex acute, base obtuse, veins on the abaxial surface hirtelous to puberulous, adaxial surface scabrous; prominent veins on the abaxial surface; pinnately-veined. Racemes leafy; pedicels 2.5-3 mm long; floral tubes 13-17 mm long; spur obtuse, horizontal; outer surface purple in the dorsal region; petals purple, ca. 3 mm long, cuneate-lanceolate, persistent in the fruit, two dorsal slightly smaller; style glabrous; nectariferous gland horizontal; ovules 6 (adapted from Koehne 1877).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Northeast (Bahia)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Saint-Hilaire, s.n., P (P01901656), P (P01901657), Minas Gerais, **Typus**
T.B. Cavalcanti, 231, CEN, 13068, RB, SPF, NY, (NY00940380), Minas Gerais
G. Pereira-Silva, 8367, CEN (CEN00050705), Bahia
T.B. Cavalcanti, 2308, CEN (CEN00027062), Tocantins

Cuphea gardneri Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** lanceolate/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirtellous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** persistent on the fruit; **colour of the petal** white; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs 0.20-2 m tall, much branched, branches dense pubescent, soft and white, glandular trichomes reddish to vinaceous intermixed. Leaves opposite, subsessile; blades 18-85 x 8-35 mm, membranaceous, lanceolate and elliptic, apex acute, margin flat, base acute to attenuate, scabrous, trichomes erect and white; petiole ca. 1 mm long. Thyrse frondose; flowers alternate; pedicel 2-7 mm long, bibractolate; floral tube 21-27 mm, wine-red, greenish distally, glandular trichomes reddish, erect; spur short; petals 6, white, persistent in the fruit; filaments free in the apical portion of the tube, reaching the sepals; infrastaminal vesicles absent; stylus pilose; ovules 5-13; nectariferous gland dorsal, triangular, erect to semi-deflexed. Seeds with a rounded margin.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Distrito Federal, Goiás)

HERBARIUM MATERIAL

H.S. Irwin, 24368, RB, 159449, (RB00211449), NY, 940384, Goiás
T.B. Cavalcanti, 2214, CEN, 26538, Goiás
F.F. Mazine, 888, CEN, 68918, Tocantins
J.M. Rezende, 1070, CEN, Distrito Federal
G. Gardner, 3720, NY, G, K, (K000533096), K, (K000533095), Goiás, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cuphea glareosa T.B.Cavalc.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** cordate or subcordate; **form of the limb** ovate; **margin of the leaf** sub revolute/incrassate. **Inflorescence: type** frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 2–8 dm tall, stems erect, robust, one or more from an enlarged woody, elongated xylopodium, much branched distally; indumentum hispid and glandular hirsute, hispid trichomes abundant, minute, white, sharp-pointed, eglandular, erect, hirsute trichomes erect, 0.2–0.5 mm; internodes longer than to shorter than subtending leaves. Leaves sessile, opposite, rarely 3-verticillate at midstem and in the inflorescence, spreading, appressed to stem distally, pinnately-veined; blades cordiform to broadly ovate, 5–14 × 3–10 mm, thickly membranous, base broadly obtuse to cordate-clasping, apex acute, margin thickened to slightly revolute, not reaching midvein, midvein prominent abaxially; blade surfaces discolorous, adaxial surface green, abaxial surface pale, nearly white, finely scabrous, sometimes also sparsely to densely glandular hirsute, especially on adaxial surface, leaf margin and abaxial veins; distal leaves of stem gradually reduced in size to form bracts of the leafy inflorescences. Inflorescences leafy simple racemes, rarely bracted and compound, branchlets to 2 cm; flowers interpetiolar, alternate; pedicels 7–15 mm; bracteoles ca. 0.5 × 0.3 mm, ovate. Floral tubes 7–9 × 0.75–2 mm including horizontal 1 mm spur; outer surface light purple to rose-purple, densely hispid and glandular hirsute as on stems; inner surface villous above stamens, sparsely pilose to glabrous below, vesicles 5 to 7, poorly developed; sepals equal, 1 × 1.75 mm, deltate, apex short-acuminate; epicalyx segments thick, hirsute, scarcely free at margin; petals 6, subequal, 3.5–5 × 1.5–2 mm, oblong to narrowly obovate, rose-purple; stamens included, antesepalous stamens scarcely reaching sinus of sepals, antepetalous stamens shorter, filaments densely villous, filaments and anthers rose-purple; pollen oblate, oval-triangular, tricolporate, syncolpate, pores protruding, exine striate, grain diam. 23–24 µm; ovary apex lightly pilose to glabrous; style at base lightly pilose to glabrous, included; stigma punctiform; nectary oblique, 1 × 1.75 mm, ca. rectangular in dorsal view, semi-cupping base of ovary. Seeds 3, 2–2.5 × 2.5–3 mm, suborbicular, margin rounded.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2477, CEN (CEN00034168), Bahia
T.B. Cavalcanti, 355, CEN (CEN00026788), HUEFS, SPF, MO, Bahia
T.B. Cavalcanti, 335, SPF, (SPF00105418), MBM, HUEFS, RB, (RB00540656), MO, Bahia, **Typus**

FIELD IMAGES / ILLUSTRATIONS

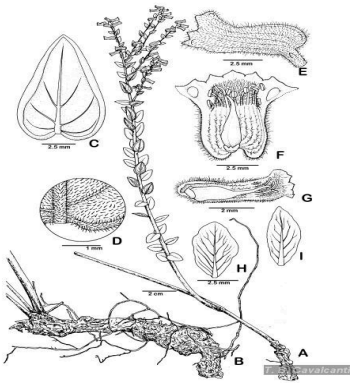


Figure 1: *Cuphea glareosa* T.B.Cavalc.

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea glauca Pohl ex Koehne

This treatment is composed of the following taxa: *Cuphea glauca*, .

Has as synonym
heterotypic *Cuphea glauca* f. *rm. hirsuta* Koehne
heterotypic *Cuphea glauca* f. *rm. hirsuta* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** flat/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs 30-40 cm tall; glaucous; stems erect, glabrous in the lower portion, strigose and pubescent in the upper portion, sometimes hirsute. Leaves opposite, sessile, subcoriaceous, glaucous, blades 15-30 x 7-11 mm, lanceolate to oblong, apex acute, base cordate, margin strigose, blades glabrous, or strigose on the veins on the abaxial surface, sometimes sparse long glandular trichomes. Racemes frondose-bracteate; pedicels 1-2 mm long; floral tubes 5-7.5 mm long, spur obtuse, deflexed; outer surface strigose and hirsute; petals cuneate-oblong, two dorsal smaller; stamens free in the upper third of the floral tube; vesicles 0; style glabrous. Seeds margin obtuse (adapted from Koehne 1877).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Northeast (Bahia, Piauí)

HERBARIUM MATERIAL

J.B.E. Pohl, 2281 = D 981, K, (K000533014), Tocantins, **Typus**
B. Luschnath, s.n., BR, Bahia, **Typus**
G. Gardner, 2582, K, F, W, Piauí, **Typus**

Cuphea glaziovii Koehne

Has as synonym
heterotypic *Cuphea niederleinii* Koehne

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** attenuate/acute; **form of the limb** linear/elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** cupuliform. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 0.5 m; stems erect from adventiously rooted rhizomes, unbranched or with short branches distally; internodes half or less than half as long as subtending leaves; indumentum glandular-hirsute with trichomes erect, reddish, to 0.3 mm long. Leaves opposite to mostly 3-verticillate, spreading to ascending, abruptly reduced in size in the inflorescence to hypsophylloid bracts; petioles 1–3 mm long, ± terete; blades linear or narrowly elliptic, 30–60 mm long, 4–11 mm wide, coriaceous, base acute to attenuate, apex acute, margin plane, thickened, not ciliate; surfaces glabrous, adaxially green, shining, abaxially green-brown, midvein prominent, brown. Racemes distinct, terminal, hypsophylloid, simple; flowers 3-verticillate, interpetiolar or subnodal; pedicels 6–10 mm long, bracteoles leaf-like, linear, 3–5 mm long. Floral tube, including blunt, 3–4-mm-wide non-spurred base, 18–26 mm long, dorsally convex, neck scarcely contracted in fruit, mouth blunt to slightly oblique; outer surface medium to deep purple, glandular-hirsute as on stems; inner surface glabrous, vesicles 0; sepals equal, 1 mm long, 2 mm wide, shallowly deltate, margins not ciliate; epicalyx segments absent. Petals 6, purple, equal, 4–8 mm long, 0.8–1.5 mm wide, narrowly spatulate to linear-filiform, spreading. Stamens: 2 short dorsalmost included, other 9 reaching to slightly exceeding margin of tube; filaments villous, filament and anther color unknown; pollen triangular to slightly oval-triangular in polar view, tricolporate, non-syncolpate, pores not protruding, colpi extending ca. 3/4 the distance to poles, exine faintly short-striate at the equator, psilate to possibly rugulate in polar and interaperturate areas, grain diameter 23 µm. Ovary non-gibbous, glabrous or puberulous; style glabrous or puberulous, reaching margin of floral tube; ovules ca. 80; disc 1.5 mm long, 1.0 mm wide, partially encircling base of ovary, asymmetrical, crenulated [*fide* protologue]. Seeds 1.3 mm long, 0.9 mm wide, brown, obdeltoid to obovoid, thin-coated, apex obtuse, margin rounded. Chromosome number unknown.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
Southeast (São Paulo)
South (Paraná)

HERBARIUM MATERIAL

G. Hatschbach, 19816, US, NY, MBM, Paraná
G. Hatschbach, 55764, RB, (RB00211445), G, MICH, MBM, Paraná
A.F.M. Glaziou, 18219, P (P00853244), K, (K000533100), São Paulo, **Typus**

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. Brittonia 42(1): 12-32.

Cuphea glutinosa Cham. & Schltdl.

Has as synonym
heterotypic *Cuphea acinifolia* A.St.-Hil.
heterotypic *Cuphea concinna* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** obtuse/attenuate/cuneate; **form of the limb** ovate/elliptic; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** pyriform. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs, 13-42 cm tall; stems erect to decumbent, internodes 0.5-4.5 cm long; sparse to densely glandular and pubescent to slightly pubescent, formed by short, greenish glandular trichomes and simple trichomes erect, sometimes distributed in a longitudinal strip along the stem. Leaves opposite, rarely verticillate; petiole 2-5 mm long subsessile; blades 3-32 x 1-13 mm, ovate to elliptic, apex acute, base rounded, obtuse to attenuate, margin flat to subrevolute, strigose and glandular; pubescent and glandular in both surfaces, sometimes dense or glabrescent. Racemes simple to compound, frondose to bracteose; flowers alternate, interpetiolar; pedicels 1-3 mm long; bracteoles c. 0.4-0.5 x 0.3 mm, ovate to elliptic. Floral tubes 6-10 mm long, spur # 1 mm long, rounded, horizontal to slightly deflexed; outer surface purple to vinaceous in the dorsal region and greenish in the ventral, pubescent and with glandular trichomes; inner surface villous above the insertion of the stamens and in the dorsal ribs, the remaining glabrous, rare the entire glabrous surface; dorsal purple and ventral petals pink or all pink, uneven, the 2 dorsal petals wider than the 4 ventral ones; filaments free in the upper portion of the floral tube; infra-staminal vesicles absent; ovary 3-4 mm long, glabrous; ovules 8-15; stylus 2.5-3.5 mm long, sometimes pilose; nectariferous gland deflexed, rare horizontal, usually triangular in dorsal view. Seeds 3-12; obovated to suborbicular; 1.5-2.1 x 1.7-2 mm; margin acute, winged; apex truncated; base obtuse to cuneate.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest, Pampa

Vegetation Types
Anthropic area, Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Southeast (Minas Gerais, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

F. Sellow, s.n., K, (K000533144), W, HAL, **Typus**
R.M. Harley, 18732, NY, 445363, Bahia
T.B. Cavalcanti, 2458, CEN, 34150, Bahia

G. Pedralli, 3062, CEN (CEN00016117), Santa Catarina
J.F.M. Valls, 14308, CEN, 34745, Rio Grande do Sul
L. Freitas, 21, CEN, 33097, São Paulo
T.B. Cavalcanti, 3687, CEN, 61975 (CEN00061975), MO, Paraná

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea glutinosa* Cham. & Schltdl.



Figure 2: *Cuphea glutinosa* Cham. & Schltdl.



Figure 3: *Cuphea glutinosa* Cham. & Schltdl.

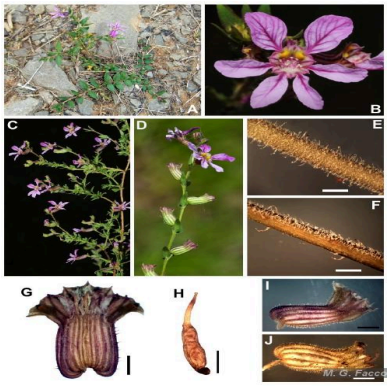


Figure 4: *Cuphea glutinosa* Cham. & Schltdl.

REFERENCE

Lourteig, A. (1969). Litráceas. In: Reitz, R. (Ed.). Flora Ilustrada Catarinense. Itajaí: Herbário Barbosa Rodrigues, 80p.
Cavalcanti, T.B. & Graham, S. (2002). Lythraceae. In: Wanderley, M.G.L. et al. (Eds.). Flora Fanerogâmica do Estado de São Paulo. São Paulo: Instituto de Botânica,. v.2, p. 163–180.

Cuphea grandiflora Pohl ex Koehne

This treatment is composed of the following taxa: *Cuphea grandiflora*, .

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** lanceolate/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs or shrubs, 1–2 m; stems weak, sparsely branched, branches long; internodes mostly half or less than half as long as subtending leaves, increasingly shorter distally; indumentum of three types: puberulous; minutely strigose with white, cystolithic, eglandular, incipiently bifid trichomes to 0.4 mm long, with the long arm antrorsely oriented; and hispid with sparse, erect, red trichomes to 2 mm long. Leaves opposite, spreading to mostly ascending, very gradually reduced in size in the inflorescence; petioles 0–2 mm long, ± terete; blades oblong-lanceolate, 30–70 mm long, 15–25 mm wide, membranaceous, base acute, apex short-acuminate, margin plane; surfaces green, minutely scabrous. Racemes indistinct, terminal, leafy, simple; flowers solitary, interpetiolar or axillary, sparse; pedicels 5 (–10) mm long; bracteoles leaf-like, broadly ovate, 2 mm long. Floral tube, including 1–2-mm-long, obtuse, descending spur, 19–30 mm long, 4–6 mm wide, dorsally convex, neck not contracted in fruit; mouth slightly oblique, upturned; outer surface red-purple with dorsal yellow-green area distally , darker red on veins, minutely strigose, sparsely hirsute/hispid on veins with the trichomes red or colorless, of mixed lengths, 0.5–2.0 mm long; inner surface glabrous or lightly pilose distal to stamen insertion, glabrous proximally, vesiculate, 5–10 short vesicles alternating with stamens at stamen base; sepals equal, 1.5 mm long, 1.5–2.0 mm wide, deltate, sparsely hirsute, not ciliate; epicalyx segments 0.7–1.5 mm long, shorter than sepals, slightly flattened, oblong, bright green, each with 1-few setae 1 mm long. Petals 6, red-purple, turning deep purple to black when dry, subequal, 2.0–3.0 mm long, 0.7–1.5 mm wide, oblong-obovate, held horizontally in same plane as floral tube. Stamens: 2 short dorsalmost included, inserted at ca. same level as the other 9, all gathered ventrally, 3 ventral antesepalous stamens glabrous, long-exserted, other stamens villous, reaching margin of tube or slightly exserted; filaments basally pale, distally red, anthers purple; pollen oval-triangular in polar view, tricolporate, syncolpate, pores protruding, exine finely striate, striae not reaching the poles, grain diameter 27–28 µm. Ovary non-gibbous, glabrous; style glabrous, exserted to 4 mm; ovules 5–10; disc 0.8–1.0 mm long, 1.3–3.0 mm wide, broadly triangular in dorsal view, semi-deflexed, slightly concave at base of ovary. Seeds 2.8–3.0 mm long, 2.5 mm wide, brown, bilateral, obovate-oblong to nearly orbicular, apex shallowly retuse, margin rounded, lighter in color.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu), Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

G. Pereira-Silva, 7467, CEN (CEN00049989), MO, Goiás
J.B.E. Pohl, 1068 (D 967), BR, W, K, (K000533093), K, (K000533094), Goiás, **Typus**
M.C.E. Amaral, CFSC 8376, SPF, MBM, Minas Gerais

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea harleyi L.M.Brauner & T.B.Cavalc.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** ovate/elliptic; **margin of the leaf** flat/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 0.3–0.6 cm tall, delicate, usually prostrate, few branched, branches delicate, strigose, with short, appressed, white trichomes, rarely mixed with sparse, reddish, erect, glandular trichomes. Leaves 11–25×1–7 mm, petiolate, petiole 0.7–1.4 mm long., brochidodromous, narrow-oblong, narrow-elliptic, elliptic, rare oval, apex acute, margin plane to subrevolute, base acute to obtuse, strigose, adaxial surface with short, appressed, non glandular trichomes, oriented horizontally scattered on the blade, abaxial surface with appressed, non glandular trichomes concentrated on the veins and absent on the blade. Inflorescence frondose to frondose-bracteose, pedicel 1–6 mm long, internodal to subaxillar, persistent; bracteoles at the apex of the pedicel; floral tube 5.3–7.7 mm long including rounded, horizontal to slightly ascending spur 0.7–1 mm, outer surface greenish to dorsally flushed rose, strigose, with short, white, appressed trichomes especially concentrated on the ribs, rarely with glandular trichomes, inner surface villous above the stamens, densely white, villous in two lines below the two dorsalmost short stamens; petals 6, pink, caducous, obovate to elliptic, two dorsals 2.5–3.4mm long, four ventrals 3–3.2 mm long; stamens 11, slightly exserted; vesicles 0; ovules 2–4; ovary glabrous, style glabrous to pilose; the gland at base of ovary horizontal to slightly deflexed, dorsally convex. Seeds 2–4, 1.6–1.7× 1.7–1.9 mm. elliptic to orbicular, margin obtuse.

COMMENTS

Cuphea harleyi is primarily characterized by the delicate, usually prostrate, few branched habit, with strigose indumentum constituted of short, appressed and white trichomes, present in the whole plant. In the leaves and flowers, the appressed trichomes are concentrated on the veins and ribs, respectively, and absent among them. Other characters are the presence of pedicels in internodal to subaxilar position, floral tube with a horizontal spur and the gland at base of ovary horizontal to deflexed. The seeds are elliptic to orbicular with obtuse margin. By the characters of the staminal position in the floral tube in which the anthers at anthesis reach or exceed the margin of the tube, the gland at base of ovary plane to convex dorsally, absence of xylopodium and seeds of obtuse margin, Cuphea harleyi is inserted in Cuphea section Euandra subsection Hilariella (Brauner & Cavalcanti 2018)

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences

Northeast (Bahia)

HERBARIUM MATERIAL

L.M. Brauner, 92, CEN, 100556 (CEN00100556), Bahia, **Typus**
L.M. Brauner, 96, CEN, 100560 (CEN00100560), Bahia
R.M. Harley, CFCR 7250, CEN, Bahia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea harleyi* L.M.Brauner & T.B.Cavalc.



Figure 2: *Cuphea harleyi* L.M.Brauner & T.B.Cavalc.



Figure 3: *Cuphea harleyi* L.M.Brauner & T.B.Cavalc.

REFERENCE

BRAUNER, L.M. & CAVALCANTI, T.B. (2018). A new species, a new synonym and lectotypification in Cuphea (Lythraceae) from Brazil. Phytotaxa 350(2): 155–160.

Cuphea hatschbachii Lourteig

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/obtuse; **form of the limb** linear/oblong/elliptic; **margin of the leaf** revolute. **Inflorescence: type** frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** acute; **position of the spur** ascending; **petal** absent on the fruit; **colour of the petal** lilac/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** unknown.

ADDITIONAL DESCRIPTION

Shrubs up to 10 cm tall; rhizome 1 cm diam.; stems hirsute and pubescent. Leaves sessile to subsessile, linear-oblong to elliptic, 5-8 x 2-3.5 mm, obtuse to subacute, margin revolute and irregularly ciliate, base rounded to slightly cordate, uninerve. Pedicels interpetiolar, 7-9 mm long; bracteoles oval. Floral tubes ca. 5 mm long, spur ascending, outer surface irregularly glandulose-, pubescent on the ribs in the lower region; sepals ciliate; epicalyx segments thickened; petals pink to lilac, oboval-subspatulate, c. 4 x 3-4 mm; stamens subincluded, filaments pilose; ovary glabrous, ovules 4-5; stylus pilose; nectariferous gland deflexed (adapted from Lourteig 1964)

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
South (Paraná)

HERBARIUM MATERIAL

G. Hatschbach, 15226, P, MBM (MBM001561), Paraná
G. Hatschbach, 20154, P (P05140917), K (K001073818), MBM (MBM008495), Paraná
Tessmann, s.n., MBM (MBM271160), P (P01901644), Paraná, **Typus**

FIELD IMAGES / ILLUSTRATIONS

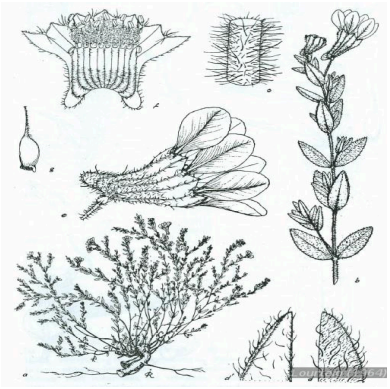


Figure 1: *Cuphea hatschbachii* Lourteig

Cuphea hirsutissima Lourteig

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/cuneate; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** violet; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrub; rhizome up to 6 mm diam.. with many fibrous roots; stem up to 70 cm tall, cylindrical. up to 5 mm diam, branched, erect to decumbent, densely hirsute-pubescent. Leaves discolor, oval oblong to oblong-lanceolate, secondary veins evident, 6-7 pairs; abundant glandular trichomes on adaxial surface, margin ciliated, base obtuse. Racemes up to 12 cm; bracts oval, acuminate, hirsute, 1.5-6 x 1.25-10 mm; pedicels pubescent, up to 10 mm. Floral tube 6-8.5 mm long, spur obtuse, outer surface with long glandular trichomes on the ribs, sparse pubescence at the base; inner surface lanose-pubescent in the upper region, pubescent the subglabrous in the lower region on the ribs; Petals violet, the two dorsal obovals-spatulate, 2.5-3.5 x 1.5-2.5 mm, the four ventral oblong to linear-spathulate, 2.5-3 x 1-2.5 mm; ovary pilose in the upper region, stylus pilose; nectariferous gland ascending, sometimes sub-horizontal; ovules 47-77. Seeds flattened, orbicular, ca. 0.75 mm long, marginate (adapted from Lourteig 1948).

Life Form
Herb, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
South (Santa Catarina)

HERBARIUM MATERIAL

T.S. Ibarrola, 962, LIL, **Typus**
L.B. Smith, 10965, NY, 445583, MO, 2454683, Santa Catarina

FIELD IMAGES / ILLUSTRATIONS

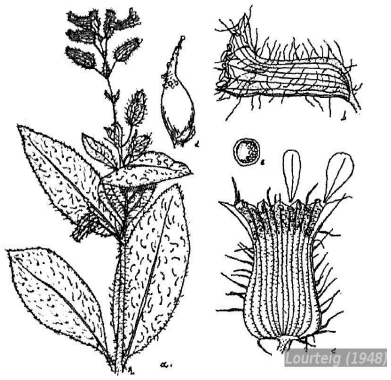


Figure 1: *Cuphea hirsutissima* Lourteig

Cuphea hybogyna Koehne

Has as synonym
heterotypic *Cuphea grandiflora* var. *fecunda* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate; **form of the limb** ovate/oblong; **margin of the leaf** revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/scabrous; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs, 1(–5) m; stems slender with exfoliating thin strips of bark, sparsely branched, vine-like, leafless except near terminus of stems; internodes half as long as subtending leaves at base of stem, progressively shorter toward stem apex; indumentum puberulous to minutely hirsute, with white, eglandular trichomes abundant on young growth, to 1 mm long. Leaves opposite, ascending, gradually reduced in size in the inflorescence, imbricate, crowded at apex of stem; petioles 0–1 mm long, ± terete; blades narrowly ovate to oblong, 15–45 mm long, 5–17 mm wide, thick, coriaceous, base subcordate, apex acute, margin slightly revolute; surfaces green or gray-green, shining, scabrous, abaxially minutely hirsute along veins, the trichomes appressed, incipiently bifid with base elongated. Racemes indistinct, terminal, leafy, simple; flowers solitary, interpetiolar; pedicels 2–3 mm long; bracteoles leaf-like, oval, 1–2 mm long. Floral tube, including 0.5–1.0-mm-long, obtuse, horizontal to slightly descending, scarcely spurred base, 28–32 mm long, 5–6 mm wide, dorsally strongly convex, neck not contracted in fruit, mouth blunt to slightly oblique, slightly enlarged ventrally; outer surface red or red-orange with yellow-green apex, glandular-hirsute, viscous, the trichomes white, erect, to 1 mm long; inner surface glabrous, vesicles 0; sepals subequal, 1.0–1.5 mm long, deltate, not ciliate; epicalyx segments 1.0 mm long, 0.6 mm wide, half as long as sepals, oblong, subcylindric, with 1-few setae 1 mm long. Petals 4–6, red-purple, turning deep purple-black when dry, equal to subequal, 2.0–2.2 mm long, 1.0–1.2 mm wide, included to slightly exserted, ovate, base subcordate (dorsal) or obtuse (ventral). Stamens: 2 short dorsalmost included, inserted slightly deeper than the others, gathered toward ventral side, 5 antesepalous exserted, 4 antepetalous subexserted, filaments sparsely villous or glabrous, red, anthers white; pollen oval-triangular in polar view, tricolporate, syncolpate, pores not protruding, exine possibly finely striate, grain diameter 20–22 µm. Ovary prominently enlarged dorsally (gibbous), depressed underneath the gibbosity, glabrous; style glabrous, deflexed toward the ventral side of tube, ultimately exserted to ca. 4 mm; ovules 10–21, disc ca. 1.0 mm long, 1.5 mm wide, broadly triangular in dorsal view, semi-deflexed, concave around base of ovary. Seeds 3.0 mm long, 2.0 mm wide, brown, bilateral, suborbicular, apex obtuse, margin thinned, broad, 0.2–0.3 mm wide.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3947, CEN (CEN00088691), Minas Gerais
A.F.M. Glaziou, 19183b, B, P (P01901638), Minas Gerais, **Typus**
J.R. Pirani, 5188, NY, SPF, CEN (CEN00058200), Minas Gerais

REFERENCE

Koehne, E. 1903. Lythraceae. Das Pflanzenreich Regni Vegetabilis Conspectus 4(216): 1- 326
Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea hyssopifolia Kunth

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** lanceolate/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** almost glabrous; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** white/purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 20-70 cm, very branched. Branches with ascending trichomes, brownish-white or white; internodes generally half of the leaf width. Leaves 10-35x1-8 mm, narrow lanceolate to oblanceolate or linear, glabrous or almost glabrous in the abaxial surface, base acute or attenuate, apex acute, rare obtuse; petiole up to 2 mm. Racemes frondose; flowers alternate; pedicels 3-8 mm long, bibracteolate; floral tube 5-8.5 mm long, spur rounded to slightly descending, the mouth not ventrally extended, green and purple dorsally, glabrous or sparsely glandular trichomes on the ribs, rarely finely hirsute; sepals sub-equal; epicalyx segments thick, obsolete, greenish; petals 6, 3-5 mm long, purple, pink or white; stamens 11, deeply included just reaching sepals, villous; nectariferous gland 3-lobed, straight, erect. Seeds 5-8, 1-1.75 × 1-1.75 mm.

COMMENTS

Cuphea hyssopifolia is one of the most popular cultivated species of Cuphea. It is grown as a perennial shrub in warm climates and is sold as an indoor plant, always with flowers, in temperate climates. Leaf morphology and trichomes varied considerably within the same species.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

Vegetation Types
Anthropic area

HERBARIUM MATERIAL

J.B. Carmo, 2, CEN, 21948 (CEN00021948), São Paulo
R.S. Oliveira, 108, CEN, 29111 (CEN00029111), Minas Gerais

Cuphea hyssopoides A.St.-Hil.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** obtuse/acute; **form of the limb** linear/lanceolate; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrub, 0.8–3 dm tall, stems erect, one to three from an elongated to semi-globose xylopodium, unbranched or sparsely irregularly branched distally in the inflorescence; indumentum finely hispid or highly glandular hirsute, hispid trichomes white, sharp-pointed, erect, hirsute trichomes colorless or red-purple, 1–2 mm; internodes mostly less than half the length of subtending leaves. Leaves sessile or subsessile with petioles 0–1 mm, opposite at base of stem, subopposite or 3-verticillate from midstem to stem apex, slightly to strongly imbricate and appressed to stem, thickly membranous, appearing uni-veined; blades narrowly linear to linear-lanceolate, sometimes oblong-elliptic to lanceolate at lower nodes, 5–30 (–50)× 1–8 mm, spreading or appressed, base rounded to acute, apex acute to acuminate, margin plane to slightly revolute, not approaching the midvein; blade surfaces sparsely to densely glandular hirsute, rarely nearly glabrous; distal leaves of stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy, simple,more or less terminal racemes; flowers interpetiolar, alternate, subopposite at verticillate-leaved nodes; pedicels 6–12 mm, elongating with age to 8–30 mm; bracteoles ca. 0.5 × 0.3 mm, ovate. Floral tubes 7–9 × 1–2 mm including rounded or sub-truncate, horizontal 0.5–0.7 mm spur; outer surface deep red-purple dorsally, especially on veins, paler ventrally, minutely white hispid and densely red-purple glandular hirsute as on stems; inner surface densely white villous above stamens, lightly villous to mostly glabrous below, lightly villous along veins below the two dorsalmost short stamens, vesicles 0 to 8; sepals equal, 1 × 1.2–1.5 mm, deltate, apex acute; epicalyx segments minute thickenings, red-purple, sparsely hispid and hirsute, margin scarcely free; petals subequal, 3–6 × 1.5–4 mm, narrowly obovate, rose to deep rose-purple, midvein dark wine; stamens included, antesepalous stamens reaching sinus between sepals, antepetalous stamens shorter, filaments white villous, anthers white; pollen oblate, subtriangular, tricolporate, non-syncolpate, pores not protruding, exine psilate, grain diam. 15 µm; ovary glabrous; style glabrous, included, subexserted in fruit; stigma punctiform; nectary oblique, ca. 0.75 × 1 mm, subtriangular in dorsal view, semi-cupping base of ovary. Seeds 3–6, 1.7–2 × 1.8–2 mm, orbicular, margin rounded, narrow, pale.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Central-west (Goiás)
Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

A. Saint-Hilaire, s.n., P (P00604201), P (P00604202), Minas Gerais, **Typus**
T.B. Cavalcanti, 3655, CEN (CEN00061944), MO, São Paulo
T.B. Cavalcanti, 2555, CEN (CEN00035440), MO, Minas Gerais
R. Mello-Silva, 2230, SPF, RB, CEN, Goiás

FIELD IMAGES / ILLUSTRATIONS

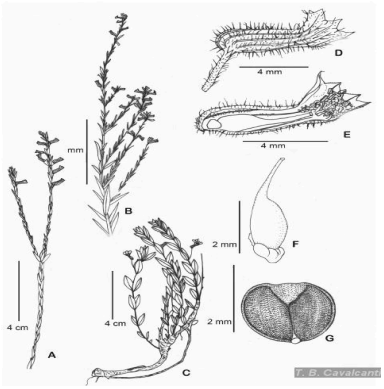


Figure 1: *Cuphea hyssopoides* A.St.-Hil.

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea ignea A.DC.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate; **form of the limb** lanceolate/ovate/elliptic/angustate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** glabrous/ hirtellous; **form of the spur** galeate; **position of the spur** deflexed; **petal** apetalous; **colour of the petal** white; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Perennial herbs or subshrubs, 0.5–1.0 m; stems semi-decumbent, irregularly branched; indumentum absent or sparsely to abundantly hirsute, trichomes white or red, erect, thin, non-glandular, 0.3–1.0 mm; internodes mostly half to less than half as long as subtending leaves. Leaves opposite, spreading; petioles 0–5 (–10) mm, approx. cylindrical; blades narrowly elliptic to lanceolate or ovate, 20–90 (– 115) × 10–25 (–40) mm, thinly membranaceous, base attenuate, apex short- to long-acuminate, margin plane; blade surfaces green, paler abaxially, glabrous or hirsute as on stems, trichomes when present equally abundant on both surfaces; leaves not reduced in size in inflorescence. Inflorescences indistinct sparsely-flowered leafy racemes; flowers solitary, interpetiolar, sometimes subnodal, well-separated in the inflorescence; pedicels 5–15 mm, slender, persistent; bracteoles reduced to a few bulbous-based setae 1 mm. Floral tubes 18–26 × 3 mm including an orbicular, inflated, horizontal to slightly descending spur 2–3 mm diam., floral tubes dorsally straight to slightly convex, more convex in fruit, neck scarcely or not narrowed in flower, contracted in fruit, mouth slightly flaring, 4–5 mm wide at tube margin, blunt to oblique; outer surface typically intensely red-orange or scarlet red, apex purple-black, dorsal sepal white, sepal margins white (rarely purple-black), surface glabrous or sparsely glandular-hirsute/hispid on the veins toward base of tube, rarely with dense, white, thin trichomes 0.5 mm; inner surface glabrous; sepals subequal, 0.2–0.5 × 3.0–4.0 mm, essentially obsolete, dorsal sepal widest, margins sparsely to abundantly ciliated by white bulbous-based setae 0.5–1 mm, sepal margins occasionally nearly glabrous; epicalyx segments variable, 0.5–1.5 mm, longer than or equal sepals, triangular to oblong, flattened, glabrous, or crowned by one seta 1 mm; petals 0; stamens 11, the 2 short dorsalmost included, 5 antesepalous stamens exserted, 4 antepetalous included to subexserted, filaments glabrous, purple, anthers purple; pollen oval-triangular in polar view, tricolporate, syncolpate, pores strongly protruding, exine uniformly striate, striae coarse, anastomosing, extending nearly to the poles, grain diam. 26–28 µm; ovary glabrous; style glabrous, exserted to 5 mm; ovules 10–20; disc 1.5–2.0 × 1.5 mm, oblong in dorsal view with rounded apex and central furrow, horizontal, not fused to spur. Seeds 2 × 2 mm, brown, bilateral, orbicular, apex flattened, margin narrow, lighter in color.

COMMENTS

Widely cultivated and naturalized in some parts of Tropical America.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

HERBARIUM MATERIAL

A. Etzel, s/n, CEN, 33961 (CEN00033961), São Paulo

Cuphea iguazuensis Lourteig

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** elliptic; **margin of the leaf** sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** violet; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Shrubs up to 35 cm tall; decumbent, stems branched, pubescent, trichomes cystolitic, antrorse, glandular trichomes, violet; internodes 5-21 mm long. Leaves opposite, subsessile, o petiole up to 5 mm; blades 6-18 x 1.5-5 mm, elliptic, apex subacute, base acute, margin subrevolute, densely pilose-pubescent, trichomes cystolitic oblique, glandular trichomes long, sparse; secondary veins 4-5 pairs, prominent on the abaxial surface. Flowers solitary, pedicels 2-7 mm long, interpetiolar; bracteoles 2, c. 0.5 mm long, ovate, sharp. Floral tubes 5-5.5 mm long, spur short, outer surface violet, pubescent, glandular trichomes rigid, violet, sparse; inner surface pilose in the region of the dorsal ribs, lanose behind the stamens; petals violet, oboval-spathulate, 2.5-3 x 1.5 mm, the two dorsals largest, c. 2.5 mm; stamens included; infrastaminal vesicles absent; nectariferous gland suborbicular, plane-concave, horizontal to slightly ascending; ovary glabrous, ovules 5; stylus pilose, included. Seeds c. 1.7 mm long, suborbicular, apex carunculate.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
South (Paraná)

HERBARIUM MATERIAL

G. Hatschbach, 23267, SPF, 172172 (SPF00172172), RB, 443458, (RB00493988), HUEFS, 146773 (HUEFS0146773), MBM (MBM013140), P (P01901632), Paraná, **Typus**

Cuphea impatientifolia A.St.-Hil.

Has as synonym
heterotypic *Cuphea affinitatum* Koehne
heterotypic *Cuphea circaeoides* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate; **form of the limb** ovate; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/hirtellous; **form of the spur** obtuse; **position of the spur** deflexed; **petal** persistent on the fruit; **colour of the petal** purple/lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Herbs (annual?) 10-50cm tall, erect, branches hirsute, glandular trichomes long, 2-2.5mm long, simple trichomes short, 0.1-0.2 mm long. Leaves opposite, 30-70x20-40 mm, membranaceous, petiolate, brachidodromous, ovate, apex obtuse to acute, margin flat, base abruptly attenuated, trichomes sparse, secondary veins 7-9, inconspicuous; petiole 5-17 mm long. Racemes bracteose, 3-10 cm long, terminal and axillary; bracts 4-8x1-2 mm, linear, ciliate; flowers alternate, pedicel 1-3 mm long; bracteoles ca. 0.5 mm long; floral tube c. 7x2 mm, c. 4mm wide in the fruit, glandular trichomes long, c. 2mm long, spur slightly deflexed; petals lilac to purplish, persistent in the fruit; nectariferous gland dorsal; seeds 2-3, black, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Atlantic Rainforest

Vegetation Types
Caatinga (stricto sensu), Carrasco Vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Saint-Hilaire, s.n., P, Minas Gerais, **Typus**
T.B. Cavalcanti, 2433, CEN, MO, Bahia
G. Eiten, 10572, US, (US01885019), NY, UB, Maranhão
G. Gardner, 2166, G, Piauí
J.A. Lombardi, 2161, CEN, 441 (CEN00033599), Minas Gerais
L.M.R. Melo, 53, EAC, Ceará
C.L. Seido, 13, HVASF, 441, (HVASF000441), Pernambuco
D.G. Oliveira, 247, ASE, Sergipe
V.P. Moreira, 463, UFRN, Rio Grande do Norte
V.F. Sousa, 694, UFRN, Paraíba

Cuphea inaequalifolia Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ obtuse; **form of the limb** lanceolate/ovate/elliptic; **margin of the leaf** sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose/pubescent; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral/third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 30-100 cm tall, stems erect to decumbent, internodes 1-4 cm long, hirsute and strigose-antrorse, glandular trichomes 2-4 mm long, vinaceous, appressed, intermixed with simple trichomes, simple trichomes <1 mm long, curved; brachyblasts absent. Leaves opposite, rare 3-verticillate, chartaceous, petioles 1-2 mm long, blades 15-60 x 7-15 mm, narrow-ovate, rare elliptic, apex acute, base obtuse to subordinate, margin subrevolute, strigose, indument strigose and sparsely hirsute on both surfaces, glandular trichomes concentrated on the ribs on the abaxial surface; brochidodromous. Racemes 10-15 cm long, simple to compound, frondose-bracteose, lax; bracts 3-25 x 1.5-6 mm, one of the bracts strongly reduced in the pair, elliptic, similar to the leaves; flowers alternate, fasciculate in the young branches, pedicels 1.5-3 mm long, interpetiolar, rare axillary; bracteoleas 0.4-0.7 x 0.4-0.7 mm, suborbicular to broad-ovate; floral tubes 6-7 mm long; spur 0.7-0.9 mm long, obtuse, deflexed; outer surface vinaceous dorsally, greenish ventrally, pubescent and densely glandular, strigose in the sepals; inner surface villous in the region of the stamens, slightly pilose in the dorsal ribs and ovary region; petals 6, light pink, subequal; stamens 11, filaments free in the upper third or in the middle third of the floral tube, ovary 1.8-2.5 mm, glabrous, stylus 1.3-3.5 mm long, glabrous, ovules 3; nectariferous gland ca. 0.8 x 0.8, deflexed. Seeds 2-3, 1.8-2.1 x 1.7-1.9 mm, obovate to broad-obovate, apex obtuse, base slightly acute, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Rondônia)
Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G. Pereira-Silva, 17024, CEN (CEN00108623), Mato Grosso
A.A.A. Barbosa, 1961, HUFU, Minas Gerais
G. Pereira-Silva, 16025, CEN, Rondônia
Tamberlik, s.n., W, **Typus**
M.V.L. Viana, s.n., CEN, 20270, Goiás
G. Pereira-Silva, 17088, CEN (CEN00108677), Mato Grosso

O.S. Ribas, 2550, CEN (CEN00058569), Mato Grosso do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea inaequalifolia* Koehne



Figure 2: *Cuphea inaequalifolia* Koehne



Figure 3: *Cuphea inaequalifolia* Koehne



Figure 4: *Cuphea inaequalifolia* Koehne

REFERENCE

Lourteig, A. 1987. Lythraceae Austroamericanae. Addenda et corrigenda II. Sellowia 39: 5-48.

Cuphea ingrata Cham. & Schltdl.

This treatment is composed of the following taxa: *Cuphea ingrata*, .

Has as synonym
heterotypic *Cuphea ingrata* var. *grandifolia* A.St.-Hil
heterotypic *Cuphea ingrata* var. *parvifolia* A.St.-Hil
heterotypic *Cuphea obliqua* Bacig.
heterotypic *Lythrum diffusum* Vell.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** oblong/elliptic/obovate; **margin of the leaf** flat/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirtellous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** white/lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular/fusiform. **Seed: margin** acute/thickened.

ADDITIONAL DESCRIPTION

Subshrubs, 0.20-0.60 m; slightly viscous, branched; stems with dense, white, short, erect eglandular trichomes, mixed with sparse, red-purple, long, erect, glandular ones to mm long; internodes shorter than the subtending leaves. Leaves petiolate, the petiole 0.5-4 (-7) mm long; blades 6-35 mm long, 4-13 mm wide, membranaceous to chartaceous, elliptic, oblong to obovate, base acute to attenuate, apex obtuse to acute, margin scabrous, plane or sometimes slightly revolute; pairs of nerves 4-7, inconspicuous; adaxial surface scabrous, with inconspicuous, very short, appressed eglandular trichomes, sometimes glabrous; abaxial surface with short, appressed, eglandular trichomes, mixed with sparse, white, short, glandular ones. Inflorescence leafy; flowers solitary, axilar; pedicels 1-3 mm long, caducuous; bracteoles 0.7-0.8 mm long, ovate to lanceolate, apex acuminate. Floral tube 7-9 mm long, including a horizontal spur 0.5-1 mm long, the floral tube1.8-2 mm wide in lateral view, with both sides inflated in frutification, outer surface pale-green sometimes purple dorsally, with or withoutsparse, long, red-purple, bulbous based, erect, glandular setae 0.4-0.7 mm long on the ribs, very short eglandular trichomes on the spur, nearly glabrous on the neck and mouth; inner surface not vesiculate, villous above the stamens and on the nerves below the two dorsal stamens; sepals equal, 0.5-0.6 mm long, the margins not ciliate; appendages 0.5-0.8 mm long, lanceolate, with short glandular setae at the apex. Petals subequal, near white to lilac, the 2 dorsals 3-5 mm long, 1.5-2.5 mm wide, obovate, the 4 ventral petals 3.2-5 mm long, 1-1.9 mm wide, narrow elliptic. Stamens 11, filaments pale-yellow, anthers pale-yellow to greyish, the 2 dorsal most shortest and most deeply inserted, the 3 ventral antesepalous glabrous and the 2 ventral antesepalous ones with villous filaments, all 5 reaching the margin of the tube, and the 4 central exserted, the 6 antepetalous with villous filaments, inserted. Stylus 2.2-3 mm long, with trichomes, sometimes glabrous, included; ovary glabrous; ovules 5-12. Seeds 1.9-2 mm long, 1.8-2 mm wide, rounded, obovate to elliptic, light-brown to dark-brown, margin acute.

Life Form
Herb, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution
Confirmed ocurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Santa Catarina)
Possible ocurrences
South (Rio Grande do Sul)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2585, CEN, 35467 (CEN00035467), Minas Gerais
L. Roth, 14683, MBM, 263793, Santa Catarina
M.M. Arbo, 3905, RB, 345411, Minas Gerais
F. Ehrendorfer, 6973, CEN, 36133, Rio de Janeiro
H.S. Irwin, 30289, NY, (NY00445345), INPA, 93474, Minas Gerais
M. Kuhlmann, 2068, CEN, 27528, São Paulo
T.B. Flores, 1505, CEN, Espírito Santo
F. Sellow, s.n., K, (K000532960), **Typus**
G. Pedralli, 3049, CEN (CEN00016150), Paraná

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea ingrata* Cham. & Schltdl.



Figure 2: *Cuphea ingrata* Cham. & Schltdl.



Figure 3: *Cuphea ingrata* Cham. & Schltdl.



Figure 4: *Cuphea ingrata* Cham. & Schltdl.

REFERENCE

Cavalcanti, T.B. & Graham, S.A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.

Cuphea laricoides Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** whorled; **base** obtuse/truncate; **form of the limb** linear/ovate; **margin of the leaf** revolute/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose/pubescent; **form of the spur** obtuse/saccate; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** white/lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs, 15-80 cm tall; stems erect to decumbent, rarely prostrate, internodes 0.3-1.5 mm long, pubescent, strigose-antrorse, trichomes <0.5 mm long, curved, appressed, intermixed with trichomes erect, sometimes sparse glandular trichomes present; brachyblasts present. Leaves generally 3-verticillate, coriaceous, sessile, blades 2-8 x 0.8-1.5 mm, linear to narrow-ovate, apex acute, base truncate to obtuse, margin subrevole to revolute, rare, flat, strigose, strigose on both surfaces, simple trichomes appressed, hyphodromous. Racemes 7-20 cm long, compound, frondose, lax; bracts 3-6 x 0.8-1.5 mm, pairs subequal, shape and indument similar to the leaves; flowers alternate, rare opposite, pedicels 2-3 mm long, interpetiolar, rare axillary; bracteoles 1-1.5 x 0.8-1.3 mm, ovate, oblong to suborbicular; floral tubes 6-8 mm long; spur 1-1.4 mm long, obtuse to slightly saccate, deflexed; outer surface purplish in the dorsal region, ventrally greenish, pubescent, glandular, or just strigose, simple trichomes <0.5 mm long, curved, glandular trichomes short, <0.5 mm long; inner surface villous in the region of the stamens, dense-pilose in the rest of the floral tube, mainly on the ribs of the lower third of the tube; petals 6, lilac to white, subequal; stamens 11, filaments free in the upper third of the floral tube; ovary 1.8-2.5 mm long, glabrous, rare pilose on the dorsal line, stylus 2.5-3 mm long, pilose on the base or glabrous, ovules 3-(4); nectariferous gland 0.6-0.7 x 0.5-1 mm, deflexed. Seeds 2-3, 1.8-2.3 x 1.8-2.3 mm, wide-obovate to suborbicular, apex slightly retuse to obtuse, base slightly acute, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Ceará, Maranhão, Piauí)

HERBARIUM MATERIAL

A. Fernandes, s.n., EAC, 6063, Maranhão
G. Pereira-Silva, 17160, CEN (CEN00109083), Piauí
L.W. Lima-Verde, 1045, EAC, Ceará
G. Pereira-Silva, 17180, CEN, Piauí
L.P. Queiroz, 10896, HUEFS, Bahia
J.S. Blanchet, 3079, K (K000533064), Bahia, **Typus**
G. Gardner, 2164, K (K000533062), Piauí, **Typus**
G. Gardner, 2163, K, (K000533061), Piauí, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea laricoides* Koehne



Figure 2: *Cuphea laricoides* Koehne



Figure 3: *Cuphea laricoides* Koehne



Figure 4: *Cuphea laricoides* Koehne

Cuphea linarioides Cham. & Schltdl.

This treatment is composed of the following taxa: *Cuphea linarioides*, .

Has as synonym
heterotypic *Cuphea linarioides* var. *communis* A.St.-Hil.
heterotypic *Cuphea linarioides* var. *crassiuscula* A.St.-Hil.
heterotypic *Cuphea linarioides* var. *minutifolia* A.St.-Hil.
heterotypic *Cuphea linarioides* var. *nana* A.St.-Hil.
heterotypic *Lythrum calcaratum* Vell.
Cuphea linarioides var. *pseudothymoides* Koehne

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** cordate or subcordate/obtuse/cuneate; **form of the limb** linear/ovate/elliptic; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** acute; **position of the spur** ascending; **petal** persistent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs 17-37 cm tall; xylopodium or rhyzome present; stems erect to decumbent, internodes 0.5-2.5 cm long; pubescent, intermixed with glandular trichomes sparse, sometimes distributed in a longitudinal strip along the stem. Leaves opposite to verticillate, acabrous or not; sessile to subsessile; blades 2.5-11 x 0.5-5 mm, ovate to elliptical, rare linear, apex acute, base cordate to obtuse, rare cuneate, margin flat to subrevolute, strigose and/or sparsely glandular, sometimes also pubescent; strigose or pubescent in both surfaces, intermixed with sparse glandular trichomes or glabrous and only glandular in the margin and central rib of the abaxial face. Racemes compound, frondose-bracteose; bracts 3-9 x 0.8-3 mm, ovate to linear, apex acute, base cordate, subcordate to obtuse; flowers alternate to opposite, interpetiolar, 1-2 flowers per node; pedicels 1.5-15 mm long; bracteoles ca. 0.3-0.8 x 0.1-0.3 mm, narrow-elliptic to narrow-ovate. Floral tubes 6-9 mm long, spur 1-3 mm long, ascending; outer surface purple to vinaceous in the dorsal region and greenish in the ventral, indument glandular, formed by short glandular trichomes (<1 mm long), purple to green, and pubescent to slightly pubescent; inner surface villous above the insertion of the stamens and pilose at the base of the floral tube; petals purple to pink, uneven, the 2 dorsal petals wider than the ventral ones; filaments free in the upper third of the floral tube, infrastaminal vesicles absent; ovary 2.3-3 mm long, pilose in the apical region to glabrous; ovules 4-7; stylus 2.2-3 mm long, pilose; nectariferous gland deflexed, widely obovate. Seeds 2-7; suborbicular to elliptical, rarely obtriangular; 1.6-1.8 x 1.4-1.9 mm; margin acute; apex truncated; base rounded to obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types
High Altitude Grassland, Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul)
Southeast (Minas Gerais, São Paulo)

South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

S.A. Graham, 889, MO, NY, 940421, Goiás
T.B. Cavalcanti, 2549, CEN (CEN00035434), Minas Gerais
G. Pedralli, 3124, CEN, 16182, Rio Grande do Sul
G. Pedralli, 3281, MO, CEN, 16126, Paraná
F. Sellow, s.n., K, **Typus**
V.C. Souza, 4373, CEN, 21989, São Paulo
S.A. Graham, 965, RB, 379949, (RB00208738), Minas Gerais
M.A. Silva, 4527, RB, 364083, (RB00208764), Distrito Federal
A. Pott, 12257, CEN, 58576, Mato Grosso do Sul
T.B. Cavalcanti, 3136, MO, CEN, 61839, Distrito Federal
G. Pedralli, 3121, CEN, 16180, Santa Catarina

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea linarioides* Cham. & Schltdl.



Figure 2: *Cuphea linarioides* Cham. & Schltdl.



Figure 3: *Cuphea linarioides* Cham. & Schltdl.

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cavalcanti, T. B. & Graham, S. A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.

Cavalcanti, T. B. & Graham, S. A. 2011. Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed. Brasília: Atalaia, v. 9, p. 131-175.

Cuphea lindmaniana Koehne ex Bacig.

Has as synonym
heterotypic *Cuphea varia* Koehne ex Bacig.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/attenuate/cuneate; **form of the limb** ovate/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** truncate; **position of the spur** without spur; **petal** absent on the fruit; **colour of the petal** white/purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** tubular/cylindric. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Herbs, 12-60 cm tall; stems erect to decumbent, internodes 2-7 cm long; hirsute and pubescent to glabrescent. Leaves opposite, slightly scabrous; petiole 1-10 mm long; blades 7-30 x 2-15 mm, oval to elliptic, apex acute to obtuse, base cuneate, attenuated to obtuse, margin flat, strigose and glandular; hirsute, sometimes strigose and pubescent on both surfaces, rare glabrous on the adaxial surface. Racemes usually simple, frondose to frondose-bracteose; flowers opposite, interpetiolar, 2 flowers per node; pedicels 4-11 mm long; bracteoles absent. Floral tubes 4-6 mm long, spur truncate; outer surface purplish to vinaceous and, generally, with a yellow spot on the dorsal sepal, covered by dense, short glandular trichomes, intermixed by scarce trichomes; inner surface densely villous above the insertion of the stamens, the rest of the tube villous to glabrescent; dorsal petals purple to pink and white ventral, rarely all white, uneven, the 2 dorsal petals generally smaller than the 4 ventral ones; filaments free in the upper third of the floral tube, exserted to sub exserted, rarely included, ventral stamens villous and dorsal glabrous; infra-staminal vesicles absent; ovary 2-3 mm long, pilose on the dorsal region, glabrous ventrally; ovules 28-62; stigma poorly capitulated; stylus 1-2 mm long, villous; nectariferous gland erect to oblique, narrow-oval to oval. Seeds 12-44; obovate, elliptic to orbicular; 0.8-1.1 x 0.8-1 mm; margin acute, winged, irregularly toothed; apex truncate, obtuse to retuse; base truncate, retuse to obtuse.

Life Form
Herb

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest, Pampa

Vegetation Types
High Altitude Grassland, Grassland, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3876, CEN, Rio Grande do Sul
L.B. Smith, 10965, RB, 101273, (RB00209176), Santa Catarina
P. Dusén, 7156, S, Paraná, **Typus**
M.G. Facco, 108, ICN, Rio Grande do Sul
L.B. Smith, 13519, NY, 445589, Paraná
A.R. Reitz, 14474, RB, 260612, (RB00209170), Santa Catarina
T.B. Cavalcanti, 3710, CEN, 72985, Santa Catarina

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea lindmaniana* Koehne ex Bacig.



Figure 2: *Cuphea lindmaniana* Koehne ex Bacig.



Figure 3: *Cuphea lindmaniana* Koehne ex Bacig.

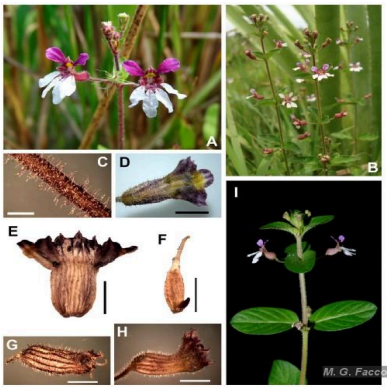


Figure 4: *Cuphea lindmaniana* Koehne ex Bacig.

REFERENCE

Bacigalupi, R.C.F. 1931. Contributions from the Gray Herbarium of Harvard University 95: 6.

Cuphea linifolia (A.St.-Hil.) Koehne

This treatment is composed of the following taxa: *Cuphea linifolia*, .

Has as synonym
heterotypic *Cuphea ericoides* var. *linifolia* A.St.-Hil.
heterotypic *Cuphea linifolia* var. *helicophora* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** linear; **margin of the leaf** flat/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent/glabrous; **form of the spur** acute; **position of the spur** ascending; **petal** absent on the fruit; **colour of the petal** white/lilac/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs, 9-35 cm tall; xylopodium and tuberous roots absent; stems generally erect, internodes 0.4-1.2 cm long, branches with short trichomes, distributed in a longitudinal strip along the stem, the rest glabrous. Leaves opposite, glabrous, subsessile; petiole <1 mm length; blades 4-17 x 0.8-1.2 mm, linear, apex acute, base acute to obtuse, margin flat to subrevolute. Racemes simple to compounds, frondose to frondose bracteose; flowers alternate, interpeciolar, 1 flower per node; pedicels 2-4 mm long; bracteoles c. 0.5-0.8x0.3-0.4 mm, narrow-oval to oval. Floral tubes 5-7 mm long, including a c. 1 mm long, ascending spur; outer surface vinaceous in the dorsal region and greenish in the ventral, glabrous or glandular on the ribs; inner surface villous above the insertion of the stamens, the rest glabrous to pilose; petals pink to lilac, rarely white, the 2 dorsal petals wider than the 4 ventral ones; stamens free in the upper third of the floral tube; infrastaminal vesicles absent; ovary 1.5-2.5 mm long, glabrous; ovules 6-8; stylus 1.3-2 mm long, glabrous; nectariferous gland broad-oboval, deflexed. Seeds 1-3, suborbicular to elliptical, 1.3-1.4 1.2-1.3 mm; margin obtuse, apex rounded to slightly truncate, base obtuse to rounded.

COMMENTS

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)
Southeast (São Paulo)
South (Paraná, Rio Grande do Sul)

HERBARIUM MATERIAL

A. Saint-Hilaire, s.n., P, São Paulo, **Typus**
G. Hatschbach, 3616, RB, 100211, (RB00209222), Paraná
S.A. Graham, 928, MO, NY, 445598, Paraná
J.F.B. Pastore, 1148, CEN (CEN00054824), Goiás
O. Bueno, 7555, ICN, Rio Grande do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea linifolia* (A.St.-Hil.) Koehne

Cuphea loefgrenii Bacig.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** oblong/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** horizontal; **petal** persistent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** unknown.

ADDITIONAL DESCRIPTION

Subshrubs or shrubs,1–2 m; stems erect, branched, branches of various lengths; internodes half to two-thirds as long as subtending leaves; indumentum abundantly glandular-hirsute/hispid with erect, thin, red-purple trichomes of various lengths, 1–10 mm long. Leaves opposite, spreading, not reduced in size in the inflorescence; petioles 1–2 mm long, ± terete; blades narrowly elliptical to oblong, 25–42 mm long, 8–16 mm wide, membranaceous, base acute to attenuate, apex acute or short-acuminate; surfaces green, adaxially scabrous, strigose, trichomes sparse, white, slightly appressed, 0.5–1 mm long, abaxially puberulous. Racemes indistinct, terminal, leafy, simple; flowers solitary, axillary, sparse; pedicels 5–7 mm long; bracteoles leaf-like, lanceolate-ovate, 1 mm long. Floral tube, including 1–1.5-mm-long, obtuse, horizontal base, 20–40 mm long, 4–5 mm wide, dorsally convex, neck slightly contracted, mouth blunt to slightly oblique; outer surface yellow-green, apex red, sepals and dorsal veins tinged red-purple, indumentum moderately glandular-hirsute, trichomes red-purple, to 1 mm long; inner surface lightly villous to glabrous distal to stamen insertion, glabrous proximally or sparsely, softly pilose (fide Bacigalupi 1931), vesicles 0; sepals equal, ca. 1.0 mm long, 1.5 mm wide, deltate, apex narrowly acuminate, hirsute; epicalyx segments merely thickened areas at sinuses of sepals, shorter than sepals, sub-bulbous, with a few setae to 1 mm long. Petals 6, pale red, subequal, 1.0–2.5 mm long,1–2 mm wide, 2 dorsal ovate with subcordate base, other 4 petals elliptic-oblong. Stamens: 2 short dorsalmost included, other 9 reaching margin of floral tube or exserted, one ventral antesepalous stamen sometimes exceptionally long, surpassing the style, filaments of 2 short dorsalmost stamens glabrous, other 9 densely villous, white, anther color unknown; pollen oval-triangular in polar view, tricolporate, syncolpate, pores protruding, exine uniformly moderately finely striate, striae anastomosing, extending up to half the distance to poles, grain diameter 23–25 µm. Ovary non-gibbous, glabrous; style glabrous, long-exserted; ovules 5 or 6 (–10 fide Bacigalupi 1931); disc broad, semi-deflexed, size unknown. Seeds unknown.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga

Vegetation Types
Caatinga (stricto sensu), Carrasco Vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Ceará, Piauí)

HERBARIUM MATERIAL

A. Loefgren, 332, R, Ceará
A. Loefgren, 256, R, S (S-R-7448), Ceará, **Typus**
G. Pereira-Silva, 17183, CEN (CEN00109129), Piauí

G. Pereira-Silva, 17188, CEN (CEN00109134), Piauí

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea loefgrenii* Bacig.



Figure 2: *Cuphea loefgrenii* Bacig.



Figure 3: *Cuphea loefgrenii* Bacig.



Figure 4: *Cuphea loefgrenii* Bacig.

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea lucens T.B.Cavalc. & S.A.Graham

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** lanceolate/ovate; **margin of the leaf** sub revolute/incrassate. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/pubescent/almost glabrous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 1.0–1.5 m; stems erect, irregularly much branched; internodes shorter to longer than subtending leaves**;** indumentum none or very sparsely puberulous with minute, glandular trichomes. Leaves opposite, spreading to ascending, crowded toward apex of branches, gradually reduced in size in the inflorescence; petioles 0–3 mm long, ± terete; blades ovate-lanceolate, 12–37 mm long, 5–20 mm wide, coriaceous, base acute to mostly obtuse, apex acute or obtuse with short acuminate tip, margin thickened to slightly revolute, minutely scabrous; surfaces green, glabrous, shining, abaxially paler, venation conspicuous on both faces. Racemes indistinct, terminal, leafy, compound; flowers solitary, interpetiolar, and on short axillary branchlets; pedicels ca. 4 mm long; bracteoles leaf-like, ovate, 0.7 mm long. Floral tube, including 0.5–1.0-mm-long, obtuse, horizontal spur, 18–22 mm long, 4 mm wide, dorsally straight to slightly convex, neck not contracted in fruit, mouth blunt to slightly oblique; outer surface yellow, proximal third of tube sparsely puberulous to minutely hirsute, remainder mostly glabrous; inner surface sparsely villous above stamens, glabrous between stamens and ovary, villous at ovary level and on veins of the 2 short dorsalmost stamens, the trichomes cylindrical, not flattened, vesicles 0; sepals equal, 0.3–0.5 mm long, 1.5–1.7 mm wide, deltate, margin not ciliate; epicalyx segments 1 mm long, longer than sepals, cylindrical, each terminated by a glandular seta. Petals 6, red, equal, rudimentary, 1.0–2.0 mm long, 0.3–1.0 mm wide, cuneate-oblong. Stamens: 2 short dorsalmost included, inserted at ca. same level as other 9, 5 antesepalous glabrous, long-exserted, 4 antepetalous villous, included or reaching margin of tube; filaments and anthers red; pollen diporate, grain length 27 µm. Ovary non-gibbous, glabrous; style glabrous, exserted ca. 4 mm; ovules 7 or 8; disc ca. 3.0 mm long, 2.5 mm wide, concave around base of ovary, apex slightly deflexed. Seeds 3.0 mm long, 2.5 mm wide, brown, bilateral, suborbicular, apex obtuse to slightly retuse, margin rounded. Chromosome number unknown.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G. Gottsberger & J. Döring, 31-28286, L, CEN (CEN00036115), Minas Gerais, **Typus**

Cuphea lutescens Pohl ex Koehne

This treatment is composed of the following taxa: *Cuphea lutescens*, .

Has as synonym
heterotypic *Cuphea lutescens* var. *macrocalyx* Koehne
heterotypic *Cuphea lutescens* var. *microcalyx* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ obtuse/acute; **form of the limb** elliptic/angustate; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse; **position of the spur** horizontal; **petal** persistent on the fruit; **colour of the petal** purple/lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** pyriform. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs, erect, 0.4-1.5 cm tall, without xylopodium, very viscous; branches pubescent, white or rusty, with long, rare, short and curved trichomes, intermixed with long and white glandular trichomes, sometimes vinaceous. Leaves 7-23x3-12 mm, subsessile to petiolate, lanceolate, elliptic to narrow-elliptic, apex acute to obtuse, margin flat to subrevolute, base obtuse, subcordate or acute, strigose, brochidodromous; petiole 3-10 mm long. Racemes frondose; pedicel 1.2-3.7 mm long, interpetiolar, persistent; bracteoles elliptic, in the final third of the pedicel with long trichomes at the apex; floral tube 7.2-9 mm long, ventrally green, dorsally vinaceous, externally strigose, trichomes rigid, intermixed with long, white glandular trichomes, sometimes vinaceous, internally villous throughout the length of the floral tube; spur obtuse, horizontal; petals 6, purple to lilac, persistent and curled into the tube in fructification, the dorsal narrow-obovate, 3.2-4 mm long, the ventral narrow-elliptic, 2.4-3.7 mm long; stamens in the upper third of the floral tube, absent infra-stem vesicles; glabrous ovary, villous to glabrous stylet, ovules 3; nectariferous gland dorsal, deflexed, concave in the ventral portion. Seeds 3, 2-2.3x2-2 mm, orbicular to elliptical, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Northeast (Bahia, Piauí)
Central-west (Goiás, Mato Grosso do Sul)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná)
Possible ocurrences
Central-west (Mato Grosso)

HERBARIUM MATERIAL

G. Pereira-Silva, 17143, CEN, Piauí
J.R. Coleman, 670, SP, São Paulo
G. Hatschbach, 75117, CEN, Espírito Santo
G. Martinelli, 19936, RB, (RB01379983), Rio de Janeiro
J.B.A. Bringel, 264, CEN, Tocantins
V.J. Pott, 8412, CEN, 63836, Mato Grosso do Sul
J.B.E. Pohl, 3291, W, Minas Gerais, **Typus**
T.B. Cavalcanti, 245, NY, SPF, UFG, BHCB, CEN (CEN00013080), Minas Gerais
T.B. Cavalcanti, 2445, CEN (CEN00034137), Bahia
L.C.M. Fonseca, 40, CEN, 37845, Paraná
T.B. Cavalcanti, 2200, CEN, Goiás

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea lutescens* Pohl ex Koehne



Figure 2: *Cuphea lutescens* Pohl ex Koehne



Figure 3: *Cuphea lutescens* Pohl ex Koehne



Figure 4: *Cuphea lutescens* Pohl ex Koehne



Figure 5: *Cuphea lutescens* Pohl ex Koehne

REFERENCE

Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.

Cavalcanti, T. B. 1994. Lythraceae. In B. Stannard. (Org.). Flora do Pico das Almas, Bahia. 1ed. Londres, Inglaterra: Royal Botanic Gardens, p. 411-416.

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cuphea lysimachioides Cham. & Schltdl.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** obtuse/acute; **form of the limb** linear/lanceolate/oblong/elliptic; **margin of the leaf** sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm)/13 to 30 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** white/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Shrubs, 23-87 cm tall; xylopodium globose to elongated; stems erect to decumbent, internodes 0.3-5.5 cm long; densely strigose and often retrorse (malpighiaceous trichomes), sometimes also hirsute, formed by glandular trichomes, greenish to purplish, intermixed or not with scarce simple trichomes. Leaves often 3-4 verticillate to opposite, rarely alternating or sub-opposite, scabrous; petiole 1-3 mm long; blades 11-48 x 4-16 mm, elliptic to oblong, apex acute, rare cuspidate or obtuse, base obtuse to cuneate, rare subcordate, margin subrevolute, strigose; densely strigose on both surfaces, with hyaline malpighiaceous trichomes with an obliquely protruding arm or with a very short second arm, sometimes intermixed with sparse glandular trichomes. Racemes generally simple, bracteose to frondose-bracteose; flowers alternate, opposite to verticillate, interpetiolar, flowers 1-4 per node; pedicels 3-20 mm long; bracteoles c. 1-2.4 x 0.8-1.3 mm, narrow-ovate to ovate. Floral tubes 8-13 mm long, spur 1-1.5 mm long, deflection; outer surface purplish in the dorsal region or totally yellowish-green, strigose or also glandular; inner surface villous to densely villous above the insertion of the stamens, the rest pilose to villous; petals white to pink, subequal; filaments free in the upper portion of the floral tube, exserted; infra-staminal vesicles absent; ovary 4-6 mm long, glabrous, rare pilose; ovules 8-15; stigma poorly capitulated; stylus 2.4-5 mm long, glabrous to sparsely pilose; nectariferous gland deflexed, triangular in dorsal view. Seeds 3-14; largely obovate to suborbicular; 2.2-3 x 2.1-2.9 mm; apex emarginated, rare slightly truncate; base truncate; margin acute, winged.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest, Pampa, Pantanal

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso do Sul)
South (Paraná, Rio Grande do Sul)

HERBARIUM MATERIAL

F. Sellow, s.n., HAL, 98391, Rio Grande do Sul, **Typus**
G. Hatschbach, 22553, MBM, Paraná
G. Hatschbach, 51601, MBM (MBM124557), MO, Mato Grosso do Sul
J.F.M. Valls, 12851, CEN (CEN00090297), Rio Grande do Sul
M.G. Facco, 197, ICN, Rio Grande do Sul
A. Saint-Hilaire, C2 - 2784, P (P00604218), Rio Grande do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea lysimachioides* Cham. & Schltdl.



Figure 2: *Cuphea lysimachioides* Cham. & Schltdl.



Figure 3: *Cuphea lysimachioides* Cham. & Schltdl.

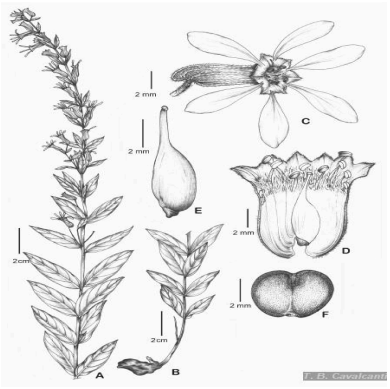


Figure 4: *Cuphea lysimachioides* Cham. & Schltdl.

REFERENCE

Graham, S.A. & Cavalcanti, T.B. (2013). Taxonomic Revision of Cuphea sect. Euandra subsect. Oidemation (Lythraceae). Phytotaxa 113 (1): 1–86.

Cuphea melampyrifolia Pohl ex Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate; **form of the limb** lanceolate/angustate; **margin of the leaf** revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs 45-56 cm tall; stems purple, pubescent-hirtelous, glabrescent in the lower portion. Leaves opposite, sessile, subcoriaceous, superior patent, inferior retroflexed, blades 25-40 x 5-10 mm, lanceolate to lanceolate-linear, apex acute, base cordate, margin revolute, glabrescent, sparse glandular trichomes, sometimes strigose trichomes; prominent veins on the abaxial face. Racemes leafy; pedicels 1.5-2 mm long, interpetiolar; floral tubes 7.5-9 mm long; spur obtuse, deflexed; outer surface pubescent; petals purple, cuneate-oblong, two dorsal smaller; stamens free in the upper third of the floral tube; vesicles 0; style glabrous; nectary deflexed. Seeds margin obtuse (adapted from Koehne 1877).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

J.B.E. Pohl, 3124, W, Minas Gerais, **Typus**

Cuphea melvilla Lindl.

Has as synonym
heterotypic *Cuphea speciosa* (Anderson) Kuntze

DESCRIPTION

Root: type axial. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** attenuate/acute; **form of the limb** lanceolate/elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** strigose/malpighiaceous; **form of the spur** saccate; **position of the spur** horizontal/deflexed; **petal** apetalous; **colour of the petal** petal absent; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** bulged. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 0.5–2.5 m; stems erect, lax, or scrambling and vine-like, unbranched or distally sparsely branched; internodes longer than subtending leaves at lower nodes, ca. equal at distal nodes; indumentum densely strigose, the trichomes bifid with long thin arms, clear or white, minute, longitudinally oriented, appressed, < 0.5 mm long, young growth glandular-hirsute, with red-purple, erect trichomes 0.5–1 mm long. Leaves opposite, rarely 3-verticillate at midstem, spreading, abruptly reduced in size in the inflorescence to hypsophylloid bracts, bracts ovate to lanceolate, 1.0–2.0 mm long, 1.5 mm wide, caducous petioles 5–10 mm long at basal nodes, shorter at distal nodes, ± terete; blades lanceolate to broadly lanceolate or elliptic, 35–120 mm long, 10–55 mm wide, membranaceous to chartaceous, base acute to attenuate, apex acute to short-acuminate, margin plane; surfaces green, typically densely minutely strigose, the trichomes bifid, longitudinally oriented, white, occasionally also glandular-hirsute. Racemes distinct, terminal, hypsophylloid, simple, loosely-flowered, often secund; flowers diversely positioned, solitary or paired, interpetiolar, axillary, or subnodal, sometimes tightly clustered toward apex of the inflorescence; pedicels 2–11 mm long; bracteoles leaf-like, suborbicular to ovate-lanceolate, 1.0–1.5 mm long. Floral tube, including 2–3-mm-long, suborbicular to oblong, horizontal to descending spur, 20–32 mm long, 5–6 mm wide, thick-walled, dorsally convex, neck strongly contracted in fruit, mouth blunt to slightly oblique; outer surface red-orange to deep red, apex green to yellow-green, abundantly minutely strigose, the trichomes bifid, longitudinally oriented, white, sometimes mixed toward basal end of floral tube with simple sparse to abundant, glandular, erect, white or red-purple setae to 1 mm long; inner surface glabrous or lightly villous distal to stamen insertion, sparsely to densely puberulous proximally, vesicles 0; sepals equal, 0.5 mm long, 2.0 mm wide, shallowly deltate, margins not ciliate; epicalyx segments ca. 1.0–1.5 mm long, ca. twice as long as sepals, cylindrical, oblong to bulbous, green or purple, coarsely setose, setae dark green or purple, bulbous-based, 0.5–1.5 mm long. Petals 0. Stamens: 2 short dorsalmost included, glabrous or lightly villous, the other 9 subexserted, sparsely to densely villous; filaments white or rose, anthers cream-colored; pollen triangular to slightly oval-triangular in polar view, tricolporate, syncolpate, pores not or slightly protruding, exine coarsely low-rugulate, rugulae slightly sinuous, oriented mostly parallel to the equator, grain diameter ca. 25 µm. Ovary non-gibbous, sparsely to densely puberulous dorsally; style puberulous, exserted to ca. 10 mm; ovules ca. 25–100 or more; disc 1.5–1.7 mm long, 1.0 mm wide, oblong, semi-deflexed. Seeds 1.5–2.0 mm long, 1.3–1.8 mm wide, brown, obdeltoid or lightly bilaterally compressed, apex obtuse, margin rounded.

Life Form
Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)
Northeast (Bahia, Maranhão)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Espírito Santo, Minas Gerais, São Paulo)
South (Paraná)

HERBARIUM MATERIAL

B.A.S. Pereira, 2718, RB, 380190, (RB00208863), Distrito Federal
A.E. Heringer, 914, NY, Mato Grosso do Sul
T.B. Cavalcanti, 2361, MO, CEN, Goiás
L. Guilding, s.n., A, **Typus**
Figueiredo, 567, MO, Acre
J.A. Rizzo, 1352, UFG, Tocantins

A.E. Heringer, 3006, US, MO, Distrito Federal
G.T. Prance, 10720, US, NY, MO, Rondônia
J.J. Strudwick, 3291, US, MO, MICH, K, Pará
M. Kuhlmann, 104, GH, NY, MO, Espírito Santo
G. Hatschbach, 45831, UB, MBM, Paraná
G.T. Prance, 13375, US, S, NY, MO, Amazonas
J.M. Pires, 52105, US, NY, Amapá
G. Martinelli, 17432, CEN (CEN00086170), RB, Roraima
A.F.M. Glaziou, 12683, NY, Minas Gerais
R.M. Harley, 17466, RB, 245057, (RB00208919), Bahia
R.M. Harley, 17466, NY, US, K, Bahia
P.E. Gibbs, 1987, MBM, São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea melvilla* Lindl.



Figure 2: *Cuphea melvilla* Lindl.



Figure 3: *Cuphea melvilla* Lindl.

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea micrantha Kunth

This treatment is composed of the following taxa: *Cuphea micrantha*, .

Has as synonym
heterotypic *Cuphea euphorbioides* A.St-Hil.
heterotypic *Cuphea micrantha* var. *longeciliata* Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ obtuse/attenuate; **form of the limb** ovate/elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse/acute; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** pyriform. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 10-40 cm tall; stems erect, internodes 0.8-2 cm long, hirsute and pubescent, glandular trichomes, long, c. 1 mm long, trichomes, <0.5 mm long, curved; brachyblasts absent. Leaves opposite, membranaceous, sessile to petiolate, petioles 1-1.5 mm long, blades 8-65 x 4-15 mm, narrow-ovate, ovate, oblong to elliptic, apex acute, base attenuate to obtuse, rare subcordate, margin flat, strigose and sparse-glandular, strigose and sparsely glandular on both surfaces, simple trichomes appressed, glandular trichomes 1-1.5 mm long, brochidodromous. Racemes 5-20 cm long, simple to compound, bracteose to frondose-bracteose, lax; bracts 1.5-30 x 0.8-11 mm, pairs subequal, narrow-ovate to ovate, similar to the leaves; flowers alternate, pedicels 1-2 mm long, interpetiolar; bracteoles ca. 0.3 x 0.2 mm, suborbicular; floral tubes 4-6 mm long; spur c. 0.6 mm long, acute to obtuse, horizontal to deflexed; outer surface purplish in the dorsal region, greenish ventrally, glandular trichomes on the ribs, slightly pubescent in the spur, rare strigose; inner surface villous in the region of the stamens, slightly pilose in the rest of the floral tube; petals 6, purple, subequal; stamens 11, filaments free in the middle third of the floral tube, stamens totally included; pistil 3-3.8 mm long, ovary 1.7-2.5 mm long, glabrous, stylus 1-1.3 mm long, pilose, ovules 3- (4); nectariferous gland ca. 0.6 x 0.3 mm, deflexed. Seeds 2-3, 1.7-2.5 x 1.5-2.2 mm, oboval, apex slightly truncate to obtuse, base slightly acute, margin obtuse.

Life Form
Herb, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Anthropic area, Grassland, Highland Rocky Field, Cerrado (lato sensu), Coastal Forest (Restinga), Amazonian Savanna, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Acre, Pará, Roraima, Tocantins)
Northeast (Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

R.M. Harley, 15350, SPF, CEPEC, NY, Bahia
E.K.S. Brandão, 20, UFRN, HUEFS, Ceará
G. Pereira-Silva, 17081, CEN, Mato Grosso
J.A.C. Silva, 531, UB, INPA, Roraima
A.M. Marinho, 131, UFRN, CEN, Rio Grande do Norte
T.B. Cavalcanti, 2222, MO, CEN, Tocantins
Humboldt & Bonpland, 1119, P, **Typus**
G.S. Pinheiro, 364, IAN, Pará
B.M.T. Walter, 1374, CEN, 27158, Goiás
T.B. Cavalcanti, 2178, CEN (CEN00026985), Distrito Federal
M. Oliveira, 5618, CEN, 78269, Pernambuco
T.B. Cavalcanti, 3765, CEN, Maranhão
T.B. Cavalcanti, 3066, CEN (CEN00046899), São Paulo
G. Hatschbach, 23728, MBM, Mato Grosso do Sul
L.P. Queiroz, 10149, HUEFS, CEN, 69986, Piauí
H.S. Irwin, 25870, NY, (NY00940076), RB, UB, Minas Gerais
G.A. Black, 51-13194, IAN, Acre
A.P. Prata, 3079, ASE, Sergipe
J.M.P. Cordeiro, 1325, EAN, Paraíba

FIELD IMAGES / ILLUSTRATIONS

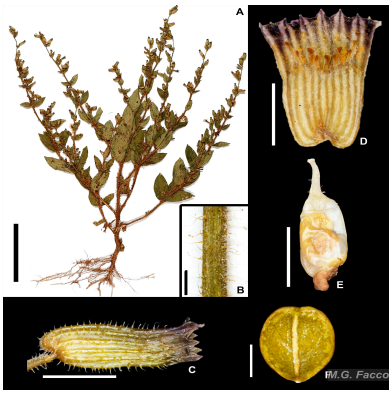


Figure 1: *Cuphea micrantha* Kunth

Cuphea mimuloides Cham. & Schltdl.

This treatment is composed of the following taxa: *Cuphea mimuloides*, .

Has as synonym
heterotypic *Cuphea mimuloides* var. *typica* Koehne
heterotypic *Cuphea tenella* Hooker et Arn.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** almost glabrous/glabrous; **form of the spur** without spur; **position of the spur** without spur; **petal** absent on the fruit; **colour of the petal** white/purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** cupuliform. **Fruit: form** rectangular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Annual herbs, 15-40 cm, stems erect or ascending from a fibrous root, slender, much branched; stems, leaves, and flowers minutely punctuated with raised resinous golden glandular trichomes; and stems also minutely white hirsute, the trichomes to ca. 0.5 mm long; proximal internodes longer that the subtending leaves, much shorter than leaves distally. Leaves opposite, spreading, secondary veins often obscure; petioles 0-1 mm; blades oblong, oval, or narrowly lanceolate larger on main stems than on branches, 2-28 mm long, 0.5-12 mm wide, thinly membranaceous, base acute, apex acute to obtuse, margin plane, surfaces bright green, minutely glandular-punctate, otherwise glabrous. Inflorescences leafy racemes, flowers consistently opposite, paired at nodes, interpetiolar, pedicels 3-9 m long, slender, persistent; bracteoles none or represented by 1-3 minute appendages ca. 5 mm below the flower. Floral tube 3-7 mm long, nearly actinomorphic, non-spurred, pedicel attachment basal, neck strongly contracted and floral tube greatly swollen in fruit; outer surface green with raised glandular punctae as on other plant parts; inner surface glabrous; vesicles none; sepals subequal to unequal, 0.2-0.4 mm long, 0.1-0.2 mm wide, dorsal lobe distinctly larger than the ventrals; epicalyx none. Petals 6, subequal to equal, 0.7-1.0 mm long, 0.2-0.5 mm wide, 2 dorsal often slightly larger than the ventrals, oval to spatulate, white, pink, or purple; stamens 9-11, 2 dorsalmost shorter and inserted deeper than the others, included, 7-9 stamens reaching sinuses of the sepals; filaments glabrous, anthers pale; pollen oval-triangular in outline, tricolporate, non-syncolpate, colpi short, pores not protruding, exine psilate, grain diameter 20-24 microns; ovary glabrous; style glabrous, included, stigma small, capitate; ovules 25 to ca 130; disc cupping base of ovary, 02-0.3 mm tall dorsally, reduced to a narrow rim ventrally. Seeds 0.4-0.5 mm long, 0.2-0.3 mm wide, suborbicular to oval in outline, golden brown, dorsally convex, raphal face plane. Chromosome number: *n*=11 (Graham, 1989).

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Caatinga

Vegetation Types
Caatinga (stricto sensu), Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Alagoas, Bahia, Pernambuco)

HERBARIUM MATERIAL

L.A. Mattos-Silva, 30, SPF, (SPF00062660), Bahia
C.J.W. Schiede, 577, HAL, **Typus**
B. Pickel, 2985, IPA, 04498, Pernambuco
M. Oliveira, 1063, CEN (CEN00060141), Alagoas

REFERENCE

Schlechtendal & Chamisso, Linnaea 5: 570. 1830.

Cuphea myrtifolia Bacig.

Has as synonym
heterotypic *Cuphea beckiana* Lourteig

DESCRIPTION

Root: type rootstock. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** ovate/oblong/elliptic; **margin of the leaf** flat/sub revolute/incrassate. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose/malpighiaceous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Perennial herbs or subshrubs, 2.7–10 dm tall, all parts tending to rusty brown or deep mahogany when dry, stems erect, usually one from a woody, elongated or globose xylopodium, sparsely branched or unbranched below, branched distally; indumentum finely strigose and hirsute, strigose trichomes white, malphighiaceous with equal arms, oriented longitudinally on the stem, hirsute trichomes rusty brown, sparse to moderately abundant, especially abundant on young growth, thin, lax, apparently eglandular, occasionally entirely lacking, 1–2.5 mm; internodes longer than leaves in the vegetative portion of the stem, shorter in the inflorescence. Leaves sessile or subsessile with petioles 0–2 mm, opposite, ascending, pinnately-veined; blades elliptic or narrowly oblong-elliptic to ovate, 12–30×4–17 mm, typically ca. 25×10 mm at midstem, often imbricate in the inflorescence, chartaceous, base rounded to acute, apex acute, margin plane, thickened or slightly revolute; blade surfaces minutely strigose, infrequently hirsute as on stem, strigose trichomes malpighiaceous, + longitudinally oriented, adaxial surface shining, margin of young leaves sparsely ciliate by long thin rusty brown trichomes; distal leaves of the stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy simple racemes; flowers interpetiolar, alternate; pedicels 1–3 mm; bracteoles 0.5–1 × 0.5–1mm, broadly ovate. Floral tubes 6–9 × 1.5–2.5 mm including rounded horizontal 0.5–1.2 mm spur (descending in Hatschbach 34065); outer surface dorsally red-purple or green with red-purple apex and veins, strigose, malpighiaceous, sometimes sparsely to moderately abundantly hirsute as on stems; inner surface densely white villous above stamens, glabrous below except villous in two lines below the two dorsalmost short stamens, vesicles 5 to 8; sepals equal, 1×1–1.5 mm, deltate, apex acute; epicalyx segments cylindrical, free-standing, 0.5 mm, bearing one to few long hirsute trichomes or setae; petals 6, subequal, 3–4.5 × 1–2 mm, narrowly oblong to obovate, pale purple to rose; stamens included, the two short dorsalmost densely villous, other stamens reaching margin of tube, lightly pilose, filaments wine-colored, anthers pale; pollen oblate, oval-triangular, tricolporate, syncolpate, pores strongly protruding, exine coarsely striate at equator, grain diam. 27 µm; ovary glabrous; style glabrous, included; stigma small-capitate; nectary 0.5 × 1 mm, oblique to horizontal, subtriangular to rounded in dorsal view, semi-cupping base of ovary. Seeds3, 2×2 mm, orbicular, margin narrowly rounded, thick, pale. Chromosome number: unknown

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna

Vegetation Types
Grassland, Cerrado (lato sensu), Mixed Ombrophyllous Forest, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Rondônia)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

T.B. Cavalcanti, 89, CEN (CEN00046240), Mato Grosso
G.O.A. Malme, s.n., S (S-R-7446), Mato Grosso, **Typus**
V.C. Souza, 15648, ESA, CEN, 34016, Mato Grosso
Vieira, 603, MO, Rondônia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea myrtifolia* Bacig.



Figure 2: *Cuphea myrtifolia* Bacig.



Figure 3: *Cuphea myrtifolia* Bacig.



Figure 4: *Cuphea myrtifolia* Bacig.

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea odonellii Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** ovate/elliptic; **margin of the leaf** flat/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** malpighiaceous; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs 20-60 cm tall; stems decumbent, internodes 0.7-3 cm long, malpighiaceous trichomes bi-armed, arms subequal to unequal, appressed to oblique, sessile, sometimes glandular trichomes present; brachyblasts absent. Leaves opposite, chartaceous to coriaceous, petioles 1-2 mm long, blades 8-30 x 1-7 mm, narrow-ovate to narrow-elliptic, rare linear, apex acute, base acute to obtuse, rare subcordate, margin with malpiguiaceous trichomes, flat to subrevolute, malpiguiaceous trichomes on both surfaces, sometimes glabrescent, rare sparse glandular trichomes, brochidodromous. Racemes 15-25 cm long, compound, frondose to frondose-bracteose, lax; bracts 5-22 x 1-5 mm, pairs subequal, linear to narrow-ovatel, similar to the leaves; flowers alternate, pedicels 1-2 mm long, interpetiolar; bracteoles 0.5-0.6- (1.6) x 0.4- (0.9) mm, ovate; floral tubes 6.5-8 mm long; spur 0.6-1.5 mm long, obtuse, slightly horizontal to deflexed; outer surface vinaceous in the dorsal region, greenish ventrally, malpighiaceous trichomes sometimes mixed with sparse glandular trichomes; inner surface villous in the region of the stamens, pilose to dense-pilose in the rest of the floral tube; petals 6, pink, magenta to violet, rare pale, subequal; stamens 11, filaments free in the upper third of the floral tube; ovary 2-2.5 mm long, glabrous, stylus 2-4 mm long, sparsely pilose to glabrous, ovules 3; nectariferous gland c. 0.6 x 0.5 mm, deflexed. Seeds (1) 2-3, 1.8-2.3 x 1.3-1.7 mm, elliptic to narrow-elliptic, apex obtuse, base obtuse to slightly acute, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna, Pantanal

Vegetation Types
Grassland, Amazonian Savanna, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Amazonas, Tocantins)
Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

HERBARIUM MATERIAL

G.T. Prance, 3375, MO, INPA, Amazonas
A. Pott, 4392, CEN, Mato Grosso do Sul
T.B. Cavalcanti, 436, CEN (CEN00013232), Goiás
T.B. Cavalcanti, 2353, CEN (CEN00027105), Mato Grosso
J.B.A. Bringel, 877, UB, CEN, Tocantins
J. Steinbach, 6163, G, F, BM, K, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea odonellii* Lourteig



Figure 2: *Cuphea odonellii* Lourteig

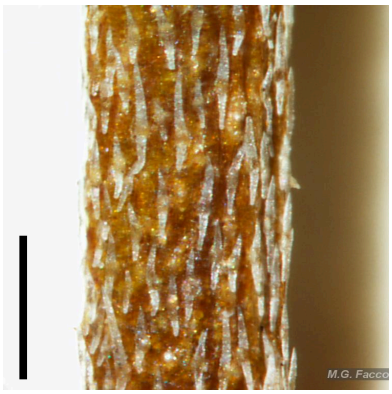


Figure 3: *Cuphea odonellii* Lourteig

REFERENCE

Lourteig, A. 1986. Revision de dos secciones del genero Cuphea P. Browne (Lythraceae). Phytologia 60(1): 17-43.

Cuphea paralarix (Lourteig) T.B.Cavalc. & S.A.Graham

Has as synonym
basionym *Cuphea ericoides* var. *paralarix* Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** obtuse; **form of the limb** linear; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** yellow; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs 20-90 cm tall; stem erect, internodes 0.5-1.2 cm long, pubescent, simple trichomes <0.5 mm long, erect to oblique, or curved, sometimes intermixed with sparse glandular trichomes; brachyblasts present. Leaves 3-verticilated, sometimes opposite, coriaceous, sessile, blades 2-12 x 0.5-2 mm, linear, apex acute, base obtuse, margin flat, rare subrevolute, serrate by short and appressed trichomes, sometimes by trichomes straight and long, strigose on both surfaces, simple trichomes appressed, rare, glandular trichomes sparse, or glabrescent, hyphodromous. Racemes 5-20 cm long, simple to compound, frondose, lax; bracts 3-10 x 0.5-1.3 mm, pairs subequal, shape and indoment similar to the leaves; flowers alternate, pedicels 2-5 mm long, interpetiolar, axillary in the brachyblasts; bracteoles 0.7-1.8 x 0.6-1 mm, narrow-ovate to wide-ovate; floral tubes 5-8 mm long; spur 0.9-1.2 mm long, obtuse, deflexed; outer surface with vinaceous ribs in the dorsal region, yellowish-greenish ventrally, slightly pubescent, intermixed with glandular trichomes on the ribs; inner surface villous in the region of the stamens, dense-pilose in the region around the ovary, or just pilose on the dorsal ribs; petals 6, yellow, subequal, sometimes the dorsal petals smaller than the ventral; stamens 11, filaments free in the upper third of the floral tube, ovary 2-3 mm long, glabrous to pilose at the apex, stylus 1.5-4 mm long, glabrous to pilose, ovules 3; nectariferous gland 0.5-0.8 x 0.6-1 mm, deflexed. Seeds (1) -2-3, 1.5-1.7 x 1.5-1.6 mm, suborbicular to broad-oboval, apex slightly truncated to obtuse, base obtuse, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Northeast (Bahia, Maranhão, Piauí)
Central-west (Distrito Federal, Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3979, CEN (CEN00088714), Goiás
M.F. Simon, 2535, CEN, Goiás
G. Pereira-Silva, 9664, CEN, Maranhão
M.F. Simon, 2939, CEN, Maranhão
R.C. Mendonça, 3320, CEN, Minas Gerais
T.B. Cavalcanti, 3910, CEN (CEN00088655), Minas Gerais
G. Pereira-Silva, 17146, CEN, Piauí
R.C. Forzza, 8714, RB, CEN, Tocantins
G. Hatschbach, 39475, P (P01901680), MBM, CEPEC, Bahia, **Typus**
J.E.Q. Faria, 2360, UB, CEN, Bahia
R.G. Chacon, 75, CEN (CEN00064167), Distrito Federal

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea paralarix* (Lourteig) T.B.Cavalc. & S.A.Graham



Figure 2: *Cuphea paralarix* (Lourteig) T.B.Cavalc. & S.A.Graham



Figure 3: *Cuphea paralarix* (Lourteig) T.B.Cavalc. & S.A.Graham



Figure 4: *Cuphea paralarix* (Lourteig) T.B.Cavalc. & S.A.Graham

REFERENCE

Cavalcanti, T.B. & Graham, S.A. (2011). Lythraceae. In: Cavalcanti, T.B. & Silva, A.P. (orgs.). Flora do Distrito Federal, Brasil. Brasília: Embrapa Recursos Genéticos e Biotecnologia. Vol.9. p. 131-175.

Cuphea paranensis Bacig.

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/attenuate; **form of the limb** ovate/cordiform; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 15–50 cm; stems sturdy from a thickened fibrous root, erect to semidecumbent, sometimes virgate, much branched, primary branches long, secondary branches short, irregular in length, internodes short to longer than subtending leaves, highly variable, very short distally; indumentum a mix of two types: puberulous, trichomes falcate, colorless, in a longitudinal row along one side of the internode; and sometimes sparsely glandular-hispid, trichomes erect, ca. 0.5 mm long. Leaves spreading to ascending, opposite to subalternate, dimorphic, those on mature primary stems distinctly larger than those of branches, proximally broadly cordate-ovate, mostly about 7 mm long, 4 mm wide, appressed and somewhat overlapping, with visible but not strong, secondary venation, those of branches and branchlets narrowly elliptic to linear-oblong, thickly membranaceous, appearing uninerved, base obtuse to attenuate, apex obtuse to acute, mostly about 2 mm long, 1 mm wide, distally crowded, imbricate, tending to form fascicles in alternate axils, all leaves gradually reduced in size in the inflorescence; surfaces adaxially glabrous, abaxially sparsely glandular-hirsute on veins, margin plane, glandular-ciliate. Racemes indistinct, terminal, leafy, simple or compound; flowers solitary, interpetiolar; pedicels 1–2 (–4) mm long, caducous; bracteoles ovate to sub-circular, apex acuminate with setae 0.3–0.6 mm long. Floral tube, including the horizontal rounded 0.5–1.0 mm long spur, 5.5–7.0 mm long, 1–2 mm wide, dorsally straight or base raised dorsally, neck wide, not strongly contracted, mouth up-turned; outer surface purple dorsally, green ventrally, veins glandular-hispid, trichomes reddish or colorless, enlarged at base, erect, 0.1–0.3 mm long, neck and mouth nearly glabrous; inner surface villous distal to stamen insertion, sparsely villous on veins of 2 dorsal short stamens, vesicles 0; sepals equal, 0.5–1.2 mm long, 0.5–1.0 mm wide, deltate, margin glabrous; epicalyx segments minute, 0.1–0.2 mm long, shorter than sepals, apex rounded, glandular-setose. Petals 6, subequal, purple to pale purple, 2 dorsals 4.0–5.5 mm long, 2–4 mm wide, obovate to elliptic, subtended at insertion by thickened yellow calluses; 4 ventrals 4.5–7.0 mm long, 1.5–2.0 mm wide, narrowly oblong to obovate. Stamens: 2 dorsalmost short and most deeply inserted, included, 5 stamens reaching the margin of the tube, 4 ventrals exserted; filaments villous, purple, anthers purple or white; pollen diporate. Ovary glabrous, style glabrous to sparsely pilose, ultimately surpassing sepals 1 mm; ovules 4–7(–12). Disc erect to slightly deflexed in the spur, semi-circular, 0.5–0.8 mm long, 10 mm wide. Seeds obovate or oblong to sub-circular, some wider than long, 1.5–1.9 mm long, 1.4–1.6 mm wide, dark-brown, base obtuse, apex obtuse to truncate, margin rounded, distinct, lighter in color, or possibly slightly thinned, to 0.1 mm wide.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences

South (Paraná)

HERBARIUM MATERIAL

P. Dusén, 17381, NY, S, MO (MO022115), P (P01901728), GH, (GH00068451), Paraná, **Typus**
G. Hatschbach, 3618, RB, (RB00209046), Paraná
L.B. Smith, 14794, NY, (NY00445613), P (P05141419), Paraná
G. Hatschbach, 11966, P (P05141417), Paraná
G. Hatschbach, 12265, P (P05141418), Paraná

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea paranensis* Bacig.



Figure 2: *Cuphea paranensis* Bacig.

Cuphea pascuorum Mart. ex Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ attenuate; **form of the limb** cordiform; **margin of the leaf** flat/crenulate. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** truncate; **position of the spur** without spur; **petal** absent on the fruit; **colour of the petal** purple/cream; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/horizontal. **Fruit: form** cylindric. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Herbs, annual, 15-30 cm tall, xylopodium absent, few viscous; branches pubescent, with short and curved trichomes, intermixed with glandular trichomes, sometimes vinaceous, rare glabrous. Leaves 2.5-10x1-5 mm, subsessile to petiolate, cordiform, apex acute, base attenuate to cordate, margin entire and/or repanda, strigose, glandular trichomes on the leaf margins, brochidodromous; petiole 0.3-1.5 mm long. Racemes compound, frondose; pedicel 3-9 mm long, interpetiolar, persistent; bracteoles absent; floral tube 3.8-4.5 mm long, outer surface greenish, pubescent, trichomes thin, short, sometimes curved, over the ribs and glabrous between them, inner surface villous above the stamens, glabrous in the rest of the tube; spur truncated; petals 6, obovate, two colors, purple and cream, deciduous on fruiting, the purple ones, 1.7-1.8 mm long, the cream ones, 2.5-3 mm long; stamens free in the middle third of the floral tube, infra-staminal vesicles absent; ovary glabrous, stylus villous, ovules numerous; nectariferous gland horizontal dorsal, slightly erect, rare slightly horizontal. Fruit tubular, seeds numerous, 0.5x0.5 mm, elliptic, margin obtuse.

Life Form
Herb

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Atlantic Rainforest

Vegetation Types
Caatinga (stricto sensu), Grassland, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Piauí)

HERBARIUM MATERIAL

H.P. Bautista, 1316, RB, 287612, (RB00209081), Bahia
D.B.O.S. Cardoso, 1360, CEN (CEN00070015), Bahia
C.F.P. Martius, Obs. 2186, M, Bahia, **Typus**
C.F.P. Martius, s.n., M (M0146332), Piauí, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea pascuorum* Mart. ex Koehne



Figure 2: *Cuphea pascuorum* Mart. ex Koehne

Cuphea pohlii Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** ovate/elliptic; **margin of the leaf** revolute/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** lilac/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrub, 0.50-1.7 m tall, xylopodium present, slightly viscous, branches hirsute to hispid, with dense and white glandular trichomes. Leaves opposite, petiolate; blades 8-40 x 6-30 mm, coriaceous, scabrous, discolorous, elliptic to ovate, apex obtuse sometimes acuminate, margin subrevolute to revolute, base obtuse to acute, adaxial surface glabrous, nitid, with very short and sparse glandular trichomes; abaxial surface with short trichomes, mainly on the veins; secondary and tertiary veins evident on both surfaces; petiole 1-2 mm long. Racemes frondose; flowers alternate, pedicel 2-3 mm long, bibracteolate; floral tube 8-10 mm long, brownish to greenish, glandular trichomes short and sparse, simple trichomes short and more abundant, inner surface villous; spur short; petals 6, pink to lilac; filaments free in the apical portion of the tube; infrastaminal vesicles absent; stylus glabrous; ovules 3; nectariferous gland dorsal, deflexed. Seeds with margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3589, CEN, MO, Goiás
A. Lourteig, 3158, K, (K000533141), Distrito Federal, **Typus**
G.M. Barroso, 584, RB, 124598, (RB00208916), Distrito Federal
R.C. Mendonça, 3188, RB, 368253, IBGE, CEN, 32472, Minas Gerais
M.G.L. Wanderley, 1683, CEN, 28633, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. & Graham, S. A. 2011. Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed. Brasília: Atalaia, v. 9, p. 131-175.

Cuphea polymorpha A.St.-Hil.

This treatment is composed of the following taxa: *Cuphea polymorpha*, .

Has as synonym
heterotypic *Cuphea polymorpha* var. *oxicoccos* A.St.-Hil.
heterotypic *Cuphea polymorpha* var. *phyllireoides* A.St.-Hil.
heterotypic *Cuphea polymorpha* var. *prostrata* A.St.-Hil.
heterotypic *Cuphea polymorpha* var. *vincoides* A.St.-Hil.

DESCRIPTION

Root: type axial/rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** lanceolate/ovate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse; **position of the spur** ascending/horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** rectangular. **Seed: margin** thickened.

ADDITIONAL DESCRIPTION

Subshrubs, 40-70 cm tall, decumbent, branches with white, short, appressed simple trichomes. Leaves opposite, subsessile; petiole 0.5-1 mm long; blades 10-25 x 4-14 mm, membranaceous to carthaceous, lanceolate to ovate, apex acute, margin flat to slightly revolute, base obtuse, adaxial surface glabrous or almost glabrous with appressed trichomes in the veins. Racemes frondose; flowers alternate; pedicel 7-18 mm long, bibractolate; floral tube 7.5-8.5 mm long, greenish, trichomes highly appressed and white on the veins, sometimes mixed with long, reddish glandular trichomes; spur short, horizontal to slightly ascending; petals 6, pink-magenta, deciduous in the fruit; filaments free in the apical portion of the tube; infrastaminal vesicles present, 8-10; stylus with few trichomes; ovules 11; dorsal, nectariferous gland horizontal. Seeds with a obtuse, thickened margin.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Grassland, Highland Rocky Field, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Espírito Santo, Minas Gerais, São Paulo)
South (Paraná)

HERBARIUM MATERIAL

H.S. Irwin, 11432, RB, 150528, (RB00209008), Distrito Federal
H.S. Irwin, 10038, RB, 150529, (RB00209105), Distrito Federal
A. Saint-Hilaire, s.n., P, **Typus**
A.P. Fontana, 665, CEN, 64202, Espírito Santo
V.C. Souza, 16693, ESA, 43991, Mato Grosso

G. Pedralli, 3284, CEN, 16114, Paraná
A.C. Cervi, 2989, MBM, 133707, Paraná
R. Romero, 2096, HUFU, 8572, Minas Gerais
G. Hastchbach, 46186, MBM, 83668, Mato Grosso do Sul
S.A.P. Godoy, 569, UEC, 75827, São Paulo
G. Hatschbach, 60208, MBM, 165423, Goiás

REFERENCE

Cavalcanti, T.B. & Graham, S.A. 2011. Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed. Brasília: Atalaia, v. 9, p. 131-175.

Cavalcanti, T.B. & Graham, S.A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.

Cavalcanti, T.B.; Graham, S.A.; Silva, M.C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cuphea potamophila T.B.Cavalc. & S.A.Graham

DESCRIPTION

Root: type axial. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate; **form of the limb** lanceolate/oblong/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/strigose/malpighiaceous; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** cupuliform. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs to 0.8 m; stems erect, several from a woody rootstock, unbranched; internodes one-half to two-thirds as long as subtending leaves; indumentum a mix of two types: abundantly minutely strigose with bifid, cystolithic, white trichomes oriented longitudinally parallel to the stem, the longer arm antrorsely directed; and puberulous with erect to falcate trichomes. Leaves opposite, spreading, very gradually or not at all reduced in size in the inflorescence; petioles 1–5 mm long, ± terete; blades elliptical to lanceolate or oblong, (15–)30–100 mm long, (5–)15–35 mm wide, thickly membranaceous, base attenuate, apex acute or short-acuminate, margin plane; surfaces green, scabrous, adaxially occasionally minutely strigose as on stems, abaxially pale. Racemes indistinct, terminal, leafy, simple, sparsely flowered; flowers solitary, interpetiolar, occasionally 1–3 additional flowers on axillary branchlets; pedicels 3–10 mm long; bracteoles leaf-like, ovate, 0.5–1.0 mm long. Floral tube, including 1.5–3.0-mm-long, obtuse, slightly descending spur, 19–21 mm long, 4–5 mm wide, dorsally straight to slightly convex, neck not contracted in fruit, mouth blunt to slightly oblique; outer surface green dorsally, reddish ventrally, apex red, minutely strigose, trichomes bifid as on stems, veins hispid, conspicuously with trichomes red-purple, 1–2 (–4) mm long; inner surface lightly pilose distal to stamen insertion and proximally on veins of the 2 short dorsalmost stamens, remainder glabrous, vesicles 0; sepals equal, 1.0 mm long, 1.5 mm wide, deltate, not ciliate; epicalyx segments 1.0 mm long, 0.5 mm wide, ca. half as long as sepals, green, thick, apex with 1–3 red-purple setae to 3 mm long. Petals 6, bright red, subequal, 4–5 mm long, 2–4 mm wide, oblong to slightly obovate, exserted, held horizontally in same plane as floral tube. Stamens: 2 short dorsalmost included, inserted slightly proximal to the others, 5 antesepalous exserted, 4 antepetalous reaching the margin of tube, all slightly gathered toward ventral side; filaments lightly villous, color unknown, anther color unknown; pollen oval-triangular in outline, tricolporate, syncolpate, pores protruding, exine striate, grain diameter 25 µm. Ovary non-gibbous, glabrous; style glabrous, exserted to 4 mm; ovules 6; disc 1.5 mm long, 2.5 mm wide, semi-deflexed, concave around base of ovary. Seeds 2.5–3.0 mm long, 2.2–2.7 mm wide, dark greenish brown, bilateral, oblong to suborbicular, apex obtuse to slightly retuse, margin rounded, lighter in color.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Riverine Forest and/or Gallery Forest

Geographic Distribution

Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

G. Pereira-Silva, 5900, MO, CEN, Goiás
G. Pereira-Silva, 4500, MO (MO357879), CEN (CEN00040180), SPF, Goiás, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea potamophila* T.B.Cavalc. & S.A.Graham

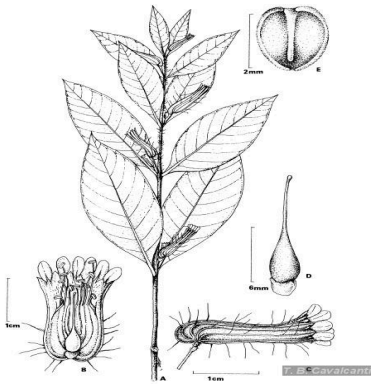


Figure 2: *Cuphea potamophila* T.B.Cavalc. & S.A.Graham

Cuphea pseudovaccinium A.St.-Hil.

Has as synonym
homotype *Cuphea pseudo-vaccinium* A.St.-Hil.
heterotypic *Cuphea reticulata* var. *aculeolata* Koehne
heterotypic *Cuphea reticulata* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ obtuse; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** flat/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirtellous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** lilac/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs 25-120 cm tall, viscous. Leaves opposite, petiole 1-4 mm long, coriaceous, rarely chartaceous, blades 4-27(-40) x 2.5-15(-20) mm, ovate-oblong to ovate-lanceolate, apex acute, margin plane to slightly revolute, base obtuse to subcordate, blades near glabrous; pinnately-veined, abaxial surface prominently reticulated. Flowers solitary, axillary; pedicel axillary, 2-6 mm long; floral tubes 7-9 mm long, spur horizontal, outer surface vinaceous in the dorsal region, cream-green ventrally; petals 6, deciduous, light pink to pink, four ventral 4-5 x 1.3-2 mm, two dorsal 3.5-4.5 mm x 1-1.5 mm; ovary 2.5-4 mm long, ovules 3, rare 4; style glabrous, 3-5 mm long; nectary dorsal, deflexed. Seeds 2-3, ca. 2.8 x 2.5 mm, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3960, CEN (CEN00088695), Minas Gerais
A.F.M. Glaziou, 19177, K, (K000533050), Minas Gerais, **Typus**
T.B. Cavalcanti, CFSC 9414, RB, 351468, (RB00209255), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea pseudovaccinium* A.St.-Hil.



Figure 2: *Cuphea pseudovaccinium* A.St.-Hil.

REFERENCE

Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.

Cuphea pterosperma Koehne

This treatment is composed of the following taxa: *Cuphea pterosperma*, .

Has as synonym
heterotypic *Cuphea pterosperma* var. *cuneata* Koehne

DESCRIPTION

Root: type rootstock. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** obtuse/acute; **form of the limb** linear/lanceolate/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose/malpighiaceous; **form of the spur** obtuse; **position of the spur** deflexed; **petal** persistent on the fruit; **colour of the petal** lilac/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs to 8 dm tall, stems erect to lax, slender, several from a globose xylopodium, unbranched; indumentum uniformly strigose and sometimes also hirsute, strigose trichomes abundant, appressed, white, malpighiaceous with basal arm often very short, longitudinally oriented on stem and pedicels, hirsute trichomes thin, glandular, weakly erect, to 2 mm; internodes shorter to longer than subtending leaves, generally shorter distally. Leaves subsessile with petioles 1–4 mm, opposite or less often 3-verticillate, ascending to appressed, pinnately-veined; blades narrowly lanceolate to linear, rarely elliptic with obtuse apex, 10–70 × 2–7 mm, thickly membranous to chartaceous, base acute to rounded, apex attenuate to acute, margin plane, secondary veins prominent abaxially; blade surfaces scabrous to nearly glabrous, trichomes minute, malpighiaceous, transversely oriented adaxially, + longitudinally-oriented abaxially, sometimes also sparsely hirsute, hirsute trichomes weak, glandular, to 1 mm; distal leaves of stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy simple racemes; flowers interpetiolar, alternate; pedicels 3–12 mm, longest at base of the inflorescence, gradually shorter distally; bracteoles 0.75–1 × 0.3–0.4 mm, lanceolate-linear. Floral tubes 9–14 × 2–4 mm including rounded, strongly descending 1–1.8 mm spur; outer surface diffuse rose-purple dorsally, minutely malpighiaceous-strigose, sometimes also hirsute as on stems and leaves; inner surface villous above stamens, glabrous below, vesicles 5 to 9, sometimes poorly developed; sepals equal, 1.2 × 1.5 mm, deltate, apex acute; epicalyx segments small thickenings, margin free; petals 6, subequal, 5–10.5 × 2–3.5 mm, oblong to oblanceolate, two dorsals slightly larger or shorter and wider than the four ventrals, clear lilac to rose; stamens included, antesepalous stamens reaching apex of sepals, antepetalous stamens reaching sinus between sepals, filaments of the two dorsalmost long stamens densely villous, the others glabrous to villous, anther color unrecorded; pollen oblate, oval-triangular, tricolporate, syncolpate, pores protruding, exine striate, grain diam. 28–30 µm; ovary glabrous; style glabrous, exserted; stigma punctiform; nectary horizontal, 0.75 mm × 0.3–0.5 mm, subcubical, + square in dorsal view, not semi-cupping base of ovary. Seeds (6 –)13–23, 2.5–2.7 × 2.2–2.5 mm, suborbicular to oblong, winged, margin acute, very thin, 0.2–0.4 mm wide.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest, Pantanal

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás, Mato Grosso do Sul)

Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

G.M. Araujo, HUFU 22579, HUFU, CEN (CEN00038213), Minas Gerais
L.Y.S. Aona, 97/109, UEC, CEN (CEN00051465), São Paulo
D.E. Hassler, 9411, G
G. Hatschbach, 33305, MBM, Goiás
V.J. Pott, 4044, CPAP, CEN (CEN00052667), Mato Grosso do Sul
H.A. Weddell, 1792, P (P00604199), G, G00227323, (G00227323), Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS

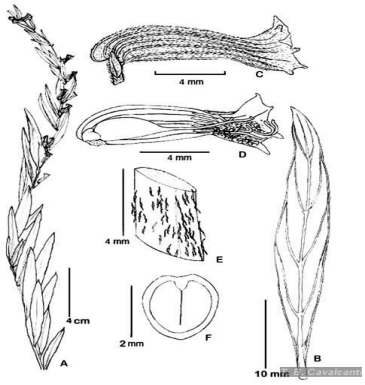


Figure 1: *Cuphea pterosperma* Koehne

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea pulchra Moric.

This treatment is composed of the following taxa: *Cuphea pulchra*, *Cuphea pulchra var. corollata*, *Cuphea pulchra var. pulchra*.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** revolute/sub revolute. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse/galeate/saccate; **position of the spur** deflexed; **petal** absent on the fruit/apetalous; **colour of the petal** red/petal absent; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs to shrubs, 40-200 cm tall; erect stems, internodes 0.8-4 cm long, pubescent and glandular, or just pubescent, trichomes short, <0.5 mm long, erect or curved, glandular trichomes ca. 0.5 mm long, sparse to dense, sometimes appressed trichomes present; brachyblasts absent. Leaves opposite, chartaceous to coriaceous, sessile, rare petiole ca. 1 mm long, blades 10-55 x 7-20 mm, ovate to oblong-ovate, rare elliptic or orbicular, apex acute, rare obtuse or cuspidate, base subcordate to cordate, rare acute or obtuse, margin subrevolute to revolute, strigose , sometimes ciliate-glandulose, strigose on both surfaces, with pubescence concentrated on the veins, sometimes pubescent and glandular, or glabrescent, brochidodromous. Racemes 8-20 cm long, simple to compound, bracteose to frondose-bracteose, usually contracted at the apex of the branches; bracts 2-30 x 1.2-15 mm, pairs subequal, ovate to oblong, similar to the leaves; flowers alternate, pedicels 3-8 mm long, interpetiolar to axillar; bracteoles 0.4-0.8 x 0.4-0.8 mm, wide-ovate, rare suborbicular; floral tubes (15-)17-24 mm long; spur 2.5-4 mm long, obtuse, saccate to galeate, deflexed; outer surface red-orange, apex greenish-yellow, pubescent and glandular, simple trichomes <0.5 mm, long, erect, glandular trichomes short, <0.5 mm long; inner surface villous in the region of the stamens, dense-pilose around the ovary; petals 0-6, dark red, subequal; stamens 11, villous, filaments free in the upper third of the floral tube; ovary 4-7 mm long, sparsely pilose to glabrous, stylus 12-16 mm long, pilose, ovules 5; nectariferous gland ca. 1.5 x 1.7 mm, deflexed. Seeds 3-4, 2,1-3 x 2-2,9 mm, broad-oboval to suborbicular, apex truncated to slightly retuse, base acute, margin obtuse.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Pernambuco, Sergipe)
Southeast (Minas Gerais)

IDENTIFICATION KEY

Chave para as variedades de *Cuphea pulchra*
1. Pétalas 0 ..... ***C. pulchra* var. *pulchra***
1. Pétalas 6, vermelho-escuras ..... ***C. pulchra* var. *corollata***

HERBARIUM MATERIAL

J.S. Blanchet, 2603, NY, (NY00039751), K, G, Bahia, **Typus**
T.B. Cavalcanti, 2451, MO, CEN (CEN00034143), Bahia
G.J. Shepherd, 4447, MBM, 58835, Minas Gerais
R.M. Harley, 16856, RB, 197480, Bahia
C. Almeida, 5, ASE (ASE0017912), Sergipe
C.G. Viana, 531, ASE, 2603, Sergipe
E.B. Miranda, 682, CEN, Minas Gerais
J.L.S. Lima, 371, HUEFS, Pernambuco

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea pulchra* Moric.



Figure 2: *Cuphea pulchra* Moric.



Figure 3: *Cuphea pulchra* Moric.



Figure 4: *Cuphea pulchra* Moric.



Figure 5: *Cuphea pulchra* Moric.



Figure 6: *Cuphea pulchra* Moric.



Figure 7: *Cuphea pulchra* Moric.

Cuphea pulchra Moric. var. *pulchra*

DESCRIPTION

Subshrubs to perennial shrubs, 40-200 cm tall; erect stems, internodes 0.8-4 cm long, pubescent and glandular, or just pubescent, trichomes short, <0.5 mm long, erect or curve, glandular trichomes ca. 0.5 mm long, sparse to dense, sometimes appressed simple trichomes present; brachyblasts absent. Leaves opposite, sessile, rare petiole ca. 1 mm long, blades 10-55 x 7-20 mm, oval to oblong-oval, rare elliptic or orbicular, apex acute, rare obtuse, base cordate to subcordate rare acute or obtuse, margin subrevolute to revolute, strigose, sometimes ciliate-glandulose, with pubescence concentrated on the veins, sometimes pubescent and glandular, or glabrescent, brochidodromous; bracts 2-30 x 1.2-15 mm, oval to oblong-oval, similar to the leaves; flowers alternate, pedicels 3-8 mm long, interpeciolar to axillary; bracteoles 0.4-0.8 x 0.4-0.8 mm, wide-oval, rare suborbicular; floral tubes (15) -17-24 mm length; spur 2.5-4 mm long, obtuse, deflexed; outer surface red-orange, apex greenish-yellow, pubescent and glandular trichomes, <0.5 mm long, erect, short glandular trichomes, <0.5 mm long; internal surface villous in the region of the stamens, dense-hairy around the ovary; petals 0; stamens 11, villous, the 2 dorsal glabrous to hairy, filaments free in the upper third of the floral tube; pistil 16-23 mm long, ovary 4-7 mm long, sparsely pilose to glabrous, stylus 12-16 mm long, pilose, ovules 5; nectariferous gland ca. 1.5 x 1.7 mm, deflexed. Seeds 3-4, 2,1-3 x 2-2,9 mm, broad-oboval to suborbicular, apex truncated to slightly retused, base acute, obtuse margin.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Pernambuco, Sergipe)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2451, MO, CEN, Bahia
J.L.S. Lima, 371, HUEFS, 175875, Pernambuco
R.M. Harley, 25248, HUEFS, K, NY, Minas Gerais
C.G. Viana, 531, ASE, 2603, Sergipe

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea pulchra var. pulchra* Moric.



Figure 2: *Cuphea pulchra var. pulchra* Moric.

REFERENCE

Cavalcanti, T. B. 1994. Lythraceae. In B. Stannard. (Org.). Flora do Pico das Almas, Bahia. 1ed. Londres, Inglaterra: Royal Botanic Gardens, p. 411-416.

Cuphea pulchra var. *corollata* T.B.Cavalc. & S.A.Graham

DESCRIPTION

Pétalas 6, vermelho-escuras, subiguais, as 2 dorsais 3,5-4,2 x 3-4 mm, amplo-obovais, as 4 ventrais 3-4,8 x 2,2-3 mm, amplo-obovais a amplo-elípticas.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

H.P. Bautista, 4226, HUEFS, ALCB, MO, RB, SPF, (SPF00125136), CEN (CEN00045095), Bahia, **Typus**
L.M. Brauner, 87, CEN (CEN00100551), Bahia
R.M. Harley, 53695, ALCB, CEN, HUEFS, IPA, Bahia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea pulchra var. corollata* T.B.Cavalc. & S.A.Graham



Figure 2: *Cuphea pulchra var. corollata* T.B.Cavalc. & S.A.Graham



Figure 3: *Cuphea pulchra var. corollata* T.B.Cavalc. & S.A.Graham



Figure 4: *Cuphea pulchra var. corollata* T.B.Cavalc. & S.A.Graham



Figure 5: *Cuphea pulchra var. corollata* T.B.Cavalc. & S.A.Graham



Figure 6: *Cuphea pulchra var. corollata* T.B.Cavalc. & S.A.Graham

REFERENCE

Cavalcanti, T.B. & Graham, S.A. 2005. New Taxa in Lythraceae from Latin America. Novon, Vol. 15 (1): 59-68.

Cuphea punctulata Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** almost glabrous/hirtellous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** violet; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs ca. 30 cm tall; stems pubescent and glandular. Leaves opposite, petioles 1.5-4 mm long, blades 20-45 x 5-10 mm, narrow-lanceolate, apex acute, base acute, margin scabrous, glabrescent, abaxial surface punctulate; veins prominent on the abaxial surface. Racemes bracteate; flowers opposite; pedicels 3-6 mm long; floral tubes 6-7 mm long, spur obtuse, horizontal; outer surface pubescent; inner surface lanate behind the stamens, below villous; petals 3,5-4 mm long, base attenuated, two dorsal obovate, four ventral lanceolate; stamens free in the upper third of the floral tube, nine ventral stamens exserted; style villous; ovary glabrous; nectary sub-horizontal; ovules 29-50 (adapted from Koehne 1877).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Caatinga (stricto sensu), Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Piauí)
Possible ocurrences
South (Paraná)

HERBARIUM MATERIAL

A.M. Carvalho, 6110, CEPEC (66439), Bahia
C.F.P. Martius, s.n., M, Piauí, **Typus**

Cuphea racemosa (L.f.) Spreng.

This treatment is composed of the following taxa: *Cuphea racemosa*, *Cuphea racemosa subsp. longiflora*, *Cuphea racemosa var. ramosior*.

Has as synonym
heterotypic *Cuphea densiflora* Koehne
heterotypic *Cuphea ligustrina subsp. fruticosa* var. *typica* Koehne
heterotypic *Cuphea obtusifolia* Koehne ex Bacig.
heterotypic *Cuphea origanifolia* var. *sublanata* A.St.-Hil.
heterotypic *Cuphea origanifolia* Cham. & Schltdl.
heterotypic *Cuphea origanifolia* Griseb.
heterotypic *Cuphea racemosa* var. *discolor* Lourteig
heterotypic *Cuphea spicata* f. *rm. robusta* Cav.
heterotypic *Cuphea spicata* var. *extratropica* Cav.
heterotypic *Cuphea spicata* var. *tropica* (Cham. et Schltdl.) Koehne
heterotypic *Cuphea spicata var. tropica* f. *parvi* Koehne
heterotypic *Cuphea spicata* Cav.
heterotypic *Lythrum racemosum* L. f.
Cuphea origanifolia var. *sublanata* Griseb.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/attenuate/truncate/cuneate; **form of the limb** ovate/elliptic; **margin of the leaf** flat/sub revolute. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent/almost glabrous; **form of the spur** obtuse/truncate; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** white/purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/horizontal. **Fruit: form** bulged/tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Herbs to shrubs, 20-60 cm tall; xylopodium absent; stems erect to decumbent, pubescent and hirsute, simple trichomes short, glandular trichomes short. Leaves opposite, petiole 1-15 mm long, blades 10-60 x 5-26 mm, oval to elliptic, base obtuse, attenuate to truncate, pubescent and glandular in both sides, sometimes strigose. Racemes simple or compound, usually bracteose; flowers opposite, pedicels 2-13 mm long, bracteoles absent; floral tubes 6-11 mm long, spur truncated to obtuse; external surface purple to vinaceous in the dorsal region, yellowish-greenish ventrally, pubescent and glandular, rare glabrescent; petals pink, purple to white, unequal, the 2 dorsal petals wider than the 4 ventral ones; stamens free in the upper third of the floral tube, exserted; infra-staminal vesicles absent; ovules 43-100; nectariferous gland horizontal to ascending. Seeds (10-) 25-97, 0.7-1 x 0.5-0.9 mm, orbicular, rare elliptica, apex obtuse, caruncle absent, margin acute.

Life Form
Herb, Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest, Pampa, Pantanal

Vegetation Types

Anthropic area, High Altitude Grassland, Grassland, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Ombrophyllous Forest (Tropical Rain Forest), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Alagoas, Bahia, Ceará, Pernambuco, Sergipe)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

IDENTIFICATION KEY

Chave retirada de Rodas & Briones (2010)
1. Face abaxial das folhas densamente pubescente-velutinas, sem tricomas glandulares sobre as nervuras ..... *C. racemosa* subsp. *longiflora*
1. Caules hirsuto-glandulares, com denso indumento de tricomas glandulares de 1-2 mm ..... *C. racemosa* var. *ramosior*

HERBARIUM MATERIAL

W. Hoehne, 5601, MO, NY, Rio de Janeiro
A.M.O. Dantas, 10, MBM, Distrito Federal
G. Pedralli, 3093, CEN (CEN00016184), Santa Catarina
D.S.C. Torres, 453, CEN, Sergipe
L.W. Lima-Verde, s.n., EAC, 22406 (EAC0022406), Ceará
V.J. Pott, 3951, CEN, Mato Grosso do Sul
M.R.V. Barbosa, 2461, NY, Alagoas
V.C. Souza, 4958, CEN, ESA, Paraná
L.P. Queiroz, 12521, CEN (CEN00065318), Rio Grande do Sul
S.A. Graham, 938, NY, MO, Minas Gerais
G. Hatschbach, 62932, CEN, MBM, Espírito Santo
S.A. Graham, 897, NY, MO, Goiás
T.B. Cavalcanti, 2429, CEN (CEN00034121), MO, Bahia
S.I. Silva, 255, MO, Pernambuco
L. Rossi, 1438, CEN, São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea racemosa* (L.f.) Spreng.



Figure 2: *Cuphea racemosa* (L.f.) Spreng.



Figure 3: *Cuphea racemosa* (L.f.) Spreng.

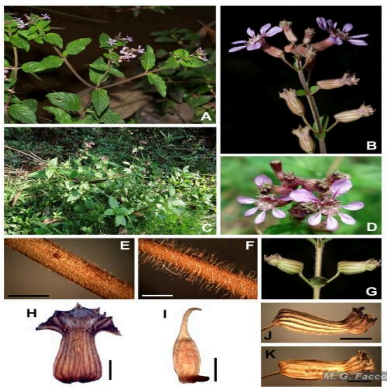


Figure 4: *Cuphea racemosa* (L.f.) Spreng.



Figure 5: *Cuphea racemosa* (L.f.) Spreng.

REFERENCE

Cavalcanti, T.B. & Graham, S. (2002). Lythraceae. In M.G.L. Wanderley, G.J. Shepherd, A.M. Giulietti, T.S. Melhem, V. Bittrich, & C. Kameyama (Eds.), Flora Fanerogâmica do Estado de São Paulo (Vol. 2, pp. 163–180). São Paulo: Instituto de Botânica.
Cavalcanti, T.B. & Graham, S.A. (2011). Lythraceae. In T.B. Cavalcanti & A.P. Silva (Eds.), Flora do Distrito Federal, Brasil (Vol. 9, pp. 131–175). Brasília: Embrapa Recursos Genéticos e Biotecnologia.
Rodas, R.D. & Briones, J.M. (2010). Lythraceae. In L. Ramella & P. Perret (Eds.), Flora del Paraguay (40th ed., p. 152). Genebra: Conservatoire et Jardin botaniques de la Ville de Genève.

Cuphea racemosa subsp. *longiflora* (Koehne) Duré & Molero

Has as synonym
basionym *Cuphea longiflora* Koehne
heterotypic *Cuphea longi* f. *ora* Koehne
heterotypic *Cuphea longi* f. *ora* Koehne

DESCRIPTION

Leaves 1-7 cm long; pedicel 5-10.

COMMENTS

Sensu Duré & Molero (2000), to be revised.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Unknown

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G. Lindberg, 349, BR, Minas Gerais
J.F. Widgren, 478, BR, Minas Gerais

Cuphea racemosa var. *ramosior* (Koehne) Duré & Molero

Has as synonym
basionym *Cuphea origanifolia* var. *ramosior* Koehne
heterotypic *Cuphea hirticaulis* Koehne
heterotypic *Cuphea racemosa* subsp. *hirticaulis* (Koehne) Lourteig

DESCRIPTION

Stems glandulose-hirsute; leaves 10-30 mm long.

COMMENTS

Sensu Duré & Molero (2000). To be revised.

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution
Confirmed ocurrences
South (Paraná)

HERBARIUM MATERIAL

G. Hatschbach, 3739, MO, Paraná

Cuphea radiaticaulis Lourteig

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** lanceolate/ovate/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** lilac; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** flask-shaped/tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Perennial herbs to 35 cm; stems in a semi-rosette, suffrutescent, rigid, erect to spreading, from woody fibrous roots, unbranched or branching at or near the base, rarely branched in the inflorescence, appearing glabrous; internodes mostly equal to or slightly longer than subtending leaves; indumentum a mix of two types: strigose, trichomes antrorsely oriented, minute, appressed, cystolythic, scarcely visible at 15x; and sparsely hispid, trichomes erect, red-purple, to ca. 0.5 mm long. Leaves opposite, sessile, ascending, closely appressed to the stem, very gradually reduced in size in the inflorescence; petioles 0–1 mm; blades ovate to mostly narrowly lanceolate-oblong, narrower toward stem apex, 5–15 mm long, 1–5 mm wide, thickly membranaceous, appearing uni-nerved, base rounded, apex obtuse to acute, margin plane, sparsely glandular-ciliate; surfaces glabrous, secondary veins obscure. Racemes indistinct, terminal, leafy, simple; flowers alternate, solitary, interpetiolar; pedicels 2–3 mm long; bracteoles ovate, thick, ca. 1 mm long. Floral tube, including a rounded, descending spur 0.75–1.0 mm long, 7–12 mm long, 2 mm wide, dorsally strongly convex in fruit, neck contracted in fruit, mouth flaring, slightly oblique; outer surface purple-red or cream with purple veins, veins moderately glandular-hispid, trichomes erect, ca. 0.5 mm long; inner surface villous distal to stamen insertion, glabrous proximally except pilose on veins of two dorsal short stamens, vesicles 8 (*fide* Lourteig 1987), inconspicuous when dried; sepals equal, 1.5 mm long, 1.5 mm wide, deltate, glabrous; epicalyx segments thickened calluses, 0.5–1.0 mm long, shorter than sepals, margin scarcely free. Petals 6, medium to light rose, subequal, two dorsals 3.0 mm long, 1.5 mm wide, oblong-obovate, shorter and wider than the ventrals, subtended at insertion by thickened yellow calluses; ventrals 4 mm long, 1 mm wide, narrowly obovate. Stamens: two dorsalmost shortest and most deeply inserted, other 9 slightly gathered ventrally, antesepalous ones reaching apices of sepals, antepetalous ones reaching sinuses of sepals; filaments sparsely villous, pale, anthers pale to white; pollen tricolporate, syncolpate, pores protruding, exine striate, striae few, flanking the pores. Ovary glabrous; style glabrous or sparsely pilose, ultimately exserted ca. 2 mm; ovules 3 (4 or 5 *fide* Lourteig 1987). Disc erect, oblong, 0.7 mm long. 0.5 mm wide. Seeds oblong, 3.0–4.0 mm long, 2.5–2.7 mm wide, brown, base round, not interrupted, apex deeply retuse, forming a nearly circular opening, margin thinned, flattened, narrowly winged, 0.1 mm wide.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso)

HERBARIUM MATERIAL

V.C. Souza, 14591, ESA, 43982, Mato Grosso
C.T. Falcão, 5108, RB, Mato Grosso
D. Philcox, 3846, K, (K000533140), UB, NY, (NY00386522), Mato Grosso, **Typus**

REFERENCE

Lourteig, A. 1987. Lythraceae Austroamericanae. Addenda et corrigenda II. Sellowia 39: 5-48.

Cuphea ramosissima Pohl ex Koehne

Has as synonym
heterotypic *Cuphea spicata* var. *molliuscula* A. St.-Hil.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** glabrous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** violet; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs 23-33 cm tall; stems erect, pubescent and glandular. Leaves opposite, petioles 3-8 mm long, blades 10-20 x 4-9 mm, ovate-oblong to oblong, rarely oblong-lanceolate, apex acute to obtuse, base acute to slightly attenuate, margin scabrous, glabrous to strigose. Racemes bracteate; pedicels 3-4(-7) mm long; bracteoles 0; floral tubes ca. 5 mm long; spur obtuse; outer surface pubescent; inner surface villous behind the stamens; petals violet, two dorsal ca. 2 mm long, spatulate, four ventral ca. 3 mm long, cuneate-lanceolate; ventral stamens included; ovary glabrous; style villous; ovules 20-32; nectary sub-horizontal, ovate-cordate. Seeds tuberculate (adapted from Koehne 1877).

Life Form
Herb, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Salino, 3315, BHCB, CEN, 33597, Minas Gerais
A.M. Giulietti, CFCR6698, NY, 940126, (NY00940126), Minas Gerais
J.B.E. Pohl, 3218, K, (K000532983), Minas Gerais, **Typus**
G. Hatschbach, 46334, NY, 940125, (NY00940125), Minas Gerais
Z.A. Trinta, 769, NY, 940127, (NY00940127), Minas Gerais

Cuphea repens Koehne

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** whorled; **base** obtuse/truncate; **form of the limb** linear; **margin of the leaf** flat/revolute/sub revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose/ malpighiaceous; **form of the spur** without spur; **position of the spur** without spur; **petal** absent on the fruit; **colour of the petal** lilac/pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Herbs, amphibious with prostrate, creeping or floating stems, mostly 10 cm long or less, forming rhizomatous mats to 25 cm in diameter, branches numerous, irregular; internodes less than half as long as subtending leaves; indumentum strigose, densely covering entire plant, the trichomes white, closely appressed, bi-fid (malpighiaceous), arms long, thin, longitudinally oriented. Leaves mostly 3–6-verticillate, scarcely diminishing in size and becoming more crowded and irregularly positioned distally on the stem, some emerging above or below the nodes; petioles 0; blades linear, 2–8 mm long, 0.5–1.0 mm wide, thickly membranaceous, appearing uni-nerved, base truncate to rounded, attached to the stem across the entire leaf base, apex acute, margin sometimes inrolled; surfaces green, densely white strigose as on the stems. Racemes indistinct, terminal, leafy, fewflowered; flowers solitary, emerging irregularly, interpetiolar or internodal, crowded at distal nodes; pedicels 1–2 mm long, attached to ventral side of tube; bracteoles terminal on the pedicel, lanceolate-linear, 0.8–1.2 mm long, extending1/3 to 1/2 the length of floral tube. Floral tube, including a non-spurred, rounded base to 0.5 mm long, 3.0–4.5 mm long, 0.8–1.0 mm wide, neck slightly contracted near midpoint of tube, mouth flaring; outer surface rose purple, bifid-strigose as on stems; inner surface moderately pilose over all; vesicles 0; sepals equal, 0.5 mm long, 0.7 mm wide, deltate, apex acute to apiculate; epicalyx segments cylindrical to slightly flattened lobes, thick, dark purple, 0.5 mm long, shorter than sepals, without setae. Petals 6, rose pink, light purple, rose- or red-purple, subequal, 2.0–2.5 mm long, 0.5–1 mm wide, obovate or broadly elliptic, ventral petals 0.2–0.4 mm longer than dorsals. Stamens 11: the 2 short dorsalmost deepest, other 9 inserted at the same level, at ca.. 2/3 length of floral tube, alternately unequal, all included; filaments lightly pilose, cream-colored, anthers cream-colored, not reaching sinuses of the sepals; pollen distinctly triangular in polar view, tricolporate, syncolpate, colpi equally wide from pore to pole, convergent in a granular polar region, pores nonprotruding, exine psilate, grain diam 22–26 mm. Ovary pilose distally; style lightly pilose, 0.5 mm long, included; ovules 7–9; disc 0.5 mm long, 0.3–0.4 mm wide, approx. rectangular, flattened, erect to reflexed over the ovary. Seeds 0.6–0.7 mm long, 0.5 mm wide, brown, scarcely compressed, oblong to subcircular, apex rounded, margin rounded. (Graham 2017).

COMMENTS

Present in marshy grasslands, campo murundum in transition to cerrado, shallow pools of standing water, mudflats, edges of gallery forests. Flowering and fruiting throughout the year as local moisture conditions permit

Life Form
Herb

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Flooded Field (Várzea), Grassland, Aquatic vegetation

Geographic Distribution

Confirmed ocurrences
North (Amazonas, Rondônia, Tocantins)
Northeast (Bahia)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

J.G. Kuhlmann, 183, MO, 961031, RB, Amazonas
A. Pott, 2279, CPAP, 2308, Mato Grosso do Sul
M.G. Paelo, 15, RON, 7925, Rondônia
Duarte, 3264, RB, 71764, Minas Gerais
M. Aparecida da Silva, 3932, RB, 380189, (RB00209036), Goiás
V.C. Souza, 24415, ESA, 66957, CEN, 68928, Bahia
L. Riedel, 1598b, LE, P (P01901844), São Paulo, **Typus**
T.B. Cavalcanti, 3409, CEN (CEN00052207), Tocantins
T.S. Filgueiras, 2527, CEN, 18587, Goiás
K.F. Pelizzaro, 26, CEN, 46407, Distrito Federal
J.R. Valle, 18, CEN, 27420, Mato Grosso

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea repens* Koehne

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cavalcanti, T. B. & Graham, S. A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.
Graham, S.A. 2017. A revision of Cuphea section Brachyandra s.s. (Lythraceae). Systematic Botany 42(4): 859-919.

Cuphea retrorsicapilla Koehne

This treatment is composed of the following taxa: *Cuphea retrorsicapilla*, *Cuphea retrorsicapilla var. enneanthera*, *Cuphea retrorsicapilla var. retrorsicapilla*.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** obtuse/acute; **form of the limb** linear/lanceolate/elliptic; **margin of the leaf** flat/revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/malpighiaceous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** flask-shaped. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Perennial herbs, 2–10 dm tall, stems erect, slender, one to several from a globose xylopodium, rarely branched; indumentum white strigose, sometimes also sparsely glandular hirsute and/or with a longitudinal row of minute, falcate trichomes, strigose trichomes malpighiaceous, longitudinally oriented on the stem, arms often unequal, the longest arm directed basally and the trichomes then appearing retrorsely oriented (var. retrorsicapilla) or trichomes without strong orientation (var. enneanthera), glandular hirsute trichomes colorless, erect, 1–2 mm; internodes longer to shorter than subtending leaves. Leaves sessile, opposite or 3- or 4-verticillate, usually 3-verticillate at midstem, ascending, often crowded and imbricate distally, pinnately-veined or appearing uni-veined (var. enneanthera); blades lanceolate-linear to broadly elliptic, 15–53 × 3–16 mm, margin plane (var. retrorsicapilla) or if appearing uni-veined, narrowly lanceolate-linear to linear, 9–20 × 1–7, margin revolute (var. enneanthera), all thickly membranous, base acute to rounded, apex acute; blade adaxial surface shining, seemingly glabrous but with minute transversely-oriented malpighiaceous trichomes, abaxial surface strigose, strigose trichomes longitudinally oriented, both surfaces sometimes also with sparse, long, glandular hirsute trichomes; distal leaves of stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy simple racemes, more or less terminal, rarely compound, flowering branchlets to 7 cm; flowers interpetiolar, alternate, infrequently opposite or 3-verticillate; pedicels 1.5–9 mm; bracteoles 0.5–0.7 × 0.3 mm, narrowly lanceolate. Floral tubes 6–8 × 1–2 mm, broadly ampullaceous in fruit, including rounded 0.5–1 mm horizontal spur; outer surface red-purple dorsally with dark red-purple veins, paler to green ventrally, moderately to densely malpighiaceous strigose and sometimes also sparsely glandular hirsute as on stems; inner surface villous above stamens, glabrous below except lightly pilose along the dorsalmost veins, vesicles 4 to10, occasionally weakly developed; sepals equal, 0.75 × 1 mm, deltate, apex acute; epicalyx segments small thickenings, the two dorsal epicalyx segments often with 1– 3 setae to 1 mm, the others sometimes with shorter setae, margin scarcely free; petals 6, subequal, 4–5 × 1.5–4 mm, two dorsals slightly narrower than four ventrals, all obovate to spatulate, bright rose-purple to pale rose-pink; stamens included, the two dorsalmost short stamens sterile, anthers absent or, if present, atrophied, pollen crumpled and sterile or lacking entirely, antesepalous stamens reaching apex of sepals, antepetalous stamens reaching sinus between sepals, filaments of the two long dorsal stamens villous, the others sparsely villous to glabrous, rose, anthers rose; pollen oblate, oval-triangular, tricolporate, syncolpate, pores protruding, exine coarsely short-striate, grain diam. 23 µm; ovary glabrous; style glabrous, exserted at maturity; stigma punctiform; nectary oblique, 0.5 × 1.2 mm, sub-triangular to semi-circular in dorsal view, semi-cupping base of ovary. Seeds 3–12, 2.5 × 2–2.5 mm, suborbicular, margin rounded, slightly thickened. Chromosome number: n = 8 (var. retrorsicapilla, Brazil: Goiás, Pereira-Silva & Moreira 11161 (CEN), n = 8 + 1 B.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Pantanal

Vegetation Types
Flooded Field (Várzea), Grassland, Highland Rocky Field, Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais)

IDENTIFICATION KEY

Key to the Varieties of *Cuphea retrorsicapilla* (Graham & Cavalcanti 2013)
1. Leaves with secondary pinnate-venation visible, margin plane or slightly revolute; stem indumentum of mostly uni- formly retrorsely oriented malpighiaceous trichomes, the longest arm of the trichomes directed basally; seeds 6–12. ..... **var. *retrorsicapilla***
- Leaves with secondary venation obscure, appearing uni-veined, margin revolute to midvein or nearly so; stem indu- mentum of mixed orientation, appearing unkempt; seeds 3–7 ..... **var. *enneanthera***

HERBARIUM MATERIAL

G. Gardner, 3147, K, K, (K000533022), Tocantins, **Typus**
T.B. Cavalcanti, 446, NY, MO, CEN, SPF, (SPF00093367), Goiás
G. Hatschbach, 30484, MO, MBM, Mato Grosso do Sul
T.B. Cavalcanti, 2218, CEN, MO, Tocantins
T.B. Cavalcanti, 2342, CEN, MO, Mato Grosso
C.E.B. Proença, 2266, CEN, UB, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS

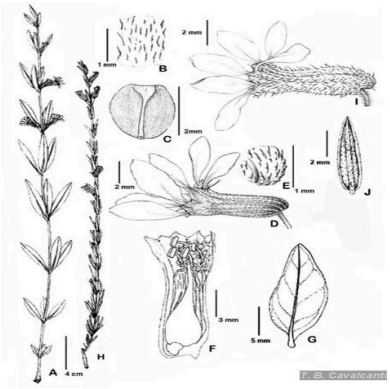


Figure 1: *Cuphea retrorsicapilla* Koehne

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.
Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cuphea retrorsicapilla Koehne var. *retrorsicapilla*

Has as synonym
heterotypic *Cuphea gracilis* var. *brasiliensis* A. St.-Hil.

DESCRIPTION

Leaves opposite or 3- or 4-verticillate, lanceolate-linear to broadly elliptic or oblong, 15–53 x 3–16 mm, secondary pinnate-venation visible, margin plane or slightly revolute; stem indumentum mostly uniformly retrorsely oriented; seeds 6–12.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Pantanal

Vegetation Types
Flooded Field (Várzea), Grassland, Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G. Gardner, 3147, K, (K000533022), OXF, W, Tocantins, **Typus**
T.B. Cavalcanti, 442, SPF, NY, MO, CEN (CEN00013237), Goiás
T.B. Cavalcanti, 2342, CEN (CEN00027094), MO, Mato Grosso
G. Hatschbach, 30484, MBM, MO, Mato Grosso do Sul
C.E.B. Proença, 2266, HUFU, UB, CEN, Minas Gerais
T.B. Cavalcanti, 2218, CEN (CEN00026542), MO, Tocantins

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea retrorsicapilla var. *enneanthera* (Koehne) S.A.Graham & T.B.Cavalc.

Has as synonym
basionym *Cuphea enneanthera* Koehne

DESCRIPTION

Leaves 3- or 4-verticillate, narrowly lanceolate-linear to linear, 9–20 × 1–7 mm, appearing uni-veined, margin revolute to midvein or nearly so; stem indumentum without strong orientation; seeds 3 –7.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás, Mato Grosso)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2345, CEN (CEN00027097), MO, Mato Grosso
G. Gardner, 3718, K, (K000533020), OXF, P, Tocantins, **Typus**
J.F.B. Pastore, 1251, CEN, Goiás

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea rigidula Benth.

DESCRIPTION

Root: type axial. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cuneate; **form of the limb** lanceolate/elliptic; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/malpighiaceous; **form of the spur** obtuse/without spur; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, to 30 cm, stems erect, brown-red, branched, branches dichotomously branched; roots undescribed; internodes half or less than half as long as subtending leaves; stem indumentum of two types: predominantly coarsely setose, trichomes abundant, erect to slightly appressed, bulbous-based, typically red-brown, 0.5–1.0 mm long; and inconspicuously strigose, trichomes bifid, appressed to the stem, longest arm oriented distally. Leaves loosely arranged, ascending, becoming imbricate distally, sessile, abruptly reduced in size in the inflorescence; petioles 0; blades broadly elliptic-lanceolate, 15–43 mm long, 5–13 mm wide, thickly membranaceous, base cuneate, apex subacute to acute, margin plane; surfaces adaxially dark green, abundantly setose, setae 1.0–1.7 mm long (–2.5 mm long fide Lourteig 2001: 70), abaxially paler green, finely bifid-strigose, midvein and 2 pairs of secondary veins visible on both surfaces. Racemes distinct, terminal, bracteate, dichotomously compound; flowers solitary, alternate, crowded distally on the stem, partially obscured by leaves and bracts; pedicels 0.5–1.0 mm long; bracteoles lanceolate, ca. 1mmlong, 0.3mmwide. Floral tube, including a poorly developed, horizontal spur to 0.2 mm long, or non-spurred, 5.5–6.0 mm long, ca. 1.5 mm wide, dorsally convex in fruit, neck slightly narrowed at 2/3 length of floral tube, mouth widely flaring, ca. 2.5–3.0 mm wide; outer surface purple, finely bifid-strigose, appearing nearly glabrous, with setae or not; inner surface lightly villous distal to stamen insertion, lightly pilose proximally except villous along the veins of the 2 dorsalmost stamens; sepals subequal, the 3 dorsalmost slightly larger, wider, 1.2 mm long, 1.2 mm wide, the others 0.7 mm long, 0.7 mm wide, all deltate, apex acute; epicalyx segments prominent, thickened lobes, dark-colored, 0.3–1.0 mm long, the dorsal ones longer than the sepals. Petals 6, pink, obovate to sub-spatulate, size uncertain, 2 dorsals darker at the narrowed base, 4 ventrals short-clawed. Stamens: 2 short dorsalmost inserted at nearly same level as other 9 in a shallow V-shape at ca. 2/3 length of floral tube, antesepalous stamens not reaching apices of sepals, antepetalous ones not reaching sinuses of sepals; filaments of 2 antesepalous stamens sparsely villous, all others glabrous, filament and anther color unknown. Ovary lightly pilose; style lightly pilose, ultimately extended to apices of the sepals or exserted ca. 0.5 mm; ovules 9 or 10. Disc erect, 0.5–0.6 mm long, 0.2 mm wide, cylindric to slightly flattened, obtuse, thick, dark-colored. Seeds 1.2–1.5 mm long, 1.2 mm wide, oblong to sub-obovate, base rounded, apex rounded, margin rounded (Graham 2019).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Amazonian Savanna, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Roraima)

HERBARIUM MATERIAL

R. Schomburgk, 155 S, K, (K000532982), K (000532982), Roraima, **Typus**

REFERENCE

Graham, S.A. (2019). A Revision of Cuphea section Amazoniana s. s. (Lythraceae). Systematic Botany 44(1): 146–183. https://doi.org/10.1600/036364419X697994
Lourteig, A. (1986). Revisión de dos secciones del género Cuphea P. Browne (Lythraceae). Phytologia 60(1): 17–55.

Cuphea rionegrensis Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/acute; **form of the limb** linear/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs 50-100 cm tall; stems erect, internodes 0.7-2.5 cm long, strigose and glandular, simple trichomes c. 0.3 mm long, appressed, glandular trichomes c. 0.7 mm long, intermixed with curved trichomes, sometimes distributed in a longitudinal strip along the stem; brachyblasts absent. Leaves opposite, membranaceous, petioles ca. 1 mm long, blades 10-30 x 1-2 mm, linear to narrow-oblong, apex acute, base acute to obtuse, margin flat, strigose, and sparsely glandular, indument sparsely glandular on both surfaces, glandular trichomes c. 0.5 mm long, short, trichomes appressed on the main vein of abaxial surface and sometimes present on the adaxial surface, hyphodromous, secondary veins rarely visible. Racemes 9-15 cm long, compound, frondose, lax; bracts leaf-like, pairs subequal; flowers alternate, pedicels 1.5-3 mm long, interpetiolar; bracteoles 0.3-0.4 x 0.15-0.2 mm, ovate; floral tubes 5-7 mm long; spur 0.6-0.8 mm long, obtuse, deflexed; outer surface greenish, glandular and slightly pubescent, glandular trichomes <1 mm long, appressed trichomes in the distal portion; inner surface villous in the region of the stamens, densely pilose in the rest of the floral tube; petals 6, pink to purple, subequal; stamens 11, villous to pilose; ovary ca. 2 mm long, glabrous, stylus 2.7-3 mm long, glabrous, ovules 2-3; nectariferous gland 0.7-1 x 0.3-0.8 mm, deflexed. Seeds 2-3, 1,9-2 x 1,6-1,68 mm, broad-elliptical, apex obtuse, base obtuse, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Amazonian Campinarana

Geographic Distribution
Confirmed ocurrences
North (Amazonas)

HERBARIUM MATERIAL

O.C. Nascimento, 622, P, MG, NY, (NY01405347), Amazonas
M. Poole, 1790, INPA, P (P01901841), NY, Amazonas, **Typus**

FIELD IMAGES / ILLUSTRATIONS

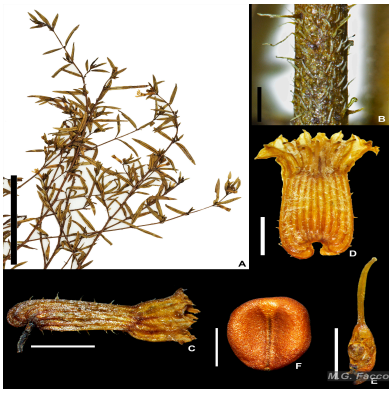


Figure 1: *Cuphea rionegrensis* Lourteig

REFERENCE

Lourteig, A. 1987. Lythraceae Austroamericanae. Addenda et corrigenda II. Sellowia 39: 5-48.

Cuphea rubescens Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** oblong; **margin of the leaf** flat. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** glabrous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect/horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs 30-35 cm tall; stems glabrous at the lower portion, hispid-pubescent and glandular at the apex. Leaves opposite, sessile to subsessile, blades 15-30 x 2.5-5 mm, narrowly lanceolate to sublinear, apex acute to obtuse, base attenuate, membranaceous, glabrous; dark red-brown veins. Racemes leafy; pedicels 1-2 mm long, interpetiolar; floral tubes ca. 6 mm long; spur obtuse, horizontal; outer surface nearly glabrous; inner surface villous behind the stamens; petals cuneate-lanceolate, two dorsal slightly larger; stamens reaching or exceeding the margin of the tube; vesicles 0; ovary glabrous; style glabrous; nectary deflexed; ovules 11-16. Seeds obovate-orbicular, margin obtuse (adapted from Koehne 1877).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Southeast (Espírito Santo, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

H. Wawra, 389, W, Bahia, **Typus**
O.C. Goés, 390, RB, 51454, (RB00208928), Rio de Janeiro
G. Martinelli, 437, RB, 171309, (RB00208920), Espírito Santo
T.B. Cavalcanti, 3660, CEN, MO, São Paulo

Cuphea rubrovirens T.B.Cavalc.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** ovate/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** pubescent/glabrous; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs to 1 m; stems erect to lax, stems irregularly sparsely branched, branches of various lengths with short axillary fascicles; internodes very short, ca. half as long as subtending leaves; indumentum a mix of two types: densely uniformly puberulous; and minutely hirsute with white, erect, eglandular trichomes. Leaves opposite, spreading to erect, frequently congested on short axillary branchlets especially in the inflorescence, not reduced in size in the inflorescence; petioles 1–2 mm long, ± terete, flanked by several dark fleshy trichomes at the nodes and in the axils; blades orbicular, broadly elliptic, or ovate, 6–22 mm long, 5–19 mm wide, smaller on branchlets, thickly membranaceous, subfleshy, base obtuse, apex acute to obtuse, margin sparsely glandular-ciliate, trichomes clear, broad-based, 0.5 mm long; surfaces green, minutely scabrous, adaxially shining, abaxially opaque and paler, abaxial veins sometimes puberulous. Racemes indistinct, terminal, leafy, compound; flowers 2–4 per node, one interpetiolar or slightly subnodal, others on short axillary branchlets; pedicels 2.0–3.5 mm long; bracteoles leaf-like, ovate, 0.8–1.0 mm long. Floral tube, including 1–1.5-mm-long, obtuse, horizontal to slightly descending spur, 13–15 mm long, 2.5–4.0 mm wide, dorsally straight or slightly convex at base, neck not contracted in flower, slightly contracted in fruit, mouth blunt; outer surface green or yellow-green, apex bright red ventrally, indumentum glabrous or sparsely puberulous with sparse glandular setae on veins; inner surface sparsely villous distal to stamen insertion, proximally glabrous except puberulous on veins of the 2 shortdorsalmost stamens, vesicles 0; sepals equal, 0.7 mm long, 0.9 mm wide, deltate, not ciliate; epicalyx segments 0.3 mm long, 0.3–0.4 mm wide, shorter than sepals, green or red, thick, margin scarcely free, rounded. Petals 6, bright red or red with dark purple apex, subequal, 4.0–6.0 mm long, 2.5–3.0 mm wide, obovate, 2 dorsalmost slightly larger than other 4. Stamens: 2 short dorsalmost included, lightly villous or glabrous, the other 9 villous, 5 antesepalous stamens well-exserted, 4 antepetalous reaching rim of tube or exserted; filaments red, anthers white; pollen diporate, grain length 27–32 µm. Ovary non-gibbous, glabrous; style glabrous, exserted 4–5 mm; ovules 3; disc 1.0 mm long, 0.5 mm wide, sub-deltoid, semi-deflexed, red, concave around ovary base. Seeds 2.5–3.0 mm long, 2.5–3.0 mm wide, light brown, bilateral, suborbicular, apex slightly retuse, margin rounded, narrow, lighter in color. Chromosome number unknown.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

I. Cordeiro, CFCR 9113, SPF, K, (K000533139), SP, R, MBM, CEN, Minas Gerais, **Typus**
V.C. Souza, 28168, ESA, CEN, Minas Gerais
J.R. Pirani, 2228, CEN, NY, SPF, (SPF00062945), Minas Gerais

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea rupestris T.B.Cavalc. & S.A.Graham

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** cordate or subcordate/obtuse; **form of the limb** linear/lanceolate; **margin of the leaf** sub revolute. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** deflexed; **petal** persistent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** cupuliform. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 3–5 dm tall, stems erect, one to six from a woody, elongated to globose xylopodium, unbranched or sparsely branched near the base; indumentum minutely eglandular hispid and glandular hirsute, hispid trichomes white, sharp-pointed, suberect, hirsute trichomes sparser, erect, ca. 0.5 mm; internodes ca. half as long as subtending leaves. Leaves sessile, opposite to subopposite, less often 3-verticillate, erect, appressed against the stem, frequently imbricate, sometimes with vegetative fasicles in the axils, pinnately-veined, secondary venation visible on wider more basal leaves, distal smaller leaves appearing uni-veined, apices often recurved; blades linear-lanceolate, 12–25 × 1–5 mm, typically ca 13.0 × 2.5 mm, thickly membranous, base rounded to mainly cordate, apex acute, margin slightly revolute, not inrolled to midvein, margin of young leaves bearing minute, malpighiaceous, transversely oriented trichomes (40×); blade surfaces minutely scabrous, appearing glabrous, abaxially with or without sparse glandular trichomes; distal leaves of stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy simple racemes; flowers interpetiolar, alternate; pedicels 5–9 mm; bracteoles ca. 0.5 × 0.2 mm, narrowly ovate. Floral tubes 7–9 × ca. 2 mm including rounded descending 1 mm spur; outer surface deep red-purple dorsally, green ventrally, sparsely to densely glandular hirsute; inner surface densely white villous above stamens, villous to sparsely villous below, vesicles 5 to 8, rarely none, prominent when present; sepals equal, 1 × 1 mm, deltate, apex acute; epicalyx segments small thickenings bearing a few short setae, margin scarcely free; petals 6, subequal, 4 × 1.5 mm, oblong to obovate, rose to light rose or lavender; stamens slightly exserted, except the two dorsalmost short stamens included, filaments villous, anthers white; pollen oblate, oval-triangular in polar view, tricolporate, syncolpate, pores strongly protruding, exine striate, grain diam. 25 µm; ovary pilose at apex; style pilose basally, included; stigma small-capitate; nectary oblique, ca. 0.5 × 1 mm, triangular in dorsal view, semi-cupping base of ovary. Seeds 3 or 4, 3 × 2.5 mm, ovate-oblong, margin rounded.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2494, CEN (CEN00033156), Goiás
J.F.B. Pastore, 1209, CEN (CEN00056053), NY, K, Goiás, **Typus**

FIELD IMAGES / ILLUSTRATIONS

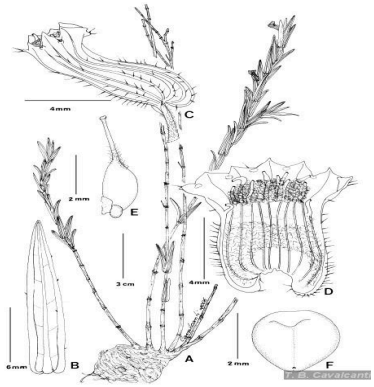


Figure 1: *Cuphea rupestris* T.B.Cavalc. & S.A.Graham

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cavalcanti, T. B. and S. A. Graham. 2008. New species, varieties, and combinations in *Cuphea* (Lythraceae) from Brazil. Novon 18: 298-314.

Cuphea sabulosa S.A.Graham

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** ovate/sub orbicular; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm)/13 to 30 long (mm); **indumentum external of the tube floral** hirsute/glabrous; **form of the spur** obtuse; **position of the spur** deflexed; **petal** apetalous; **colour of the petal** petal absent; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 0.4 m; stems irregularly branched, branches of various lengths; internodes half as long to equal subtending leaves; indumentum none, stems glabrous. Leaves opposite, spreading to ascending, scarcely or not at all reduced in the inflorescence, additional leaves tightly clustered on axillary branchlets; petioles 0–1mm long, 1 mm wide, flattened, broadly attached at the node; blades broadly ovate to suborbicular, 5–12 mm long, 5–8 mm wide, thickly membranaceous, subfleshy, base obtuse, rarely briefly attenuate, apex obtuse, margin plane, thick; surfaces green, glabrous, shining. Racemes indistinct, terminal, leafy, simple; flowers 1–3 per node, one interpetiolar, others on very short axillary branchlets; pedicels 1.0–2.5 mm long; bracteoles leaf-like, ovate to oblong, ca. 0.5 mm long. Floral tube, including 1-mm-long, obtuse, slightly descending spur, 11–13 mm long, 3–4 mm wide, dorsally distinctly convex, especially in fruit, neck thick, short, scarcely contracted in fruit, mouth blunt; outer surface yellow, glabrous or sparsely glandular-hirsute on veins, the trichomes clear, 0.5–0.7 mm long; inner surface glabrous distal to stamen insertion, glabrous between stamen insertion and ovary, at ovary level bearing flattened, hyaline trichomes ca. 1 mm long, vesicles 0; sepals equal, 1.0 mm long, 1.5 mm wide, deltate, margin not ciliate; epicalyx segments 0.5 mm long, thickened lobes, oblong, each terminated by a coarse seta, shorter than sepals. Petals 0. Stamens: 2 short dorsalmost included, inserted immediately proximal to the others, 5 antesepalous at or slightly exceeding margin of floral tube, 4 antepetalous included, reaching the margin; filaments glabrous, color unknown, anther color unknown; pollen diporate, grain diameter 25 µm. Ovary non-gibbous, glabrous; style glabrous, exserted 1.5 mm; ovules 3–6; disc 0.5–1.0 mm long, 1.0–2.0 mm wide, semi-deflexed, concave around base of ovary. Seeds 3.0 mm long, 2.5 mm wide, dark brown, bilateral, cordiform, apex retuse, margin rounded, narrow, light brown. Chromosome number unknown.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Amazonian Campinarana, Amazonian Savanna

Geographic Distribution
Confirmed ocurrences
North (Amazonas)

HERBARIUM MATERIAL

C.A. Cid Ferreira, 5811, UB, K, (K000533138), INPA, 127275, (INPA0127275), MO, NY, Amazonas, **Typus**

Cuphea santos-limae G.M.Barroso

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate; **form of the limb** ovate/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/scabrous; **form of the spur** without spur; **position of the spur** without spur; **petal** persistent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** cupuliform. **Fruit: form** tubular. **Seed: margin** unknown.

ADDITIONAL DESCRIPTION

Subshrubs, 1–1.7 m; stems erect, branched; internodes half as long as subtending leaves; indumentum a mix of two types: puberulous; and densely glandular-hirsute with pale red or colorless trichomes enlarged basally, ca. 0.5 mm long. Leaves opposite, spreading, gradually reduced in size in the inflorescence; petioles 5 mm long, ± terete; blades oblong to obovate, 20–37 mm long, 8–17 mm wide, thickly membranaceous, base narrowly attenuate, apex acute or obtuse and briefly apiculate, margin plane, sparsely ciliate on young leaves; surfaces moderately strigose, the trichomes slightly appressed, 0.1 mm long. Racemes distinct, terminal, leafy, simple; flowers solitary, alternate or opposite, mostly sub- or supra-nodal, crowded toward stem apex; pedicels 5–7 mm long, attached basally; bracteoles exceptionally large and leaf-like, elliptic, (1) 2–4 mm long. Floral tube actinomorphic or nearly so, cylindrical, uniformly slender over length of tube or slightly contracted around base of ovary, 23–30 mm long, 3–5 mm wide, spur none, neck not contracted, mouth slightly flared; outer surface red, puberulous, and sparsely glandular-hirsute with trichomes red-purple, bulbous-based, to 0.5 mm long, more abundant on sepals; inner surface glabrous, vesicles 0; sepals equal, 1.5–2.0 mm long, 1.5–2.0 mm wide, deltate, margin red-purple setose; epicalyx segments essentially absent, mere thickenings at sinus of sepals, dark green, margin not free. Petals 2, red, dorsal, 1.5–2.0 mm long,1.0 mm wide, elliptic, tapering to an acute apex. Stamens equally inserted, 5 antesepalous stamens exserted, others reaching margin of floral tube; filaments glabrous, pale, anthers white or greenish; pollen diporate, grain length 21–23 µm. Ovary non-gibbous, glabrous, stipitate, stipe 0.5 mm long; style glabrous, exserted to 6 mm; ovules 15; disc 0.5–1.0 mm tall, cupuliform or annular, surrounding base of the stipe. Seeds ca. 0.5 mm long, 0.4 mm wide (immature), bilateral, obovoid, apex and margin at maturity unknown.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution
Confirmed ocurrences
Southeast (Espírito Santo, Rio de Janeiro)

HERBARIUM MATERIAL

J. Santos-Lima, 329, RB, 27077, (RB00540662), Rio de Janeiro, **Typus**
R.R. Vervloet, 2573, CEN (CEN00064181), Espírito Santo
A.P. Fontana, 650, MBML, CEN (CEN00064201), Espírito Santo

REFERENCE

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32.

Cuphea schwackei Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ obtuse; **form of the limb** lanceolate/ovate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** absent; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirtellous; **form of the spur** truncate; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Herbs; stems pubescent and hirsute-glandular. Leaves opposite, subsessile, blades ca. 10-16 x 8-10 mm, ovate, apex acute, base cordate, margin scabrous, ciliate, glabrous. Racemes frondose-bracteose; flowers opposite; pedicels 4-7 mm long; bracteoles 0; floral tubes 6-8 mm long; spur obtuse, horizontal; outer surface pubescent; dorsal sepal larger than ventral, deflexed in fructification; petals red; stamens free in the apical portion of the floral tube; ovary villous at the apex; style villous; nectariferous gland sub-horizontal; ovules 11, margin obtuse (adapted from Koehne 1893).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

A.P. Fontana, 5371, RB, 474027, (RB00544697), Espírito Santo
C.A.W. Schwacke, 6286, RB, R, Minas Gerais, **Typus**
P. Fiaschi, 1039, CEN, 46346, Rio de Janeiro
P.H. Labiak, 4947, RB, 473809, (RB00544202), CEN, 72132, Espírito Santo
L.S. Leoni, 2162, CEN, 34523, Minas Gerais
L. Kollmann, 3178, CEN, 64207, Espírito Santo

Cuphea sclerophylla Koehne

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** linear/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent/scabrous; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** lilac/violet; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrub, 30-1 m tall; stem glabrous or substrigose, sometimes with glandular trichomes short. Leaves longer than internodes, opposite, subsessile, linear to narrow-oblong, coriaceous, 20-65x1.5-4.5 mm, apex acute, margin plane, base acute. Raceme frondose; pedicel 2-4.5 mm long, bibracteolate, bracteoles ovate, ciliate; floral tube 7.5-10 mm long, glandular trichomes short. sepals equal in size; petals 6, violaceous; vesicules present; stylus glabrous; ovules 4-6; nectariferous gland dorsal, horizontal; seed margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2302, MO, 317183, CEN, 27055, Minas Gerais
S.A. Graham, 883, MO, NY, 940169, (NY00940169), Minas Gerais
F. Sellow, s.n., K, (K000533049), Minas Gerais, **Typus**
S.A. Graham, 983, NY, 940167, (NY00940167), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea sclerophylla* Koehne

Cuphea scolnikiae Lourteig

DESCRIPTION

Root: type axial/rhizomatose. **Stem: indumentum** with hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/cuneate; **form of the limb** lanceolate/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute/pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** persistent on the fruit; **colour of the petal** violet; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** flask-shaped. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs ca. 30 cm tall; root fibrous; stem rhizomatous, radicular in the lower part, pubescent, cystolitic, appressed or subhirsute, malpighiaceous with unequal arms, mixed with very short, white or violet simple trichomes and some longer and sparse glandular trichomes, 0.7 mm long. Leaves opposite, subsessile or petiolate, petioles c. 2.5 mm long, elliptical to lanceolate, 13-40 x 4-18 mm, apex acute, base cuneate, rare obtuse, with dense cistolitic trichomes, very short on the abaxial surface, thin, sparse glandular trichomes on both surfaces, veins hirsute-pubescent on the abaxial face. Flowers solitary, axillar; pedicel ca. 1 mm long; bracteoles ca. 0.5 mm long, ovate, sharp. Floral tubes 5.5-8.5 mm long, spur obtuse; fauce narrowed the; outer surface with simple trichomes short, uniform, mixed with violet glandular trichomes; inner surface lanose-pubescent behind the stamens, the rest glabrous, the two dorsal ribs pilose; petals violet, 4-4.5 mm long, sometimes with few trichomes on the back of the middle vein, hirsute, the petals dorsal obovate-spathulate; stamens 11; nectariferous gland sub-horizontal; ovary glabrous; stylus glabrous or with few trichomes at the apex, ovules (3-)10. Seeds 9, dark, 2.5 x 2 mm, sub-rectangular, thick, flattened with remarkably thickened lateral margins, interrupted at the base and apex, presenting 4 acute angles.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Flooded Field (Várzea), Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Rondônia)
Central-west (Mato Grosso)

HERBARIUM MATERIAL

L.C.B. Lobato, 1084, MG (MG152185), Rondônia
C.C. Berg, 19820, MO, INPA, NY, (NY00940164), Mato Grosso
I.L. Amaral, 832, INPA, NY, (NY00940165), Mato Grosso
C.A.C. Ferreira, 5643, INPA, Mato Grosso
R. Scolnik, 682, CORD, P, **Typus**
M.R. Cordeiro, 1237, NY, (NY00940166), Mato Grosso

Cuphea sessiliflora A.St.-Hil.

Has as synonym
heterotypic *Cuphea costata* Koehne
heterotypic *Cuphea parietarioides* (A. St.-Hil.) Koehne
heterotypic *Cuphea petiolata* Pohl ex Koehne
heterotypic *Cuphea viscosissima* var. *parietarioides* A. St.-Hil

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** ovate/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** obtuse; **position of the spur** horizontal; **petal** persistent on the fruit; **colour of the petal** white/lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, leaves with obtuse base, petiole 1-3 mm long; floral tube 7-7.5 mm long; petals persistent in fructification; vesicles absent; ovules 3-5; seed margin obtuse.

COMMENTS

This species may be synonym of C. lutescens (on going studies).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Central-west (Goiás, Mato Grosso do Sul)
Southeast (Minas Gerais, São Paulo)
Possible ocurrences
North (Tocantins)

HERBARIUM MATERIAL

G. Hatschbach, 49461, MO (3172335), Bahia
A.N. Duarte, 15, P, Minas Gerais, **Typus**
T.B. Cavalcanti, 2300, CEN, 23053 (CEN00027053), MO, Minas Gerais
W. Hoehne, s.n., CEN, 26.140, São Paulo
G. Hatschbach, 60192, MBM, 165424, Goiás
V.J. Pott, 2325, CEN, 52664, Mato Grosso do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea sessiliflora* A.St.-Hil.



Figure 2: *Cuphea sessiliflora* A.St.-Hil.

Cuphea sessilifolia Mart.

This treatment is composed of the following taxa: *Cuphea sessilifolia*, .

Has as synonym
homotype *Cuphea sessilifolia* var. *pilosa* Koehne
homotype *Cuphea sessilifolia* Mart. var. *sessilifolia*
heterotypic *Cuphea impexa* Koehne
heterotypic *Cuphea reflexifolia* Koehne
heterotypic *Cuphea sessili* f. *lia var. pilosa* Koehne
heterotypic *Cuphea sessili* f. *lia var. pilosa* Koehne
heterotypic *Cuphea sessilifolia* var. *strigosa* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** cordate or subcordate/ obtuse; **form of the limb** lanceolate/ovate; **margin of the leaf** flat. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse/saccate; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple/lilac; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** pyriform/fusiform. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs erect, rarely prostrate, 0.2-1 m tall, without xylopodium, viscous; branches hirsute, with long glandular trichomes intermixed with short and curved trichomes, sometimes rigid and appressed to the stem. Leaves 4-31x2,4-9 mm, sessile to subsessile, ovate to ovate-lanceolate, apex acute, margin flat, base cordate or obtuse, strigose, trichomes appressed and rigid, intermixed with glandular trichomes, brochidodromouss; petiole 0.2-0.7 mm long. Racemes compound, frondose to frondose bracteose; pedicel 1.9-2.2 mm long, interpetiolar, persistent; oval bracteoles, in the final third of the pedicel; floral tube 6.4-8.2 mm long, ventrally vinaceous, dorsally purplish, outer surface hirsute and strigose, glandular trichomes long, intermixed with appressed simple trichomes, inner surface villous above the stamens and sparse villous below the stames; spur obtuse, deflexed, slightly saccate; petals 6, ovate, purple to lilac, deciduous in fructification, dorsal 2-3,7 mm long, ventral 2,6-3,5(-4) mm long; filaments free in the upper third of the floral tube, infra-staminal vesicles absent; ovary glabrous to scarce villous, stylus villous, sometimes glabrous, ovules 3; nectariferous gland dorsal, deflexed, convex in the dorsal portion and concave in the ventral portion. Seeds 3, 1,9-2,1x1,9-2 mm, elliptical, margin obtuse.

Life Form
Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Grassland, Highland Rocky Field, Cerrado (lato sensu), Coastal Forest (Restinga), Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Northeast (Bahia, Maranhão, Sergipe)
Central-west (Goiás)
Southeast (Espírito Santo, Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2310, CEN, Minas Gerais
T.B. Cavalcanti, 2252, CEN, MO, Goiás
C.F.P. Martius, 421 p.p., BR, K, (K000533073), P, Bahia
S.A. Mori, 9624, NY, CEPEC, RB, RB, 246905, (RB00209102), Bahia
O.J. Pereira, 61, VIES, Espírito Santo
R.P. Orlandi, 173, RB, Sergipe

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea sessilifolia* Mart.

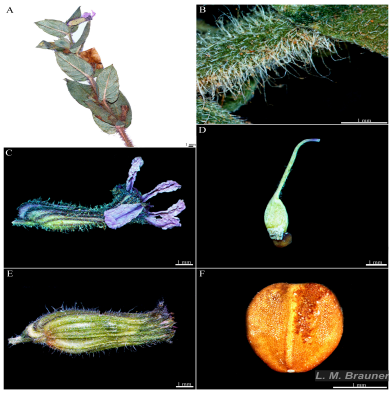


Figure 2: *Cuphea sessilifolia* Mart.

Cuphea sincorana T.B.Cavalc.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** lanceolate/angustate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** pubescent; **form of the spur** acute; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** cylindric. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Shrubs erect or prostrate, ca. 30 cm tall, xylopodium present, slightly viscous; branches hirtellous, with glandular trichomes winnish, intermixed with appressed simple trichomes. Leaves 9,7-13,8x1,6-3 mm, subsessile, narrow-lanceolate, apex acute, margin flat, base obtuse, strigose, brochidodromous; petiole 0.8-1 mm long. Racemes compound, frondose; pedicel 3-16 mm long, interpetiolar, persistent; bracteoles ovate, in the final third of the pedicel; floral tube 6.4-8.2 mm long, outer surface ventrally greenish, dorsally purple, simple trichomes long, rigid and appressed, intermixed with glandular trichomes, inner surface villous above the stamens and throughout the floral tube; spur obtuse, horizontal; petals 6, purplish, caducous in fructification, the dorsal obovate, c. 3.2 mm long, the ventral narrow-obovate, c. 2.8 mm long; filaments free in the upper third of the floral tube, infra-staminal vesicles present; ovary glabrous, stylus glabrous, ovules 6; nectariferous gland dorsal, deflexed. Seeds 6, immature elliptical, margin obtuse, thickened.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2460, MO, HUEFS, 42365, CEN, 34152, Bahia
R.M. Harley, 15857, CEPEC, K, Bahia
R.M. Harley, 15531a, CEPEC, K, Bahia
R.M. Harley, 26468, SPF, (SPF00062315), Bahia, **Typus**

FIELD IMAGES / ILLUSTRATIONS

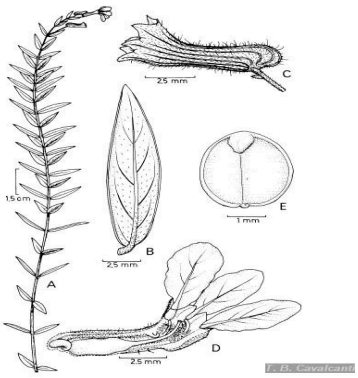


Figure 1: *Cuphea sincorana* T.B.Cavalc.



Figure 2: *Cuphea sincorana* T.B.Cavalc.

REFERENCE

Cavalcanti, T.B. 1991. New species of Cuphea (Lythraceae) from Brazil. Kew Bulletin 46(2): 253-268.

Cuphea sperguloides A.St.-Hil.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** cordate or subcordate/obtuse; **form of the limb** linear; **margin of the leaf** revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 1.5–4 dm tall, stems woody, erect to semi-decumbent and spreading, one to three or more closely arising from a woody, elongated rootstock, irregularly branched from near the base; indumentum minutely eglandular hispid and glandular hirsute, hispid trichomes colorless, sharp-pointed, erect; hirsute trichomes red-purple or colorless, highly glandular-viscous, mostly erect, of irregular lengths to 1 mm; internodes ca. half as long as the subtending leaves. Leaves sessile, 3- or 4-verticillate, opposite or subopposite at more basal nodes, ascending, uni-veined, crowded and imbricate distally, often recurved; blades narrowly linear, 3–25 × 0.5–3 mm, typically 10 × 1 mm, thickly membranous, base rounded to cordate, apex obtuse, margin revolute to the midvein; blade surfaces scabrous by minute simple trichomes and hirsute by glandular, colorless, 1 mm trichomes, sparser abaxially, erect; distal leaves of stem gradually or not at all reduced in size to form bracts of the inflorescences. Inflorescences leafy simple racemes; flowers interpetiolar, alternate or subopposite to opposite; pedicels 5–19 mm, typically ca. 10 mm; bracteoles 0.5–0.7 × 0.3–0.5 mm, suborbicular, apex obtuse. Floral tubes 7–8 × 2 mm including rounded, descending 1 mm spur; outer surface rose-purple dorsally and along the veins, paler or green ventrally, hispid and densely glandular hirsute as on stems, leaves, and pedicels; inner surface densely villous above stamens, lightly villous below except densely villous on two veins below the two dorsalmost short stamens, vesicles 0; sepals equal, 1 × 1 mm, deltate, apex acute; epicalyx segments minute thickenings, setose, margin scarcely free; petals subequal, 4–5 × 2 mm, two dorsals slightly longer than the four ventrals, all oblong, bright rose; stamens included, antesepalous stamens reaching sinus between sepals, antepetalous ones deeper, the two dorsal short stamens glabrous, other stamens villous, filaments rose, anthers white; pollen oblate, subtriangular, tricolporate, non-syncolpate, pores not protruding, exine psilate, grain diam. 15 µm; ovary glabrous; style glabrous, included; stigma small-capitate; nectary oblique, 0.5–1 × 1.25–2 mm, obtusely triangular in dorsal view, semi-cupping ovary. Seeds 3–6, 2.5 × 2–2.2 mm, suborbicular, margin rounded, pale.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

C.A.W. Schwacke, 8247, RB, 74318, (RB00209211), Minas Gerais
T.B. Cavalcanti, 3120, CEN, MO, Minas Gerais

A. Saint-Hilaire, B2-2108, P (P00604194), P (P00604193), Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS

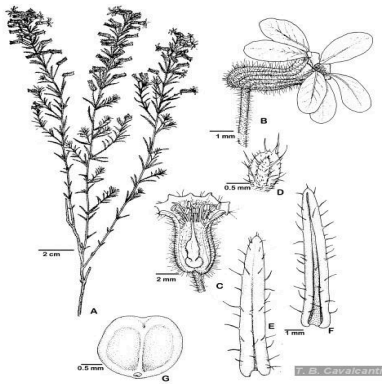


Figure 1: *Cuphea sperguloides* A.St.-Hil.



Figure 2: *Cuphea sperguloides* A.St.-Hil.



Figure 3: *Cuphea sperguloides* A.St.-Hil.

REFERENCE

Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea spermacoce A.St.-Hil.

This treatment is composed of the following taxa: *Cuphea spermacoce*, *Cuphea spermacoce var. arguta*, *Cuphea spermacoce var. erectifolia*, *Cuphea spermacoce var. spermacoce*.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite/whorled; **base** obtuse/attenuate/acute; **form of the limb** linear/lanceolate/ovate/elliptic/obovate; **margin of the leaf** flat/revolute. **Inflorescence: type** frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm)/13 to 30 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** deflexed; **petal** persistent on the fruit; **colour of the petal** purple/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** thickened.

ADDITIONAL DESCRIPTION

Perennial herbs, 1.2–7.5 dm tall, stems erect, one to three or more from a woody, globose or elongate xylopodium, generally unbranched or sparsely branched; indumentum sparsely to densely eglandular hispid and glandular hirsute, hispid trichomes minute, white, sharp-pointed, erect or antrorsely oriented, glandular hirsute trichomes white or colorless, rarely red-purple, erect or lax, 0.2–3 mm; internodes shorter to often several times longer than subtending leaves, when shorter, the leaves often appressed to the stem and imbricate. Leaves sessile or subsessile with petioles 0–2 mm, opposite and mostly 3- or 4-verticillate at midstem, spreading or slightly to strongly ascending or appressed to the stem, pinnately-veined, sometimes appearing uni-veined; blades narrowly linear-lanceolate, lanceolate-elliptic, ovate to ovate-elliptic, ovate-oblong or oblanceolate, 10–112 × 0.5–35 mm, thickly membranous, base attenuate, acute, rounded or obtuse, apex acute or short-acuminate, margin plane or very slightly revolute, secondary veins and intramarginal venation prominent except in most uni-veined leaves; blade surfaces diverse, typically finely scabrous, with abundant, white, minute hispid or strigose trichomes, appearing nearly glabrous, less often with more conspicuous, longer, sometimes transversely-oriented trichomes and thin, glandular viscous setae scattered on both blade surfaces and/or along margin; distal leaves of the stem gradually reduced in size to form bracts of the inflorescences. Inflorescences leafy simple racemes; flowers interpetiolar, alternate, opposite or 3- or 4-verticillate; pedicels of mature flowers 7–20 mm, longest at the lowest nodes of the inflorescence; bracteoles 0. 5–1 × 0.5–0.7 mm, ovate. Floral tubes 7–14 × 2–4 mm including rounded, descending 1–1.5 mm spur; outer surface diffuse rose-purple dorsally with rose-purple veins, paler ventrally, hispid only or hispid and hirsute as on stems; inner surface sparsely to densely villous above stamens, pilose to villous below, vesicles 8 to 10, prominently elongated or (in var. erectifolia) weakly developed to none; sepals equal, 1–1.5 × 1.5–2 mm, narrowly to broadly deltate, apex acute to acuminate; epicalyx segments small thickenings, hispid or with one to few setae, margin scarcely free; petals 6, subequal, 3–7 × 1.5–4 mm, two dorsal petals equal to or slightly shorter than four ventrals, all oblong to narrowly obovate, pale pink to rose-purple; stamens subexserted to included, antesepalous stamens reaching apex of sepals, antepetalous stamens reaching sinus between sepals, the two dorsal short stamens densely villous, other stamens glabrous to densely villous, filaments and anthers pale pink to rose; pollen oblate, oval-triangular, tricolporate, syncolpate, pores protruding, exine finely striate, grain diam. 27–30 µm; ovary apex pilose; style pilose at the base, included; stigma punctiform; nectary oblique, 0.5 × 0.75–1 mm, triangular in dorsal view, semi-cupping base of ovary. Seeds 3, 2.5–2.7 × 2.5–3.5 mm, orbicular to slightly wider than long, margin thick, rounded. Chromosome number: 2n = 18 (var. spermacoce), 2n = 30+1 B (var. erectifolia).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types

Grassland, Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Distrito Federal, Goiás)
Southeast (Minas Gerais)

IDENTIFICATION KEY

Key to the Varieties of *Cuphea spermacoce* (Graham & Cavalcanti 2013)
1. Leaves 3- or 4-verticillate at midstem, spreading or ascending, not closely appressed to the stem, (15–)20–112 mm long; vesicles 8–10..... 2
- Leaves opposite at midstem, rarely 3-verticillate at midstem, closely appressed to the stem especially distally, 10–20 mm long; vesicles 0 or weakly developed ..... **var. *erectifolia***
2. Leaves narrowly linear-lanceolate, (15–)20–70 mm long, secondary venation visible only on basal and near-basal leaves, distal smaller leaves appearing uni-veined ..... **var. *arguta***
- Leaves lanceolate-elliptic, ovate-elliptic to ovate-oblong, or oblanceolate, 20–112 mm long, secondary venation visible throughout .. **var. *spermacoce***

HERBARIUM MATERIAL

A. Saint-Hilaire, s.n., P, Minas Gerais, **Typus**
T.B. Cavalcanti, 2221, CEN, Tocantins
T.B. Cavalcanti, 2254, CEN, MO, Distrito Federal
A.M. Giulietti, CFCR 6374, SPF, K, Minas Gerais
J.B.E. Pohl, 964, K, K, (K000533035), Goiás
T.B. Cavalcanti, 84, K, CEN, Goiás

FIELD IMAGES / ILLUSTRATIONS

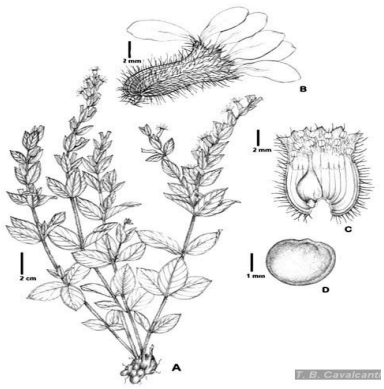


Figure 1: *Cuphea spermacoce* A.St.-Hil.

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea spermacoce A.St.-Hil. var. *spermacoce*

Has as synonym
heterotypic *Cuphea crulsiana* Koehne
heterotypic *Cuphea excoriata* Mart. ex Koehne
heterotypic *Cuphea polymorphoides* Koehne
heterotypic *Cuphea remotifolia* Koehne
heterotypic *Cuphea spermacoce* var. *angustata* Koehne
heterotypic *Cuphea spermacoce* var. *elongata* Koehne

DESCRIPTION

Perennial herbs, 2–7.5 dm. Leaves mostly 3- or 4-verticillate, spreading to ascending, petioles 0–2 mm; blades lanceolate-elliptic, ovate-elliptic to ovate-oblong, or oblanceolate, attentuate, acute or rounded at the base, 20–112 × 9–35 mm, secondary venation visible throughout. Floral tubes 7–17 mm, spur descending; vesicles 8–10 (Graham & Cavalcanti 2013).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Distrito Federal, Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G.P. Silva, 11172, CEN, 67427, Goiás
G.M. Barroso, s.n., RB, 124600, (RB00208633), Goiás
M.A. Silva, 5275, CEN, 62205, Distrito Federal
T.B. Cavalcanti, CFCR 8232, SPF, 39539, CEN, Minas Gerais
T.B. Cavalcanti, 2221, CEN, Tocantins
A. Saint-Hilaire, s.n., P, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea spermacoce var. spermacoce* A.St.-Hil.



Figure 2: *Cuphea spermacoce var. spermacoce* A.St.-Hil.

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. & Graham, S. A. 2011. Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed. Brasília: Atalaia, v. 9, p. 131-175.

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea spermacoce var. *arguta* T.B.Cavalc. & S.A.Graham

DESCRIPTION

Perennial herbs, 2.5–6 dm. Leaves sessile, 3-verticillate, sometimes opposite near base of stem, spreading to semi-erect, not appressed, secondary venation visible on the basal and near-basal leaves, distal smaller leaves appearing uni-veined; blades narrowly linear-lanceolate, (15–) 20–70 × 0.5–6 mm, typically ca. 40 × 6 mm at midstem, base attenuate, apex sharp, long acute-acuminate, margin plane, not revolute, blade surfaces minutely scabrous. Floral tubes 7–9 mm, spur descending; vesicles 8–10 (Graham & Cavalcanti 2013).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

A.C. Allem, 513, CEN (CEN00000513), Goiás, **Typus**
H.S. Irwin, 9876, NY, Goiás
T.B. Cavalcanti, 990, MO, CEN, Goiás

FIELD IMAGES / ILLUSTRATIONS

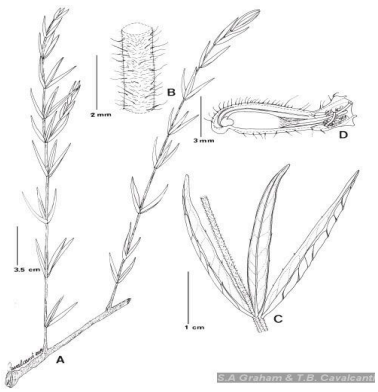


Figure 1: *Cuphea spermacoce var. arguta* T.B.Cavalc. & S.A.Graham

REFERENCE

Cavalcanti, T. B. and S. A. Graham. 2008. New species, varieties, and combinations in *Cuphea* (Lythraceae) from Brazil. Novon 18: 298-314.
Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.

Cuphea spermacoce var. *erectifolia* (Koehne) T.B.Cavalc. & S.A.Graham

Has as synonym
basionym *Cuphea erectifolia* Koehne
heterotypic *Cuphea erectifolia* var. *angustifolia* Koehne
heterotypic *Cuphea erectifolia* var. *latifolia* Koehne

DESCRIPTION

Perennial herbs 1–3(4.5) dm. Leaves sessile, opposite, rarely 3-verticillate at midstem, erect, closely appressed against the stem especially distally, secondary venation visible throughout; blades narrowly ovate to ovate-elliptic or ovate-oblong, 10–20 × 3–7 mm, typically ca. 16 × 6 mm at midstem, base rounded, obtuse, or subcordate, apex acute, margin plane or revolute only to the intramarginal vein, blade surfaces minutely scabrous. Floral tubes 8–10 mm, spur descending or sometimes horizontal on smallest flowers; vesicles none or weakly developed (Graham & Cavalcanti 2013).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3121, MO, CEN (CEN00046953), Minas Gerais
T.B. Cavalcanti, 3059, SPF, CEN (CEN00046892), MO, Goiás
S.A. Graham, 891, MO, NY, Goiás
J.B.E. Pohl, 861, W, K, (K000533028), BR, Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea spermacoce var. erectifolia* (Koehne) T.B.Cavalc. & S.A.Graham

REFERENCE

Graham, S.A. & T.B. Cavalcanti. 2013. Taxonomic Revision of *Cuphea* sect. Euandra subsect. *Oidemation* (Lythraceae). Phytotaxa 113(1): 1-86.
Cavalcanti, T. B. and S. A. Graham. 2008. New species, varieties, and combinations in *Cuphea* (Lythraceae) from Brazil. Novon 18: 298-314.

Cuphea strigulosa Kunth

This treatment is composed of the following taxa: *Cuphea strigulosa*, .

Has as synonym
homotype *Cuphea strigulosa* subsp. *opaca* Koehne
heterotypic *Cuphea aperta* Koehne
heterotypic *Cuphea strigulosa* subsp. *nitens* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate; **form of the limb** elliptic/obovate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse/saccate; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** white/lilac/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** cylindric. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs to shrubs, 0.3-2m tall, without xylopodium, few viscous, stem reddish; branches pubescent, with thin, short and curved trichomes, intermixed with scarce glandular trichomes. Leaves 15-28x6-12 mm, petiolate, elliptic to obovate, apex acute, margin flat, base attenuated or asymmetrical, stricter, simple trichomes appressed and rigid, intermixed with few glandular trichomes, concentrated in the main vein, brochidodromous; petiole 0.9-1.3 mm long. Racemes compound, frondose; pedicels 1-1.8 mm long, interpetiolar, non-persistent; bracteoles elliptic, apex long-attenuated; floral tube 6.3-7 mm long, ventrally pink to white, dorsally pink to dark pink, outer surface strigose, simple trichomes rigid and appressed intermixed with long and sparse glandular trichomes, inner surface villous above the stamens and the rest glabrous; spur obtuse, saccate, deflexed; petals 6, oval, purplish, pink, white or lilac, deciduous on fruiting, the dorsal c. 2 mm long, ventral c. 1.4 mm long; filaments free in the upper third of the floral tube, infra-staminal vesicles present; ovary glabrous; stylus glabrous; ovules 6; nectariferous gland dorsal, deflexed. Seeds 3, 1.4-1.8x1.7-1.82 mm, elliptical, margin acute, winged.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Anthropic area, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Paraíba, Pernambuco, Sergipe)
Central-west (Distrito Federal, Goiás)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

C.G. Viana, 1785, ASE, SPF, Sergipe
B.M.T. Walter, 6201, CEN, Distrito Federal
J.M. Rezende, 690, CEN, Goiás

J.B.A. Bringel Jr., 15, CEN, Minas Gerais
Humbolt & Bonpland, s.n., P, **Typus**
T.B. Cavalcanti, 2426, HUEFS, 42376, CEN, 34118 (CEN00034118), Bahia
E.P. Heringer, 3284, NY, (NY00940150), Bahia
H.C.H. Silva, 3, MO, 3412570, Pernambuco
G. Hatschbach, 46716, MBM, Espírito Santo
E. Melo, 10807, CEN, HUEFS, Paraíba
L.A. Skorupa, 725, CEN, Rio de Janeiro

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea strigulosa* Kunth



Figure 2: *Cuphea strigulosa* Kunth



Figure 3: *Cuphea strigulosa* Kunth



Figure 4: *Cuphea strigulosa* Kunth



Figure 5: *Cuphea strigulosa* Kunth

REFERENCE

Lourteig, A. 1987. Lythraceae Austroamericanae. Addenda et corrigenda II. Sellowia 39: 5-48.

Cuphea teleandra Lourteig

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** attenuate/acute; **form of the limb** oblong/elliptic/obovate; **margin of the leaf** crenulate. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 13 to 30 long (mm); **indumentum external of the tube floral** hirsute/glabrous; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** red; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs to shrubs, 0.5–1.7 m; stems erect, irregularly much branched, branches of various lengths, frequently with short axillary branchlets; internodes shorter to longer than subtending leaves, typically very short; indumentum densely puberulous, with white, erect, eglandular trichomes <0.5 mm long. Leaves opposite, spreading or frequently congested on short axillary branchlets especially in the inflorescence, not reduced in size in the inflorescence; petioles 1–4 mm long, ± terete, flanked by several dark fleshy trichomes at the nodes and in the axils; blades oblong to broadly elliptic or obovate, 7–23 mm long, 4–15 mm wide, thickly membranaceous, subfleshy, base acute to attenuate, apex acute to obtuse, margin slightly crenulate, sparsely glandular-ciliate, trichomes clear, broad-based, 0.5 mm long; surfaces green, glabrous or minutely scabrous, abaxially paler, abaxial veins sometimes puberulous. Racemes indistinct, terminal, leafy, simple or compounded by numerous axillary branchlets; flowers 2–4 at a node, one interpetiolar, others on axillary branchlets; pedicels 2 mm long; bracteoles leaf-like, ovate-elliptic, to 1 mm long. Floral tube, including 2-mm-long, horizontal to slightly descending spur, 15–19 mm long, 2.5–3.0 mm wide, dorsally straight or slightly convex at base, neck not contracted in flower, not or only slightly narrowed in fruit, mouth blunt to slightly oblique; outer surface yellow-green, flushed red dorsally toward apex, or entirely red, apex red-purple ventrally and on dorsal intercostal areas and veins, glabrous or sparsely glandular-hirsute on veins, the trichomes colorless, bulbous-based, erect, ca. 0.5 mm long; inner surface sparsely villous to glabrous except proximally densely puberulous on veins of the 2 short dorsalmost stamens, vesicles 0; sepals equal, 1.0 mm long, 1.7 mm wide, deltate, not ciliate; epicalyx segments 0.3 mm long, 0.3–0.6 mm wide, shorter than sepals, green or red, thick, margin free, apex obtuse with a seta. Petals 6, red-purple, subequal 3.5–4.0 mm long,1.5–2.5 mm wide, narrowly obovate. Stamens: 2 short dorsalmost included, inserted deeply in lower third of floral tube, white-villous, the other 9 glabrous or lightly villous, 5 antesepalous exserted, 4 antepetalous reaching margin of floral tube; filaments red, anthers white; pollen diporate, grain length 23–27 µm. Ovary non-gibbous, glabrous; style glabrous, exserted ca. 4 mm; ovules 3; disc 1.0 mm long, 0.5 mm wide, oblong to sub-deltoid, red, semi-deflexed, not concave around ovary. Seeds 3.0 mm long, 2.6–3.0 mm wide, light brown, bilateral, oblong to subcordiform, mostly slightly longer than wide, apex slightly retuse, margin rounded.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

H.S. Irwin, 23544, K, (K000533137), P, NY, US, Minas Gerais, **Typus**
T.B. Cavalcanti, 2316, CEN (CEN00027069), MO, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea teleandra* Lourteig

REFERENCE

Cavalcanti, T. B. 2004. Flora de Grão Mogol, Minas Gerais: Lythraceae In: Bol. Bot. Univ. São Paulo. , v.22, 283-290.

Graham, S.A. (1990). New Species of *Cuphea* Section *Melvilla* (Lythraceae) and an Annotated Key to the Section. *Brittonia* 42(1): 12-32

Cuphea tenuissima Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** linear; **margin of the leaf** revolute. **Inflorescence: type** bracteate(s). **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple/pink; **stamen** third medium of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Shrubs 10-60 cm tall; stems erect, internodes 0.5-4 cm long, strigose antrorse or retrorse, hirsute, or just strigose, simple trichomes, appressed, glandular trichomes long, 1-2 mm long, intermixed with sparse and short simple trichomes <0.5 mm long, curved to erect; brachyblasts absent. Leaves opposite, rarely subalternate, chartaceous, sessile to petiolate, petioles ca. 1 mm long, blades 10-50 x 1-2- (4) mm, linear, rare narrow-ovate, apex acute, base obtuse, margin strongly revolute, strigose on both surfaces, simple trichomes appressed, intermixed with sparse to absent glandular trichomes, hyphodromous, main vein prominent on the abaxial surface. Racemes 5-20 cm long, compound, sometimes simple, bracteose, rare frondose bracteose, lax; bracts 1.5-50 x 0.5-2 mm, pairs subequal, narrow-ovate to linear, similar to the leaves; flowers alternate to fasciculate, pedicels 1-5 mm long, interpetiolar; bracteoles 0.4-0.5 x 0.2-0.4 mm, oval; floral tubes (4)-5-6.7 mm long, spur 0.4-0.7 mm long, obtuse, horizontal to deflexed; dorsal outer surface and ribs winish to purplish, ventrally greenish, slightly strigose and glandular, glandular trichomes long, ca. 1 mm long, on the ribs; inner surface villous in the region of the stamens, slightly pilose around the ovary, rare glabrous; petals 6, pink to purple, subequal; stamens 11, filaments free in the middle third of the floral tube; ovary 1.5-2.5 mm long, glabrous, rare pilose in the apical portion, stylus 0.5-1.3 mm long, glabrous, ovules 3; nectariferous gland 0.3-0.5 x 0.4-0.5 mm, slightly deflexed to deflexed. Seeds 2-3, 1.5-2.2 x 1.2-1.8 mm, elliptical, oboval to suborbicular, apex obtuse to slightly retuse, base acute to obtuse, margin obtuse.

Life Form
Herb, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Pará, Tocantins)
Northeast (Maranhão)
Central-west (Goiás, Mato Grosso)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2233, CEN, Tocantins
W.J. Burchell, 8533-2, US, P, NY, K, (K000532969), Tocantins, **Typus**
T.B. Cavalcanti, 3763, CEN (CEN00088513), Maranhão
V.C. Souza, 14766, CEN, 34008, Mato Grosso

G. Pereira-Silva, 4569, CEN (CEN00040888), Goiás
T.B. Cavalcanti, 2263, CEN, Minas Gerais
T.C. Plowman, 8981, MO, INPA, P, Pará

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea tenuissima* Koehne



Figure 2: *Cuphea tenuissima* Koehne

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Cuphea thymoides Cham. & Schltdl.

This treatment is composed of the following taxa: *Cuphea thymoides*, .

Has as synonym
homotype *Cuphea thymoides* Cham. & Schltdl. var. *thymoides*
heterotypic *Cuphea thymoides* var. *argentina* Cham. & Schltdl.
heterotypic *Cuphea thymoides* var. *laevis* A.St.-Hil
heterotypic *Cuphea thymoides* var. *pseudoerica* A.St.-Hil
heterotypic *Cuphea thymoides* var. *satureioides* A.St.-Hil.

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** fasciculate/opposite; **base** obtuse; **form of the limb** linear/lanceolate/oblong/elliptic; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose/hirtellous; **form of the spur** obtuse; **position of the spur** deflexed; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent/present; **position of the gland(s) nectariferous on the base of the ovary** deflexed. **Fruit: form** flask-shaped/tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Perennial subshrubs, turning dark, approx. black on drying, 0.1–0.7 m; stems slender, still, viscous, 1 to several from an elongate woody rhizome with fibrous roots, mostly ascending, less often semi-decumbent, much branched, primary branches long, secondary branches short or long, often ascending, internodes shorter to longer than subtending leaves, highly variable, very short distally; indumentum a mix of two or three types: puberulous, trichomes abundant, minute, colorless, falcate or erect, mostly restricted to one side of the internodes; sparsely to densely glandular-hirsute, trichomes short, erect, to ca. 0.5 mm long; and rarely also these intermixed with sparse, longer, thin, glandular trichomes. Leaves opposite to subalternate, spreading, ascending and often fasciculate in alternate axils distally; petioles 0–1.5 mm long; blades 2–8 (–12) mm long, 0.5–3.0 (–6.0) mm wide, distinctly larger and caduceus along the primary stem than on branches, oblong, elliptic, lanceolate or linear-oblong (rarely ovate?, thickly membranaceous, base rounded to obtuse on distal leaves, tending to attenuate on proximal leaves, apex obtuse to acute, margin plane, glabrous or glandular-ciliate, trichomes hispid, well-spaced, sturdy; surfaces abaxially appearing uninerved, secondary veins sometimes visible adaxially on larger proximal leaves, midvein often with a line of short glandular trichomes like those on leaf margin. Racemes indistinct, terminal, leafy, simple or compound; flowers solitary, interpetiolar; pedicels 1 (–5) mm; bracteoles ovate to suborbicular, acuminate at apex with setae 0.3–1.0 mm long. Floral tube, including a rounded to slightly descending spur 0.5–1 mm long, 5.5–10 mm long,1–2 mm wide, dorsally straight or raised at the base, neck remaining wide, not strongly contracted, in fruit, mouth up-turned; outer surface purple dorsally, green ventrally, veins glandular-hispid with sparse to moderate, short, reddish or colorless, erect trichomes 0.1–0.3(–1) mm long, neck and mouth areas nearly glabrous; inner surface lightly villous distal to stamens, glabrous proximally except on veins of two dorsal short stamens, vesicles (0–)6–8, poorly developed, mostly appearing as white roughened patches on dried specimens; sepals equal, 0.5–1.2 mm long, 0.5–1.0 mm wide, deltate, margin not ciliate; epicalyx segments minute thickened lobes, 0.1–0.2 mm long, much shorter than sepals, margin scarcely free, apex rounded, each with one seta. Petals 6, uniformly purple to pale purple with dark midvein, 2 dorsals wider, equal to, or shorter than the ventrals, 4.0–6.0mm long, 2–4 mm wide, narrowly obovate, subtended at insertion by thickened yellow calluses, 4 ventrals 4.5–7.0 mm long, 1.5–2.0 mm wide, narrowly oblong to narrowly obovate. Stamens: 2 dorsalmost shortest and most deeply inserted, included, 2 dorsalmost long stamens villous, antesepalous ones reaching apices of sepals to slightly surpassing, , antepetalous reaching sinuses of sepals; filaments purple or cream-colored, 6 villous, 3 antesepalous ventral filaments glabrous or nearly so, anthers purple or cream; pollen diporate, striate, striae parallel. Ovary glabrous, style glabrous or sparsely pilose, ultimately surpassing sepals 1 mm; ovules 4–7(–12). Disc slightly deflexed, 0.5–0.8 mm long, 1 mm wide, semi-circular to subtriangular, + trilobed, slightly concave around base of ovary,. Seeds 1.5–1.9 mm long, 1.4–1.6 mm wide, obovate, oblong, or sub-circular, some wider than long, brown, apex obtuse to truncate, base obtuse, margin distinct, slightly thinned, lighter in color than seed body, 0.1 mm wide.

Life Form
Subshrub

Substrate
Terrestrial

Coleção Flora do Brasil 2020 - Jardim Botânico do Rio de Janeiro

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais, São Paulo)
South (Paraná)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3662, CEN (CEN00061103), MO, Paraná
V.C. Souza, 4434, CEN (CEN00021995), São Paulo
S.A. Graham, 922, RB, 312653, (RB00208962), Paraná
R. Romero, 1062, HUFU, 5792, Minas Gerais

Cuphea tuberosa Cham. & Schltdl.

DESCRIPTION

Root: type rootstock. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** ovate; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** glabrous/ hirtellous; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** purple; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** erect. **Fruit: form** tubular. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 1.5–5.5 dm tall, stems erect, robust, one to several from a globose or elongated xylopodium, unbranched below the inflorescence; indumentum pubescent and glandular hirsute, trichomes of the pubescence white, erect to curled, glandular hirsute trichomes sparse to moderately abundant, erect with an enlarged base, ca. 0.3 mm; internodes longer than subtending leaves. Leaves with petioles 5–16 mm, ultimately sessile at distal nodes, opposite, spreading, pinnately-veined; blades broadly to narrowly ovate, 20–50 × 10–25 mm, thickly membranous, base obtuse to rounded, apex acute to short-acuminate, margin plane, undulate; blade surfaces finely scabrous, adaxial surface minutely hispid, often appearing glabrous, sometimes also with sparse reddish or colorless, erect glandular trichomes to ca. 0.5 mm, abaxial surface scabrous, the trichomes appressed, mostly restricted to the veins, occasionally also sparsely glandular hirsute, youngest leaves minutely glandular ciliate; Inflorescences leafy simple racemes with leaves of stem gradually reduced distally to form bracts, or in well-developed plants, inflorescences once or twice compound with leaves + abruptly reduced to bracts, branchlets to ca. 16 cm, slender, many-flowered; flowers interpetiolar, alternate; pedicels 2–10 mm; bracteoles ca. 0.3 × 0.2 mm, ovate. Floral tubes 8–12 × 2–2.5 mm including horizontal to subdescending 1 mm spur; outer surface deep red-purple dorsally and on the veins, paler ventrally, intercostal areas glabrous, veins hispid, trichomes highly glandular viscous, erect, red-purple or colorless, 0.2 mm; inner surface lightly villous above stamens, glabrous below except villous on the veins below the two short dorsal stamens, vesicles 0; sepals subequal, 1–2 × 1–2 mm, broadly deltate, apex acute, dorsal sepal slightly longer and wider than the others; epicalyx segments minute thickenings, glabrous, margin scarcely free; petals 6, unequal, two dorsal petals 7–8 x 4 mm, longer and wider than the four ventrals, elliptical to obovate, four ventral petals 6 × 1 mm, oblong to linear, all petals pale lilac with darker midvein; antesepalous stamens well-exserted, antepetalous stamens reaching sinus between sepals, four dorsal stamens densely villous, the others lightly villous or glabrous, filaments and anthers whitish; pollen prolate, diporate, syncolpate, pores protruding, grain length 24 µm; ovary glabrous; style glabrous or sparsely pilose, exserted; stigma small-capitate; nectary oblique, 0.7–1 × 1 mm, triangular in dorsal view, semi-cupping base of ovary. Seeds 10–22, 1.7–2.5 × 1.5–2 mm, oblong to subcordiform, margin rounded, pale.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest, Pampa

Vegetation Types
Grassland, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

F. Sellow, s.n., K, (K000533040), G, HAL, **Typus**
S.A. Graham, 933, MO, NY, (NY00645191), Paraná
M.G. Facco, 176, ICN, Rio Grande do Sul
G. Pedralli, 3214, CEN (CEN00016129), Santa Catarina
G. Pedralli, 3174, CEN (CEN00016106), Rio Grande do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea tuberosa* Cham. & Schltdl.



Figure 2: *Cuphea tuberosa* Cham. & Schltdl.



Figure 3: *Cuphea tuberosa* Cham. & Schltdl.

REFERENCE

Lourteig, A. 1969. Flora Ilustrada Catarinense - Litráceas. Itajaí: Herbário Barbosa Rodrigues, 80 p.

Graham, S.A. & Cavalcanti, T.B. (2013). Taxonomic Revision of Cuphea sect. Euandra subsect. Oidemation (Lythraceae). Phytotaxa 113 (1): 1–86.

Cuphea urbaniana Koehne

This treatment is composed of the following taxa: *Cuphea urbaniana*, .

Has as synonym
heterotypic *Cuphea carunculata* Koehne
heterotypic *Cuphea dusenii* Koehne
heterotypic *Cuphea reitzii* Lourteig
heterotypic *Cuphea urbaniana* var. *bornmuelleri* Koehne ex Bornm.
heterotypic *Cuphea urbaniana* var. *uleana* Koehne

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse/attenuate/cuneate; **form of the limb** ovate/elliptic; **margin of the leaf** revolute. **Inflorescence: type** frondose. **Flower: pedicel** 0.1 to 6 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm)/13 to 30 long (mm); **indumentum external of the tube floral** hirsute/strigose; **form of the spur** obtuse; **position of the spur** horizontal/deflexed; **petal** absent on the fruit; **colour of the petal** white/pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** deflexed/horizontal. **Fruit: form** tubular. **Seed: margin** acute.

ADDITIONAL DESCRIPTION

Subshrubs 0.3-0.6 m; stems erect to decumbent, spreading, sparsely to abundantly branched, braches slender, lax; indumentum strigose, trichomes minute, white, retrorse, abundant especially on young growth and inflorescence, with or without sparse to abundant, ± erect, glandular-hirsute red or clear trichomes to 2 mm; internodes equal to or longer than subtending leaves. Leaves opposite, spreading; petioles 1–7 mm; blades elliptic to narrowly elliptic or oblong, 10–32 (–55) × 5–17 (–25) mm, thickly membranaceous, dry, base attenuate, infrequently obtuse, apex acute to obtuse, margin plane to subrevolute; blade surfaces scabrous, green, minutely strigose, with or without sparse glandular-hirsute trichomes; leaves gradually reduced in size in inflorescence. Inflorescenses indistinct terminal leafy simple racemes, infrequently with short axillary flowering branchlets; flowers solitary, interpetiolar; pedicels 1.5–3.5 mm, caducuous; bracteoles ovate to suborbicular, 0.5–0.9 mm. Floral tubes (6–) 8–12 (–13) × 1.5–2.2 mm including a horizontal, obtuse, slightly descending spur 0.9-1.1 mm, floral tubes dorsally straight, neck slightly contracted in fruit, mouth oblique, strongly upturned; outer surface purple dorsally, paler ventrally, retrose strigose, with or without sparse to abundant glandular hirsute trichomes to 2 mm as on stems; inner surface glabrous above stamen insertion, glabrous or lightly villous below except villous along vein below each short dorsalmost stamen, 6–8 vesiculate, vesicles typically prominent, occasionally less so; sepals equal, 0.9–1×1.3–1.5 mm, margin not ciliate; epicalyx segments 0.2–0.5 mm, cylindrical, shorter than sepals, apex setose, setae 1–4, red-purple, glandular 1–2 mm; petals medium purple to rose, subequal, the 2 dorsals 5.5–7 ×3.5–4 mm, obovate, other 4 4.8–6×1.5–2 mm, narrowly elliptic; stamens 11, 2 short dorsalmost included, other 9 reaching or slightly exceeding the tube margin, filaments pale yellow, 2 long dorsals woolly, sometimes 3 ventral stamens glabrous, anthers pale yellow; pollen oval-triangular in polar view, tricolporate, syncolpate, pores protruding, exine psilate or withone stria flanking the pores, grain diameter ca. 25 µm; ovary glabrous; style glabrous or lightly pilose toward the style base, ultimately exserted 2–5 mm; ovules 8–13; disc 0.5–0.9 × 0.5 mm, thick, semicircular in dorsal view, semi-deflexed. Seeds 1.8–1.9 × 1.7–1.8 mm, dark-brown, bilateral, suborbicular to slightly obovate, apex prominently enlarged (“carunculate”), pointed, margin thickened, rounded.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Atlantic Rainforest, Pampa

Vegetation Types
Flooded Field (Várzea)

Geographic Distribution
Confirmed ocurrences
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

F. Sellow, 23, B, **Typus**
M.G. Facco, 103, ICN, Rio Grande do Sul
G. Hatschbach, s.n., RB, 114436, (RB00209326), Paraná
G. Hatschbach, 44414, MBM (MBM071894), Paraná
G. Pedralli, 3123, CEN, 16181, Rio Grande do Sul
G. Pedralli, 3254, CEN, 16341, Paraná
T.B. Cavalcanti, 3711, MO, CEN, 61998, Santa Catarina

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cuphea urbaniana* Koehne



Figure 2: *Cuphea urbaniana* Koehne



Figure 3: *Cuphea urbaniana* Koehne

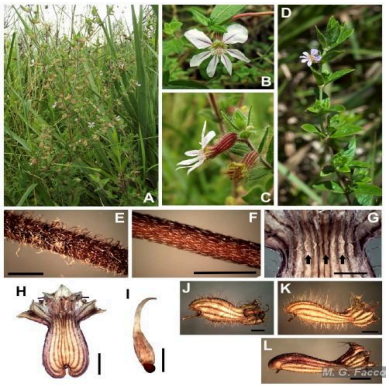


Figure 4: *Cuphea urbaniana* Koehne

Cuphea vesiculosa Koehne

DESCRIPTION

Root: type rhizomatose. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** acute; **form of the limb** linear/oblong; **margin of the leaf** flat. **Inflorescence: type** frondose. **Flower: pedicel** 7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** strigose; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** pink; **stamen** third upper of the tube floral; **vesicule** present; **position of the gland(s) nectariferous on the base of the ovary** horizontal. **Fruit: form** rectangular/tubular. **Seed: margin** thickened/obtuse.

ADDITIONAL DESCRIPTION

Subshrubs, 25-50 cm tall, decumbent or suberect; branches strigose sometimes pubescent, few branched. Leaves opposite, the same length of the internodes or longer, 15-35x2-4.5 mm, membranaceous, adaxial surface glabrous or strigose, abaxial surface scabra or strigose, margin scabrous, subrevolute; subsessile, linear, apex acute, base acute, sometimes obtuse, secondary veins inconspicuous; petiole 1-2mm long. Racemes simple or compound, pedicel interpetiolar or infrapetiolar, 1.5-12 mm long, bibracteolate; bracteoles oblong, sometimes ciliate; floral tube 7-11 mm long, spur short, obtuse, outer surface strigose, inner surface villose; sepals equal, petals narrow cuneate-oblong; infrastaminal vesicles 10, conspicuous; stylus glabrous or sparse pilose, nectariferous gland subdeflexed, cordate; ovules 8-12. Seeds suborbicular, margin obtuse.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
Southeast (São Paulo)

HERBARIUM MATERIAL

F. Sellow, 1792, K, São Paulo, **Typus**
C.F.P. Martius, Obs. 573, M, São Paulo, **Typus**

Cuphea xanthopetala S.A.Graham & T.B.Cavalc.

DESCRIPTION

Root: type axial. **Stem: indumentum** without hair malpighiaceous. **Leaf: phylotaxy** opposite; **base** obtuse; **form of the limb** linear/lanceolate; **margin of the leaf** flat. **Inflorescence: type** bracteate(s)/frondose. **Flower: pedicel** 0.1 to 6 long (mm)/7 to 20 long (mm); **bracteole(s)** present; **long (mm) of the tube floral** 3 to 10 long (mm); **indumentum external of the tube floral** hirsute; **form of the spur** obtuse; **position of the spur** horizontal; **petal** absent on the fruit; **colour of the petal** yellow; **stamen** third upper of the tube floral; **vesicule** absent; **position of the gland(s) nectariferous on the base of the ovary** deflexed/ horizontal. **Fruit: form** tubular. **Seed: margin** obtuse.

ADDITIONAL DESCRIPTION

Subshrubs 16-20 cm tall with 1 to a few stems arising from an eventually enlarged, elongated to slightly globose, woody root, the stems erect, unbranched, minutely hispid, bearing a mix of eglandular, minute, erect, white hairs and glandular-viscous, bulbous-based hairs to 1 mm long; intemodes ca. 2/5 the length of the subtending leaves. Leaves decussate, sessile, slightly ascending, imbricate or nearly so; blades 15-35 x 4-8 mm, narrowly lanceolate, thickly membranous, the midvein prominently raised below, the secondary and intramarginal veins conspicuous in the dry state, the base obtuse to rounded, the apex acuminate; blade surfaces glabrous except for sparsely scattered, lax, white, glandular setae to 0.5 mm long; leaves abruptly reduced toward stem apex to form lanceolate-linear bracts of the inflorescence. Inflorescence a distinct, small-bracted, parsely flowered, terminal raceme; flowers alternate, interpetiolar; pedicels 5-10 mm long; bracteoles 2, lanceolate, 0.5 mm long, subopposite near the apex of the pedicel. Floral tubes 7-8 mm long, 1.5 mm wide at anthesis, including a rounded, horizontal spur extending 1 mm or less beyond the attachment of the pedicel, the pedicel ventral, the neck of the floral tube contracted at anthesis, broad in fruit, the mouth flaring, ca. 3 mm wide in lateral view, upturned with a small ventral pouch; outer surface yellow-green, bearing abundant eglandular and glandular hairs as on the stems; inner surface lightly villous, denser on the dorsalmost ribs at the base of the ovary, vesicles 0 to weakly developed; sepals equal, 1 x 1 mm, triangular; appendages minute thickenings at the sinuses between the sepals, the margin scarcely free. Petals 6, subequal, 3.5-5 x 1.5-2 nun, the ventrals slightly longer than the dorsals, oblong-obovate, yellow; stamens 11, the 2 dorsalmost shortest and inserted deepest, the 5 antesepalous stamens reaching the apex of the sepals, the 4 antepetalous ones reaching the sinuses of the sepals or shorter, the filaments villous. Pollen oval-triangular, tricolporate, syncolpate, the pores strongly protruding, the exine coarsely striate, especially at the pores; diam. (18-)20-25 ~m in lactic acid. Style villous, included to barely exserted at anthesis, long-exserted in fruit, the apex curving upward; stigma small-capitate to punctiform; ovules 3; nectariferous gland 0.5 x ca. 1 mm, thick, in the plane of the ovary, horizontal-deflexed. Seeds 2.5 x 2 mm, oblong-orbicular, brown, apex obtuse, marginate, margin narrow, obtuse.

COMMENTS

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Amazonas)
Central-west (Mato Grosso)

HERBARIUM MATERIAL

R. Kral, 75128, CEN, 26784 (CEN00026784), MO, SP, Mato Grosso, **Typus**
G. Vieira, 148, NY, (NY02108583), MO, 3155917, Amazonas

FIELD IMAGES / ILLUSTRATIONS

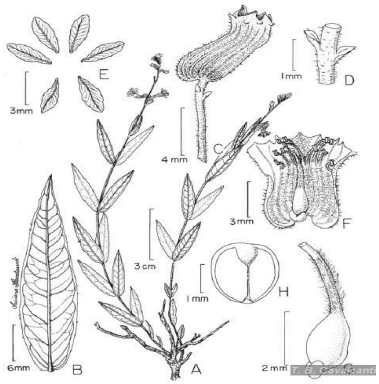


Figure 1: *Cuphea xanthopetala* S.A.Graham & T.B.Cavalc.



Figure 2: *Cuphea xanthopetala* S.A.Graham & T.B.Cavalc.



Figure 3: *Cuphea xanthopetala* S.A.Graham & T.B.Cavalc.

REFERENCE

Graham, S.A. & Cavalcanti, T.B. 1999. The yellow-flowered species of *Cuphea* (Lythraceae), including three new taxa. *Brittonia* 51: 24–30. http://dx.doi.org/10.2307/2666552

Diplusodon Pohl

This treatment is composed of the following taxa: *Diplusodon*, *Diplusodon adpressipilus*, *Diplusodon aggregatifolius*, *Diplusodon alatus*, *Diplusodon appendiculosus*, *Diplusodon argenteus*, *Diplusodon argyrophyllus*, *Diplusodon astictus*, *Diplusodon bahiensis*, *Diplusodon bolivianus*, *Diplusodon bradei*, *Diplusodon burchellii*, *Diplusodon buxifolius*, *Diplusodon caesariatus*, *Diplusodon canastrensis*, *Diplusodon candollei*, *Diplusodon capitalensis*, *Diplusodon capitatus*, *Diplusodon chapadensis*, *Diplusodon ciliatiflorus*, *Diplusodon ciliiflorus*, *Diplusodon cordifolius*, *Diplusodon cryptanthus*, *Diplusodon decussatus*, *Diplusodon divaricatus*, *Diplusodon epilobioides*, *Diplusodon ericoides*, *Diplusodon fastigiatus*, *Diplusodon floribundus*, *Diplusodon glaucescens*, *Diplusodon glaziovii*, *Diplusodon glocimarii*, *Diplusodon gracilis*, *Diplusodon grahamae*, *Diplusodon hatschbachii*, *Diplusodon helianthemifolius*, *Diplusodon heringeri*, *Diplusodon hexander*, *Diplusodon hirsutus*, *Diplusodon imbricatus*, *Diplusodon incanus*, *Diplusodon kielmeyeroides*, *Diplusodon lanceolatus*, *Diplusodon leucocalycinus*, *Diplusodon longipes*, *Diplusodon macrodon*, *Diplusodon marginatus*, *Diplusodon mattogrossensis*, *Diplusodon micromerus*, *Diplusodon microphyllus*, *Diplusodon minasensis*, *Diplusodon mononeuros*, *Diplusodon myrsinites*, *Diplusodon nigricans*, *Diplusodon nitidus*, *Diplusodon oblongus*, *Diplusodon orbicularis*, *Diplusodon ovatus*, *Diplusodon panniculatus*, *Diplusodon paraisoensis*, *Diplusodon parvifolius*, *Diplusodon petiolatus*, *Diplusodon plumbeus*, *Diplusodon puberulus*, *Diplusodon punctatus*, *Diplusodon pygmaeus*, *Diplusodon quintuplinervius*, *Diplusodon ramosissimus*, *Diplusodon retroimbricatus*, *Diplusodon rosmarinifolius*, *Diplusodon rotatus*, *Diplusodon rotundifolius*, *Diplusodon saxatilis*, *Diplusodon sessiliflorus*, *Diplusodon sigillatus*, *Diplusodon sordidus*, *Diplusodon speciosus*, *Diplusodon stellatus*, *Diplusodon strigosus*, *Diplusodon subsericeus*, *Diplusodon thymifolius*, *Diplusodon thysanosepalus*, *Diplusodon trigintus*, *Diplusodon ulei*, *Diplusodon uninervius*, *Diplusodon venosus*, *Diplusodon verruculosus*, *Diplusodon vidalii*, *Diplusodon villosissimus*, *Diplusodon villosus*, *Diplusodon virgatus*, *Diplusodon vittatus*, *Diplusodon xiphodon*.

HOW TO CITE

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Has as synonym
heterotypic *Diplodon* Spreng.
heterotypic *Friedlandia* Cham. & Schltdl.

DESCRIPTION

Subshrubs, shrubs, usually with a xylopodium, or small trees. Stems generally with exfoliating bark, upper branches cylindrical, subquadrangular to quadrangular, with an inconspicuous to conspicuous wing or wing absent, rust, yellow, wine-colored, whitish, brown, or greenish, glabrous or with diverse kinds of trichomes, often with gall-associations; colleters localized on the branches at the base of the leaves, bracts, and prophylls. Leaves opposite, decussate, sessile or petiolate, blade pilose or glabrous, the margin entire, plane or revolute, sometimes fleshy, erose, cilate, or with protuberances; pinnate veins hyphodromous, pinnate eucamptodromous to acrodromous with perfect base to acrodromous with supranumerary base, prominent or inconspicuous, frequently with domatia of the pocket type. Inflorescences frondose, frondose-bracteose, or bracteose, polytelic, of the botrya to pleiobotrya or diplothyrse to pleiothyrse types, with lateral cymes in triads or dichasia, or more rarely monotelic of the thyrsoid type. Bracts distinct from the vegetative leaves or similar to them in size and shape. Flowers actinomorphic, hexamerous, corolla in various tones of rose to red, but rarely white, perigynous; floral tube funnel-shaped, but rarely oblong; rarely with glands under the petal insertion point; petals crinkled, obovate to elliptic, the apex obtuse or rarely acute; sepals triangular with inconspicuous or prominent papillae on the margin, epicalyx composed of 6 segments, varying widely in shape and position, or absent to inconspicuous; androecium diplostemonous or polystemonous to rarely haplostemonous, stamens 6–55, generally exserted, anthers dorsifixed, versatile, elliptic to reniform, yellow; pollen prolate to prolate-spheroidal, tricolporate, the colpus inconspicuous, elongated meridionally, arranged equatorially, equidistant, straight, ca. 35 mm long, relatively inconspicuous when compared to the pore which is prominent, and frequently obscured from sight by the thick, undulating sculptural elements, pore elongate, 5 × 10 mm, situated at the midpoint of the colpus, the inner margin entire, the annulus conspicuous, the outer margin lobate, wall thick (4–5 mm), verrucate, margins of the verrucae irregular and lobate, polar region with larger verrucae in some species; ovary glabrous or more rarely with trichomes at the apex, bicarpellate, bilocular with incomplete septa; placentation basal, in the fruiting stage thick and with two semi-lunar septa; style filiform, generally curved, exserted; stigma capitate, papillose. Fruit a septicidal capsule, the floral tube persistent, with a broad mouth or very rarely constricted at the mouth, capsule globose to oblong, glabrous or more rarely with trichomes at the apex; seeds flat to lens-shaped, winged, wing small; embryo straight, cotyledons flat, orbicular or reniform, radical scarcely elongated, epidermal trichomes of the seed coat straight. Pollen generally prolate to subprolate, very rarely orbicular. 2n = 30.

COMMENTS

Etymology: Name of Greek origin, originating from the fusion of the words *diplus* = double and *odon* = tooth, which refers to the calyx and epicalyx whorls of the flowers. New species for the genus will be published in 2021 in the Flora Neotropica monographs.

Life Form
Shrub, Subshrub, Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Caatinga (stricto sensu), High Altitude Grassland, Grassland, Highland Rocky Field, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Seasonally Deciduous Forest, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Amapá, Rondônia, Tocantins)
Northeast (Bahia, Maranhão, Piauí)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais, São Paulo)
Possible ocurrences
Northeast (Bahia, Maranhão)
Central-west (Mato Grosso do Sul)

IDENTIFICATION KEY

1. Leaves 0.5–4 mm wide, linear, oblong-linear, narrowly oblong, narrowly elliptic, narrowly lanceolate, linear-lanceolate, elliptic-linear, linear-spathulate, narrowly triangular.
2. Leaves with indumentum on adaxial surface.
3. Epicalyx segments 0.5–2 mm long, not exceeding the length of the sepals.
4. Leaf base acute to attenuate, petiole 0.5-1.5 mm long. Epicalyx segments pubescent to hirtellous to sparsely sericeous, not ciliate.
5. Leaves with minute stellate trichomes.
6. Leaves hyphodromous. Epicalyx segments 1.5–2 mm;; floral tube glabrous or almost glabrous; stamens 12. Minas Gerais ……..... *D. puberulus*
6. Leaves eucamptodromous. Epicalyx segments 0.5–1 mm long; floral tube covered by inconspicuous stellate trichomes; stamens 15. Distrito Federal, Goiás ……..……..…….....….....…. *D. rosmarinifolius*
5. Leaves with sericeous indumentum or finely pubescent or with sparse short trichomes, sometimes hirtellous, never stellate.
7. Leaf margin plane, lateral veins absent ……..…….....…. *D. gracilis*
7. Leaf margin subrevolute to revolute, lateral veins 1–2 of each side of the midvein.
8. Floral tube 3.5–6 mm long, hirtellous, covered by sparse trichomes or trichomes appressed. Goiás.
9. Leaf blade 4–7 mm wide, apex acute ……..… *D. xerophilus*
9. Leaf blade 1–3.5 mm wide, apex obtuse ……..…. *D. grahamae*
8. Floral tube 2–2.5 mm long, covered by minute, inconspicuous trichomes. Bahia, Minas Gerais, Piauí, Tocantins ..... *D. thymifolius*
4. Leaf base cordate, sessile. Epicalyx segments ciliate with sparse and spreading trichomes ……..…. *D. cordifolius*
3. Epicalyx segments 3–7 mm long, exceeding the apex of the sepals 2–3 mm.

10. Plants from Goiás and Tocantins.
11. Prophylls 2.5–4.2. Upper branches covered by dense indumentum with short trichomes, stellate, sometimes forming tufts or covered by finely pubescent, becoming glabrous in the upper parts.
12. Upper branches covered by dense indumentum with short trichomes, stellate, sometimes forming tufts. Leaf apex acute, margin revolute. Branches of the synflorescence not thin and delicate.
13. Leaf abaxial surface canescent. Floral tube 3.5–4 mm long, covered by stellate trichomes forming tufts. Epicalyx segments 2–4 mm long. Plant canescent, usually caespitosous ……..... *D. stellatus*
13. Leaf abaxial surface not canescent. Floral tube 4–4.5 mm long, covered by stellate trichomes not forming tufts. Epicalyx segments 4–6.5 mm long. Plant not canescent, not caespitosous …….....… *D. macrodon*
12. Upper branches covered by finely pubescent, glabrous in the upper parts. Leaf apex obtuse, margin plane. Branches of the ynflorescence thin and delicate ……..... *D. gracilis*
11. Prophylls 5–10. Upper branches hirtellous to pubescent, never looking stellate or glabrous.
14. Floral tube ca. 5 mm long, prophylls ca. 5.5 mm long. Subshrubs taller than 0.4, erect ……..... *D. vittatus*
14. Floral tube 7.5–8 mm long, prophylls 9–9.5 mm long. Subshrubs 0.2–0.4 m tall, prostate to suberect ……..... *D. chapadensis*
10. Plants from Minas Gerais.
15. Leaves 10–42 mm long, acrodromous or eucamptodromous, secondary veins 1–4 on each side of the midvein, base acute or attenuate, rarely obtuse, surface not warty. Stamens 12–18.
16. Pedicel 4–7 mm long, prophylls 5–7 mm long. Leaf secondary veins 1–2 on each side of the midvein, domatia present ……..... *D. epilobioides*
16. Pedicel 2.5–3.5 mm long, prophylls 10–11 mm long. Leaf secondary veins 3–4 on each side of the midvein, domatia absent . …….. *D. glocimarii*
15. Leaves 3–6 mm long, hyphodromous, lateral veins absent, base retuse to cordate, surface warty. Stamens 6 .....… *D. verruculosus*
2. Leaves glabrous on adaxial surface or on both surfaces (when trichomes present, only on the midvein: *D. uninervius*, *D. candollei*, *D. conduplicatus* or with minute, inconspicuous trichomes on the margin: *D. praetermissus*).
17. Stamens 6.
18. Leaves with short dense indumentum on the abaxial surface, on the midvein only; prophylls with midvein pubescent on the adaxial surface; floral tube 3.2–3.5 mm long, with sparse trichomes; epicalyx segments 1.8–1.9 mm long, with cilia ….....…….…. *D. candollei*
18. Leaves completely glabrous; prophylls glabrous; floral tube 4–6 mm long, glabrous; epicalyx segments 2–5 mm long, not ciliate.
19. Leaves margin plane ……..…….…….....……. *D. glaziovii*
19. Leaves margin revolute …….....…….……. *D. hexander*
17. Stamens 12–18.
20. Leaf margin strongly revolute.
21. Leaves with midvein densely pubescent on the abaxial surface; prophylls and epicalyx segments with sparse trichomes, sparsely ciliate, prophylls with margin subrevolute to revolute. Minas Gerais …….....…….. *D. uninervius*
21. Leaves completely glabrous; prophylls and epicalyx segments glabrous, prophylls with margin plane. Minas Gerais …….....…. *D. mononeuros*
20. Leaf margin plane.
22. Plants 0.10–0.35 m tall, stem without ramification or caespitose. Botryum.
23. Leaves folded longitudinally in the midvein, keeled, midvein yellowish, long-ciliate, base retuse, amplexicaulous, margin dense long ciliate …….....… *D. conduplicatus*
23. Leaves expanded, not folded longitudinally in the midvein, not keeled, midvein green, not ciliate, base not amplexicaulous, margin glabrous, sometimes sparse ciliate.
24. Plant erect; flowers subsessile, pedicel 0–1 mm long; prophylls 4.5–5.5 mm, epicalyx segments linear-triangula, not ciliate. Goiás ……..... *D. ericoides*
24. Plant caespitousous; flowers pedicellate, pedicel 1.5–2.2 mm long,; prophylls 6–6.5 mm, epicalyx segments lanceolate, slightly concave, prominently short-ciliate. Minas Gerai …….....……. *D. psammophilus*
22. Plants 0.40-3 m tall, much-branched. Pleiobotryum.
25. Plants dark-brown when dry; pedicel 0–0.9 mm long; prophylls 6–7.1 mm long. epicalyx segments 4–5 mm long, secondary veins in the leaves reddish to rust-colored …….....…… *D. praetermissus*

25. Plants not dark-brown when dry; pedicel 1.5–5 mm long; prophylls 2.5-5.5 mm long., epicalyx segments 0.8–3.5 mm long, secondary veins in the leaves not reddish or rust-colored.
26. Secondary veins in the leaves 1 on each side of the midvein; floral tube 4.5–5 mm long, epicalyx segments 3–3.5 mm long. Minas Gerais ……..……. *D. canastrensis*
26. Secondary veins in the leaves absent; prophylls 2.5–4, floral tube 3–4 mm, epicalyx segments 0.8–3 mm long. Goiás.
27. Leaves petiolate; petioles 1–2 mm long; blades 3–8 (–12)mm wide, slightly punctate, narrowly oblong, base acute to attenuate, apex obtuse ……. *D. gracilis*
27. Leaves sessile; blades 0.5–0.9 mm wide, not punctate, linear, base obtuse, apex acute, minutely acuminate ……...…… *D. tenuifolius*
1. Leaves wider than 4 mm, if 3-5 mm never linear or narrow (3-7 times longer than wide).
28. Epicalyx absent or present with reduced segments of 0.1–1.5 mm long.
29. Plants completely covered by indumentum.
30. Branches with dense short indumentum, rust-colored; floral tube golden to orange-colored, densely covered by bulbous glandular trichomes, bottle shaped …….……. *D. divaricatus*
30. Branches hirtellous, hirsute, velutinous, hispid, not rust-colored; floral tube not golden or orange-colored, not covered by glandular trichomes, trichomes not bottle shaped.
31. Leaves strongly discolorous, adaxial surface dark-brown to black, abaxial surface whitish, covered by stellate trichomes forming congested tufts ……..……..……..……..... *D. helianthemifolius*
31. Leaves not strongly discolorous, stellate trichomes absent.
32. Leaves silvery, indumentum sericeous
33. Petiole 3–7 mm long; epicalyx segments equalling the sepals in length. Bahia ……..…. *D. argyrophyllus*
33. Petiole 1–3 mm long; epicalyx segments much shorter than the sepals. Minas Gerais ……..…. *D. subsericeus*
32. Leaves not silvery, indumentum hirsute, hirtellous, villous, pubescent, glabrescent.
34. Floral tube densely covered with white trichomes, hirsute, villous to sericeous.
35. Stamens 6 or 18.
36. Leaves 4–11 × 2–6 mm; epicalyx segments 0–0.5 mm long.
37. Stamens 6. Minas Gerais ….. *D. minasensis*
37. Stamens 18. Goiás ……..…. *D. micromerus*
36. Leaves 10–57 × 6–30 mm; epicalyx segments 0.5–3.5 mm long.
38. Prophylls 4.5–6 mm long; synflorescence bracteose ……..... *D. rupestris*
38. Prophylls 1.5–3 mm long; synflorescence frondose.
39. Pedicel absent; bracts usually longitudinally folded; petiole ca. 1 mm long; subshrubs 0.2–1.2 m tall …..... *D.villosus*
39. Pedicel 1.5–2.2 mm long; bracts not longitudinally folded; petiole 1–2 mm long; shrubs 1.5–3 m tall …..... *D. caesariatus*
35. Stamens 12–15.
40. Plant dark-green to dark-brown when dry. Epicalyx segments equal or shorter than the sepals length, spreading to slightly deflexed. Bahia, Distrito Federal, Mato Grosso, Minas Gerais, Rondonia. Bolivia.
41. Blades as long as wide, 3–7 mm larg. Epicalyx segments cylindrical. Bahia ……..…. *D. parvifolius*
41. Blades one to two times longer than wide, 9–30 mm larg. Epicalyx segments lanceolate to triangular. Distrito Federal, Mato Grosso, Minas Gerais, Rondonia. Bolivia.
42. Floral tube 2–3 mm long. Minas Gerais ..... *D. hirsutus*
42. Floral tube 4–6 mm long. Distrito Federal, Mato Grosso, Rondonia. Bolivia …….....……. *D. bolivianus*
40. Plant canescent, not dark when dry. Epicalyx segments longer than the sepals length, strongly deflexed. Goiás ……..…. *D. incanus*
34. Floral tube covered by sparse trichomes or pubescent, not hirsute or sericeous.
43. Prophylls 1.5–3.7 mm long. Goiás.
44. Leaves 3–10 mm long; stamens 12.
45. Epicalyx segments deflexed …..... *D. incanus*
45. Epicalyx segments suberect …..... *D. prostratus*
44. Leaves 10–45 mm long; stamens 18.
46. Leaves elliptic to ovate-elliptic, apex obtuse, 6–13 mm wide; pedicel 1.5–2.2 mm long …….....…. *D. caesariatus*
46. Leaves narrowly elliptic, apex acute, 4–7 mm wide; pedicel 0–0.5 mm long …….……..……. *D. xerophilus*
43. Prophylls 4.5–7 mm long. Minas Gerais.
47. Plant not dark-brown when dry; leaves 10–30, apex obtuse; petiole 3–7 mm ….....…. *D. aggregatifolius*

47. Plant dark-brown when dry; leaves 5–7, apex acute rarely obtuse, petiole 1–1.5 mm long …..……. *D. microphyllus*
29. Plants glabrous or apparently glabrous with minute and inconspicuous trichomes, sometimes just on the flowers.
48. Inflorescences bracteose, flowering region very distinct from the vegetative region, with significant reduction in shape and/or size of the bracts compared to leaves.
49. Leaf base acute to attenuate; venation hyphodromous to eucamptodromous. Minas Gerais …….…..……..… *D. vidalii*
48. Leaf base obtuse, venation acrodromous-basal type. Goiás.
50. Synflorescence without terminal flower in the main axis and without cymes in the lateral branches ……..... *D. punctatus* var. *punctatus*
50. Synflorescence with presence of terminal flower in the main axis and cymes in the lateral branches …….....…. *D. panniculatus*
48. Inflorescences frondose-bracteose or frondose, gradual reduction in shape and/or size of the leaves compared to bracts or lacking any significant reduction in shape and/or size.
51. Pedicel 7–47 mm long. Marginal leaf vein wine-colored to purple ..... *D. marginatus*
52. Pedicel 0.5–6.5 mm long; marginal leaf vein not conspicuously colored, green.
52. Stamens 30–32; pedicel 7–9.5 mm long. Tocantins ..... *D. trigintus*
52. Stamens 12–18; pedicel 2–6.5 mm long.
53. Leaves acrodromous-basal-supranumerary, base obtuse, cordate or subcordate to amplexicaul.
54. Leaves 25–65 mm long; corolla 3–4 cm diam. Goiás, Tocantins ..... *D. imbricatus*
54. Leaves 8–20 mm long; corolla ca. 2.5 cm diam. South of Minas Gerais ……...…….....…. *D. buxifolius*
53. Leaves hyphodromous or eucamptodromous, base acute to slightly attenuate.
55. Plant not dark-brown when dry; prophylls 2.5–3 × 0.8–1 mm, unkeeled; floral tube 4–4.5 mm long …….. *D. myrsinites*
55. Plant dark-brown when dry; prophylls 4–6 × 2.5–3 mm, keeled; floral tube 5–6.5 mm long …..... *D. oblongus*
28. Epicalyx present, conspicuous, segments 2–11 mm long.
56. Plants completely glabrous to glabrescent or apparently glabrous with cilia at the margins of bracts, prophylls and sepals or sparse trichomes on the leaves or covered by minute and/or inconspicuous trichomes on the branches, pedicel or floral tube.
57. Flowers long pedicellate, pedicel 7–47 mm long.
58. Flowers with 12 stamens. Minas Gerais.
59. Leaves orbicular-reniform to oval-depressed; floral tube 4–5 mm long …….…..…….....…. *D. glaucescens*
59. Leaves oval-lanceolate; floral tube 5.5–6 mm long …….....……. *D. rotundifolius*
58. Flowers with (13–)18–33 stamens. Goiás, Minas Gerais, Tocantins.
60. Prophylls 13–25 x 4–15 mm, sometimes hiding the floral tube. Inflorescences without terminal flower, cymes absent.
61. Leaves with domatia, not glaucous, elliptic-lanceolate, base acute to obtuse; epicalyx segments 6–8 mm long; corolla ca. 4.5 cm diam. Goiás, Tocantins ….…….....….. *D. cryptanthus*
61. Leaves without domatia, glaucous, ovate, base retuse, sometimes slightly amplexicaul; epicalyx segments 2.5–3 mm long; corolla 5–6 cm diam. Goiás …….....……..… *D. longipes*
60. Prophylls 2–2.8 x 1–1.8 mm, not hiding the floral tube. Inflorescences with terminal flower, cymes present.
62. Prophylls, floral tube, sepals and epicalyx segments with inconspicuous pubescence. Triplothyrsoid to pleiothyrsoid.]Prophylls 2–2.8 mm long, not even reaching the base of the floral tube. Floral tube 4–6 mm long. Goiás …….……. …. *D. panniculatus*
62. Prophylls, floral tube sepals and epicalyx segments glabrous. Thyrsoid. Prophylls 5.5–8 mm long, reaching the apex of floral tube. Floral tube 6–6.5 mm long. Goiás, Mato Grosso, Mato Grosso do Sul, Minas Gerais ..... *D. ovatus*
57. Flowers sessile, subsessile, not long pedicellate, pedicel 0–6.5 mm long.
63. Leaves eucamptodromous (veins departing along the midvein) or hyphodromous (just the midvein evident, but if veins visible, acrodromous).
64. Inflorescences bracteose, flowering region very distinct from the vegetative region, with significant reduction in shape and/or size of the leaves compared to bracts.
65. Prophylls reaching the middle of the floral tube or below the middle.
66. Stamens 12; leaves 20–45 mm long.
67. Petiole 5–10 mm long; pedicel 3–5 mm long, floral tube 6–6.5 mm long, epicalyx segments 3–3.5 mm long …… *D. nitidus*

67. Petiole 1–1.5 mm long; pedicel 0.5–1.5 mm long, floral tube 4–4.5 mm long, epicalyx segments 0.8–1.5 mm long ……. *D. vidalii*
66. Stamens 18–44. Leaves 40–100 mm long.
68. Leaves glaucous, base attenuate; floral tube 6–10 mm long; stamens 26–55; upper branches wine- to rust-colored ……. *D. kielmeyeroides*
68. Leaves not glaucous, base obtuse; floral tube 4.5–5 mm long; stamens 18; upper branches not wine- or rust-colored ……. *D. ramosissimus*
65. Prophylls surpassing the middle reaching the apex of the floral tube reaching the base of sepals.
69. Floral tube 5–7 mm long, stamens 18–24 .. 92. *D. venosus*
69. Floral tube 4.8–5 mm long, stamens 12.
70. Leaves 11–35 mm long, veins and upper branches rust to wine-colored; prophylls 3–4 mm long, reaching the middle or the apex of the floral tube. Bahia ……..……..…… *D. ciliatus*
70. Leaves 40–95 long, veins and upper branches straw-colored; prophylls 6–10 mm long, surpassing the apex of the floral tube. Goiás ……..……..…. *D. astictus*
64. Inflorescences frondose-bracteose or frondose, gradual reduction in shape and/or size of the leaves compared to bracts or lacking any significant reduction in shape and/or size.
71. Stamens 26–55; corolla 6.5–7 cm in diam.; floral tube fleshy.
72. Leaves base attenuate;branches unwinged or inconspicuoly winged ……..…..... *D. kielmeyeroides*
72. Leaves base retuse to obtuse-subcordate; branches markedly winged, wings 1.5–2 mm wide ……..… *D. alatus*
71. Stamens 12–24. Corolla 1.5–4.5 cm in diam.; floral tube not fleshy.
73. Corolla white. Inflorescence frequently with accessory branches ……..……..…..... *D. virgatus*
73. Corolla rose, red, pink, purple, or lilac, never white. Inflorescence without accessory branches.
74. Plants dark-brown when dry.
75. Epicalyx segments foliaceous, hyaline, 2 mm wide, obovate to lanceolate; ovary glabrous or minutely pilose on the apex ……..…. *D. appendiculosus*
75. Epicalyx segments cylindrical to compressed, not hyaline, up to 1 mm wide, linear; ovary completely glabrous.
76. Epicalyx segments 1–2 mm long. Leaf base obtuse. South of Minas Gerais ……..……..…….. *D. buxifolius*
75. Epicalyx segments 2–5 mm long. Leaf base acute to attenuate. Bahia, Distrito Federal, Goiás, central, west and north of Minas Gerais, Mato Grosso, Tocantins.
77. Flowers sessile to subsessile, pedicel 0–1 mm long; prophylls keeled.
78. Leaves elliptic, ovate to ovate-lanceolate, petiole 2–9 mm, epicalyx segments 2–3.5 mm long …..….. *D. oblongus*
78. Leaves narrowly oblong, petiole 0.5–1.5 mm, epicalyx segments 4–5 mm long …..... *D. praetermissus*
77. Flowers pedicellate, pedicel 2–5 mm long; prophylls unkeeled.
79. Bracts 3–4 mm wide. Leaves hyphodromous, petiole 1–2 mm long ……..…….. *D. gracilis*
79. Bracts 6–12 mm wide. Leaves eucamptodromous, petiole 3–10 mm long.
80. Prophylls 1–1.5 mm, spathulate, reaching the middle or the apex of the floral tube ……... *D. ciliatus*
80. Prophylls ca. 0.8 mm, linear-lanceolate, reaching to the base of the floral tube ……..….. *D. nitidus*
74. Plants not dark-brown when dry.
81. Leaves hyphodromous, if veins visible, acrodromous.
82. Prophylls 7–13 mm long, surpassing the apex of the floral tube; floral tube 6–7 mm long; leaves oval, oval-lanceolate to elliptic-lanceolate, base obtuse to cordate. Goiás ……..…..……. *D. burchellii*
82. Prophylls 2.5–3 mm long, reaching the middle of the floral tube; floral tube 4–4.5 mm long; leaves obovate, elliptic to narrowly oblong, leaves acute to slightly attenuate. Minas Gerais ……..……. *D. myrsinites*
81. Leaves eucamptodromous.
83. Petiole 5–10 mm long; prophylls 2–3 mm long, reaching to the base of the floral tube; pedicel 3–5 mm long ..… *D. nitidus*
83. Petiole 0–5 mm long. Prophylls 3.5–9 mm long, reaching the middle of the floral tube to surpassing it; pedicel 0.4–3.5 mm long.
84. Prophylls 5–9 mm long; petiole up to 1 mm long. Minas Gerais ..... *D. ciliiflorus*
84. Prophylls 3–4.5 mm long. Petiole 1–5 mm long. Bahia.
85. Leaves with ciliate margin and prominent lateral veins on abaxial surface; epicalyx segments 2.5–4 ..…. *D. ciliatus*
85. Leaves with plane and not-ciliated margin; lateral veins inconspicuous on abaxial surface; epicalyx segments 4–5; inflorescence without cymes of triads …..……..... *D. ulei*
63. Leaves acrodromous-basal-typical (all veins departing from the base of the midvein) or acrodromous supranumerary (1–4 veins departing from the base of the midvein and 1–3 veins departing along the midvein), sometimes lateral veins very inconspicuous.
86. Stamens 19–44; epicalyx segments 5–10 mm long.

87. Bracts, prophylls, sepals and epicalyx segments bearing long cilia on the margin; leaf veins rust-colored …….....…. *D. ciliatiflorus*
87. Bracts, prophylls, sepals and epicalyx segments completely glabrous, not long ciliate; leaf veins not rust-colored.
88. Plants dark-brown when dry; prophylls 10–12 mm long, surpassing the apex of the floral tube ca. 5 mm; epicalyx segments 8–10 mm long; leaves acrodromous-basal-typical, blade with dark punctae over the whole surface …...…… *D. sordidus*
88. Plants not dark-brown when dry; prophylls 4–9 mm long, reaching the apex of the floral tube or slightly below; epicalyx segments 1.8–6 mm long; leaves acrodromous-basal-supranumerary, blade without dark punctae.
89. Veins 4–6 on each side, domatia absent; epicalyx segments 5–6 mm long; synflorescence frondose-bracteose ……..…….. *D. speciosus*
89. Veins 2–3 along the midvein, domatia present; epicalyx segments of 1.8–2 mm long; synflorescence bracteose ……... *D. venosus*
86. Stamens 6–18; epicalyx segments 2–5 mm long.
90. Inflorescence bracteose, flowering region very distinct from the vegetative region, with significant reduction in shape and/or size of the leaves compared to bracts.
91. Prophylls not reaching the middle of the floral tube; petiole 3–7 mm long; leaves with conspicuous domatia ……..…. ……. *D. ramosissimus*
91. Prophylls almost reaching to surpassing the apex of the floral tube; petiole 0–3 mm long mm; leaves without domatia or rarely with faint domatia.
92. Epicalyx segments 3–4 mm long, stamens 12; branches of the inflorescence thin and delicate, bracts 6–8 mm long ……..…. *D. punctatus* var. *dentatus*
92. Epicalyx segments 1.8–2 mm long, stamens 18-24; branches of the inflorescence not thin or delicate, bracts 15–30 mm long ….……..... *D. venosus*
90. Inflorescence frondose-bracteose or frondose, gradual reduction in shape and/or size of the leaves compared to bracts, or lacking any significant reduction in shape and/or size.
93. Inflorescence with a terminal flower, cymes present; leaves 30–95 mm long ….....…….……. *D. ovatus*
93. Inflorescence without a terminal flower, cymes absent; leaves 5–30 mm long.
94. Leaves wider than longer, triangular-deltoid, oval-depressed to obcordiform.
95. Pedicel 0.5–1.5 mm long; floral tube 6.5–8 mm long, dark-brown in fruit. Goiás ….....…… *D. decussatus*
95. Pedicel 2–7 mm long; floral tube 4–5 mm long, pale beige in fruit. Minas Gerais.
96. Stamens 6; pedicel 2–5 mm long; leaves 8–22 mm long …….....…..… *D. orbicularis*
96. Stamens 12; pedicel 5–7 mm long; leaves 5–10 mm long ……..……..…..... *D. glaucescens*
94. Leaves longer than wider, ovate, oval-elliptic, oval-lanceolate to elliptic-lanceolate,
97. Plants not dark-brown when dry. Leaves strongly imbricate, hiding completely the stem …….…..... *D. burchellii*
97. Plants dark-brown when dry; leaves not imbricate, not hiding the stem.
98. Sepals and epicalyx segments long ciliate; epicalyx segments ca. 5.5 mm long. Goiás .....…. *D. thysanosepalus*
98. Sepals and epicalyx segments not ciliate; epicalyx segments 3–4 mm long. Bahia, Minas Gerais …….……. *D. quintuplinervius*
56. Plants with indumentum on all parts, even though minutely pubescent.
99. Epicalyx segments 2–3.5 mm long.
100. Plants covered by pubescent to hirsute, never silvery-sericeous indumentum.
101. Stamens 12–15.
102. Prophylls 2.5–5 mm long; floral tube 2–3.5 mm long (4–7 mm in *D. bolivianus*, *D. bradei* and *D. parvifolius*).
103. Floral tube 4–7; synflorescence bracteose, usually with development of first order accessory branches, when synflorescence frondosous, plant from Bahia.
104. Leaf blade 50–90 × 40–60 mm, petioles 10–25 mm long. Thyrse. Minas Gerais …….....…..... *D. bradei*
104. Leaf blade 4–40 × 3–30 mm, petioles 1–6 mm long. Diplobotryum to pleiobotryum. Bahia, Distrito Federal, Mato Grosso, Rondônia (Brazil), Bolívia.
105. Leaves 4–12 × 3–7 mm. Synflorescence frondose. Bahia ..... *D. parvifolius*
105. Leaves 20–40 × 9–30 mm Synflorescence bracteose Distrito Federal, Mato Grosso, Rondônia (Brazil), Bolívia ...…. *D. bolivianus*
103. Floral tube 2–3 mm long; synflorescence frondose, without accessory branches.
106. Plants not dark brown when dry. Epicalyx segments sword shape or lanceolate, flat, equal or shorter than the sepals, spreading to slightly deflexed. Leaf blade 4–10 mm long, secondary veins 2–3 on each side of the mifvein. Goiás …….....……. *D. incanus*
106. Plants dark brown when dry. Epicalyx segments narrow-cylindrical, longer than the sepals, strongly deflexed. Leaf blade 10–35 mm long, secondary veins3–4 on each side of the mifvein. Bahia, Minas Gerais.

107. Synflorescence bracteose to frondose-bracteose, bracts orbicular, smaller than leaves. Prophylls unkeeled, ciliate with thick trichomes; epicalyx segments glabrous, strongly ciliate with thick trichomes; petals ca. 6 mm long. Leaf base obtuse to retuse. Bahia ……..……. *D. xiphodon*
107. Synflorescence frondose, bracts not distinguishable from the leaves in shape and size. Prophylls keeled, cilia not not distinguishable from indumentum; epicalyx segments densely covered with white tricomes; petals 12–15 mm long. Leaf base acute to obtuse. Minas Gerais ….…….…….…. *D. hirsutus*
102. Prophylls 6–10 mm long, floral tube 4–6.5 mm long.
108. Trichomes not stellate on the branches and/or leaves.
109. Plants from Distrito Federal, Goiás. Rondônia (Brasil), Bolívia.
110. Plants minutely pilose, trichomes short. Prophylls strongly keeled. Synflorescence frondose …….....… *D. nigricans*
110. Plants hirsute to sericeous, trichomes longer. Prophylls not keeled. Synflorescence bracteose ..... *D. bolivianus*
109. Plants from Minas Gerais (Brasil).
111. Prophylls 8–9 mm long, surpassing the apex of the floral 1–1.5 mm; pedicel 3.5–6 mm long; epicalyx segments 3.5–5 mm long, thick .....… *D. obtectus*
111. Prophylls 4.5–7 mm long; pedicel 1–2.5 mm long. 2–2.8 mm long, not thick.
112. Plants dark brown when dry
113. Synflorescence bracteose. Petioles 4–10 mm long, leaf blades with 5–8 secondary veins on each side of the midvein …….....… *D. rupestris*
113. Synflorescence frondose. Petioles 1–3 mm long, leaf blades with 2–5 secondary veins on each side of the midvein.
114. Prophylls 6–6.5; floral tube 5–5.5 mm long; epicalyx segments erect. Leaves folded longitudinally when dry. Bahia …….....…. *D. bahiensis*
114. Prophylls 4.5–6, floral tube 4–5 mm long long; epicalyx segments deflexed to spreading. Leaves not folded longitudinally when dry. Minas Gerais ..... *D. microphyllus*
112. Plants not dark brown when dry
115. Leaves hyphodromous, secondary veins not visible …….....… *D. saxatilis*
115. Leaves eucamptodromous or acrodromous, secondary veins 2–4 on each side of midvein.
116. Leaves sessile to subsessile; petioles 0-0.5 mm long, base retuse, cordate to rarely obtuse.
117. Leaves canescent, strongly discolor, secondary veins 4–5, not parallel, lanceolate …….……. *D. vividus*
117. Leaves not canescent, not discolor, secondary veins 3–4, almost parallel …….....…. *D. rectinervis*
116. Leaves petiolate, petiole 3–7 mm long, base acute to attenuate …….....…. *D. aggregatifolius*
108. Trichomes stellate on the branches and/or leaves.
118. Leaves 3–5 mm wide, adaxial surface nitid, glabrous, when dry ash-gray; abaxial surface totally white due to dense indumentum, abaxial surface with dense trichomes not stellate; veins 4–5, almost parallel; prophylls 4–4.5 mm long; epicalyx segments 2–2.5 mm long …….....….... *D. plumbeus*
118. Leaves 5–12 mm wide, adaxial and abaxial surfaces with stellate trichomes forming tufts, not ash-gray when dry; veins 2–3, not parallel; prophylls 3.5–3.8 mm long; epicalyx segments 1–1.5 mm long ……...…….….. *D. helianthemifolius*
101. Stamens (17–)18–32.
119. Sepals golden in color due dense indumentum with secretory trichomes bottle shaped; prophylls orbicular, wide and keeled. Stamens 24–32 …….....…. *D. sessiliflorus*
119. Sepals covered by simple trichomes, not golden in color, not bottle shaped.
120. Prophylls 4–6 mm long, floral tube 3–6 mm long
119. Petioles 4–15 mm long; secondary veins 4–8.
121. Leaf apex acute to attenuate. Accessory branches of the first and second order present in the inflorescence; flowers much concentrated at the apex of the branches, sometimes forming glomerules, epicalyx segments 2.5–4 mm long, longer than the sepals. Plants not dark-brown when dry. Goiás ……. *D. petiolatus*
121. Leaf apex obtuse, Accessory branches of the first and second order absent in the inflorescence; flowers not concentrated at the apex of the branches, never forming glomerules, epicalyx segments 1–2 mm long, shorter than the sepals. Plants dark-brown when dry. Minas Gerais ……..…….…. *D. rupestris*
120. Petioles 0–2.5 mm long; secondary veins 2–4.
122. Bracts not folded longitudinally in the inflorescence. Prophylls 3–6 mm long.
123. Leaves eucamptodromous, base acute to attenuate, secondary veins 1–2 on each side of the midvein
124. Epicalyx segments erect, with long trichomes spreading and sparse; prophylls 3–4.5 mm long. Leaves margin revolute …….....……. *D. heringeri*

124. Epicalyx segments spreading to slightly deflexed, sparsely pubescent, covered with short and fine trichomes prophylls 4–6 mm long. Leaves margin plane to subrevolute.
125. Leaves narrowly lanceolate, narrowly elliptic, apex acute. epicalyx segments 3–3.5 mm long, cylindrical, spreading. Goiás ……..……... *D. vittatus*
125. Leaves obovate to lanceolate, apex obtuse. epicalyx segments erect Minas Gerais ……..… *D. capitatus*
123. Leaves acrodromous, base obtuse to subcordate, secondary veins 2–4- on each side of the midvein
126. Epicalyx segments 2–2.5 mm long spreading to slightly deflexed, shorter than the sepals. Indumentum finely pubescent, not dense.
127. Leaf blade 20–45mm long, epicalyx segments 2–2.5 mm long, cylindrical to slightly dorsiventrally compressed, spreading. Distrito Federal ……..…. *D. capitalensis*
127. Leaf blade 6–10 mm long epicalyx segments ca. 2 mm long, cylindrical, spreading to slightly deflexed. Indumentum hirsute to pubescent. Goiás …….…. *D. fastigiatus*
126. Epicalyx segments 4–4.5 mm long, suberect, longer than the sepals, sometimes the same size. Indumentum strongly dense and short …….……..… *D. sigillatus*
122. Bracts longitudinally folded in the inflorescence. Prophylls 2–3 mm long …….....…..…… *D. villosus*
119. Prophylls 8.5–10 mm long, floral tube 7.5–8 mm long.
128. Leaf blade 3–5 mm wide, eucamptodromous, narrow-elliptic, base acute to attenuate, apex acute, pubescent, secondary veins 2 on each side of the midvein ……..…..… *D. chapadensis*
128. Leaf blade 15–34 mm wide, acrodromous, ovate to ovate-lanceolate, base obtuse to subcordate, apex obtuse, hirsute to sericeous, secondary veins 8–10 on each side of the midvein ……..…. … *D. retroimbricatus*
100. Plants covered by dense, silvery-sericeous indumentum.
129. Segments of epicalyx 1–2 mm long; leaves not imbricate, showing the stem, petiole 3–7 mm long. Bahia ……..….. *D. argyrophyllus*
129. Segments of epicalyx 3–5.5 mm long; leaves strongly imbricate, not showing the stem, petiole absent. Goiás.
130. Stamens 15–18; leaves 8–12 mm wide; lateral leaf veins 4–5 …….....….... *D. adpressipilus*
130. Stamens 12; leaves 4–6 mm wide; lateral leaf veins 2–3 ……..……..…….…….....…… *D. argenteus*
99. Epicalyx segments 4–7 mm long (if 3.5 mm long, then floral tube and sepals covered by bulbous-based secretory trichomes).
131. Epicalyx segments longer than the sepals.
132. Leaves covered by silvery, sericeous indumentum, erect, imbricate.
133. Leaves sessile, with base obtuse; stamens 15–18; prophylls 7–8.1 mm long, floral tube 6–7 mm long; leaves ovate to oval-lanceolate, veins 4 or 5 on each side, 2 or 3 departing from the base of the midvein. Goiás ……..... *D. adpressipilus*
133. Leaves petiolate, with base acute; petiole 2.5–3.5 mm long; stamens 12; prophylls 10–11 mm long, floral tube 8–9 mm long; leaves elliptic to oval-elliptic, veins 3–4 on each side of the midvein, all departing from the base of the midvein. Minas Gerais, São Paulo ..... *D. glocimarii*
132. Leaves not covered by silvery indumentum, indumentum not sericeous, not imbricate, spreading to suberect.
134. Epicalyx segments 3.5–6 mm.
135. Plants with inconspicuous indumentum or minutely pubescent and, covered with short or minute trichomes. Maranhão and Northern Minas Gerais.
136. Prophylls 8–10 mm long; pedicel 3.5–6 mm long …….…….....…. *D. obtectus*
136. Prophylls 4–4.6 mm long, pedicel 2 mm long …….…….....….. *D. rotatus*
135. Plants with dense indumentum, conspicuous, strigose, hirsute, villous, pubescent, trichomes not minute. Goiás, São Paulo, southern Minas Gerais.
137. Prophylls keeled, margin usually hyaline, ovary and capsule usually pilose at the apex; leaves dark-green to dark-brown when dry, eucamptodromous, base acute-attenuate to obtuse …….....……..… *D. leucocalycinus*
137. Prophylls not keeled, margin not hyaline, ovary and capsule totally glabrous; leaves not dark-green or dark-brown when dry, acrodromous-basal-supranumerary (eucamptodromous in *D. lanceolatus*), base obtuse, subcordate or cordate.
138. Prophylls 4–5.5 mm long; leaf margin strongly revolute.
139. Leaves covered by dense indumentum, trichomes very short; prophylls with 3 conspicuous veins, reddish .....… *D. sigillatus*
139. Leaves hirsute, covered by long trichomes; prophylls without conspicuous veins ……. *D. heringeri*
138. Prophylls 6–11 mm long; leaf margin plane rarely subrevolute.
140. Floral tube, sepals and epicalyx segments covered by glandular secretory, trichomes;

stamens 10–15; leaves 7–12 mm wide; domatia present ……..…. *D. hatschbachii*
140. Floral tube, sepals and epicalyx segments covered by non-glandular secretory trichomes;
stamens 15–32; leaves 10–45 mm wide; domatia present.
141. Leaves sessile; domatia present; epicalyx segments 6.5–7 mm …….……. *D. floribundus*
141. Leaves petiolate, petiole 1–5 mm long; domatia absent; epicalyx segments 3–6 mm long.
142. Epicalyx segments broadly triangular with subrevolute margin, sometimes foliaceous;
prophylls 9.5–11; corolla 5–6 cm in diam. ……. ……. *D. paraisoensis*
142. Epicalyx segments cylindrical, never foliaceous; prophylls 6–8 corolla 3–5 cm in diam.
143. Floral tube 4.5–6 mm long; stamens 18–26; leaf abaxial surface covered with
short trichomes. Distrito Federal, Goiás, Minas Gerais, Mato Grosso ……..... *D. lanceolatus*
143. Floral tube 6.5–7.5 mm long; stamens 15–19; leaf abaxial surface covered by
long trichomes. São Paulo, Southern Minas Gerais ….....…. *D. villosissimus*
134. Epicalyx segments equal to or shorter than sepals.
144. Small subshrubs 3–11 cm tall; stamens 12; prophylls reaching the middle or the apex of the floral tube
…….... *D. pygmaeus*
144. Subshrubs taller than 15 cm; stamens 15–34; prophylls reaching or surpassing the apex of the floral tube.
145. Leaves eucamptodromous; petiole 3–5 mm long; floral tube pubescent …….
…….....….. *D. lanceolatus*
145. Leaves acrodromous-basal-supranumerary; petiole 0–3 mm long; floral tube densely pilose, hirsute,
silver-sericeous and/or with bulbous-based trichomes or thick trichomes.
146. Prophylls as long as wide, ovate to orbicular, 4.5–10 mm wide, usually hiding the floral tube; sepals
and epicalyx segments covered by bulbous-based trichomes; leaf adaxial and abaxial surface rough, with a
verrucose aspect due to the bulbous base of the trichomes, trichomes sparse and equidistant ……..….....…. *D. strigosus*
146. Prophylls longer than wide, never ovate or orbicular, 2.5–4.5 mm wide, not hiding the floral tube; sepals and epicalyx
segments covered by trichomes without bulbous-based; leaf adaxial and abaxial surface not rough, indumentum dense.
147. Leaves imbricate, sessile, blades and floral tube covered by dense silver-sericeous indumentum ……..……..…
D. adpressipilus
147. Leaves not imbricate, petiolate, petiole 0.5–3 mm long, blades and floral tube not covered by silver-sericeous indumentum.
148. Leaves 25–90 mm long, veins 4–10 on each side along the midvein; prophylls 9.5–11 mm long …….……..… *D. paraisoensis*
148. Leaves 6–25 mm long, veins 3–4 on each side along the midvein; prophylls 3–5.5 mm long.
149. Leaves covered by dense indumentum, trichomes very short; prophylls with 3 conspicuous veins, reddish …….. *D. sigillatus*
149. Leaves hirsute, covered by long trichomes; prophylls without conspicuous veins …….. *D. heringeri*
132. Epicalyx segments 6–9 mm long.
150. Leaves narrowly elliptic to narrowly lanceolate, base acute, covered by dense minute, short or stellate trichomes in tufts,
veins 1–2 on each side along the midvein …….....….. *D. stellatus*
150. Leaves oval-lanceolate, base obtuse, cordate or subcordate, covered by dense, long trichomes,
veins 3–7 on each side along the midvein.
151. Leaves petiolate; petiole 1–3 mm long; domatia absent. Stamens 23–32.
152. Floral tube 5.5–7 mm long, epicalyx segments 4.3–7 mm long, broadly triangular
with subrevolute margin, sometimes foliaceous. Goiás …….....… *D. paraisoensis*
152. Floral tube 8–9 mm long, epicalyx segments 8.5–9 mm long, cylindrical, Mato Grosso ……..…
D. mattogrossensis
151. Leaves sessile; petiole 0; domatia present. Stamens 18 ……..... *D. floribundus*

REFERENCE

Cavalcanti, T.B. 2021. Diplusodon Pohl. Flora Neotropica 122. Springer. (no prelo)

Diplusodon adpressipilus Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 15/18.

ADDITIONAL DESCRIPTION

Subshrubs to 1 m tall, erect, with a xylopodium, branched just at the inflorescence, not dark-brown when dry. Upper branches cylindrical, unwinged, sericeous, covered by white, appressed trichomes, internodes 4–12 cm long. Leaves decussate, imbricate, erect, sessile; blades 15–25 (–48) × 8–12(–20) mm, coriaceous, not discolorous, acrodromous, supranumerary at the base, ovate to ovate-lanceolate, base obtuse, apex acute, slightly acuminate, margin plane, blades covered by dense silver-sericeous indumentum, sometimes hirsute or caducous, trichomes appressed; secondary veins 4 or 5 on each side, 2 or 3 departing from the base of the midvein, sometimes the secondary and tertiary veins prominent on the adaxial surface, less so on the abaxial surface; domatia absent. Synflorescence frondose-bracteose of the diplobotryum type, congested, with short branches concentrated on the terminal portion of the paraclades; accessory branches absent, principal florescence 4–10 cm long, paraclades 4–18 mm long, generally short; bracts similar to vegetative leaves, diminishing in size toward the apex of the branch; flowers short-pedicellate, hypopodium 0.5–1.5 mm long, epipodium 0.5–1 mm long, slightly more in fruit; prophylls 7–8.1 mm long, reaching or surpassing the apex of the floral tube, oblong to obovate, keeled, the apex acute, slightly acuminate, margin plane, silver-sericeous to hirsute; floral tube 6–7 mm long, oblong, silver-sericeous; sepals 3.5–4.5 mm long, triangular, not caudate, not deflexed, in fruit with bulbous secretory trichomes becoming orange in color; epicalyx segments (3.5–)5–5.5 mm long, the same size as or slightly surpassing the sepals; narrowly triangular, dorsiventrally compressed, erect, corolla 3–3.5 cm in diam., rose to lilac, petals 16–17 × 8–9 mm, elliptic, apex obtuse; stamens 15–18, free portion of the filaments 7–9 mm long, included, rarely, slightly exserted; ovary ca. 2.5 × 2–2.5 mm, globose or rounded, glabrous, style 11–15 mm long, ovules 29–30. Capsule ca. 4 × 4.3–4 mm, globose; seeds 23–25, 1.8–2.2 × 1.2–2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 400, NY, SPF, CEN, Goiás
T.B. Cavalcanti, 3502, SPF, CEN, Goiás
G.T. Prance, 58242, K, (K000528516), UB, NY, US, Goiás, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon adpressipilus* Lourteig



Figure 2: *Diplusodon adpressipilus* Lourteig

REFERENCE

Cavalcanti, T.B. Diplusodon Pohl (Lythraceae). Flora Neotropica 122.
Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon aggregatifolius T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** deflexed/ patent; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–2 m tall, with a xylopodium, erect, branched, pubescent, leaves concentrated at branch apices, not dark-brown when dry. Branches lax, the upper portions quadrangular to subquadrangular, unwinged, red to wine-colored, pubescent, internodes 0.5–3 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 3–7 mm long; blades 10–30 × 5–12 mm, coriaceous, slightly discolorous, eucamptodromous, elliptic to obovate, less often orbicular, base acute to attenuate, apex obtuse, margin plane to rarely subrevolute, adaxial surface pubescent; secondary veins 2 or 3 on each side of the midvein, departing along the midvein, strongly visible; domatia absent. Synflorescence frondose to frondose-bracteose, diplobotryum to pleiobotryum type, lax; accessory branches sometimes present, principal florescence 3–15 cm long, botryum type, generally truncate, paraclades 4–10 cm long; bracts similar in shape to the vegetative leaves, only slightly smaller; flowers short-pedicellate, hypopodium 1–2 mm long, epipodium 0–0.5 mm long; prophylls 5–7 mm long, reaching the middle of the floral tube or to the apex, elliptic to obovate, unkeeled, base narrowly attenuate, margin plane, pubescent; floral tube 4–5 mm long, green, funnel-shaped, pubescent; sepals 2–2.5 mm long, wine-colored, triangular, not caudate, not deflexed, pubescent; epicalyx segments 1.5–2.5 mm long, flat, spreading or slightly deflexed, the same size as or slightly surpassing the sepals; pubescent; corolla 2.5–3 cm in diam., rose-magenta to purple, petals 9–12 × 6–7 mm, obovate, apex obtuse; stamens (10–)12, free portion of the filaments 5.5–6.5 mm long, exserted ca. 1 mm; ovary 2–2.8 × 1.9–2 mm, globose to rhombic, glabrous, style 12–19 mm long, rose, ovules 6–14. Capsules ca. 5–5.5 × 6 mm, globose, glabrous; seeds 4–9, 3–4 × 2–3 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 278, CEN, SPF, CEN, 58185, (CEN0058185), Minas Gerais
T.B. Cavalcanti, 2320, SPF, CEN, Minas Gerais
T.B. Cavalcanti, CFCR 9596, SPF, UEC, NY, K, CEN, Minas Gerais, **Typus**

REFERENCE

Cavalcanti, T.B. 2020. Diplusodon Pohl (Lythraceae). Flora Neotropica Monograph 122.

Cavalcanti, T. B. 2004. Flora de Grão Mogol, Minas Gerais: Lythraceae In: Bol. Bot. Univ. São Paulo. , v.22, 283-290.

Diplusodon alatus T.B.Cavalc.

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** eucamptodromous/hyphodromous; **base** obtuse/retuse/subcordate/amplexicaul; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent/erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1.7 m tall, erect to decumbent, unbranched, glabrous, with a xylopodium, not dark-brown when dry. Branches lax, the upper portions markedly quadrangular and winged, wing 1.5–2 mm wide, wine-colored to chestnutbrown, nitid, internodes 1.5–5 cm long. Leaves decussate, not imbricate, spreading, coriaceous, sessile-amplexicaulous; blades 30–120 × 20–70 mm, green-glaucous, not discolorous, eucamptodromous-craspedrodromous sometimes looking hyphodromous, oblong, oblong-lanceolate, ovate or ovate-oblong, base retuse to obtuse-subcordate, amplexicaulous, apex obtuse to sometimes acute, margin plane; secondary veins 15–27 on each side of the midvein, inconspicuous; domatia absent. Synflorescence frondose to frondose-bracteose, botryum to diplobotryum spiciform type, lax; accessory branches absent, principal florescence 20–22 mm long, botryum spiciform type, paraclades 10–23 mm long; bracts similar to the vegetative leaves, decreasing in size toward the stem apex; flowers subsessile, hypopodium 1–2 mm long, epipodium 0.5–1 mm long; prophylls 5–9 × 2–5 mm long, reaching the apex of the floral tube or slightly less, oblong-lanceolate, unkeeled, base retuse, apex obtuse, margin plane; floral tube 6–7 mm long, clear green, funnel-shaped, slightly fleshy, 1–2 mm thick, large and coriaceous in fruit, sepals 7–8 mm long, triangular, with thick margin, fleshy, not caudate, coriaceous, thick and turning inward in fruit; epicalyx segments 3–4 mm long, cylindrical, narrowly triangular, spreading to erect, shorter than the sepals; corolla 6.5–7 cm in diam., rose-magenta, petals 30–35 × 20–22 mm, obovate, apex obtuse; stamens 32–55, free portion of the filament ca. 10 mm long, included; ovary ca. 3 × 6 mm, obconic, glabrous, style ca. 17 mm long, ovules ca. 35. Capsules 5–6 mm × ca. 9 mm, globose, glabrous; seeds 27–49, 3.5–4 × 3–3.5 mm. 2n = 30 (Cavalcanti 1995).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 850, CEN, 14197, (CEN0014197), NY, SPF, CEN, K, MBM, Goiás, **Typus**
T.B. Cavalcanti, 3742, CEN, Goiás
T.B. Cavalcanti, 3811, CEN (CEN00088555), CEN

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon alatus* T.B.Cavalc.



Figure 2: *Diplusodon alatus* T.B.Cavalc.

REFERENCE

Cavalcanti, T.B. 2020. Diplusodon Pohl (Lythraceae). Fora neotropica Monograph 122.
Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon appendiculosus Lourteig

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.6–1.4 m tall, with a xylopodium, erect, branched, glabrous, dark-brown when dry. Upper branches subquadrangular to quadrangular, with narrow wings of 0.1–0.2 mm wide, internodes 1–2.5 cm long. Leaves decussate, not imbricate, spreading, coriaceous, petiolate; petioles 1–2 mm long; blades 15–50 × 6–25 mm, not glaucous, not discolorous, eucamptodromous, elliptic-lanceolate or oblong to obovate, base acute, attenuate, apex acute to obtuse, margin thickened, plane or slightly revolute, with protuberances, the abaxial surface with sparse warts and rust-colored veins; secondary veins 3–4 on each side of the midvein, departing along the midvein; domatia absent. Synflorescence frondose to frondose-bracteose, triplobotryum spiciform type, congested; accessory branches absent, principal florescence ca. 14 cm long, paraclades of the first order 19–30 cm long, of the second order 4–7 cm long; bracts resembling the vegetative leaves in shape, scarcely diminished in size toward the apex of the branch; flowers subsessile, hypopodium 0.5–1, epipodium 0; prophylls 6–10 × 4–6 mm, surpassing the apex of the floral tube, ovate-lanceolate or oblong to spathulate, keeled, base retuse to acute, apex obtuse, margin plane; floral tube 5.5–7 mm long, green, oblong, glabrous, internally with cordiform glands below the region of petal insertion; sepals 2.5–4.5 mm long, triangular, caudate, deflexed, with thick, papillose margin and sparse trichomes; epicalyx segments 4.5–6 × 2 mm, green, foliaceous, hyaline, obovate to lanceolate, spreading to suberect, glabrous, longer than the sepals; corolla ca. 4.5 cm in diam., rose-magenta to red, petals 19–20 × 10–11 mm, oblong, apex obtuse; stamens 12, free portion of the filaments 7–9 mm long, exserted; ovary 2–3 × 2.l–4 mm, obconic, glabrous or the apex with very short trichomes, style 13–17 mm long, ovules 16–34. Capsules 5–5.1 × 4–5 mm, dark-brown, oblong, sometimes short stipitate, with white, caducous indumentum on the apex; seeds 4–17, 2.8–4 mm × 1.9–3 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3538, CEN, SPF, Goiás
H.S. Irwin, 24414, SPF, CEN, Goiás, **Typus**
T.B. Cavalcanti, 3149, CEN, MO, CEN (CEN00046981), Goiás

REFERENCE

Cavalcanti, T.B. 2020. Diplusodon Pohl (Lythraceae). Flora Neotropica Monograph 122.
Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon argenteus Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** acrodromous; **base** obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.2–0.4 m tall, with a xylopodium, erect, slightly branched or branched just at the inflorescence, silvery, not dark-brown when dry. Upper branches cylindrical, unwinged, silvery, sericeous, covered by white, appressed trichomes, internodes 0.7–1 cm long. Leaves decussate, imbricate, erect, coriaceous, sessile; blades 7–11 × 4–6 mm, not discolorous, acrodromous with supranumerary base, ovate-lanceolate to narrow-lanceolate, boat-shaped, keeled, base obtuse, apex acute or long-acuminate, margin plane to involute, blade covered by dense, silvery-sericeous indumentum; secondary veins 2–3 on each side of the midvein, 2 departing from the base of the midvein, inconspicuous on both surfaces, the midvein prominent; domatia absent. Synflorescence frondose, diplobotryum type, congested; accessory branches absent, principal florescence 6–12 cm long, paraclades 2–10 mm long, generally short; bracts resembling the vegetative leaves in shape and size; flowers sessile; prophylls 4.5–6 mm long, reaching the apex of the floral tube, elliptic to ovate, keeled, apex acute or long-acuminate, sometimes apiculate, margin plane, silver-sericeous; floral tube 4.5–6 mm long, narrowly oblong, silver-sericeous; sepals 3–3.5 mm long, triangular, not caudate, not deflexed, silver-sericeous; epicalyx segments 3–3.3 mm long, narrowly triangular, delicate, erect, the same size or slightly shorter than the sepals; corolla 2.5–2.7 cm in diam., rose to dark-rose, petals 13–14 × 6.5–7 mm, obovate, apex obtuse; stamens 12, free portion of the filaments 6–6.5 mm long, slightly exserted, ovary ca. 1.5 × 2 mm, rounded, glabrous, style 10–13 mm long, ovules 10–19. Capsules 2.7–3 × 2– 3.2 mm, oblong, glabrous; seeds 9–17, 1.1–1.5 × 1–1.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

H.S. Irwin, 24318, K, NY, P, UB, Goiás, **Typus**
G. Hatschbach, 53969, MBM, Goiás
G.P. Silva, 16435, RB, 580685, (RB00793333), CEN, Goiás
T.B. Cavalcanti, 3525, NY, K, UB, P, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon argyrophyllus T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** suberect/ erect; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs to 1.2 m tall, erect, branched, not dark-brown when dry. Upper branches subquadrangular, unwinged, canescent, covered by a dense sericeous indumentum, internodes 0.9–2 cm long. Leaves decussate, not imbricate, suberect, coriaceous, petiolate; petioles 3–7 mm long; blades 15–40 × 8–20 mm, slightly discolorous, eucamptodromous, elliptic to ovate-elliptic or rarely elliptic-lanceolate, base acute to slightly attenuate, apex acute or shortly acuminate to more rarely obtuse, margin plane to slightly revolute, adaxial surface olive green, canescent, with sericeous indumentum, veins sulcate, abaxial surface densely covered by a white silvery indumentum; veins prominent; secondary veins (3–)5–7 on each side, departing along the midvein; domatia absent. Synflorescence frondose to bracteose, triplobotryum to pleiobotryum type, congested; accessory branches absent, principal florescence caducous, not seen, paraclades 3–25 cm long; bracts resembling the vegetative leaves in shape, decreasing in size toward the apex of the branch, up to 10 × 5 mm; flowers subsessile, hypopodium ca. 1 mm long, epipodium ca. 0.5 mm long; prophylls ca. 5 × 2.2–2.5 mm, reaching the apex of the floral tube, spathulate, oblong to ovate-elliptic, unkeeled, apex obtuse to acute, margin plane, densely covered by a white to silveryindumentum; floral tube ca. 4.5 mm long, funnel-shaped, densely covered by white to silver indumentum; sepals 1.5–2 mm long, triangular, not caudate, not deflexed, indumentum the same as that of the floral tube; epicalyx segments 1–2 mm long, lanceolate, equaling the sepals in length, erect to suberect, with the same indumentum as the floral tube; corolla 2.5–3 cm in diam., rose, petals 13–14 × 7.5–8.5 mm, elliptic to obovate, base narrow, apex obtuse; stamens 12, free portion of the filaments 7–7.5 mm long, slightly exserted; ovary 2–2.2 × 3–3.2 mm, obconic, glabrous, style 12–13 mm long, stigma white, ovules 14–15. Capsules ca. 5 × 4.6 mm, oblong, glabrous; seeds ca. 14, 2.8–3 × 2.2–2.4 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

W. Ganev, 11, K, SPF, 88768, (SPF00088768), NY, CEN, 18976, (CEN0018976), HUEFS, 10454, (HUEFS0010454), SPF, Bahia, **Typus**
R.M. Harley, 27056, CEPEC, K, SPF, Bahia

Diplusodon astictus Lourteig

Has as synonym
heterotypic *Diplusodon gracilis* var. *ulei* Koehne

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/attenuate/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** deflexed/ patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.3–1.5 m tall, erect, branched just at the inflorescence, glabrescent, usually dark-brown when dry. Lower branches fistulose, the upper ones cylindrical, slightly flattened, unwinged, chestnut brown to wine-colored, with sparse trichomes or glabrous, internodes 3.5–5 cm long. Leaves decussate, not imbricate, suberect, subsessile to petiolate; petioles 1–3 mm long; blades 40–95 × 13–55 mm, chartaceous to coriaceous, not glaucous, not discolorous, eucamptodromous, elliptic to lanceolate, base obtuse, acute, or attenuate, apex acute, rarely obtuse, slightly acuminate, margin plane, sometimes ciliate, blades glabrescent, trichomes slightly bulbous at the base, sparse, common on the abaxial surface; secondary veins 4–5 on each side, departing along the midvein, chestnut brown to wine-colored, domatia absent or rarely with faint domatia. Synflorescence bracteose, triplobotryum to pleiobotryum type, lax; accessory branches absent, principal florescence botryum type, paraclades 5–44 cm long; bracts 15–35 × 5–10 mm, glabrous, elliptic; flowers short-pedicellate, hypopodium 1–2 mm long, epipodium to 0.5 mm long; prophylls 6–10 × 3–4.5 mm, surpassing the apex of the floral tube, elliptic to ovate, keeled, base acute to obtuse, apex acute, margin plane; floral tube 5–7 mm long, funnel-shaped, glabrous, internally with cordiform glands below petals; sepals 3–4 mm long, triangular, thick, apex papillose, deflexed, glabrous; epicalyx segments 3–4 mm long, slightly dorsiventrally compressed, spreading to slightly deflexed, glabrous; corolla 4.5–5.5 cm in diam., rose-magenta to red, petals 20–23 × 15–18 mm, obovate, apex obtuse; stamens 12, free portion of the filaments 10–10.5 mm long, exserted; ovary 2–2.5 × (1–)2–3.5 mm, rhombic, depressed, glabrous, sulcate, style 13–17 mm long, ovules 20–40. Capsules ca. 4.5 × 4 mm, globose, glabrous; seeds 26–32, 1.9–3 × 1.5–2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 404, K, G, MBM, NY, 940239, (NY00940239), SPF, CEN, Goiás
E.Y. Dawson, 14731, R, P, LAM, US, Goiás

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon astictus* Lourteig

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon bahiensis T.B. Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** obtuse; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 1–1.5 m tall, erect, branched, dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, hirtellous to rarely pubescent, trichomes white, thick and sparse, concentrated on the veins, internodes 1–1.5 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1–3 mm long; blades 10–22 × 5–13 mm, membranaceous, not discolorous, eucamptodromous, elliptic to ovate, base obtuse, apex obtuse, margin revolute to subrevolute, slightly folded longitudinally when dry; sparse trichomas on both surfaces; secondary veins 3–5 on each side, departing along the midvein; domatia present. Synflorescence frondose, pleiobotryum type, congested; accessory branches absent, principal florescence 5–10 cm long, paraclades 4–7 cm long; bracts similar to the vegetative leaves, smaller; flowers subsessile, hypopodium 1–2 mm long, epipodium 0–0.5 mm long; prophylls 6–6.5 × 3–4 mm, reaching the apex of the floral tube or surpassing until the base of the epicalyx segments, elliptic to narrowly elliptic, unkeeled, apex obtuse, margin plane, white and sparse trichomes concentrated on the central vein and margin; floral tube 5–5.5 mm long, light green when fresh, funnel-shaped, sparsely covered with white trichomes; sepals 2.5–3 mm long, long-triangular, acuminate, ciliate, not caudate, not deflexed; epicalyx segments 2.5–3 mm long, lanceolate, flat, erect, shorter than the sepals, ciliate; corolla 3–3.5 cm in diam., lilac to rose-magenta, petals 12–15 × 8.5–10 mm, oblong to elliptic, apex obtuse; stamens 12, free portion of the filaments 4.5–5 mm long, not exserted, pale yellow to lilac; ovary 2–2.1 × 1.9–2 mm, rhombic, glabrous, style 12–12.5 mm long, rose, stigma green, ovules 17–26. Capsules 4–4.5 × 3–4 mm, oblong, glabrous; seeds ca. 2, 2.5 × 2.2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
North (Amapá)
Northeast (Bahia)

HERBARIUM MATERIAL

E.M. Lughada, 5955, HUEFS, ALCB, CEN, CEPEC, SPF, K, Bahia, **Typus**
T.B. Cavalcanti, 359, CEN (CEN00019183), CEN, 19183, Amapá

REFERENCE

Cavalcanti, T.B. 2020. Diplusodon Pohl (Lythraceae). Fora neotropica Monograph 122.

Cavalcanti, T. B. New taxa in Diplusodon (Lythraceae) from Brazil. Phytotaxa, v. 38, p. 29-35, 2011.

Diplusodon bolivianus T.B.Cavalc. & S.A.Graham

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened/non blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute; **margin** subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 0.2–1.5 m tall, erect, branched, usually dark-brown when dry. Upper branches subquadrangular to quadrangular, unwinged, indumentum dense, whitish, hirsute to sericeous, trichomes yellow to white, internodes 1.5–3 cm long. Leaves decussate, not imbricate, erect, petiolate; petioles 1–6 mm long; blades 20–40 × 9–30 mm, chartaceous, not discolorous, eucamptodromous, elliptic to broadly elliptic, base acute, apex obtuse, very shortly acuminate, margin frequently subrevolute, slightly ciliate, adaxial surface sparsely hirsute, abaxial surface densely hirsute; secondary veins 4–6 on each side of the midvein, inconspicuous on the adaxial surface, prominent on the abaxial surface; domatia inconspicuous. Synflorescence bracteose, diplobotryum to triplobotryum type, congested; sometimes with development of first order accessory branches, principal florescence short, generally caducous; bracts similar to the leaves in shape, smaller toward the apex; flowers subsessile, hypopodium 0–0.5 mm long, epipodium ca. 0.5 mm long; prophylls 3.2–3.8 × 1–2.5 mm, reaching from the middle to the apex of the floral tube, oblong to obovate, unkeeled, margin plane, ciliate, densely hirsute on the abaxial surface to sericeous; floral tube 4–6 × ca. 4 mm, funnel-shaped, densely hirsute to sericeous; sepals 1.5–2 mm long, triangular, not caudate, not deflexed, with the same indumentum as the tube, ciliate; epicalyx segments 1–2 mm long, triangular, deflexed to spreading, less than or equal to the length of the sepals, with the same indumentum as the floral tube; corolla 1.5–2 cm in diam., rose, petals 6–8 × 4–5 mm, elliptic, apex obtuse; stamens 12, included or slightly exserted; ovary ca. 3 × 2.8–3 mm, obovate, glabrous, style 5.5–6 mm long, ovules 13–17. Capsules 3–4 × 4–5 mm, globose, glabrous; seeds 3–11, 2.1–3 × 2–3 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Rondônia)
Central-west (Distrito Federal, Mato Grosso)

HERBARIUM MATERIAL

T.J. Killeen, 4845, NY, MO, CEN, 37671, (CEN0037671), CEN, **Typus**
T.B. Cavalcanti, 2381, NY, MO, CEN, Mato Grosso
M.A. Barboza, 23, UB, Rondônia

REFERENCE

Cavalcanti, T. B. ; Graham, S. A. . Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed.Brasília: Atalaia, 2011, v. 9, p. 131-175.

Diplusodon bradei Pilg.

Has as synonym
heterotypic *Diplusodon rupestris* T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 10 to 30 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** attenuate/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** patent/erect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 1–2 m tall, erect, branched, velutinous, not dark-brown when dry. Branches lax, the upper ones cylindrical, unwinged, rust-colored, the uppermost clear yellow, tomentose, internodes 5.5–9.5 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 10–25 mm long; blades 50–90 × 40–60 mm, coriaceous, not discolorous, eucamptodromous, ovate, elliptic-lanceolate to less often obovate, base obtuse or slightly attenuate, apex obtuse, margin plane, adaxial surface olive green, pubescent to velutinous, abaxial surface canescent, velutinous; secondary veins 7–11 on each side, departing along the midvein, sulcate on the adaxial surface, reddish and prominent on the adaxial surface; domatia absent. Synflorescence bracteose, wide, pleiothyrse type, with cymes in triads or dichasia; lax, accessory branches of the first and second order, rarely of the third order; accessory branches 2–13 cm long, principal florescence 4–13(–17) cm long, thyrse type, frequently deciduous; paraclades of the first order 7–50 cm long, paraclades of the second order 6–20 cm long, paraclades of the third order 6–14 cm long; bract of the first order 12–30 × 0.7–14 mm, elliptic to ovate, those of the next order decreasing in size; bracts of the second and third order 15–25 × 10–15 mm; flowers pedicellate, hypopodium ca. 0.5 mm long, epipodium 1.5–2.5 mm long; prophylls 3–3.5 × 1–1.5 mm, reaching the middle of the floral tube, oblong, unkeeled, base obtuse to retuse, margin plane, slightly ciliate; floral tube 6–7 mm long, funnel-shaped, with short indumentum; sepals 3–4 mm long, triangular, not caudate, not deflexed, margin short-ciliate; epicalyx segments 3–3.5 mm long, cylindrical, erect to spreading, reaching the height of or slightly less than the sepals, with the same indumentum as the floral tube; corolla 2–2.5 cm in diam., clear rose to lilac, petals 10–16 × 7–13 mm, obovate, apex obtuse; stamens 12, free portion of the filaments ca. 10 mm long, exserted 2–3 mm; ovary 2–2.5 × 3–3.5 mm, obovate to orbicular, glabrous, style 16–18 mm long, ovules (11–)20–25. Capsule 5–5.1 × ca. 4 mm, globose, glabrous; seeds 10–16, 2.5–2.9 × 2–2.2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A.C. Brade, 13406, RB, 28678, (RB00540664), MO, CEN, Minas Gerais

T.B. Cavalcanti, 2301, NY, 941151, (NY00941151), MO, CEN, Minas Gerais
G. Hatschbach, 61811, MBM, Minas Gerais

Diplusodon burchellii Koehne

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/cordate/amplexicaul; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.3–1.5 m tall, erect, slightly branched, with a xylopodium, glabrous, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, yellow, glaucous when fresh, not dark-brown when dry, very rarely with long and sparse white trichomes on the stem and branches, internodes 0.6–2 cm long. Leaves decussate, imbricate, congested, erect, sessile; blades 8–25 × 8–26 mm, glaucous, coriaceous, not discolorous, acrodromous with supranumerary base, looking hyphodromous because lateral veins are very inconspicuous, elliptic-lanceolate to ovate-lanceolate, base obtuse, sometimes cordate to amplexicaulous, apex acute, margin plane, slightly thickened and yellow, sometimes hyaline; secondary veins 3–4 on each side, with 2–3 departing from the base of the midvein and 1–2 departing along the midvein, inconspicuous on both surfaces of the leaf; domatia absent. Synflorescence frondose, botryum to diplobotryum type, congested; accessory branches absent; bracts similar to the vegetative leaves in shape, decreasing in size toward the apex of the branch; flowers sessile; prophylls 7–13 × 3–3.5 mm, surpassing the apex of the floral tube by ca. 1.5 mm, glaucous, elliptic-lanceolate, unkeeled, base obtuse, apex acute, margin plane; floral tube 6–7 mm long, green, glaucous, oblong; sepals 1.5–3 mm long, triangular, not caudate, not deflexed; epicalyx segments 3.5–5 mm long, narrowly triangular to lanceolate, dorsiventrally compressed, erect, surpassing the sepals; corolla 3.5–4 cm in diam., lilac to red, petals 17–22 × 10–12 mm, obovate, apex obtuse; stamens 12, filaments lilac, exserted 3–4 mm; ovary ca. 3 mm wide, obovate, glabrous, style 14–15 mm long, ovules 28–30. Capsule 5–6 × 3–5 mm, oblong, glabrous; seeds 8–25, 2–3 × 2–2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

HERBARIUM MATERIAL

W.J. Burchell, 7911, K, (K000528521), Goiás, **Typus**
T.B. Cavalcanti, 3526, SPF, CEN
T.B. Cavalcanti, 1824, NY, 923569, (NY00923569), CEN
G.P. Silva, 4414, MO, CEN, NY, 932240, (NY00932240)

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon buxifolius (Cham. & Schltdl.) A.DC.

This treatment is composed of the following taxa: *Diplusodon buxifolius*, .

Has as synonym
basionym *Friedlandia buxifolia* Chamisso & Schlechtendal
heterotypic *Diplusodon vaccinifolius* Mart. ex A.DC.

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** obtuse; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 0.4–2 m tall, erect, much-branched, glabrescent, dark-brown when dry. Upper branches quadrangular, winged, distinctly four-angled, glabrous, internodes 0.5–1 cm long. Leaves decussate, not imbricate, spread to suberect, subsessile; petioles 0–1 mm long; blades 8–20 × 7–11 mm, chartaceous, not discolorous, eucamptodromous, ovate or ovate-lanceolate, base obtuse, apex obtuse, margin plane to subrevolute, with trichome protuberances, glabrous; secondary veins 3 on each side of the midvein, inconspicuous on both surfaces, domatia absent. Synflorescence frondose to frondose-bracteose, diplobotryum spiciform to pleiobotryum spiciform type, congested; accessory branches absent, principal florescence 4–7 mm long, paraclades 6–27 cm long; bracts similar to the vegetative leaves in shape, decreasing slightly in size toward the apex of the branch; flowers subsessile, hypopodium 0–0.5, epipodium 0–0.5 mm long; prophylls 2.8–4 × 1.5–2.5 mm, reaching from the middle to the apex of the floral tube, ovate or oblong to elliptic, slightly keeled, base obtuse, apex obtuse, margin plane, generally ciliate, glabrous; floral tube 4–5 mm long, oblong, glabrous, rarely pubescent; sepals 1.8–2 mm long, triangular, caudate, not deflexed, glabrous; epicalyx segments 1–2 mm long, lanceolate, dorsiventrally compressed, spreading to deflexed, shorter than the sepals, glabrous or with long trichomes; corolla 1.5–2.5 cm in diam., lilac to purple, petals 10–12 × 6–8 mm, obovate, apex obtuse or sometimes acute; stamens 12, free portion of the filaments 6–9 mm long, red, exserted; ovary 1.2–1.5 × 2–2.5 mm, rhombic, style 10–2.8 mm long, ovules 10–16. Capsule 1.9–2 × 2.9–3 mm, globose, glabrous; seeds 7–16, 1.8–2 × 1–1.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G.M. Magalhães, 17363, MO, CEN, Minas Gerais
T.B. Cavalcanti, 2571, MO, CEN, Minas Gerais
F. Sellow, s.n., K, K, (K000528553), Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon buxifolius* (Cham. & Schltdl.) A.DC.



Figure 2: *Diplusodon buxifolius* (Cham. & Schltdl.) A.DC.

Diplusodon caesariatus Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/obtuse; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** smaller than or to half of the tube flower/half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Shrubs 1.5–3 m tall, erect, branched, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, hirsute to hispid, with long and white trichomes, internodes 8–16 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1-2 mm long; blades 10–25 × 6–13 mm, chartaceous, slightly discolorous, eucamptodromous to acrodromous with supranumerary base, elliptic to ovate-elliptic, base obtuse to acute, apex obtuse, margin plane to subrevolute, glabrescent, adaxial surface olive green, with sunken veins, with sparse, short and fine trichomes or almost glabrous, abaxial surface light green, with abundant long trichomes on the veins or with very short trichomes on the veins, almost glabrous; secondary veins 3 on each side, departing along the midvein; domatia present. Synflorescence frondose, botryum to diplobotryum type, congested; accessory branches absent, principal florescence botryum type, 4–5 cm long, often truncate, paraclades 6–8 cm long; bracts the same shape as the leaves diminished in size toward the apex of the branch; flowers pedicellate, hypopodium 1–1.2 mm long, epipodium 0.5–1 mm long; prophylls 1.5–3.7 × 0.5–1.5 mm, reaching the base to the apex of the floral tube, spathulate, unkeeled, base acute, apex obtuse, margin plane, short-ciliate, cilia thick; floral tube 4–5.5 mm long, light-green, funnel-shaped, narrow, covered with sparse, long and white trichomes or with very short and inconspicuous trichomes; sepals 2–2.8 mm long, triangular, not caudate, not deflexed, not ciliate; epicalyx segments 1–1.5mm long, cylindrical, deflexed, ciliate, shorter than the sepals; corolla 2-3 cm in diam., rose magenta, petals 10–15 × 5–7 mm, obovate, apex obtuse; stamens 18, free portion of the filaments 5–5.2 mm long, rose, exserted ca. 5 mm; ovary 1.7–2 mm × 1.2–2 mm, rounded, glabrous, style 9–12.5 mm long, rose, ovules ca. 13. Capsule 2.8–3 × 2.8–3.5 mm, globose, glabrous; seeds ca. 11, ca. 1 × 1.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

E.Y. Dawson, 14397, LAM, P, Goiás, **Typus**

Diplusodon canastrensis T.B.Cavalc.

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** 0.5 the 4.0 mm; **venation** hyphodromous; **base** attenuate; **margin** flat; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 0.4–0.6 m tall, erect, much-branched, not dark-brown when dry. Upper branches quadrangular, with much reduced wings of 0.2–0.3 mm wide, slender, congested, very slightly pilose, trichomes very short, inconspicuous, internodes 3–8 mm long on the upper branches, leaves caducous on the very old branches. Leaves decussate, not imbricate, erect, sessile; blades 5–7 × 1–2 mm, coriaceous, not discolorous, hyphodromous, narrowly oblong, base attenuate, apex obtuse, margin plane, slightly hyaline, sometimes slightly ciliate by very short, sparse trichomes, blades glabrous; secondary veins 1 on each side, inconspicuous, the midvein prominent on the abaxial surface, sulcate on the adaxial surface; domatia absent. Synflorescence frondose, pleiobotryum type, congested; accessory branches absent, principal florescences not seen, paraclades 5–10 cm long; bracts resembling the vegetative leaves; flowers pedicellate, hypopodium 1.5–2 mm long, epipodium 0–1 mm long, very slightly pilose; prophylls 4–5.5 × 1.5–3 mm, reaching to surpassing the apex of the floral tube, oblong-linear or narrowly-obovate to elliptic, base acute, apex obtuse, margin plane, glabrous or rarely with very short trichomes; floral tube 4.5–5 mm long, clear green, funnel-shaped, glabrous or with inconspicuous trichomes; sepals 3–3.5 mm long, yellow, triangular, apex attenuate, slightly caudate, not deflexed, margin with secretory papillae on the inner margin, slightly hyaline, short-ciliate with sparse, reduced trichomes, trichomes short, concentrated on the apex; epicalyx segments 3–3.5 mm long, dorsiventrally compressed, with a yellow midvein, erect, reaching or surpassing the apex of the sepals, margin slightly hyaline, short-ciliate with reduced sparse trichomes or totally glabrous, papillose on the inner surface in the region of the apex; corolla ca. 2 cm in diam., lilac, petals 9–10 × 7.5–8 mm, long-obovate, apex obtuse to emarginate; stamens 12, free portion of the filaments 6–7 mm long, exserted ca. 1 mm; ovary ca. 1.2 × ca. 2 mm, rhombic, glabrous, style 10–11 mm long, dark rose, stigma conspicuously papillose, ovules 12–17. Capsule 3.8–4 × 2.9–3 mm, oblong, glabrous; seeds ca. 12, 2–2.5 × 1.5–1.8 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

R. Romero, 2980, CEN, MO, HUFU, Minas Gerais

R.M. Silva, 1973, MO, HUFU, RB, 403033, (RB00540665), BHCB, 91402, (BHCB000197), G, G00227379, (G00227379), MBM, 295952, (MBM0295952), NY, 688093, (NY00688093), SP, 370927, (SP001122), SPF, 155559, (SPF00155559), CEN, 46636, (CEN0046636), Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon canastrensis* T.B.Cavalc.

Diplusodon candollei Pohl ex DC.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** hyphodromous; **base** acute; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 6.

ADDITIONAL DESCRIPTION

Shrubs 1–1.5 m tall, erect, much-branched, sometimes dark-brown when dry. Upper branches cylindrical, unwinged, pubescent, internodes 0.3–0.5 mm long. Leaves decussate, not imbricate, suberect, subsessile; petioles (when present) to 1 mm long; blades 4–6 × 0.5–0.8 mm, coriaceous, not discolorous, not glaucous, hyphodromous, linear, base acute, apex obtuse, margin strongly revolute; secondary veins absent (or not visible?), with short dense indumentum on the abaxial surface, adaxial surface glabrous; domatia absent. Synflorescence frondose, diplobotryum to triplobotryum type, congested; accessory branches absent, paraclades 3–12 mm long; bracts similar in shape and size to the vegetative leaves; flowers pedicellate, pedicel pubescent, hypopodium 1–1.5 mm long, epipodium 0.3–0.5 mm long; prophylls 4–4.5 × 2.5–3 mm, reaching the apex of the floral tube, ovate to ovate-elliptic, concave, not keeled, base acute, apex obtuse, margin plane, midvein pubescent on the adaxial surface; floral tube 3.2–3.5 mm long, funnel-shaped, with sparse trichomes, glabrescent; sepals ca. 2 mm long, triangular, not caudate, not deflexed, ciliate; epicalyx segments 1.8–1.9 mm long, cylindrical, erect, slightly shorter than the sepals, with evident cilia; corolla ca. 2 cm in diam., lilac, petals 6.5–8 × 4.5–5 mm, obovate, apex obtuse; stamens 6, free portion of the filaments ca. 6 mm long, exserted ca. 2 mm; ovary ca. 1.3 × 1.5 mm, obconic, glabrous, style 11–12 mm long, ovules 5–6. Capsule 3–5 × 2–3 mm, oblong, glabrous; seeds 3–6, 1.7–3 × 1.5–3 mm. n=15 (Cavalcanti 1995).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3130, W, K, G, BR, Minas Gerais
J.B.E. Pohl, 3553, G, W, BR, K, (K000528582), K, (K000528581), Minas Gerais, **Typus**
G. Hatschbach, 67290, RB, 402373, (RB00209272), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon candollei* Pohl ex DC.

Diplusodon capitalensis T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** eucamptodromous/acrodromous; **base** obtuse; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs, ca. 0.80 m tall, erect, branched, not dark-brown when dry. Upper branches cylindrical, unwinged, rust-colored, covered by dense, white, short trichomes of varying sizes, sometimes equal, internodes 1.5–4 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1–2.5 mm long; blades 20–45 × 4–11 mm, olive green, chartaceous, not discolorous, not dark-brown when dry, acrodromous with supranumerary base to eucamptodromous, elliptic to elliptic-lanceolate, base obtuse, apex acute, margin plane to subrevolute, blades pubescent, trichomes with thick base, abaxial surface short-villous; secondary veins 2–3 on each side, inserted along the midvein; domatia present. Synflorescence bracteose to frondose-bracteose, diplobotryum spiciform to triplobotryum spiciform type, lax; accessory branches absent, principal florescence 5–10 cm long, paraclades 13–20 cm long; bracts 7–15 × 2–7 mm, elliptic to elliptic-lanceolate; flowers subsessile, hypopodium 0.5–1 mm long, epipodium absent; prophylls 4–5 mm long, reaching the middle of the floral tube or surpassing the middle slightly, ovate to obovate, keeled, apex obtuse, margin plane, ciliate, pubescent; floral tube 4.8–5 mm long, funnel-shaped, covered by short-villous appressed, ascending, whitish trichomes; sepals 1.5–2.5 mm long, triangular, not caudate, not deflexed, ciliate, sparsely pubescent; epicalyx segments 2–2.5 mm long, cylindrical to slightly dorsiventrally compressed, spreading, shorter than the sepals, sparsely pubescent; corolla 2.5–3.2 cm in diam., rose to lilac, petals 11–15 × 7–7.5 mm, obovate, base acute, apex obtuse; stamens 18, free portion of the filaments 6.5–7 mm long, exserted 1.5–2 mm; ovary 1.5–2 × 2–2.5 mm, rounded, glabrous, style 12–13 mm long, ovules 17–30. Immature capsules 3–3.5 × 3.5–3.9 mm, globose, glabrous; seeds 9–14, 2–2.4 × 1.9–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)

HERBARIUM MATERIAL

G.P. Silva, 7905, NY, K, W, UB, SPF, CEN, Goiás
J.A. Pastore, 610, K, CEN, MO, Distrito Federal, **Typus**
J.A. Pastore, 641, CEN, W, UB, SPF, NY, K, Distrito Federal

FIELD IMAGES / ILLUSTRATIONS

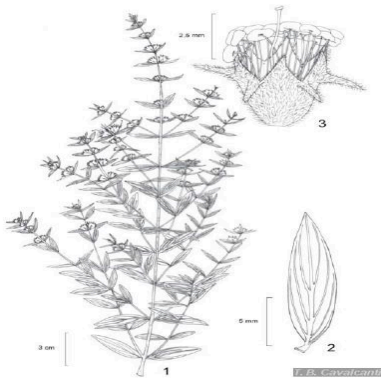


Figure 1: *Diplusodon capitalensis* T.B.Cavalc.

REFERENCE

Cavalcanti, T. B. ; Graham, S. A. 2011. Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed.Brasília: Atalaia, v. 9, p. 131-175.

Diplusodon capitatus (A. St.-Hil.) Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** attenuate; **margin** subrevolute; **lateral vein** 0 1 of the each side/2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs, erect, branched. Upper branches cylindrical, young branches flattened, pubescent to hirtellous, rust-colored, not dark-brown when dry. Leaves decussate, not imbricate, suberect, short-petiolate; blades ca. 12 × 8 mm, coriaceous, not discolorous, eucamptodromous, obovate to lanceolate, base attenuate, apex obtuse, margin subrevolute, short pubescent-villous, adaxial surface punctate; secondary veins 1–2 on each side, departing along the midvein. Synflorescence triplobotryum type; accessory branches absent; flowers subsessile, compact and capitate at the branch apices; prophylls ca. 5.2 × 2 mm, reaching or nearly reaching the apex of the floral tube, spathulate, apex obtuse, margin plane, ciliate, hirtellous; floral tube ca. 4.5 mm long, funnel-shaped, hirtellous; sepals ca. 3.5 mm long, triangular, not caudate, not deflexed, hirtellous; epicalyx segments 3.1–3.5 mm long, slightly exceeding the sepals, narrow and dorsiventrally compressed with spreading trichomes, erect; stamens 18, free portion of the filaments 8–9 mm long, exserted; ovary ca. 2 × 3 mm, rounded, glabrous, style ca. 13 mm long, ovules ca. 22. Fruits not seen.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Saint-Hilaire, s.n., P (P00506524), P (P00506525), P (P00506526), Minas Gerais, **Typus**

Diplusodon chapadensis T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs 0.2–0.4 m tall, prostate to suberect, slightly branched, sometimes caespitose, with a xylopodium, not dark-brown when dry. Upper branches cylindrical, unwinged, pubescent to hirtellous, internodes 2–3 cm long. Leaves decussate, not imbricate, erect, petiolate; petioles 1–3 mm long; blades 12–30 × 3–5 mm, membranaceous to chartaceous, not discolorous, eucamptodromous, narrowly elliptic, base acute to attenuate, apex acute, margin subrevolute, covered by a dense pubescent and white indumentum; secondary veins 2 on each side, departing along the midvein, inconspicuous on both leaf surfaces, domatia absent. Inflorescence frondose, botryum type, lax; accessory branches absent; bracts similar to vegetative leaves in shape but smaller; flowers pedicellate, hypopodium ca. 2 mm long, epipodium ca. 1 mm long; prophylls 9–9.5 × 1.9 mm, surpassing the apex of the floral tube, elliptic, unkeeled, margin plane, dense pubescent; floral tube 7.5–8 mm long, oblong, covered by a dense pubescent, white indumentum; sepals 2.5–3 mm long, triangular, not caudate, not deflexed, with the same indumentum as the tube, not ciliate; epicalyx segments 2.6–3.1 mm long, slightly dorsiventrally compressed, spreading, not surpassing the sepals, with the same indumentum as the tube; corolla ca. 3.5 cm in diam., bright rose, petals ca. 13 mm long, elliptic, apex obtuse; stamens 18, free portion of the filaments ca. 7 mm long, slightly exserted; ovary ca. 1.8 × 2.3 mm, obovate-depressed, glabrous, style ca. 12 mm long, ovules 22–30. Capsule 2.9–4 × 3.5 mm, oblong, glabrous; seeds 13, 2.1–2.4 × 1.7–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3823, CEN, Goiás
T.B. Cavalcanti, 2185, SPF, RB, NY, CEN, 26992, (CEN0026992), MO, K, CEN, Goiás, **Typus**
K. Calago, 97, MO, CEN, Goiás

FIELD IMAGES / ILLUSTRATIONS

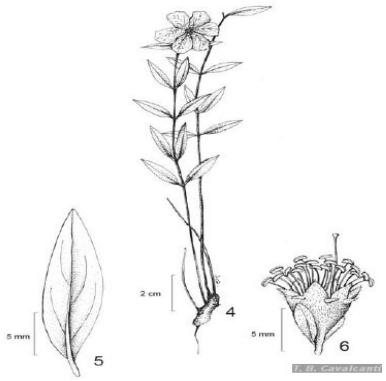


Figure 1: *Diplusodon chapadensis* T.B.Cavalc.

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T.B. 2007. Novas espécies em Diplusodon Pohl (Lythraceae) do Planalto Central e Minas Gerais, Brasil. Acta Botanica Brasilica 21: 1–10.

Diplusodon ciliatiflorus T.B.Cavalc.

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** sessile/0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/subcordate/amplexicaul; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.6–2 m tall, erect, branched, with a xylopodium, glabrescent, often dark-brown when dry. Upper branches subquadrangular, rust-colored, winged, glabrous, internodes 1.5–4.5 cm long. Leaves decussate, not imbricate, suberect, sessile to subsessile, sometimes amplexicaulous; petioles (when present), to 1 mm long; blades 25–65 × 10–35 mm, slightly glaucous, coriaceous, not discolorous, rust-colored, acrodromous with supranumerary base, lanceolate, elliptic–lanceolate, the most basal ovate to oblong, base obtuse to slightly subcordate, apex acute to obtuse or sometimes acuminate, margin plane with protuberances or ciliate, blades glabrous, adaxial surface with inconspicuous veins, abaxial surface with conspicuous veins, rust-colored; veins 4–5 on each side, 2–4 departing from the base of the midvein, rust-colored; domatia absent. Synflorescence frondose, diplobotryum to triplobotryum type, lax; accessory branches absent, principal florescence 7–15 cm long, botryum type, paraclades 5–35 mm long; bracts decreasing from leaf size toward the apex of the branch, lanceolate to elliptic-lanceolate or rarely ovate-oblong, sometimes bearing long cilia on the margin, caducous; flowers pedicellate, hypopodium 2–2.5 mm long, epipodium ca. 1 mm long; prophylls 7–12 × 3.5–4 mm, reaching the apex of the floral tube or frequently surpassing the apex of the floral tube, elliptic, unkeeled, base obtuse, apex acute to obtuse, margin plane, generally with abundant long cilia or less often cilia sparse; floral tube 7–8 mm long, funnel-shaped, glabrous or glabrescent, trichomes sometimes sparse; sepals 5–6 mm long, triangular, generally with the apex prolonged to 9 mm in fruit, not deflexed, with long, sparse cilia; epicalyx segments (4–)7–8 mm long, dorsiventrally compressed, spreading to suberect, when erect, exceeding the sepals, with long, sparse cilia; corolla 5–7 cm in diam., lilac to reddish, petals 26–28 × 14–15 mm, obovate, apex obtuse; stamens 19–22, free portion of the filaments 12–16 mm long, exserted; ovary 2.5–2.8 × 3–3.2 mm, rhombic, glabrous, sulcate, style 20–22 mm long; ovules 34–42. Capsule 4.5-8 × 4-9 mm, globose, glabrous; seeds 11–36, 3–5 × 4–4.5 mm.

COMMENTS

Leaves glabrous but long-ciliate. Sepals and epicalyx segments glabrous but long-ciliate.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 1046, CEN, 17897, (CEN0017897), SPF, NY, K, CEN, UB, Goiás, **Typus**
G. Hatschbach, 54783, NY, 940263, (NY00940263), Goiás

REFERENCE

Cavalcanti, T. B. 1998. New Species of Diplusodon (Lythraceae) From Brazil. Novon, v. 8, p. 337 – 351.

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon ciliiflorus Koehne

Has as synonym
heterotypic *Diplusodon psammophilus* Lourteig

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** eucamptodromous; **base** obtuse; **margin** flat; **lateral vein** 0 1 of the each side/2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/ shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.10–3 m tall, erect, branched, with a xylopodium, sometimes dark-brown when dry. Upper branches subquadrangular, unwinged, yellow, glabrous or rarely with inconspicuous pubescence, internodes 6–25 cm long. Leaves decussate, not imbricate, erect to suberect, subsessile; petioles to 1.5 mm long; blades 6–24 × 5–10 mm, coriaceous, slightly discolorous, not glaucous, eucamptodromous, oblong, elliptic to ovate, sometimes narrowly oblong, base obtuse, apex obtuse, rarely acute, margin plane, ciliate or not, adaxial surface dark-green, nitid, glabrous, abaxial surface olive green, rarely with sparse trichomes distributed over the blade; secondary veins 1–3 on each side, departing along the midvein, inconspicuous on the adaxial surface, chestnut brown on the abaxial surface; domatia absent. Synflorescence frondose, botryum or triplobotryum type, lax; accessory branches absent, principal florescence 5–15 cm long, paraclades 5–35 cm long; bracts similar to the vegetative leaves, decreasing in size toward the apex of the stem; flowers pedicellate, hypopodium 1–2.5 mm long, epipodium 0.5–1 mm long; prophylls 5–9 × 2.5–4.5 mm, reaching or sometimes surpassing the apex of the floral tube, oblong to elliptic, base acute, apex acute, margin plane, frequently ciliate, glabrous or with sparse trichomes; floral tube 4–6 mm long, larger in fruit, green to wine-colored, funnel-shaped, glabrous; sepals 4–6 mm long, slightly caudate, not deflexed, triangular, with conspicuous cilia on the margin; epicalyx segments 4–6 mm long, wine-colored at the base, cylindrical, erect, the same size as or shorter than the sepals, generally prominently ciliate; corolla 3.5–4 cm in diam., rose-magenta, petals 14–20 × 12–15 mm, obovate, apex obtuse, sometimes emarginate; stamens 12, free portion of the filaments 6.5–7.5 mm long, slightly exserted; ovary 1.8–2 × 2.5–2.8 mm, obconic, glabrous, style 14–17 mm long, ovules 15–24. Capsules globose, glabrous; seeds 4–12, 2.5–2.8 × 1.9–2 mm.

COMMENTS

Sepals and epicalyx segments glabrous but long-ciliate.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 253, W, K, Minas Gerais
T.B. Cavalcanti, 188, CEN, SPF, RB, 319149, (RB00209327)
G. Gardner, 4569, K, (K000528579), K, (K000528578), W, K, Minas Gerais, **Typus**

REFERENCE

Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.

Diplusodon cordifolius Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** cordate; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Shrubs 0.3–0.8 m tall, sometimes prostrate, with a xylopodium, much-branched, canescent, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, densely covered with simple, long trichomes, internodes 5–6 mm long. Leaves decussate, not imbricate, suberect, sessile; blades 6–10(–12) × 1.5–3.5 mm, coriaceous, not discolorous, eucamptodromous, lanceolate to oblong, usually with waist in the middle region, base cordate, apex acute, margin revolute; secondary veins 2–3 on each side of the midvein, prominent on the abaxial surface, adaxial and abaxial surfaces hirsute, covered with simple, long trichomes, rarely the indumentum very dense and silvery; domatia evident. Synflorescence frondose, diplobotryum to pleiobotryum, type congested; accessory branches absent, principal florescence ca. 4 cm long, botryum type, sometimes caducous, paraclades 3–15 cm long, bracts similar to the vegetative leaves in form and size; flowers pedicellate, hypopodium 1–1.5 mm long, epipodium 0.5–1.5 mm long; prophylls 3–5.5 × 1.5–3 mm, reaching the apex of the floral tube or slightly less, elliptic-lanceolate, unkeeled, base obtuse, apex acute, margin plane, ciliate, covered with long, sparse trichomes; floral tube 5–5.5 mm long, greenish, funnel-shaped, covered with simple, long trichomes; sepals 3–5.5 mm long, wine-colored, triangular, sometimes with a dorso-elongated apex, not deflexed, with long, sparse trichomes, ciliate; epicalyx segments 0.5–2 mm long, dorsiventrally compressed, spreading to suberect, ciliate, shorter than the sepals; corolla ca. 2 cm in diam., lilac to bright rose, petals 8–9 × 4.5–5 mm, obovate, apex obtuse to sometimes acute; stamens 18, free portion of the filaments 6.5–9 mm long, exserted, ovary 1.9–2.1 × 2–2.5 mm, obovate-depressed, glabrous, style 10–12.5 mm long, ovules 13–19. Capsule ca. 3.5 × 3.2 mm, globose, glabrous; seeds 10–15, 1.8–2.5 × 1.2–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

H.S. Irwin, 24807, MO, NY, P, UB, Goiás, **Typus**
T.B. Cavalcanti, 3527, P, NY, MO, UB, Goiás
G.T. Prance, 58203, UB, NY, 940243, (NY00940243), K, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon cryptanthus T.B.Cavalc.

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** acute/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 7 to 47 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 18.

ADDITIONAL DESCRIPTION

Shrubs 0.6–1(–2) m tall, erect, much-branched, with a xylopodium, glabrescent, totally glabrous when mature, corymbiform, not dark-brown when dry. Upper branches slender, quadrangular, with small wings of 0.1–0.2 mm wide, internodes 1.5–3 cm long. Leaves decussate, not imbricate, suberect, subsessile; petioles 1.5–2 mm long; blades 40–57 × 13–25 mm, not glaucous, chartaceous to membranaceous, not discolorous, acrodromous with typical base, elliptic-lanceolate, base acute to obtuse, apex acute, margin plane, glabrous, adaxial surface with small black dots; secondary veins 2 on each side, 1 pair departing from the base of the midvein, inconspicuous on the adaxial surface, prominent on the abaxial surface; domatia evident. Synflorescence frondose, triplobotryum to pleiobotryum type, lax; accessory branches absent, principal florescence 4–7 cm long, botryum type, paraclades 10–25 cm long, bracts 10–50 × 6–20 mm, elliptic to ovate-elliptic, similar to the vegetative leaves in shape; flowers pedicellate, hypopodium 15–25 mm long, epipodium 2–2.5 mm long; prophylls 13–25 × (4–) 9–12 mm, sometimes hiding the floral tube, ovate, base and apex obtuse, margin plane; floral tube 7–8 mm long, narrowly oblong, glabrous; sepals 2–3 mm long, wine-colored, triangular, not caudate, not deflexed; epicalyx segments 6–8 mm long, green, linear, slightly dorsiventrally compressed, erect, surpassing the sepals; corolla ca. 4.5 cm in diam., rose to purple, petals 16–16.5 mm long, obovate, apex obtuse; stamens 18, free portion of the filaments 7–8 mm long, exserted ca. 2 mm; ovary 2.5–3 × 3–4 mm, rhombic, glabrous, style 14–15 mm long, ovules 26–35. Capsules globose, glabrous, seeds 19–30, 1.5–2.1 × 2–3 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2595, MO, CEN, Goiás
G.P. Silva, 5057, NY, MO, CEN, Goiás
G.P. Silva, 5908, MO, CEN, Tocantins
T.B. Cavalcanti, 1053, UFG, CEN, 17898, (CEN0017898), SPF, Goiás, **Typus**

FIELD IMAGES / ILLUSTRATIONS

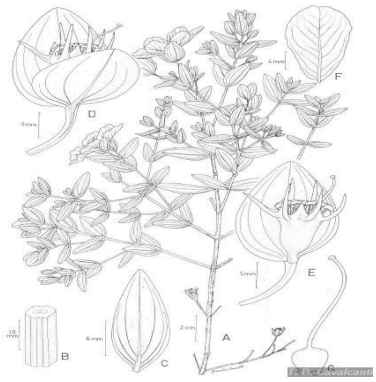


Figure 1: *Diplusodon cryptanthus* T.B.Cavalc.

Diplusodon decussatus Gardner

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** cordate/retuse/subcordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** suberect/erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.3–1 m tall, erect to sometimes prostate, unbranched to slightly branched, with a xylopodium, glabrous, usually dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, internodes 1–3 cm long. Leaves decussate, not imbricate, spreading, sessile; blades 10–22 × 17–35 mm, strongly glaucous, coriaceous, not discolorous, acrodromous-basal-supranumerary, triangular-deltoid, base retuse or subcordate to cordate, apex obtuse, sometimes slightly acuminate, margin plane, slightly thickened and yellow to slightly wine-colored, adaxial surface with inconspicuous veins, abaxial surface with veins more apparent; secondary veins 5–9 on each side, most of them departing from the base of the midvein, 1–2 departing along the midvein; domatia absent. Synflorescence frondose, botryum to diplobotryum type, congested; accessory branches absent, principal florescence 10–15 cm long, paraclades 8–12 cm long; bracts similar to the vegetative leaves in shape and size; flowers subsessile, hypopodium 0.5–1 mm long, epipodium up to 0.5 mm long; prophylls 4.5–6.5(–8) × 3–5.5 mm, reaching to the middle of the floral tube or less, elliptic or ovate to cordate, slightly keeled, margin plane; floral tube 6.5–8 mm long, glaucous, in fruit dark chestnut brown, nitid, 8–9 mm long oblong; sepals 2.5–3.5 mm long, triangular, not caudate, not deflexed, sometimes just the top deflexed; epicalyx segments 2–2.5 mm long, slightly wine-colored, cylindrical to flattened, erect to suberect, the same size as the sepals; corolla ca. 3.5 cm in diam., lilac to rose-magenta, petals ca. 20 × 12 mm, narrowly obovate, apex obtuse; stamens 12, free portion of the filaments 7–11 mm long, slightly exserted; ovary 2.5–3 × 2.5–3 mm, yellow-green, rhombic, glabrous, style 17–18 mm long, rose-magenta, ovules 17–33. Capsule 4–5 × 3 mm, dark-brown, oblong, glabrous; seeds 5–16, 2.5–3.3 × 1.8–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2248, NY, 941146, (NY00941146), CEN, Tocantins
G. Gardner, 3722, P, K, (K000528520), K, (K000528518), W, G, G00227376, (G00227376), K, (K000528519), OXF, NY, G, Tocantins, **Typus**
T.B. Cavalcanti, 3626, W, P, OXF, NY, K, G, 61915, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon divaricatus Pohl

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/cordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 18/19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.5–1 m tall, erect, slightly branched, with a xylopodium, not dark-brown when dry. Upper branches rust-colored, cylindrical, unwinged, with a dense short indumentum formed by bulbous glandular trichomes, internodes 1.5–3.5 cm long. Leaves decussate, not imbricate, suberect, sessile; blades 15–45 × 10–38 mm, coriaceous, not discolorous, acrodromous-basal-supranumerary, ovate to ovate-lanceolate, base obtuse to cordate, apex acute to obtuse, sometimes acuminate, margin plane, adaxial and abaxial nearly glabrous, very slighty pilose, trichomes short, most easily seen along the veins; secondary veins 4–6 on each side, 2–4 departing from the base of the midvein; domatia absent or rarely with faint domatia. Synflorescence frondose-bracteose to bracteose, botryum spiciform to triplobotryum type, congested; accessory branches absent, principal florescence not seen, paraclades 2–6 cm long; bracts 5–15 × 4–10 mm, ovate, ovate-lanceolate to orbicular; flowers subsessile, hypopodium ca. 0–0.5 mm long, epipodium 0–0.5 mm long; prophylls 3–3.5 × 2–3 mm, not reaching the middle of the floral tube, ovate to orbicular, unkeeled, concave, base obtuse, apex obtuse, margin plane, densely pilose, trichomes bulbous, white; floral tube 6–7 mm long, golden in color, infundifuliform, densely covered with bulbous glandular trichomes; sepals 3.5–4 mm long, golden in color, triangular, not caudate, sometimes slightly deflexed, covered with golden botuliform glandular trichomes; epicalyx segments to 0.5 mm long, inconspicuous, cylindrical, shorter than the sepals; corolla 3.5–4.5 cm in diam., rose-magenta or lilac to red, petals 19–20 × 10–11 mm, elliptic, apex obtuse; stamens 18–23, free portion of the filaments 7–7.5 mm long, slightly exserted; ovary 2–2.5 × 3–4 mm, rounded, glabrous, style 10–14 mm long, ovules 29–50. Capsules 5–5.6 × 4–6 mm, globose, glabrous; seeds 15–44, 1.8–2 × 1.8–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

J.B.E. Pohl, 2537, K, (K000528532), W, K, Goiás, **Typus**
T.B. Cavalcanti, 2398, CEN, NY, 941157, (NY00941157), W, K, Goiás
A. Saint-Hilaire, s.n., P, Minas Gerais
R. Romero, 1009, HUFU, CEN, Minas Gerais

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon epilobioides Mart. ex DC.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** attenuate; **margin** revolute; **lateral vein** 0 1 of the each side/2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm/7 to 47 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 12/18.

ADDITIONAL DESCRIPTION

Shrubs 0.5–3 m tall, erect, much-branched, not dark-brown when dry. Upper branches lax, cylindrical to subquadrangular, unwinged, with minute, dense, inconspicuous trichomes, internodes 0.5–1 cm long. Leaves decussate, not imbricate, erect, short-petiolate; petioles 1.5–2 mm long; blades 10–22 × 1–4 mm, coriaceous, slightly canescent, sometimes slightly discolorous, eucamptodromous, narrowly elliptic to narrowly oblong, base long-attenuate, apex obtuse to acute, margin revolute, leaves covered by minute, dense, inconspicuous trichomes, giving a velvety appearance, adaxial surface with sulcate veins, abaxial surface slightly canescent, with prominent veins; secondary veins 1(–2) on each side of the midvein; domatia present. Synflorescence frondose, diplobotryum to pleiobotryum type, lax; accessory branches absent, principal florescence 4–10 cm long, botryum type, paraclades 4–20 cm long; bracts similar to the vegetative leaves in shape, slightly smaller toward the apex of the branches; flowers pedicellate, hypopodium 2–4 mm long, epipodium 2–3 mm long; prophylls 5–7 × 1–1.5 mm, usually surpassing the apex of the floral tube 1–2 mm, sometimes not reaching the apex of the floral tube, inserted in the middle of the pedicel, narrowly elliptic or spathulate to lanceolate, unkeeled, base attenuate, apex obtuse, margin plane to involute, covered by erect, short trichomes; floral tube 3–4.5 mm long, green, funnel-shaped, covered by minute, inconspicuous trichomes, sometimes appearing glabrous; sepals 2.5–3 mm long, wine-colored, triangular, caudate, not deflexed, with the same type of indumentum as the floral tube; epicalyx segments 3–4 mm long, cylindrical, erect, surpassing the sepals, with the same type of indumentum as the floral tube; corolla 2–2.5 cm in diam., lilac or rose-magenta to red, petals 6.1–9.5 × 5–7.5 mm, obovate, apex obtuse; stamens 12–18, free portion of the filaments 5–9 mm, exserted, surpassing the apex of the sepals 3–3.5 mm; ovary ca. 2 × 1.5–2.3 mm, rhombic, glabrous, style 10–13 mm long, ovules 10–16. Capsules 2.8–3.1 × 2–2.1 mm, globose, glabrous; seeds 5–7, 1.5–2 × 1.8–2.9 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G. Martinelli, 11163, BHCB, NY, 940271, (NY00940271), RB, MO, CEN, Minas Gerais
T.B. Cavalcanti, 3142, MO, CEN, Bahia
M.M. Arbo, 5640, SPF, CTES, Bahia

C.F.P. Martius, s.n., G, M, Minas Gerais, **Typus**
W. Ganev, 3401, Bahia

Diplusodon ericoides Lourteig

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** 0.5 the 4.0 mm; **venation** hyphodromous; **base** obtuse; **margin** flat; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 10–30 cm tall, delicate, erect, unbranched, sometimes slightly branched at inflorescence, sometimes caespitose, with a xylopodium, glabrous, not dark-brown when dry. Upper branches subquadrangular, unwinged, very slightly pubescent, internodes 5–6 cm long. Leaves decussate, erect, sometimes imbricate, sessile; blades 4–8.5 × 0.8–1.5 mm, slightly glaucous, coriaceous, not discolorous, hyphodromous, linear-lanceolate, base obtuse, apex acute, margin plane; secondary veins 1 on each side of midvein, inconspicuous; domatia absent. Synflorescence frondose, botryum to diplobotryum type, congested; accessory branches absent, principal florescence caducous, paraclades 2–2.5 cm long; bract similar in shape and size to the vegetative leaves; flowers subsessile, hypopodium absent, epipodium ca. 1 mm long; prophylls 4.5–5.5 × 1.2–1.5 mm, surpassing the apex of the floral tube, linear-lanceolate, unkeeled, base obtuse, apex acute, margin plane; floral tube 4–4.5 mm long, oblong; sepals 1.5–2 mm long, triangular, not caudate, not deflexed; epicalyx segments 2.5–2.8 mm long, linear-triangular, dorsiventrally compressed, erect, shorter than the sepals; corolla 1.5–2.5 cm in diam., rose-magenta, petals 11–11.5 × 4.8–5 mm, obovate, apex obtuse; stamens 12, free portion of the filaments 4–5 mm long, dark rose, exserted; ovary ca. 1.3 × 1.5 mm, orbicular, glabrous, style 5–7 mm long, dark rose, stigma green, ovules 12–15. Capsule ca. 4.3 × 2 mm, globose to oblong, glabrous; seeds 4–5, 1.5–2 × 0.9–1.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2721, MO, CEN, Goiás
W.R. Anderson, 7949, P, UB, NY, MO, MBM, Goiás, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon fastigiatus Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/subcordate; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Shrubs ca. 0.4 m tall, erect, branched, not dark-brown when dry. Upper branches subquadrangular, unwinged, pubescent, internodes 0.5–1.2 cm long. Leaves decussate, not imbricate, spreading, subsessile; petioles ca. 1 mm long; blades 6–10 × 5–7 mm, coriaceous, not discolorous, acrodromous-basal-supranumerary, ovate-lanceolate to elliptic-lanceolate, base obtuse to subcordate, apex acute, margin revolute; blades covered by fine, short indumentum; secondary veins 3 on each side of the midvein, prominent on the abaxial surface; domatia present. Synflorescence frondose, diplobotryum to triplobotryum type; accessory branches absent, principal florescence ca. 10 cm long, botryum type, paraclades 3–6 cm long, virgate; bracts ovate to oblong, 5–8 × 2.5–4 mm; flowers pedicellate, hypopodium 1–1.5 mm long, epipodium 0.5–1 mm long; prophylls 5–6 × ca. 4 mm, reaching the middle of the tube or slightly more, ovate, unkeeled, base acute, apex obtuse, margin plane, covered with fine trichomes; floral tube 5–5.5 mm long, funnel-shaped, covered with short and fine trichomes; sepals ca. 4 mm long, triangular, not caudate, not deflexed, covered with fine trichomes; epicalyx segments ca. 2 mm long, cylindrical, spreading to slightly deflexed, shorter than the sepals; corolla ca. 2.5 cm in diam., rose, petals ca. 14 × ca. 6 mm, obovate, apex obtuse; stamens 18, free portion of the filaments ca. 6.5 mm long, slightly exserted; ovary ca. 1.5 × ca. 2 mm, oboval, glabrous, style ca. 12 mm long, ovules ca. 14. Capsules ca. 3.5 × 4 mm, globose, glabrous; seeds 2.9–3.1 × 1.5–1.7 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

A.M. Giulietti, 588, UB, P, Goiás, **Typus**

Diplusodon floribundus Pohl

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/cordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs (0.2–) 0.5–1.5 m tall, erect, slightly branched, glabrescent, not dark-brown when dry. Upper branches cylindrical, unwinged, hirsute, with a dense indumentum of long, white trichomes, sometimes pubescent, rarely glabrous, internodes 1–2 cm long. Leaves decussate, not imbricate, spreading to suberect, sessile; blades 10–60 × 10–32 mm, coriaceous, not discolorous, acrodromous-basal-typical to supranumerary, ovate-lanceolate, base obtuse to slightly cordate, apex obtuse or sometimes slightly acuminate, margin plane, sometimes thickened or ciliate, hirsute, glabrescent, blade canescent mostly near the region of the veins, covered by dense, long, white, abundant trichomes, sometimes completely glabrous; secondary veins 3–4 on each side, departing from the base of the midvein, 1 along the midvein, prominent on the abaxial face, less evident on the adaxial face; domatia present. Synflorescence frondose, botryum to triplobotryum type, congested; accessory branches absent, principal florescence short, generally caducous, paraclades 5–20 cm long; bracts similar to the vegetative leaves in shape, reduced in size toward the apex of the branches; flowers sessile to subsessile, hypopodium 0.5–1 mm long, epipodium absent; prophylls 8–9 × 4–5 mm, surpassing the apex of the floral tube, lanceolate, unkeeled, base obtuse, apex acute to obtuse, margin plane, with long trichomes; floral tube 7–7.5 mm long, funnel-shaped, with dense indumentum of long trichomes; sepals 5.5–7 mm long, triangular, not caudate, not deflexed, pilose; epicalyx segments 7–10 mm long, cylindrical, narrow, erect, surpassing the sepals, with spreading trichomes shorter than on the rest of the plant; corolla 4–4.5 cm in diam., rose, petals 18–20 × 9–10 mm, obovate, apex obtuse; stamens (16–)18, free portion of the filaments 7–9 mm long, exserted; ovary 1.5–2 × ca. 3 mm, rounded, glabrous, style 10–12 mm long, ovules 28–30. Capsules ca. 4 × 3 mm, globose to obovate-depressed, glabrous; seeds ca. 35, 2–2.5 × 1.8–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

J.B.E. Pohl, 1885, K, (K000528537), K, (K000528536), W, G, Goiás, **Typus**
T.B. Cavalcanti, 3728, W, K, G, Goiás
S.P.C. Silva, 452, NY, 923518, (NY00923518), MO, CEN, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon glaucescens DC.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** cordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 7 to 47 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.2–2 m tall, erect, branched, glabrous, not dark-brown when dry. Branches lax, cylindrical, the upper ones subquadrangular, unwinged, yellow to reddish, internodes 1–2.5 cm long. Leaves decussate, not imbricate, spreading, sessile, 8–22 × 8–26 mm, glaucous, coriaceous, not discolorous, acrodromous basal typical, ovate-depressed to orbicular-reniform, base cordate, apex rounded, acuminate, margin plane, reddish to wine-colored; secondary veins 3–6, departing from the base of the midvein, rarely one vein departing from a higher level of the midvein; domatia absent. Synflorescence frondose, diplobotryum to pleiobotryum type, congested; accessory branches absent, principal florescence 9.5–13 cm long, botryum type, paraclades 4–20 mm long; bracts 8–12 × 7–12, ovate-lanceolate to orbicular-reniform; flowers pedicellate, hypopodium 4–6.5 mm long, 8–11 mm long in fruit, epipodium ca. 1 mm long; prophylls 5–6 × 4–5 mm, reaching the apex of the floral tube or slightly less, ovate, unkeeled, base and apex obtuse, margin plane; floral tube 4–5 mm long, in fruit, including the sepals, 11–13 × 7–8 mm, greenish with parts wine-colored, dark-brown in fruit, slightly nitid, funnel-shaped; sepals 3.5–4 mm long, triangular, not caudate, not deflexed; epicalyx segments 3.3–3.5 mm long, cylindrical-triangular, erect, reaching the height of the sepals; corolla ca. 3.5 cm in diam., rose-magenta, petals ca. 17 × 12 mm, obovate, apex obtuse; stamens 12, free portion of the filaments 7–8 mm long, not surpassing the sepals; ovary 1.5 × 2.2 mm, broadly obovate-depressed, glabrous, style ca. 18 mm long, ovules 19–22. Capsules 3.8–4 × 3.9–4 mm, oblong, glabrous; seeds 11–13, 2–2.5 × 1.5–2 mm. n=15 (Graham, 1985).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2286, CEN, MO, NY, 941149, (NY00941149), Minas Gerais
C.F.P. Martius, 1350, G, M, Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon glaucescens* DC.

Diplusodon glaziovii Koehne

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** hyphodromous; **base** acute; **margin** flat; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 6.

ADDITIONAL DESCRIPTION

Shrubs 1–1.5 m tall, erect, much-branched, glabrous, dark-brown when dry. Branches congested, the upper ones subquadrangular, unwinged, intenodes ca. 1 cm long. Leaves decussate, not imbricate, erect, subsessile; petiole ca. 1 mm long; blades 6–12 × 1.5–3.5 mm, coriaceous, slightly discolorous, not glaucous, hyphodromous, narrowly-obovate to narrowly elliptic, concave, base acute, apex obtuse, margin plane, lateral veins absent, adaxial surface dark-green, abaxial olive green. Synflorescence frondose, diplobotryum to triplobotryum type; accessory branches absent, principal florescence botryum type, ca. 4 cm long, caducous, paraclades 8–17 mm long; flowers pedicellate, hypopodium 1.5–2.5 mm long, epipodium 0–0.5 mm long, prophylls 5.5–10 × 2.7–3 mm, reaching almost to the apex of the floral tube, obovate, slightly keeled, base acute, apex obtuse, margin plane; floral tube ca. 5 mm long, green, funnel-shaped; sepals 3–4 mm long, wine-colored, triangular, slightly caudate, not deflexed, not ciliate; epicalyx segments 4–5 mm long, cylindrical, slightly dorsiventrally compressed on the upper third, erect, surpassing the sepals ca. 2 mm; corolla 1.5–3 cm in diam., bright rose, petals 12–13 × ca. 7 mm, elliptic, apex obtuse; stamens 6, free portion of the filaments 6–7.7 mm long, slightly exserted, surpassing the sepals ca. 0.5 mm; ovary 1.8–2.2 × 2–3 mm, rhombic, glabrous, style ca. 14 cm long, ovules 8–9. Immature capsules globose, glabrous, seeds ca. 3, immature.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A.F.M. Glaziou, 19174a, K, P, K, (K000528577), RB, 41739, (RB00540669), Minas Gerais, **Typus**
T.B. Cavalcanti, 2305, P, K, Minas Gerais
T.B. Cavalcanti, 2305, MO, CEN, NY, Minas Gerais

Diplusodon glocimarii T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** acute/attenuate/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1 m tall, erect, slightly branched, with a xylopodium, not dark-brown when dry. Upper branches strongly quadrangulate, rust-colored to yellow, winged, wing 0.3–0.6 mm wide, pubescent to short-villous, indumentum white. Leaves decussate, imbricate, erect, petiolate; petioles (1.5–) 2.5–3.5 mm long; blades 20–42 × (2.5–4) 5–18 mm, silvery to glaucous, coriaceous, not discolorous, acrodromous-basal, elliptic to ovate-elliptic, sometimes narrow-lanceolate, base acute to rarely obtuse or attenuate, apex acute, margin plane to rarely subrevolute, blade soft to the touch, covered by a short-villous indumentum on both surfaces, abaxial surface usually silvery or white, varying to an indumentum composed of dense, short, inconspicuous trichomes, without the silvery aspect; secondary veins 3–4 on each side of the midvein, departing from the base of the midvein, 1 on each side of the midvein when leaves are narrow-lanceolate, sulcate on the abaxial surface; domatia absent. Synflorescence frondose to frondose-bracteose, diplobotryum to triplobotryum type, congested; accessory branches absent, principal florescence 20–30 cm long, paraclades 15–25 cm long; bracts 15–25 × 5–10 mm, similar to the vegetative leaves but smaller in size; flowers pedicellate, hypopodium 1.5–2 mm long, epipodium 1–1.5 mm long; prophylls 10–11 × 3–3.5 mm, surpassing the sepals 1–2 mm, elliptic, unkeeled, base and apex acute, margin plane, short-villous or covered by indumentum of small, inconspicuous trichomes; floral tube 8–9 mm long, yellowish brown-golden in fruit, oblong, short-villous or covered by indumentum of small, inconspicuous trichomes, silvery to whitish; sepals 2.5–3.2 mm long, triangular, not caudate, not deflexed, short-villous or with inconspicuous indumentum; epicalyx segments 4–4.5 mm long, narrowly lanceolate, dorsiventrally compressed, spreading when fresh, suberect when dry, surpassing the sepals, with short, spreading or small, inconspicuous trichomes; corolla 2.5–3 cm in diam., lilac, petals 15–25 × 7–15 mm, elliptic to obovate, apex obtuse; stamens 12, free portion of the filament 12–14 mm long, red, exserted 5–6 mm; ovary 2–2.5 × 3–3.5 mm, obovate-depressed, glabrous, style ca. 20 mm long, wine-colored, stigma green, prominently capitate, ovules (15–)33–38. Immature capsules oblong to oboval, glabrous; seeds 8–26, 2.2–2.8 × 1.8–2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

R. Romero, 7000, Minas Gerais
T.B. Cavalcanti, 2513, NY, 940294, (NY00940294), RB, MO, CEN, Minas Gerais

T.B. Cavalcanti, 2521, MBM, 304433, (MBM0304433), CEN, 35408, (CEN0035408), BHCB, 60281, (BHCB000199), MO, RB, NY, 941158, (NY00941158), NY, 688094, (NY00688094), CEN, Minas Gerais, **Typus**
D. Sasaki, 234, SPF, São Paulo

FIELD IMAGES / ILLUSTRATIONS

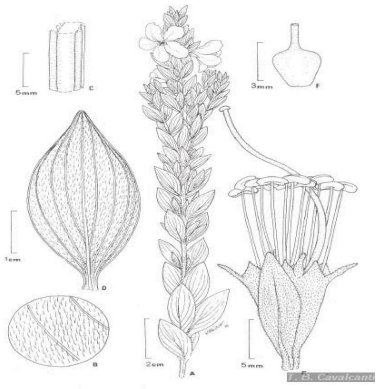


Figure 1: *Diplusodon glocimarii* T.B.Cavalc.

Diplusodon gracilis Koehne

This treatment is composed of the following taxa: *Diplusodon gracilis*, .

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** hyphodromous; **base** acute/attenuate; **margin** flat; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower/half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12/18.

ADDITIONAL DESCRIPTION

Shrubs 0.5–3 m tall, erect, much-branched, not dark-brown when dry. Upper branches cylindrical, unwinged, delicate, finely pubescent, becoming glabrous in the upper parts, internodes 0.5–2 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1–2 mm long; blades 8–12(–25) × 3–8(–12) mm, chartaceous to membranaceous, not discolorous, hyphodromous, finely pubescent, becoming glabrous, sometimes slightly silvery, narrowly oblong, base acute to attenuate, apex obtuse, margin plane, blades slightly punctate; lateral veins absent; domatia absent. Synflorescence frondose, of the pleiobrotry type, lax; accessory branches absent, principal florescence caducous, paraclades 4–12 cm long, bracts similar to the vegetative leaves in shape and size, glabrous or glabrescent; flowers pedicellate, hypopodium 2.5–3 mm long, epipodium 0.5–2 mm long, finely pubescent; prophylls 2.5–3.9 × 1–1.1 mm long, reaching to the middle of the floral tube or surpassing the apex, narrowly oblong to obovate, unkeeled, base acute or attenuatte, apex obtuse, margin plane; floral tube 3–4 mm long, green, funnel-shaped, glabrous to finely pubescent; sepals 1.5–2.5 mm long, triangular, slightly caudate, not deflexed, finely pubescent, not ciliate; epicalyx segments 2–3 mm long, narrow cylindrical, suberect, the same length as the sepals, sometimes longer, finely pubescent; corolla 1.5–2 cm in diam., rose, petals 6.7 × 5–5.5 mm, obovate, apex obtuse; stamens 12–18, free portion of the filaments 5.5–6 mm long, slightly exserted; ovary 1.5–2.2 × 1.8–2.2 mm, rounded, glabrous, style 6.5–10 mm long, ovules 7–10. Capsules 3–4 × 3–3.5 mm, oblong, slightly narrow at the base, glabrous; seeds 3–6, 2.4–3.5 × 1.9–2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3243, NY, SPF, CEN
G. Gardner, 3155a, G, G00227373, (G00227373), K, (K000528574), K, (K000528572), W, P, NY, G, Tocantins, **Typus**
T.B. Cavalcanti, 3489, MO, CEN, Tocantins

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon grahamae T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** acute; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3; **stamen** 15.

ADDITIONAL DESCRIPTION

Shrubs 0.2–1 m tall, erect, branched, sometimes caespitose, with an elongated xylopodium, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, canescent, pubescent to hirsute, with white tricomes; internodes 0.1–1 cm long. Leaves decussate to verticillate, not imbricate, suberect, subcoriaceous, subsessile; petioles 0.5–1 mm long; blades 5–20 × 1–3.5 mm, slightly glaucous, sometimes discolorous, eucamptodromous to hyphodromous, narrowly elliptic to linear, base acute to attenuate, apex obtuse, margin subrevolute to revolute, adaxial and abaxial canescent, with sericeous indumentum or with sparse short trichomes, sometimes inconspicuous; secondary veins 1 on each side of the midvein, prominent; domatia present sometimes inconspicuous. Synflorescence frondose, botryum to diplobotryum type; accessory branches absent, principal florescence 8–20 cm long, paraclades 2–15 cm long; bracts similar to the vegetative leaves; flowers subsessile, hypopodium 0.8–1 mm long, epipodium 0–0.5 mm long; prophylls 2.5–4.5 × 1.2-1.6 mm, reaching the middle to the apex of the floral tube or sometimes surpassing the floral tube, obovate to lanceolate, unkeeled, base acute, apex obtuse, margin plane to involute; floral tube 3.5–6 mm long, when fresh green at the base, winish to the apex, funnel-shaped to oblong, pubescent, covered by short trichomes appressed and ascendent; sepals 2–2.5 mm long, triangular, not caudate, not deflexed, pubescent to sparse-sericeous, not ciliate; epicalyx segments 0.8–2 mm long, cylindrical, spreading to slightly deflexed, shorter than the sepals, pubescent to hirtellous to sparsely sericeous, sometimes canescent; corolla 2.5–3 cm in diam., rose to rose-magenta, petals 12–13 × 6–8 mm, elliptic to narrowly obovate, base acute to obtuse, apex obtuse; stamens 12–18, free portion of the filaments 5–8 mm long, surpassing the sepals 2 mm; ovary 2.5–2.8 × 2–2.5 mm, obovate-depressed to obovate-cordate, glabrous, style 7–12 mm long, ovules 10–18. Capsules 3–4.5 × 3.1–3.5 mm, obovate to oblong, glabrous; seeds 8–15, 1.9–2.1 × 1.5–1.9 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

G. Hatschbach, 59326, MBM, Goiás, **Typus**
G. Hatschbach, 70676, MBM, Goiás

FIELD IMAGES / ILLUSTRATIONS

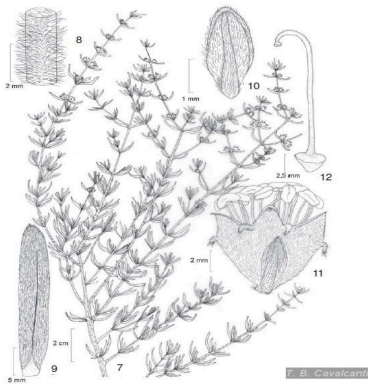


Figure 1: *Diplusodon grahamae* T.B.Cavalc.

REFERENCE

Cavalcanti, T.B. 2007. Novas espécies em Diplusodon Pohl (Lythraceae) do Planalto Central e Minas Gerais, Brasil. Acta Botanica Brasilica 21: 1–10.

Diplusodon hatschbachii Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/cordate; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 6/15.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1.2 m tall, erect, unbranched to slightly branched, with a xylopodium, canescent, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, canescent, with abundant, thin, long trichomes with a thick base intermixed with very short trichomes, internodes 1.5–2 cm long. Leaves decussate, not imbricate, erect, sessile; blades 10–25 × 7–12 mm, coriaceous, not discolorous, acrodromous-basal-supranumerary, oblong-lanceolate, base obtuse to cordate, apex acute, margin plane to slightly revolute, blades slightly concave, bearing sparse thin, long trichomes concentrated on the veins and margins; secondary veins 3–5 on each side, 1–2 departing near the base of the midvein, the secondary and tertiary veins prominent on the adaxial surface, slightly less on the abaxial; domatia present. Synflorescence frondose, botryum to diplobotryum type, congested; accessory branches absent, principal florescence 2–7 cm long, botryum type, paraclades 3–8 cm long; bracts similar to the vegetative leaves, diminishing in size toward the apex of the branches; flowers pedicellate, hypopodium 1.5–2 mm long, epipodium 0.5–1 mm long, longer in fruit; prophylls 7–8 mm long, reaching the apex of the floral tube, elliptic, unkeeled, densely covered by white trichomes shorter than those of the leaves; floral tube 6–9 mm long, oblong, densely covered by white secretory, bulbous-based trichomes and in fruit with a constriction in the middle third and acute and orange base; sepals 2.5–3 mm long, triangular, not caudate, not deflexed, ciliate, with secretory, bulbous-based trichomes, sometimes turning orange, mainly on the fruit; epicalyx segments 3.5–4.5 mm long, cylindrical to slightly dorsiventrally compressed, erect, the same size as or surpassing the sepals, ciliate, with the same trichomes as the sepals; corolla ca. 3.5 cm in diam., rose to pale lilac, petals 10–13 × 12–14 mm, obovate, apex obtuse; stamens 10–15, free portion of the filaments 7–8 mm long; ovary glabrous, style 11–18 mm long, ovules 15–42. Capsules 2.5–3.5 × 3–3.5 mm, oblong, glabrous; seeds 9–18, 1.8–2 × 1.5–2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

E.P. Heringer, 2310, NY, 923848, (NY00923848), IBGE, Goiás
T.B. Cavalcanti, 3757, CEN, Goiás
G. Hatschbach, 38567, P, MO, MBM, MBM, 46714, (MBM0046714), Goiás, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon helianthemifolius DC.

This treatment is composed of the following taxa: *Diplusodon helianthemifolius*, *Diplusodon helianthemifolius var. helianthemifolius*, *Diplusodon helianthemifolius var. pemphoides*.

Has as synonym
heterotypic *Diplusodon velutinus* Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** sessile/3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous/acrodromous; **base** attenuate/cordate; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 0.4–3 m tall, erect, much-branched, with a xylopodium, dark-brown when dry. Upper branches, whitish to rust-colored, quadrangular to rarely cylindrical, unwinged or with a narrow wing, puberulous to villous, with stellate white trichomes, or trichomes mixed with simple, long or stellate trichomes with long arms, internodes 0.8–1.5 cm long. Leaves decussate, not imbricate, spreading to deflexed or suberect, sessile, subsessile to petiolate; petioles (when present), to 5 mm long; blades 10–30 × 5–36 mm, coriaceous, strongly discolorous, eucamptodromous to acrodromous-basal-supranumerary, elliptic to oblong, ovate to ovate-lanceolate, base attenuate or obtuse to cordate, apex acute, slightly acuminate, margin revolute, adaxial surface brownish-green to olive-green, sometimes dark-brown, slightly verrucose or minutely pilose, or with stellate trichomes with short arms that form very prominent clumps of trichomes, abaxial surface canescent, the stellate trichomes forming congested tufts, conferring a villous aspect to the surface, sometimes with mixed long and simple or long-armed stellate trichomes; secondary veins 2–3 along the midvein, rust-colored on the abaxial surface, barely apparent or prominent, sulcate on the adaxial surface; domatia absent. Synflorescence frondose, pleiobotryum spiciform to diplobotryum spiciform type, congested; accessory branches absent, principal florescence 4–13.5 cm long, botryum spiciform type, paraclades 4–18.5 cm long; bracts 6–12 × 1.5–3 mm, narrowly elliptic to oblong-lanceolate, with revolute margins; flowers sessile to subsessile, hypopodium absent, epipodium ca. 1 mm long; prophylls 3–4 × 1–2.5 mm, surpassing the middle of the floral tube or reaching the apex of the floral tube, ovate-oblong or ovate to obovate, unkeeled, base acute, apex acute to obtuse, margin plane, ciliate; floral tube 4–5.5 mm long, larger in fruit, measured with the sepals 6.5–7 × 5–6 mm, funnel-shaped, minutely pilose; sepals 1.5–2 mm long, wine-colored, not caudate, not deflexed, ciliate or not; epicalyx segments 1.5–2 mm long, cylindrical or subulate, spreading to deflexed, with long cilia at the apex or not ciliate; corolla 2.4–3 cm in diam., magenta, purple to reddish, petals 7–13 × 6–8 mm, obovate or oblong-elliptic, base obtuse, apex acute; stamens 12, free portion of the filaments 6–7 mm long, exserted, surpassing the sepals ca. 1 mm; ovary 1–2 × 1.5–1.8 mm, rhombic, glabrous, style 9–15 mm long, ovules 12–14. Capsules 4–5 mm × 3.5–4.5 mm, globose, glabrous; seeds 8–14, 2.5–3.1 × 2–2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution

Confirmed ocurrences
Northeast (Bahia, Maranhão)
Central-west (Goiás)
Southeast (Minas Gerais)

IDENTIFICATION KEY

1. Leaves eucamptodromous, petiolate, petioles 2.5–5 mm long, elliptic to oblong, base acute to attenuate. Sepals ciliate, epicalyx segments with long cilia at the apex ……. *D. helianthemifolius* var. *helianthemifolius*
1. Leaves acrodromous-basal-supranumerary, sessile to subsessile, petioles 0–1 mm long, ovate or ovate-lanceolate to narrowly lanceolate, base obtuse to cordate.
Sepals rarely ciliate, when ciliate, the cilia very short, epicalyx segments not ciliate
……..... *D. helianthemifolius* var. *pemphoides*

HERBARIUM MATERIAL

C.F.P. Martius, 1338, G, M, Minas Gerais
H.S. Irwin, 14853, UB, NY, Bahia
H.S. Irwin, 29262, NY, UB, Goiás
T.B. Cavalcanti, 252, G, M, Minas Gerais
G. Gardner, 4568, K, (K000528543), Minas Gerais
H.S. Irwin, 28627, RB, 159462, (RB00209387), Minas Gerais
B.M.T. Walter, 4421, CEN, Maranhão
R.M. Silva, 727, RB, 345378, (RB00209432), CEN, CTES, SPF, P, Minas Gerais

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. 2004. Flora de Grão Mogol, Minas Gerais: Lythraceae In: Bol. Bot. Univ. São Paulo. , v.22, 283-290.
Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.
Cavalcanti, T. B. 1994. Lythraceae. In B. Stannard. (Org.). Flora do Pico das Almas, Bahia. 1ed. Londres, Inglaterra: Royal Botanic Gardens, p. 411-416.

Diplusodon helianthemifolius DC. var. *helianthemifolius*

DESCRIPTION

Shrubs 1–3 m tall; internodes 1–1.5 cm long. Leaves 10–36 mm wide, suberect, elliptic to oblong, base acute to attenuate, petioles 2.5–5 mm long. Bracts 8–12 mm long, narrowly elliptic; flowers sessile, hypopodium and absent epipodium; prophylls 1–1.5 mm wide; sepals ciliate; epicalyx segments with long cilia at the apex; ovules ca. 12.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2296, NY, CEN, Minas Gerais
T.B. Cavalcanti, 252, HB, K, CEN, Minas Gerais
H.L. Wagner, CFCR 9325, SPF, K, CEN, Minas Gerais
C.F.P. Martius, 1338, G, M, Minas Gerais, **Typus**

Diplusodon helianthemifolius var. *pemphoides* (DC.) Koehne

Has as synonym
basionym *Diplusodon pemphoides* De Candolle
heterotypic *Diplusodon alutaceus* A.St.-Hil.

DESCRIPTION

Shrubs 0.4–1 m tall; internodes 0.8–1 cm long. Leaves 5–12 mm wide, spreading to deflexed, ovate to ovate-lanceolate to narrowly ovate-lanceolate, base obtuse to cordate, sessile to subsessile, petiole (when present) to 1 mm long. Bracts 6–7 mm long, oblong-lanceolate; flowers subsessile, hypopodium absent, epipodium ca. 1 mm long; prophylls ca. 2.5 mm wide; sepals rarely ciliate, when ciliate, the cilia minute; epicalyx segments not ciliate; ovules 14.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Maranhão)
Central-west (Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

R.F. Vieira, 1165, NY, MO, CEN, Bahia
T.B. Cavalcanti, 230, SPF, RB, 319156, (RB00209450), K, CEN, Minas Gerais
G.P. Silva, 4098, CEN, Maranhão
H.S. Irwin, 19262, NY, UB, Goiás
C.F.P. Martius, s.n., G, M, Minas Gerais, **Typus**
T.B. Cavalcanti, 2287, NY, MO, CEN, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon helianthemifolius var. pemphoides* (DC.) Koehne



Figure 2: *Diplusodon helianthemifolius var. pemphoides* (DC.) Koehne

Diplusodon heringeri Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** acrodromous; **base** obtuse; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Shrubs 0.5–3 m tall, erect, much-branched, canescent, not dark-brown when dry. Upper branches cylindrical, unwinged, hirsute to hispid, internodes 0.5–1 cm long. Leaves subsessile; petioles 0.5–1 mm long; blades 6–10(–17) × 4–9 mm, decussate, not imbricate, suberect, coriaceous, not discolorous, acrodromous-basal-supranumerary, ovate to elliptic, base obtuse, apex obtuse, margin revolute, adaxial surface hirsute, verrucose, abaxial surface hirsute, covered by white, long trichomes; secondary veins 3 on each side along the midvein, sometimes 2 departing from the base of the midvein, prominent domatia evident. Synflorescence frondose, pleiobotryum type, congested; accessory branches absent, principal florescence truncate, paraclades 5–10 cm long; bracts similar to the vegetative leaves in shape and size, only a little smaller; flowers sessile, in congested coflorescences at the apex of the branches; prophylls 3–4.5 mm long, reaching the apex of the floral tube or slightly less, obovate to elliptic, unkeeled, base acute, apex obtuse, margin plane; floral tube 4–4.5 mm long, yellow, funnel-shaped, hirsute; sepals 2–2.5 mm long, triangular, not caudate, not deflexed, ciliate, with long trichomes; epicalyx segments 2.5–5(–6) mm long, narrowly lanceolate to cylindrical, erect, the same size as the sepals, rarely longer, with long trichomes spreading, white and sparse; corolla 2–2.5 cm in diam., bright rose, petals 9–11 × 5–6 mm, elliptic to obovate, apex obtuse; stamens (17–)18, free portion of the filaments 7–9 mm long, slightly exserted; ovary 1.5–2 × 2–2.9 mm, rounded, glabrous, style 9–12 mm long, ovules 12–14. Capsules 3.4–3.5 × 2.9–3.5 mm, globose, glabrous; seeds 5–7, ca. 2 × 1.5–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3539, P, MBM, Goiás
G. Hatschbach, 36895, MBM, 34602, (MBM0034602), P, MBM, Goiás, **Typus**
T.B. Cavalcanti, 2205, MO, CEN, NY, 1093214, (NY01093214), Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon hexander DC.

This treatment is composed of the following taxa: *Diplusodon hexander*, .

Has as synonym
heterotypic *Diplusodon angustifolius* Mart. ex DC.
heterotypic *Diplusodon hexander* f. *rm. angusti* DC.

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** hyphodromous; **base** acute/attenuate; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 6.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1.7 m tall, erect, much-branched, without a xylopodium, glabrous, usually dark-brown when dry. Upper branches subquadrangular to quadrangular, chestnut brown, unwinged, internodes ca. 1 cm long. Leaves decussate to sometimes verticillate, not imbricate, erect, subsessile to petiolate; petioles 1–1.5 mm long; blades 6–15 × 1–4 mm, glaucous, coriaceous to slightly fleshy, not discolorous, hyphodromous, linear to linear-spathulate or elliptic-linear, concave, base acute to slightly attenuate, apex acute to obtuse, margin revolute to the midvein, sometimes subrevolute, adaxial surface dark-green, glaucous, midvein very sulcate, abaxial surface olive-green, with a very prominent midvein, lateral veins absent; domatia absent. Synflorescence frondose, diplobotryum to pleiobotryum type, lax; accessory branches absent, principal florescence 4–10 cm long, botryum type, sometimes caducous, paraclades 2.5–18 cm long; bracts similar to the vegetative leaves in shape and size; flowers pedicellate, hypopodium 1.5–3 mm long, epipodium 0–2 mm long; prophylls 5–6 × 1.5–2.5 mm, reaching or exceeding the apex of floral tube ca. 1.5 mm, obovate to widely obovate, elliptic-lanceolate to spathulate, unkeeled, base and apex acute, margin plane; floral tube 4–6 mm long, greenish, funnel-shaped; sepals 1.5–2 mm long, larger in fruit, 4.5–5.5 mm long, wine-colored, triangular, not caudate, not deflexed; epicalyx segments 2–5 mm long, cylindrical to dorsiventrally compressed, erect, longer than the sepals; corolla 1.5–3 cm in diam., rose-magenta to reddish, petals 11–13 × 7–9 mm, obovate-elliptic to oblong, apex obtuse; stamens 6, free portion of the filaments 4.5–6 mm long, exserted, surpassing the sepals ca. 1 mm; ovary 1.5–1.8 × 2 mm, obconic, glabrous, style 9–14 mm long, ovules 8–18. Capsules 4–4.5 × 3.5–4 mm, globose, glabrous; seeds 8–10, 2.5–2.8 × 2.1–2.5 mm. n= 15 (Graham, 1992).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

C.F.P. Martius, s.n., M, G, Minas Gerais, **Typus**

C.A.W. Schwacke, 8262, OUPR, RB, 74324, (RB00284296), Minas Gerais
T.B. Cavalcanti, 250, NY, 923807, (NY00923807), CEN, K, SPF, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon hexander* DC.

Diplusodon hirsutus (Cham. & Schltdl.) A.DC.

Has as synonym
basionym *Friedlandia hirsuta* Cham. et Schlecht
heterotypic *Diplusodon serpyllifolius* Mart. ex DC.
heterotypic *Diplusodon smithii* Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** eucamptodromous/acrodromous; **base** acute/attenuate/obtuse; **margin** subrevolute/revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 12/15.

ADDITIONAL DESCRIPTION

Shrubs 0.5–3 m tall, erect, much-branched, usually dark-green to dark-brown when dry. Upper branches subquadrangular to quadrangular, unwinged, generally canescent, sometimes rust-canescent, densely pilose to hirtellous, internodes 0.6–1.5 cm long. Leaves decussate, not imbricate, spreading to suberect, petiolate; petioles 1–6 mm long; blades 8–35 × 5–25 mm, chartaceous, not discolorous, eucamptodromous to acrodromous-basal-supranumerary, elliptic or ovate to orbicular, base acute to obtuse, apex obtuse to acute or sometimes acuminate, margin slightly revolute to subrevolute, glabrescent, adaxial surface pilose, verrucose, abaxial surface densely hirsute, canescent principally on the veins; secondary veins 3–4 on each side, departing along the midvein or departing from the base of the midvein; domatia present. Synflorescence frondose, pleiobotryum type, congested; accessory branches absent, principal florescence of the botryum spiciform type, paraclades 5–20 cm long; bracts similar to the vegetative leaves, but smaller; flowers sessile to subsessile, hypopodium 0–1 mm long, epipodium 0–0.5 mm long; prophylls 2.5–4 mm long, reaching the middle or apex of the floral tube, obovate, oblong to elliptic, keeled, base acute, apex obtuse, rarely acute, margin plane, densely covered with white trichomes; floral tube 2–3 mm long, funnel-shaped, densely covered with white tricomes to less pilose; sepals 2–3 mm long, triangular, not caudate, not deflexed, densely covered with white tricomes to less pilose; epicalyx segments 0.5–3 mm long, lanceolate, spreading to slightly deflexed, shorter than the sepals, with the same indumentum as the sepals; corolla 3–3.5 cm in diam., clear rose, lilac or purple to reddish, petals 12–15 × 7–8 mm, obovate, apex obtuse; stamens 12–15, free portion of the filaments 7–10 mm long, exserted; ovary 1.7–2 × 2–2.5 mm, rounded, glabrous, style 14–18 mm long, stigma green, ovules 13–28. Capsule 4.5–5 × 4.4.5 mm, globose, glabrous; seeds 7–25, 2–3 × 1.8–2 mm. 2n=30 (Graham & Cavalcanti, 2001).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2322, SP, CEN, Minas Gerais
F. Sellow, s.n., K, (K000528548), W, P, Minas Gerais
A.B. Joly, CFSC 52, SP, CEN, Minas Gerais
F. Sellow, 2053, K, (K000528547), Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon hirsutus* (Cham. & Schltdl.) A.DC.

Diplusodon imbricatus Pohl

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** cordate/subcordate/amplexicaul; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 12/18.

ADDITIONAL DESCRIPTION

Subshrubs 0.5–2 m tall, erect, branched, stem brownish to redish, glabrous, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, internodes 3–5 cm long. Leaves not imbricate, decussate, spreading to suberect, sessile to amplexicaulous; blades 25–65 × 12–45 mm, slightly glaucous, chartaceous, not discolorous, acrodromous-basal-supranumerary, with inconspicuous reticulation, lanceolate to ovate-lanceolate, base cordate or subcordate to amplexicaulous, apex acute, margin plane, marginate-yellow; secondary veins 6–10 on each side, 3–6 departing from the base and 3–4 departing along the midvein, inconspicuous; domatia absent. Synflorescence frondose-bracteose, diplobotryum type, congested; accessory branches absent, principal florescence 15–20 cm long, botryum type, paraclades 10–20 mm long; bracts 10–20 × 5–10 mm, lanceolate to ovate-lanceolate, margin plane, marginate-yellow; flowers pedicellate, hypopodium 2–4 mm long, persistent, epipodium 0–0.5 mm long; prophylls 3.5–4 × 2.8–3 mm, reaching the middle of the floral tube, rhombic to broadly elliptic, unkeeled, base acute to obtuse, apex obtuse, margin plane; floral tube 4–5.5 mm long, oblong; sepals 2.5–3 mm long, triangular, not caudate, not deflexed; epicalyx segments absent or 0.5–1 mm long, spreading, shorter than the sepals; corolla 3–4 cm diam., lilac to rose, petals 12–15 × 6.6–8 mm, obovate, apex obtuse; stamens 12–18, free portion of the filaments 7.5–8.5 mm long, exserted, surpassing the sepals ca. 1 mm; ovary 2–2.2 × 1.7–3.5 mm, rhombic, glabrous, style 14–16 mm long, ovules 16–20. Capsule 5–6 × 5–6.5 mm, chestnut brown when mature, globose, glabrous; seeds 15–17, 2–3 × 2–3.8 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3524, NY, CEN, MO, Goiás
J.B.E. Pohl, 1988, K, (K000528527), K, (K000528528), W, G, Tocantins, **Typus**
T.B. Cavalcanti, 2228, NY, 923846, (NY00923846), MO, CEN, Tocantins

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon incanus Gardner

This treatment is composed of the following taxa: *Diplusodon incanus*, .

Has as synonym
heterotypic *Diplusodon incanus* var. *hirtellus* Koehne
heterotypic *Diplusodon incanus* var. *serpyllum* Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** deflexed; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 1.2–2.5 m tall, erect, much-branched, usually slightly canescent, heterogeneous in leaf size, not dark-brown when dry, glabrescent. Upper branches cylindrical, unwinged, densely pilose or villous, internodes 0.4–0.8 cm long. Leaves decussate, not imbricate, spreading to suberect, petiolate; petioles 0.5–2 mm long; blades 4–10 × 4–9(–13) mm, coriaceous, not discolorous, eucamptodromous, elliptic to ovate-elliptic, base acute to attenuate, apex obtuse, margin subrevolute, glabrescent, sometimes canescent, with fine trichomes, sometimes slightly sericeous or almost glabrous; secondary veins 2–3 on each side of the midvein, adaxial surface with sunken, inconspicuous veins, densely covered by abundant, white trichomes on the blade and veins, slightly prominent on the abaxial surface; domatia present. Synflorescence frondose-bracteose to frondose, diplobotryum to pleiobotryum type, congested; accessory branches absent, principal florescence botryum type, 1.5–5 cm, often truncate, paraclades 2–19 cm long; bracts 5–15 × 2–7 mm, obovate to elliptic or the same shape and size as the leaves; flowers pedicellate, hypopodium 0.3–1 mm long, epipodium 0.3–0.5 mm long; prophylls 2.2–3 × 1–1.5 mm, reaching the middle of the floral tube or slightly beyond the middle of the floral tube, oblong, unkeeled, base acute, apex acute to obtuse, margin plane to involute, the trichomes becoming very short and sparse; floral tube 2–3.5 mm long, oblong or funnel-shaped, covered by dense indumentum or the trichomes becoming very short and sparse or sparsely sericeous; sepals 1.8–3 mm long, triangular, not caudate, not deflexed, pilose, ciliate or not; epicalyx segments 1.5–3(–3.5) mm long, cylindrical, strongly deflexed, the same indumentum as that of the sepals, ciliate or with very short trichomes, longer than the sepals; corolla 1.8–2.5 cm in diam., rose to lilac, petals 6–9 × 4–8.5 mm, obovate, ovate to elliptic, apex obtuse; stamens 12, free portion of the filaments 6–7 mm long, exserted; ovary 1.7–1.9 mm × 1.8–2 mm, rounded, glabrous, style 9–12.5 mm long, ovules 8–17. Capsules 3.5–4 × 3.5–3.9 mm, globose, glabrous; seeds 6–15, 2–2.9 × 1.1–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Central-west (Goiás)

HERBARIUM MATERIAL

G. Gardner, 4140, K, (K000528558), G, G00227365, (G00227365), BR, NY, P, OXF, W, Goiás, **Typus**
R.M. Harley, 28587, HUEFS, CEN, Bahia

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon kielmeyeroides A.St.-Hil.

This treatment is composed of the following taxa: *Diplusodon kielmeyeroides*, *Diplusodon kielmeyeroides var. kielmeyeroides*, *Diplusodon kielmeyeroides var. macrocalyx*.

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** attenuate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal/longer than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1.2 m tall, erect, unbranched or branched just at inflorescence, with a xylopodium, glabrous, slightly branched, sometimes caespitose, not dark-brown when dry. Upper branches cylindrical to subquadrangular, wine- to rust-colored, lax, unwinged or inconspicuoly winged, internodes 1.5–10 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1.5–10 mm long; blades 40–100 × (20–)35–70 mm, glaucous, chartaceous, not discolorous, elliptic to obovate or obovate to rhombic, base attenuate, apex obtuse, margin plane, with protuberances, sometimes with cilia; eucamptodromous-brochidodromous, secondary veins 8–24 on each side of the midvein, inconspicuous, tertiary veins forming an inconspicuous reticulum; domatia absent. Synflorescence bracteose, botryum to diplobotryum type, lax; accessory branches absent, principal florescence truncate, paraclades 18–90 cm long; bracts 10–30 mm long, 4–15 mm long, elliptic; flowers pedicellate, hypopodium 1–2 mm long, epipodium 0.5–1 mm long; prophylls 1.5–8 × 0.5–1.8 mm, wine-colored, reaching the middle of the floral tube or the apex, oblong to lanceolate, unkeeled, margin plane; floral tube 6–10 mm long, green, funnel-shaped, sometimes nitid in living material, fleshy or not, robust or thin; sepals 5.5–6.5 mm long, triangular, not caudate, not deflexed; epicalyx segments 2–8 mm long, dark-green or light green, lanceolate, elliptic-lanceolate, dorsiventrally compressed, or flat, spreading to suberect, shorter or longer than the sepals; corolla 5–8 cm in diam., bright rose, rose-magenta or lilac, petals 23–30 × 13–20 mm, apex obtuse; stamens 26–55, free portion of the filaments 8–10 mm long, not exserted or slightly exserted; ovary 2.8–3.5 × 3–4.5 mm, obconic, glabrous, style 12–18 mm long, ovules 36–48. Capsules 5–11 × 4–9 mm, globose, glabrous; seeds 23–34, 3–5 × 2.8–4 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)
Southeast (Minas Gerais)

IDENTIFICATION KEY

1. Prophylls 1.5–2 mm long. Floral tube 6–6.5 mm long, floral tube thin; epicalyx segments 2–3 mm long, shorter than the sepals ……..... *D. kielmeyeroides* var. *kielmeyeroides*

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1. Prophylls ca. 8 mm long. Floral tube 9–10 mm long, floral tube robust and fleshy; epicalyx segments 7–8 mm long, longer than the sepals ……..… *D. kielmeyeroides* var. *macrocalyx*

HERBARIUM MATERIAL

T.B. Cavalcanti, 2266, NY, MO, CEN, Minas Gerais
T.B. Cavalcanti, 2269, MO, NY, 923819, (NY00923819), CEN, Minas Gerais
A. Saint-Hilaire, s.n., P, Minas Gerais, **Typus**

Diplusodon kielmeyeroides A.St.-Hil. var. *kielmeyeroides*

DESCRIPTION

Subshrubs, sometimes caespitose. Upper branches cylindrical to subquadrangular, unwinged, internodes 1.5–5 cm long. Leaves with the petioles 1.5–4 mm long; blades 25–55 mm wide, elliptic to obovate, margin without cilia; secondary veins 8–21 on each side, departing along the midvein. Paraclades 18–30 cm long; bracts 12–30 × 11–15 mm; prophylls 1.5–2 × 0.5–1 mm, wine-colored, not reaching the middle of the floral tube; floral tube 6–6.5 mm long, shiny in living material; sepals 5.5–6 mm long; epicalyx segments 2–3 mm long, dark-green, lanceolate, dorsiventrally compressed, shorter than the sepals; corolla 5–6.5 cm in diam., bright rose to rose-magenta, petals 23–25 × 13–16 mm; stamens 26–44, free portion of the filaments 8–9 mm long, slightly exserted; ovary 3–3.5 × 3–3.5 mm, style 15–18 mm long, ovules 36–45. Capsules 5–8 × 4–6.5 mm; seeds 23–24, 3–3.5 × 2.8–3.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2266, NY, MO, CEN, Minas Gerais

Diplusodon kielmeyeroides var. *macrocalyx* T.B.Cavalc.

DESCRIPTION

Subshrubs, slightly branched. Upper branches subquadrangular, sometimes inconspicuously winged, internodes 5–10 cm long. Leaves with petioles 2–10 mm long; blades 40–70 mm wide, obovate to rhombic, margin sometimes with cilia; secondary veins 17–24 on each side of the midvein. Paraclades 20–90 cm long; bracts 10–20 × 4–13 mm; prophylls ca. 8 × 1.5–1.8 mm, reaching the apex of the floral tube; floral tube 10 mm long, fleshy; sepals 6–6.5 mm long, fleshy; epicalyx segments 7–9 mm long, light green, elliptic-lanceolate, flat, longer than the sepals; corolla 7–8 cm in diam., lilac, petals 27–30 × 18–20 mm; stamens 45–50, free portion of the filaments 9–10 mm long, not exserted; ovary ca. 2.8 × 4.5 mm, style ca. 12 mm long, ovules ca. 48. Capsules 9–11 × 8–9 mm, coriaceous; seeds ca. 34, 4–5 × 3.5–4 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

J.F. Pastore, 1907, W, SPF, K, NY, MO, HUEFS, CEN, Goiás
J.F. Pastore, 1851, W, SPF, MO, CEN, Goiás, **Typus**

Diplusodon lanceolatus Pohl

This treatment is composed of the following taxa: *Diplusodon lanceolatus*, .

Has as synonym
heterotypic *Diplusodon alutaceus* Pohl
heterotypic *Diplusodon lanceolatus* var. *alutaceus* (Pohl) Koehne
heterotypic *Diplusodon lanceolatus* var. *scaber* (Pohl) Koehne
heterotypic *Diplusodon scaber* Pohl

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/longer than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 18/19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.2–1.5 m tall, erect, branched, with a xylopodium, not dark-brown when dry. Upper branches cylindrical, lax, unwinged, pubescent, internodes 3–10 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 3–5 mm long; blades 30–60 × 25–30 mm, olive-green, chartaceous, not discolorous, eucamptodromous, elliptic to elliptic-lanceolate, base obtuse, rarely acute, apex acute, margin plane, adaxial surface glabrescent, abaxial surface rough, covered with short, generally dense indumentum, pubescent to hirtellous; secondary veins 3–6 on each side, departing along the midvein, prominent; domatia absent. Synflorescence frondose-bracteose, diplobotryum spiciform to triplobotryum spiciform type, congested, sometimes with development of accessory branches of the first order 4–8 cm long, principal florescence 7–20 cm long, paraclades of the primary order 4–25 cm long, paraclades of the secondary order 1.5–10 cm long; bracts 10–20 × 3–6 mm, elliptic, margin plane; flowers sessile to subsessile, hypopodium 1–1.5 mm long, epipodium absent; prophylls (4–)6–8 × 3–4.5 mm, surpassing the floral tube or rarely less than the tube, elliptic-lanceolate or oblong to obovate, unkeeled, base acute, apex obtuse, margin plane, ciliate; floral tube 4.5–6 mm long, clear green, funnel-shaped, pubescent; sepals 2–4 mm long, triangular, not caudate, not deflexed, ciliate, pubescent; epicalyx segments (3–)4–5.5 mm long, cylindrical, spreading to suberect, the same size as the sepals or a little longer, pubescent; corolla 3–4.5 cm in diam., clear rose, petals 14–17 × 8–11 mm, obovate, base acute, apex obtuse; stamens 18–26, free portion of the filaments 8.5–11 mm long, surpassing the sepals 2–3 mm; ovary 0.5–2.3 × 2.2–2.8 mm, obconic, glabrous, style 10–16 mm long, ovules 20–33. Capsules 5.5–6 × 5–5.5 mm, globose, glabrous; seeds 10–27, 2–2.5 × 2–2.8 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás, Mato Grosso)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 421, SPF, NY, CEN, Goiás
J.B.E. Pohl, 1526, G, W, Goiás, **Typus**
B.M.T. Walter, 4833, CEN, Distrito Federal
V.C. Souza, 16322, ESA, CEN, Mato Grosso
T.B. Cavalcanti, 263, CEN, SPF, NY, Minas Gerais

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon leucocalycinus Lourteig

Has as synonym
heterotypic *Diplusodon irwinii* Lourteig
heterotypic *Diplusodon urceolatus* Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12/15.

ADDITIONAL DESCRIPTION

Shrubs 0.4–1.5 m tall, erect, much-branched, with a xylopodium, sometimes dark-green or dark-brown when dry. Upper branches cylindrical, sometimes rust-colored, unwinged, villous-tomentose to pubescent, internodes 1-2 cm long. Leaves decussate, not imbricate, spreading to suberect; petioles 2–5 mm long; blades 12–40 × 8–30 mm, not discolorous, coriaceous, petiolate, eucamptodromous, ovate to elliptic or rarely orbicular, base acute-attenuate to obtuse, apex obtuse to acute, margin plane, yellow, villous-tomentose, hirtellous to pubescent or with equal-armed stellate indumentum mixed with villous-tomentose or pubescent indumentum to various degrees, from only stellate, with long trichomes rare, to only villous-tomentose or pubescent, generally canescent on the abaxial surface, trichomes bulbous-based; secondary veins 3–5 on each side, departing along the midvein; domatia present. Synflorescence frondose, diplobotryum type, congested; accessory branches absent, principal florescence generally caducous, when present ca. 18 cm long, paraclades 8–19 mm long; bracts similar to the vegetative leaves except diminishing in size toward the apex of the branch; flowers subsessile, hypopodium 0.5–1 mm long, epipodium absent; prophylls 9–11 × 3–5 mm, surpassing the apex of the floral tube, oblong to oblong-elliptic, keeled, base obtuse to retuse, apex obtuse, acuminate to apiculate, margin plane, usually hyaline, villous-tomentose; floral tube 6–9 mm long, oblong, totally covered with villous-tomentose white indumentum or sometimes hirtellous to pubescent, yellow glands below the petal insertion; sepals 1–2.5 mm long, triangular, not caudate, not deflexed, villous-tomentose; epicalyx segments 4.5–6 mm long, cylindrical, dorsiventrally compressed, erect, surpassing the sepals 2–3 mm long, with short, sparse indumentum, sometimes hirsute; corolla 4–4.5 cm in diam., clear rose to rose-magenta, petals 18–22 × 8–10 mm, oblong to elliptic, apex obtuse; stamens 12–15, free portion of the filaments 9–10 mm long, surpassing the sepals ca. 1 mm; ovary 2–4 × 2.5–3 mm, obconic, sulcate-angulate with a lobed, densely pilose at the apex, indumentum whitish or glabrous, persistent on the capsule, style 13–20 mm long, ovules 12–22. Capsules 4–4.5 × 3.5–4.5 mm, oblong, with white indumentum at the apex; seeds 4–11, 2.5–3.2 × 2–2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

G. Hatschbach, 36374, MO, BR, MBM, 34609, (MBM0034609), P, Goiás, **Typus**

T.B. Cavalcanti, 384, NY, 923852, (NY00923852), SPF, K, CEN, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon longipes Koehne

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** retuse/amplexicaul; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 7 to 47 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12/18.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–0.6 m tall, erect, branched just at inflorescence, sometimes caespitose, with a xylopodium, glabrous, glaucous, unbranched, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, light-yellow, internodes 3–4 cm long. Leaves decussate, not imbricate, erect, sessile; blades 30–70 × 20–50 mm, glaucous, chartaceous, not discolorous, acrodromous-basal, glabrous, ovate, base retuse, sometimes slightly amplexicaulous, apex obtuse, sometimes apiculate, margin plane, light-yellow; secondary veins 4–6 on each side, inconspicuous; domatia absent. Synflorescence frondose, botryum type, congested; accessory branches absent; flowers pedicellate, hypopodium 15–40 mm long, epipodium 1–2 mm long; prophylls 18–22 × 10–15 mm, elliptic to ovate, surpassing the apex of the floral tube, totally hiding the flower, base and apex obtuse, margin plane; floral tube 9–11 mm long, clear green, oblong, narrow; sepals 2–3 mm long, triangular, not caudate, slightly deflexed, glabrous; epicalyx segments 2.5–3 mm long, dorsiventrally compressed, spreading to suberect, the same size as or slightly shorter the sepals; corolla 5–6 cm in diam., purple, petals 23–28 × 15–17 mm, obovate, apex obtuse; stamens 13–18, free portion of the filaments 9–11 mm long, exserted 2–2.5 mm; ovary ca. 3.1 × 3.1 mm, oblong, glabrous, style 16–20 mm long, ovules 30–52. Capsule 6–6.5 × 4–6 mm, globose, glabrous; seeds 8–10, 2–2.6 × 1.6–1.9 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

B.M.T. Walter, 3008, NY, MO, CEN, Goiás
G.P. Silva, 5941, SPF, MO, CEN, Goiás
H.A. Weddel, 2844, P, Goiás, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon macrodon Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** eucamptodromous; **base** acute; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 18/19 to 55.

ADDITIONAL DESCRIPTION

Shrubs 0.5–2.5 m tall, erect, much-branched, not dark-brown when dry. Upper branches subquadrangular, unwinged, covered by dense indumentum with short trichomes oriented in different directions, sometimes looking stellate trichomes, internodes 10–12 mm long. Leaves decussate, not imbricate, suberect; petioles 1–2.5 mm long; blades 8–17 × 1.5-3 (–4–5) mm, chartaceous to coriaceous, petiolate, not discolorous, sometimes slightly glaucous, eucamptodromous, narrowly elliptic to narrowly oblong, base acute, apex acute, margin revolute, adaxial and abaxial surfaces covered by very short trichomes, in abaxial surface more concentrated on the veins; secondary veins 2 on each side, departing along the midvein, inconspicuous on the adaxial surface; domatia absent. Synflorescence frondose, pleiobotryum spiciform type, congested; accessory branches absent, principal florescence truncate, botryum spiciform type, paraclades 4–20 mm long; bracts similar to the vegetative leaves in shape and size; flowers subsessile, hypopodium 0.1–0.2 mm long, epipodium 0.3–0.5 mm long; prophylls 3.6–4.2 × 1.5–1.8 mm, surpassing the middle of the floral tube, sometimes surpassing the apex of the floral tube, elliptic, unkeeled, base acute, apex acute, sometimes reflexed, margin plane; floral tube 3.5–4 mm long, greenish, funnel-shaped, covered by very short stellate trichomes; sepals 1.8–2 mm long, wine-colored, triangular, slightly deflexed, not caudate, not ciliate; epicalyx segments 4–6.5 mm long, narrow-cylindrical, spreading, covered by very short stellate trichomes, longer than the sepals; corolla 1.5–2.5 cm in diam., lilac to rose, petals 7–8 × 4–4.5 mm, obovate, apex obtuse; stamens 18–24, free portion of the filaments 7–7.5 mm long, exserted, surpassing the sepals 2.5–3 mm; ovary ca. 1.5 × 2–2.1 mm, obovate, glabrous, style 10.5–11 mm long, ovules 13–20. Capsules ca. 3 × 3–3.5 mm, globose, glabrous; seeds 5-11, 1.8–2.5 × 1.2–2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

HERBARIUM MATERIAL

G. Gardner, 4135, K, (K000528567), G, BR, K, (K000528566), P, Goiás, **Typus**
T.B. Cavalcanti, 2246, CEN, NY, 923860, (NY00923860), NY, Tocantins

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon marginatus Pohl

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** retuse/amplexicaul; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 7 to 47 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 18/19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.3–1 m tall, erect, unbranched, branched just at inflorescence, with a xylopodium, glabrous, not dark-brown when dry. Upper branches rust to wine-colored, quadrangular to flattened, unwinged, internodes 2–7 mm long. Leaves decussate, sometimes imbricate, erect, amplexicaulous; blades 35–120 × 20–75 mm, olive-green, glaucous, chartaceous, not discolorous, acrodromous-basal-supranumerary, elliptic-lanceolate or lanceolate to ovate, base retuse to amplexicaulous, apex acute or rarely obtuse, margin plane with yellowish cast when fresh, wine-colored to purple when dry; secondary veins 5–10 on each side, 4–5 of them departing from the base of the midvein, wine-colored or purple; domatia absent. Synflorescence frondose-bracteose, diplobotryum type, less often simple botry, congested; accessory branches absent, principal florescence 10–25 mm long, botryum type, paraclades 6–25 mm long; bracts 13–55 × 10–35 mm, ovate-lanceolate to lanceolate, margin plane, wine-colored to purple; flowers long-pedicellate, hypopodium 15–45 mm long, epipodium 0.5–1.5 mm long; prophylls 9.5–13 × 6–9 mm, reaching the apex or slightly more than to the middle of the floral tube, ovate-lanceolate to orbicular, concave, unkeeled, base and apex obtuse, margin plane, wine-colored to purple; floral tube 10–11 mm long, green to purple, funnel-shaped; sepals 4–5 mm long, triangular, not caudate, spreading to deflexed, glabrous, rarely with 1–2 cilia at the apex; epicalyx segments absent or when present reduced to mere protuberances and rounded, glabrous or rarely with long trichomes; corolla 6–7 cm in diam., purple to clear purple, petals 23–30 × 13–17 mm, elliptic, apex and base obtuse; stamens (18–)23–33, free portion of the filaments 12–14 mm long, exserted, surpassing the sepals 2–3 mm; ovary 3.5–4 × ca. 4 mm, globose, glabrous, style purple, 17–24 mm long, ovules 25–30. Capsules 9 × 7–7.5 mm, globose, glabrous; seeds 36–42, 2.5–4 × 2.5–4 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)

HERBARIUM MATERIAL

J.B.E. Pohl, 990 (D 944), M, OXF, W, K, (K000528525), K, (K000528526), BR, G, Goiás, **Typus**
T.B. Cavalcanti, 1000, NY, K, CEN, SPF, Goiás
G.P. Silva, 7285, CEN, MO, Distrito Federal

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon marginatus* Pohl

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon mattogrossensis T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/cordate/subcordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.8–1.5 m tall, erect, branched just at inflorescence, with a xylopodium, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, densely covered with long, white trichomes; internodes 2–6 cm long. Leaves decussate, not imbricate, subsessile; petioles 1–3 mm long; blades 40–60 × 20–45 mm, coriaceous, not discolorous, acrodromous-basal-supranumerary, ovate-lanceolate, base cordate to subcordate to obtuse, apex obtuse, acuminate, margin plane, blades villous due to the bulbous trichome base; secondary veins 4–7 on each side, 2–4 of them departing from the base of the midvein, prominent on the abaxial surface; domatia absent. Synflorescence frondose, botryum to diplobotryum type; accessory branches absent; flowers pedicellate, hypopodium 4–4.5 mm long, epipodium 1.5–2 mm long; prophylls 16–17 × 7–8 mm, surpassing the apex of the floral tube, elliptic-lanceolate, unkeeled, base obtuse to acute, apex acute, margin plane, pilose; floral tube 8–9 mm long, funnel-shaped, densely covered with long trichomes; sepals 5.5–6 mm long, triangular, not caudate, not deflexed, densely covered with long trichomes; epicalyx segments 8.5–9 mm long, cylindrical, erect, surpassing the sepals; corolla 5.5–6 cm in diam., petals 23–25 mm long, obovate, apex obtuse; stamens 23–32, free portion of the filaments ca. 10 mm long, included; ovary 3–3.5 × 4.5–5 mm, obovate-depressed, glabrous, style ca. 17 mm long, ovules ca. 36. Fruits not seen.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso)

HERBARIUM MATERIAL

H.S. Irwin, 16139, NY, 923872, (NY00923872), Mato Grosso
J.A. Ratter, 1361, NY, K, UB, Mato Grosso, **Typus**

REFERENCE

Cavalcanti, T.B. & Graham, S.A. 1998. Lythraceae. In: Dubs, B. (ed.) Prodromus Florae Matogrossensis. Part I. Checklist of angiosperms. Part II. Types from Mato Grosso. Beltron-Verlag, Switzerland. 173-175.

Diplusodon micromerus T. Cavalcanti

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** acrodromous; **base** cordate; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Shrubs ca. 0.35 m tall, erect, much-branched, congested, not dark-brown when dry. Upper branches cylindrical, unwinged, dense hirsute, whitish, internodes 0.5–0.8 cm long. Leaves decussate, not imbricate, suberect, strongly congested, sessile; blades 4–6 × 3–6 mm, canescent, coriaceous, discolorous, acrodromous supra-numerary, orbicular to oblong-lanceolate, base cordate, sometimes obtuse, apex obtuse, margin strongly revolute; secondary veins 3–4 on each side, adaxial surface hirsute-sericeous, green-grayish, with deeply sulcate veins, abaxial surface hirsute-sericeous, white, with prominent veins; domatia absent. Synflorescence frondose, triplobotryum to pleiobotryum type, congested; accessory branches absent, principal florescence truncate, paraclades 3–10 cm long; bracts similar to the vegetative leaves in shape and size; flowers sessile, hypopodium and epipodium absent; prophylls 5–5.5 × 3.8–3.9 mm, reaching to the apex of the floral tube, obovate, unkeeled, margin plane; floral tube 4–4.5 mm long, funnel-shaped, densely covered with silvery trichomes, turning the floral tube shiny; sepals 2–2.5 mm long, triangular, not caudate, not deflexed, densely covered with silvery trichomes; epicalyx segments 0–0.5 mm long, shorter than the sepals, cylindrical, spreading, sericeous; corolla ca. 1.5 cm in diam.; lilac, petals 12–14 × 6.5–9 mm, elliptic, apex obtuse; stamens 18, free portion of the filaments ca. 6 mm long, shortly exserted; ovary oboval, glabrous, ca. 1.9 × 1.8 mm, style ca. 11 mm long, ovules ca. 13. Fruits not seen.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

J.F.B. Pastore, 466, CEN, K, MO, SPF, W, Goiás, **Typus**

REFERENCE

Cavalcanti, T. B. New taxa in Diplusodon (Lythraceae) from Brazil. Phytotaxa, v. 38, p. 29-35, 2011.

Diplusodon microphyllus Pohl

Has as synonym
heterotypic *Diplusodon buxifolius* var. *naudini* Lourteig
heterotypic *Diplusodon hirtellus* (Cham. et Schlecht.) G. Don
heterotypic *Friedlandia hirtella* Cham. et Schlecht.

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute; **margin** subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1 m tall, dark brown when dry. Upper branches quadrangulate, weakly winged, with long, sparse trichomes, internodes 0.5–1.2 cm long. Leaves decussate, spreading to suberect, petiolate; petioles 1–1.5 mm long; blades 5–17 × 3–11 mm, eucamptodromous, membranaceous to chartaceous, slightly discolorous, dark brown when dry, ovate to lanceolate, base acute, apex acute or rarely obtuse, margin slightly revolute, adaxial surface glabrous, abaxial surface olive-green, with sparse trichomes, veins scarcely prominent; secondary veins 2–3 on each side, departing along the midvein; domatia absent. Synflorescence congested, frondose, diplobotryum to pleiobotryum type, accessory branches absent, principal florescence botryum type, 10–35 mm long, paraclades 7–30 mm long, bracts similar to the vegetative leaves, slightly smaller; flowers subsessile, hypopodium 0.7–1.5 mm long, epipodium 0.5–0.7 mm long; prophylls 4.5–6 × 1.5–3 mm, reaching the apex of the floral tube or slightly less, elliptic, unkeeled, base and apex acute, margin plane, ciliate; floral tube 4–5 mm long, funnel-shaped, sparsely pilose; sepals 2–3 mm long, triangular, not caudate, not deflexed, almost glabrous, ciliate; epicalyx segments 1.5–2 mm long, cylindrical, curved, deflexed to spreading, shorter than the sepals, pilose; corolla 2–2.5 mm long, rose to purple, petals 10–13 × 6–9.5 mm, elliptic to obovate, apex obtuse; stamens 12, free portion of the filaments 8–9 mm long, exserted; ovary 1.5–2 × 2–2.5 mm, rhombic, glabrous, style 14–15 mm long, ovules 8–18. Capsules ca. 3.5 × 3 mm, oblong, glabrous; seeds ca. 7, 2–2.2 × 1.5–1.6 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2581, NY, MO, CEN, Minas Gerais
J.B.E. Pohl, 5792, W, Minas Gerais, **Typus**
L.O. Williams, 6745, RB, 61450, (RB00209506), Minas Gerais

Diplusodon minasensis Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** eucamptodromous; **base** acute; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed; **diam. (cm) corolla** 1 to 3; **stamen** 6.

ADDITIONAL DESCRIPTION

Shrubs 1–2.2 m tall, erect, much-branched, with whitish indumentum, canescent, not dark-brown when dry. Upper branches cylindrial to subquadrangular, unwinged, hirsute, lateral branches erect, internodes 5–6 mm long. Leaves decussate, not imbricate, suberect, short-petiolate; petioles to 1 mm long; blades 5–11 × 2–5 mm, coriaceous, not discolorous, eucamptodromous, narrow-elliptic, base acute, apex obtuse, margin revolute, abaxial surface hirsute, covered by whitish trichomes with bulbous base, adaxial surface verrucose due to the bulbous trichome bases; secondary veins 2–3 on each side of the midvein, prominent; domatia absent. Synflorescence frondose, diplobotryum to pleiobotryum type, congested; accessory branches absent, principal florescence 4–10 cm long, botryum type, paraclades 2–14 cm long, bracts similar to the vegetative leaves in shape and size; flowers subsessile, hypopodium 0.5–1 mm long, epipodium 0–0.5 mm long; prophylls 5–5.5 × ca. 3 mm, reaching the apex of the floral tube or sometimes surpassing it, obovate, unkeeled, base acute, apex obtuse, margin revolute, 3–5-lateral veined; floral tube 4–5 mm long, oblong, hirsute, with whitish trichomes with bulbous bases; sepals ca. 2 mm long, triangular, not caudate, not deflexed, covered by whitish trichomes; epicalyx segments ca. 1 mm long, shorter than the sepals, lanceolate, deflexed; corolla 2–2.5 cm in diam., clear rose to rose-magenta, petals 10–11 × ca. 6 mm, obovate, apex obtuse; stamens 6, free portion of the filaments 8–9 mm long, exserted, surpassing the sepals 4–5 mm; ovary 1.8–1.9 × 2.1–2.2 mm, obconic, glabrous, style 10–11 mm long, ovules 15–19. Capsules ca. 3 × 2.5 mm, oblong, glabrous; seeds ca. 3, ca. 2.8 × 2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 220, CEN, NY, 923874, (NY00923874), SPF, K, Minas Gerais
G. Hatschbach, 51067, MBM, 115605, (MBM0115605), K, (K000528514), P, Minas Gerais, **Typus**

Diplusodon mononeuros Pilg.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** hyphodromous; **base** acute/attenuate; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 1.5–3 m tall, erect, much-branched, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, indumentum inconspicuous, minutely pilose, internodes 5–7 cm long. Leaves decussate to verticillate, not imbricate, spreading to suberect, subsessile; petioles 0.5–1 mm long; blades 3–12 × 0.7–3 mm, chartaceous, slightly discolorous, hyphodromous, linear-spathulate, base acute to attenuate, apex obtuse, margin revolute, blades glabrous; lateral veins absent (or not visible?); domatia absent. Synflorescence frondose, pleiobotryum type; accessory branches absent, paraclades 4–16 cm long; bracts the same size and shape as the leaves; flowers pedicellate, hypopodium 2.5–4 mm long, epipodium 0.5 mm long, minutely pilose; prophylls 3.5–6 mm long, reaching or slightly exceeding the middle of the floral tube, subspathulate, unkeeled, base acute, apex obtuse, margin plane, glabrous, spreading to erect, when erect, rarely somewhat ciliate, inserted in the upper third of the pedicel; floral tube 3–4.5 mm long, funnel-shaped, glabrous; sepals 2.5–2.8 mm long, triangular, not caudate, not deflexed, not ciliate; epicalyx segments 2.6–2.8 mm long, cylindrical, spreading, shorter than the sepals, glabrous; corolla ca. 2.5 cm in diam., light rose to lilac, petals 9–10 × 6–7 mm, obovate, apex obtuse; stamens 12, free portion of the filaments 8–8.5 mm long, exserted; ovary ca. 1.5 × 2 mm, obconic, glabrous, style 13–14 mm long, ovules ca. 20. Capsules 3.5–3.7 × 3.9–4 mm, globose, glabrous; seeds 4–6, 2.6–2.9 × 1.9–2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A.C. Brade, 13405, R, RB, 28674, (RB00540671), MO, CEN, Minas Gerais
T.B. Cavalcanti, 3125, MO, CEN, Minas Gerais

Diplusodon myrsinites DC.

This treatment is composed of the following taxa: *Diplusodon myrsinites*, .

Has as synonym
heterotypic *Diplusodon koehnei* Schwacke
heterotypic *Diplusodon myrsinites* var. *cribellinus* Koehne

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** hyphodromous; **base** acute/attenuate; **margin** flat; **lateral vein** 0 1 of the each side/2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent/suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1 m tall, erect, much-branched, with a xylopodium, glabrous, not dark-brown when dry. Upper branches yellow to rust-colored, quadrangular, wing 0.2–0.5 mm wide, internodes 0.5–1.5 cm long. Leaves decussate, not imbricate, suberect to spreading, subsessile; petioles ca. 1 mm long; blades 4–22 × (3–)5–12 mm, coriaceous, not discolorous, slightly glaucous, hyphodromous, obovate or elliptic to rarely narrowly oblong, base acute or slightly attenuate, apex obtuse to acute, margin plane, yellow to wine-colored; secondary veins 1–2 on each side, departing along the midvein, inconspicuous on both surfaces of the blade; domatia absent. Synflorescence frondose, diplobotryum to pleiobotryum type, lax; accessory branches absent, principal florescence generally truncate, paraclades 4–30 cm long; bracts similar to the vegetative leaves in shape, decreasing in size toward the apex of the branch; flowers subsessile, hypopodium 1.8–2.3 mm long, epipodium 0.5–0.8 mm long; prophylls 2.5–3 × 0.8–1 mm, reaching from the middle to the apex of the floral tube, oblong, obovate to wide elliptic, unkeeled, base acute, apex obtuse, margin plane, wine-colored; floral tube 4–4.5 mm long, green, funnel-shaped, glabrous; sepals 2–2.5 mm long, wine-colored, triangular, not caudate, not deflexed; epicalyx segments (1–)1.5–2.5 mm long, cylindrical to narrowly lanceolate, spreading to suberect, rarely slightly deflexed, shorter than sepals or the same size; corolla 2–2.5 cm in diam., lilac to purple, petals 11–13 × 7–8 mm, obovate, apex obtuse to acute; stamens 12, free portion of the filaments 6–8 mm long, exserted; ovary 1.5–2 × 2–2.5 mm, rhombic, glabrous; style 13–18 mm long, ovules 14–23. Capsules 4.5–5 × 3.7–4 mm, globose, glabrous; seeds (9–)12–17, 1.8–2 × 1.5–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

C.F.P. Martius, obs 530, G, M, Minas Gerais, **Typus**
E.T. Neto, 3925, CEN, BHCB, Minas Gerais
V.C. Souza, 2005, ESA, CEN, RB, 423237, (RB00349204), Minas Gerais
T.B. Cavalcanti, 3088, MO, CEN, Minas Gerais
C.A.W. Schwacke, 12410, RB, 74332, (RB00209541), Minas Gerais

Diplusodon nigricans Koehne

Has as synonym
heterotypic *Diplusodon xerampelinus* Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 1–1.5 m tall, erect, branched, dark-brown to black when dry. Upper branches subquadrangular to quadrangular, unwinged, with short trichomes, internodes 1–3 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1–4 mm long; blades 10–35 × 8–20 mm, coriaceous, not discolorous, eucamptodromous, ovate to elliptic, base acute, attenuate; apex obtuse, margin plane, indumentum hirtellous on both surfaces, short trichomes sometimes mixed with tufts of stellate trichomes; secondary veins 3–6 on each side, departing along the midvein, prominent on the abaxial surface, domatia present. Synflorescence frondose, triplobotryum to pleiobotryum type; accessory branches absent, principal florescence 5–10 cm long, paraclades 4–20 cm long; bracts similar to the vegetative leaves, diminishing in size toward the apex of the branch, flowers sessile, hypopodium and epipodium absent; prophylls 6–8 mm long, reaching the apex of the floral tube, oblong, strongly keeled, minutely pilose, margin hyaline; floral tube 5–6 mm long, funnel-shaped, minute pilose; sepals 2–2.8 mm long, not caudate, not deflexed, minute pilose; epicalyx segments 2–3 mm long, cylindrical, suberect to spreading, the same size as or shorter than the sepals, with short cilia on the apex; corolla 2.5–3 cm in diam., rose-magenta to purple, petals 14–17 × 8–10 mm, obovate, apex obtuse; stamens 12, free portion of the filaments 9–10 mm long, exserted; ovary 2–2.5 × 1.8–2 mm, rhombic, glabrous, style 14–15 mm long; ovules 18–22. Immature capsules ca. 3.5 × 2.5 mm, oblong, glabrous or with white indumentum at the apex; seeds not seen.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

A.F.M. Glaziou, 21425, LE, P, K, (K000528570), R, 175, (R000000175), BR, K, Goiás, **Typus**
B. Gates, 140, UB, SP, P, Goiás
G.M. Barroso, 624, CEN, P, UB, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon nitidus Mart. ex DC.

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** 3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 1.5–3 m tall, erect, much-branched, glabrous, sometimes dark-brown when dry. Upper branches quadrangular, winged, internodes 1.5–4 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 5–10 mm long; blades 20–45 × 6–25 mm, coriaceous, not discolorous, eucamptodromous, elliptic, base acute or attenuate, apex obtuse, margin plane, nitid; secondary veins 3–6 on each side, departing along the midvein, not prominent; domatia absent. Synflorescence bracteose to frondose-bracteose, diplothyrse to diplobotryum type, lax; accessory branches rarely present, principal florescence 4–7 cm long, botryum type, sometimes caducous, paraclades 4–35 mm long; bracts 6–12 mm long, elliptic, linear-elliptic to narrowly-obovate; flowers pedicellate, hypopodium 1.5–3 mm long, epipodium 1.5–2 mm long; prophylls 2–3 × ca. 0.8 mm, reaching to the base of the floral tube, linear-lanceolate, unkeeled, base obtuse to retuse, apex acute, margin plane; floral tube 5.5–6 mm long, wine-colored, funnel-shaped, glabrous; sepals 4–5 mm long, triangular, with prolonged apex, not deflexed; epicalyx segments 3–3.5 mm long, cylindrical, spreading to slightly deflexed, shorter than the sepals; corolla 4–4.5 cm diam., rose-magenta, petals 15–18 × 10–11 mm, obovate, apex obtuse; stamens 12, free portion of the filaments 7–8 mm long, included to slightly exserted; ovary obovate-depressed, style 13–15 mm long, ovules 13–16. Capsules 6–7 × 5.5–7 mm, globose, glabrous; seeds 11–22, 2.5–3 × 2–3 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3202, BHCB, CEN, Minas Gerais
E.T. Neto, 4018, BHCB, CEN, Minas Gerais
S.A. GRAHAM, 981, MO, NY, 923875, (NY00923875), Minas Gerais
C.F.P. Martius, s.n., G, M, Minas Gerais, **Typus**

Diplusodon oblongus Pohl

This treatment is composed of the following taxa: *Diplusodon oblongus*, .

Has as synonym
homotype *Diplusodon oblongus* Pohl var. *oblongus*
heterotypic *Diplusodon oblongus* var. *angustifolius* T. Cavalcanti

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** 3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** patent/erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–3 m tall, erect, much-branched, with a xylopodium, dark-brown when dry. Upper branches subquadrangular to cylindrical, rarely quadrangular, rust-colored, with reduced wings 0.1–0.2 mm wide, totally glabrous or inconspicuously pilose with minute trichomes, internodes 1–3.5 cm long. Leaves decussate, not imbricate, spreading to suberect, petiolate; petioles 2–9 mm long; blades 10–7.5 × 10–38 mm, not glaucous, coriaceous, not discolorous, dark-brown when dry, eucamptodromous, elliptic, ovate or ovate-lanceolate, base acute or attenuate, apex obtuse rarely acute, margin plane, rarely with some short cilia, blades glabrous; secondary veins 3–4 on each side of the midvein, prominent, yellow in nature, wine-colored when dry; domatia absent. Synflorescence frondose, triplobotryum to pleiobotryum type, congested; sometimes with accessory branches of the first order, principal florescence 2–10 cm long, paraclades of the first order 7–27 cm long, of the second order 2–10 cm long; bracts similar to the vegetative leaves in shape, decreasing in size toward the apex of the branch; flowers subsessile, hypopodium 0.5–1 mm long, epipodium 0–0.5 mm long; prophylls 4–6 × 2.5–3 mm, reaching the middle or to the apex of the floral tube, oblong, keeled, base retuse, apex acute to obtuse, margin plane, glabrous or minutely pilose; floral tube 5–6.5 mm long, wine-colored, oblong, often glabrous, rarely minutely pilose; sepals 2–2.5 mm long, wine-colored, triangular, not caudate, slightly deflexed, thick, minutely ciliate, sometimes cilia more evident on the sepal apex, with conspicuous papillose trichomes on the margin of the inner surface; epicalyx segments 1.5-3.5 mm long, cylindrical, spreading to erect, the same size of the sepals, often glabrous, rarely minutely pilose; corolla 4–4.5 cm in diam., lilac to clear purple or sometimes rose-magenta, petals 13–15 × 9–10 mm, elliptic, apex obtuse to acute; stamens 12, free portion of the filaments 8–9 mm long, exserted, ovary 1.5–1.8 × 1.8–2 mm, obovate-depressed, glabrous, style 13–15 mm long, ovules 22–32. Capsules 4.8–5.5 × 4–4.5 mm, oblong, glabrous; seeds 9–25, 2–3 × 1.5–2.5 mm. 2n=30 (Cavalcanti, 1995; Graham & Cavalcanti, 2001).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Distrito Federal, Goiás, Mato Grosso)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

H.S. Irwin, s.n., RB, 134062, (RB00209411), Goiás
J.A. Rizzo, 9335, UFG, Tocantins
E.R. Santos, 328, HTO, Tocantins
G.P. Silva, 2200, NY, MO, CEN, Distrito Federal
T.B. Cavalcanti, 87, UB, SP, K, CEN, Mato Grosso
T.B. Cavalcanti, 2265, NY, MO, CEN, Minas Gerais
J.B.E. Pohl, 5791, M, G, BR, W, Goiás, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon orbicularis Koehne

This treatment is composed of the following taxa: *Diplusodon orbicularis*, .

Has as synonym
heterotypic *Diplusodon orbicularis* var. *brachyander* Koehne

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/cordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** suberect/erect; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 6.

ADDITIONAL DESCRIPTION

Subshrubs 0.15–2 m tall, erect, branched, glabrous, not dark-brown when dry. Upper branches yellow, cylindrical, unwinged, lax, internodes 0.5–1 cm long. Leaves decussate, not imbricate, spreading, subsessile; petioles 0.5–1 mm long; blades 5–10(–15) × 5–18 mm, glaucous, coriaceous, not discolorous, acrodromous-basal-typical, cordiform to oblate-cordiform, base cordate or rarely obtuse, apex obtuse, frequently acuminate, margin plane, sometime wine-colored; secondary veins 2–3 on ech side, departing at the base of the midvein; domatia absent. Synflorescence frondose, diplobotryum to triplobotryum type, lax; accessory branches absent, principal florescence 8–9 cm long, often truncate, paraclades 6–25 cm long; bracts similar to vegetative leaves in shape and size; flowers pedicellate, hypopodium 1.5–4 mm long, epipodium 0.5–1 mm long; prophylls 4–5 × 3–4 mm, slightly shorter than or reaching the apex of the floral tube, elliptic-lanceolate to rhomboid-ovate, unkeeled, base obtuse to rarely acute, apex obtuse to acute, margin plane; floral tube 4–5 mm long, clear green with wine-colored apex, funnel-shaped; sepals 2–3 mm long, wine-colored, triangular, slightly caudate, not deflexed; epicalyx segments 2–2.5 mm long, cylindrical to slightly dorsiventrally compressed, erect to suberect, shorter than the sepals; corolla clear rose to lilac, 3–3.5 cm in diam., petals 12–15 × 8–9 mm, obovate, apex obtuse; stamens 6, free portion of the filaments rose to wine-colored, 7–9 mm long, exserted; ovary 1–1.5 × 1.2–1.5 mm, obconic to orbicular, glabrous, style 13–15 mm long, ovules 15–25. Capsules 3–4.5 × 3.1–4, globose, glabrous; seeds 12–17, 2.3–2.5 × 2–2.5 mm. 2n=30 (Graham & Cavalcanti, 2001).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Riedel, s.n., LE, Minas Gerais, **Typus**
T.B. Cavalcanti, CFSC 10139, SPF, Minas Gerais
T.B. Cavalcanti, 2271, CEN, MO, NY, 885428, (NY00885428), Minas Gerais
A.F.M. Glaziou, 19167, BR, C, K, (K000528517), P, LE, Minas Gerais

REFERENCE

Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.

Diplusodon ovatus Pohl

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** acute/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm/7 to 47 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–0.9 m tall, erect, unbranched, sometimes caespitose, with a xylopodium, glabrous, not dark-brown when dry. Upper branches cylindrical, flattened, unwinged, internodes 3–8 cm long. Leaves decussate, rarely 3-verticillate at basal nodes, not imbricate, suberect, petiolate; petioles 1–2 mm long; blades 30–70 × 25–50 mm, coriaceous to chartaceous, not discolorous, not glaucous, acrodromous-basal to acrodromous-basal-supranumerary, ovate to ovate-lanceolate or rarely orbicular, base obtuse to acute, apex acute to obtuse, margin plane, ciliate on the older leaves; secondary veins 3–5 on each side, 3–4 of them departing at the base of the midvein, prominent on the abaxial surface; domatia absent. Synflorescence bracteose, of the thyrsoid type, lax; accessory branches absent, paraclades short with terminal cymes; bracts 7–30 × 2–14 mm, ovate to elliptic; flowers pedicellate, hypopodium 2.5–6 mm long (7 mm in fruit), epipodium 2–4 mm long (7 mm in fruit); prophylls 5.5–8 × 1–2 mm, reaching from the base to the middle of the floral tube, linear, unkeeled, base retuse, apex acute, margin plane; floral tube 6–6.5, in fruit 8–10 mm, funnel-shaped; sepals 3–4 mm long, triangular, slightly caudate, sometimes the top deflexed, slightly thickened, rarely with some trichomes on the margin; epicalyx segments 2–3 mm long, cylindrical, spreading, the same size as or shorter than the sepals; corolla 2.5–3 mm in diam., rose, petals 20–23 × 12–16 mm, obovate, apex obtuse; stamens 18, free portion of the filaments 8.5–9 mm long, included to exserted; ovary 2–2.5 × 3–3.5 mm, rhombic, glabrous, style 17–18 mm long, ovules 46–59. Capsule 5–6 × 5.5–6 mm, wine-colored, globose, glabrous; seeds 10–40, 2–3 × 2–2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

R. Romero, 1727, CEN, HUFU, Minas Gerais
J.B.E. Pohl, 589 (D 940), G, M, K, (K000528531), K, (K000528530), W, BR, Minas Gerais, **Typus**
G. Hatschbach, 33061, P, MO, NY, MBM, Mato Grosso do Sul
A. Loefrgren, 2178, SP, São Paulo
H.S. Irwin, 25261, K, UB, P, MO, NY, 923942, (NY00923942), RB, 165348, (RB00209519), Mato Grosso

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. & Graham, S. A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.

Diplusodon panniculatus Koehne

DESCRIPTION

Leaf: hair presence/absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 7 to 47 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 15/18.

ADDITIONAL DESCRIPTION

Subshrubs 0.6–1 m tall, erect, branched just at inflorescence, with a xylopodium, not dark-brown when dry. Branches lax, the upper ones cylindrical to subquadrangular, unwinged or sometimes with a narrow wing, glabrous, internodes 2–5.5 cm long. Leaves decussate, not imbricate, erect, subsessile; petioles broad, to 1 mm long; blades 25–55 × 7–25 mm, coriaceous, glabrous, not discolorous, acrodromous-basal-supranumerary, elliptic-lanceolate to ovate-lanceolate, base obtuse, apex acute, margin plane, sometimes ciliate; secondary veins 3 on each side, 2 of them departing from the base of the midvein, tertiary veins forming a prominent reticulum on both surfaces of the blade, more prominent on the adaxial surface; domatia absent. Synflorescence bracteose, triplothyrsoid to pleiothyrsoid, type lax; accessory branches absent, paraclades 4–20 m long, glabrous, from the second order onwards pubescent to glabrous; bracts of the first order 4–20 × 2–8 mm, elliptic to elliptic-lanceolate, glabrous, those of the cymes or dichasia, 2–4 × ca. 1 mm, linear, pubescent; flowers pedicellate, hypopodium 5–6 mm long, epipodium 4–5 mm long; prophylls 2–2.8 × 1–1.8 mm, not even reaching the base of the floral tube, linear, keeled, base retuse, apex acute, margin plane, pubescent; floral tube 4–6 mm long, greyish purple, funnel-shaped, pubescent; sepals 4–5 mm long, triangular, not caudate, sometimes the top deflexed, pubescent; epicalyx segments 1.5–2.2 mm long, cylindrical, spreading to deflexed, shorter than the sepals; corolla 3–4.5 cm in diam., rose-magenta, petals 15–17 × 10–12 mm, obovate, apex obtuse; stamens 15–18, free portion of the filaments 6–8 mm long, exserted to included; ovary 2–2.5 × 2.5–4 mm, obovate-depressed, glabrous, style 10–12 mm long, ovules 28–30. Capsules 5–5.5 × 4–4.5 mm, globose, glabrous; seeds 18–26, 1.8–2 × 1.5–1.9 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

A.F.M. Glaziou, 21416, R, 177, (R000000177), BR, P, K, (K000528552), Goiás, **Typus**
T.B. Cavalcanti, 3182, MO, CEN, Goiás
S.A. Mori, 16947, UB, P, K, CEN, NY, 923946, (NY00923946), Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon paraisoensis Lourteig

Has as synonym
heterotypic *Diplusodon foliosus* T.B.Cavalc.
heterotypic *Diplusodon lanceolatus var. alutaceus* f. Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/cordate/subcordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/longer than sepal; **segment of the epicalyx** patent/ suberect; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–3 m tall, stem 1–1.5 cm diam, erect, branched, with a xylopodium, not dark-brown when dry. Upper branches subquadrangular, sometimes bright grey, unwinged, strigose to dense sericeous, internodes 1–3 cm long. Leaves decussate, suberect, not imbricate, subsessile to petiolate; petioles 1–3 mm long; blades 25–90 × 10–45 mm, coriaceous, not discolorous, acrodromous-basal-supranumerary, ovate to oblong-lanceolate, base cordate to subcordate to obtuse, apex acute to obtuse or acuminate, margin plane, blade verrucose due to the bulbous base of the trichomes, velvety to the touch, adaxial surface strigose to sericeous, abaxial surface strigose to sericeous, with dense white trichomes, sometimes sufficiently abundant to turn the leaves whitish, sometimes inconspicuous; secondary veins 4–10 on each side, 3–4 of them departing from the base of the midvein; domatia absent. Synflorescence frondose-bracteose, triplobotryum to pleiobotryum type, congested; accessory branches absent, principal florescence 4–6 cm long, paraclades 6–25 cm long; bracts 10–27 × 6–10 mm, similar to the vegetative leaves in shape; flowers subsessile, hypopodium absent, epipodium 1–2 mm long; prophylls 9.5–11 × 2.5–4.5 mm, surpassing the apex of the floral tube, elliptic-lanceolate, unkeeled, base obtuse to acute, apex acute, margin plane, pilose; floral tube 5.5–7 mm long, funnel-shaped, increasing in size on fruit, whitish, densely pilose; sepals 3–6 mm long, wine-colored, triangular, not caudate, not deflexed, pilose; epicalyx segments 4.3–7 mm long, greenish to wine-colored, broadly triangular with subrevolute margin, sometimes foliaceous, spreading to suberect, reaching or exceeding the height of the sepals, pilose; corolla 5–6 cm in diam., clear rose to lilac or sometimes bright rose, petals 18–25 × 12–15 mm, obovate, apex obtuse, sometimes emarginate; stamens 24–32, free portion of the filaments 10–14 mm long, exserted 5–6 mm, rose, surpassing the sepals ca. 1 mm; ovary 2.1–2.8 × 3–3.7 mm, obconic, glabrous, style 14–21 mm long, stigma black-violet, ovules 36–80. Capsules ca. 5.5 × 5.5–6 mm, globose, glabrous; seeds (33–)50–72, 3.5–4 × 3–3.5 mm. 2n= 30 (Cavalcanti, 1995).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3147, MO, CEN, Tocantins
H.S. Irwin, 24793, NY, P, Goiás, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon parvifolius Mart. ex DC.

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** eucamptodromous; **base** obtuse/subcordate; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 0.7–2 m tall, erect, much-branched, dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, velutinous, hirsute, tricomes with bulbous base, canescent, internodes 1–2 cm long. Leaves decussate, not imbricate, spreading to suberect, subsessile; petioles to 1 mm long; blades 4–12 × 3–7 mm, canescent, coriaceous, sometimes discolor, eucamptodromous, orbicular, ovate-lanceolate to elliptic-lanceolate, base obtuse to subcordate, apex obtuse, margin revolute; secondary veins 3–5 on each side, adaxial surface hispid, tricomes with bulbous base, with deeply sulcate veins, abaxial surface hirsute, veins prominent; domatia absent. Synflorescence frondose, diplobotryum to pleiobotryum type, congested; accessory branches absent, principal florescence botryum type, 9–14 cm long, paraclades 3–22 cm long; bracts similar to the vegetative leaves in shape and size; flowers subsessile, hypopodium 0.5–1 mm long, epipodium absent; prophylls 2.5–3 × 1.8–2 mm, reaching to the middle of the floral tube, obovate, unkeeled, base acute, apex obtuse, margin plane; floral tube 4–5 mm long, funnel-shaped, densely covered with white trichomes, turning the floral tube whitish, sepals 1.8–2 mm long, triangular, not caudate, not deflexed, pilose as the floral tube; epicalyx segments 1–2 mm long, pilose, cylindrical, spreading to deflexed, shorter than the sepals; corolla ca. 2 cm diam., rose-magenta, petals 10–11 × 6–6.5 mm, obovate, base obtuse; stamens 12, free portion of the filaments 5–7 mm long, exserted; ovary 1.8–2 × 2–2.2 mm, obovate-depressed, glabrous, style 12–14.5 mm long, ovules 8–10. Capsules 2.5–3.5 × 2.5–3 mm, globose, glabrous; seeds 2–3, 2–2.1 × 1.9–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

C.F.P. Martius, 531, K, G, M, Bahia, **Typus**
A.M. Giulietti, H51051, SPF, CEN, NY, K, HUEFS, CEPEC, Bahia
T.B. Cavalcanti, 314, SPF, NY, MBM, F, CEN, Bahia

REFERENCE

Cavalcanti, T. B. 1994. Lythraceae. In B. Stannard. (Org.). Flora do Pico das Almas, Bahia. 1ed. Londres, Inglaterra: Royal Botanic Gardens, p. 411-416.

Diplusodon petiolatus T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 3 to 10 mm/10 to 30 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1.6 m tall, erect, branched, sometimes caespitose, with a xylopodium, not dark-brown when dry. Branches cylindrical, lax, unwinged, densely puberulous, with short thick trichomes of different lengths, irregularly arranged, sometimes forming tufts, internodes 2–6 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 6–15 mm long; blades 45–70 × 15–40 mm, slightly glaucous, chartaceous, not discolorous, eucamptodromous, elliptic to ovate, base acute to obtuse, apex acute to attenuate, margin plane, blades pubescent; secondary veins 4–6 on each side, departing along the midvein, tertiary veins often evident; domatia absent. Synflorescence bracteose, pleiobotryum type, lax, broad and long, beginning almost from the base of the plant, branches slender and delicate, with short trichomes of varying sizes; accessory branches of the first and second orders present, short, principal florescence generally truncate, paraclades of the first order 20–30 cm long, paraclades of the second order 10–15 cm long; bracts 20–30 × 7–10 mm, elliptic; flowers much concentrated at the apex of the branches, sometimes forming glomerules, subsessile, hypopodium ca. 1 mm long, epipodium absent; prophylls 4–5 × 1–1.2 mm, surpassing the floral tube, narrowly oblong, keeled, base acute, apex acute, margin plane; floral tube 4–5 mm long, canescent, funnel-shaped, trichomes very short and dense; sepals 1.5–2 mm long, triangular, not caudate, slightly deflexed, margins with conspicuous papillae; epicalyx segments 2.5–4 mm long, cylindrical and narrow, erect, ca. 1.5 mm longer than the sepals; corolla 1.7–2 cm in diam., bright rose, petals 10–12 × 6–8 mm, elliptic, base acute, apex obtuse; stamens 18, free portion of the filaments 6–7 mm long, slightly exserted, anthers generally with trichomes; ovary 1.2–1.8 × 1.8–2 mm, obconic, glabrous, style 10–13 mm long, ovules 12. Capsules ca. 3 × 2.5–3.1 mm, globose to oblong, glabrous; seeds 5–12, 1.5–2 × 1.1–1.9 mm.

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

HERBARIUM MATERIAL

G. Gardner, 3724, G, NY, W, P, OXF, K, Goiás, **Typus**
G.P. Silva, 6492, MO, CEN, Tocantins
T.B. Cavalcanti, 1254, SPF, NY, 923950, (NY00923950), MO, CEN, Goiás

FIELD IMAGES / ILLUSTRATIONS

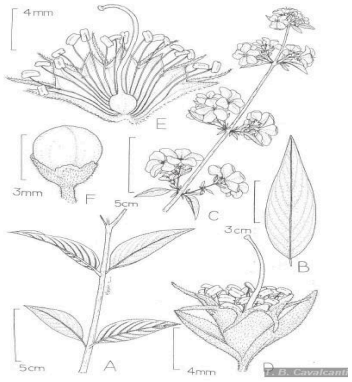


Figure 1: *Diplusodon petiolatus* T.B.Cavalc.

Diplusodon plumbeus T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** subcordate; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs to shrubs 0.4–1.2 m tall, erect, branched, with a xylopodium, dark-brown when dry. Upper branches cylindrical to subquadrangular, sometime with a faint wing, covered by stellate trichomes, internodes 0.3–1 cm long. Leaves decussate, not imbricate, spreading, sessile; blades 6–22 × 3–5 (–19) mm, coriaceous, discolorous, acrodromous-basal-supranumerary, narrowly lanceolate, base subcordate, apex acute, margin revolute, adaxial surface dark-green, nitid, glabrous, with sulcate veins, ash-gray when dry; abaxial surface totally white due to dense indumentum, when dry the veins rust-colored, almost parallel, with dense white trichomes or sometimes glabrous; secondary veins 4–5 on each side, prominent; domatia absent. Synflorescence frondose, triplobotryum spiciform type, congested; flowers petiolate, hypopodium 0.5–1.5 mm long, epipodium ca. 0.5 mm long, prophylls 4–4.5 × 2.2–2.5 mm, reaching the middle of or at times surpassing the floral tube, elliptic to obovate, keeled, base acute, apex obtuse, margin plane, puberulous; floral tube 4–5 mm long, yellow, wine-colored in fruit, oblong, pilosity inconspicuous, apparently glabrous, sepals 2–2.5 mm long, triangular, not caudate, not deflexed; epicalyx segments 2–2.5 mm long, lanceolate, dorsiventrally compressed, spreading, the same size as the sepals; corolla 3–3.5 cm in diam., rose-magenta to bright rose, petals 15–17 × 10–12 mm, obovate, apex obtuse to acute; stamens 12, free portion of the filaments 7–9 mm long, exserted, ovary obconic, glabrous, ovules 15–21. Capsules 5.5–6 × 4.5–5 mm, oblong, glabrous; seeds 19–21, 2.5–3 × 2.1–2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

H.S. Irwin, 13258, F, K, RB, SPF, MBM, NY, CEN
T.B. Cavalcanti, 1267, K, CEN, RB, 327450, (RB00540672), MBM, 213102, (MBM0213102), CEN, 18555, (CEN0018555), SPF, NY, F, Goiás, **Typus**

REFERENCE

Cavalcanti, T. B. 1998. New Species of Diplusodon (Lythraceae) From Brazil. Novon, v. 8(4), p. 337 – 351.
Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon puberulus Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** hyphodromous; **base** acute; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.5–1.5 m tall, erect, much-branched, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, covered with erect, minute stellate trichomes, internodes 0.4–0.5 cm long. Leaves decussate to verticillate, not imbricate, suberect, subsessile; petioles to 1 mm long; blades 6–18 × 0.8–1.5 (–4) mm, coriaceous, not discolorous, hyphodromous, linear, rarely narrow elliptic, base acute, apex obtuse, margin revolute to the midvein, adaxial surface covered with very short and erect trichomes, sulcate-veined, abaxial surface covered by minute stellate trichomes, venation very prominent, secondary veins absent; domatia absent. Synflorescence frondose, pleiobotryum type, congested; accessory branches absent, principal florescence botryum type, paraclades of the first order 10–19 cm long, paraclades of the second order 4.5–6 cm long; bracts similar to the vegetative leaves in shape and size; flowers pedicellate, hypopodium 2–3.5 mm long, epipodium 1–1.5 mm long; prophylls 4–4.2 × 1.1–1.5 mm, reaching the apex of the floral tube, lanceolate, unkeeled, base attenuate, apex obtuse, margins plane, covered by appressed, minute trichomes; floral tube 3.5–4 mm long, oblong-triangular, glabrous; sepals 1.5–2 mm long, triangular, not caudate, not deflexed, glabrous, with cilia on the margin; epicalyx segments 1.5–2 mm long, cylindrical, spreading to suberect, not exceeding the length of the sepals, covered by erect, minute trichomes; corolla ca. 2 mm in diam., lilac to purple, petals ca. 6.5 × 4 mm, obovate, apex obtuse to acute; stamens 12, free portion of the filaments 4.5–5 mm long, exserted; ovary ca. 1 × 1.5 mm, rhombic, glabrous, style 10–13 mm long., ovules 12–16. Capsules 3–4 × 4–4.1 mm, globose, glabrous; seeds 6–10, 3–3.1 × 2–2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)
Possible ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

G. Gardner, 4563a, W, NY, P, G, G00227349, (G00227349), G, G00227348, (G00227348), K, (K000528565), Minas Gerais, **Typus**
W.W. Thomas, 5945, P, K, CEPEC, NY, 445429, (NY00445429), SPF, Minas Gerais

Diplusodon punctatus Pohl

This treatment is composed of the following taxa: *Diplusodon punctatus*, *Diplusodon punctatus var. dentatus*, *Diplusodon punctatus var. punctatus*.

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.2–1.7 m tall, erect, branched, with a xylopodium, totally glabrous when mature, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, bright yellow, internodes 3–5.5 cm long. Leaves decussate, not imbricate, erect, subsessile; petioles 1–3 mm long; blades 17–75 × 16–40 mm, glaucous, slightly coriaceous, not discolorous, acrodromous-basal type, ovate-lanceolate, with black punctae, base obtuse, apex acute, margin plane, glabrous; secondary veins 2 on each side, departing from the base of the midvein, prominent; domatia absent. Synflorescence bracteose, pleiobotryum type, lax, thin, delicate, bright yellow; accessory branches absent, principal florescence botryum type, 3–5 cm long, paraclades 3–24 cm long; bracts 6–8 × 1.5–2.5 mm, elliptic to elliptic-lanceolate, margin plane, 1 vein on each side; flowers pedicellate, pedicel not persistent, hypopodium 2.5–5.5 mm long, epipodium 0–1 mm long; prophylls 4–5.5 × 1–2 mm, reaching or surpassing the apex of the floral tube, keeled, oblong, base retuse, apex acute to obtuse, margin plane; floral tube 3.2–5 mm long, clear yellow to straw-colored in fruit, funnel-shaped; sepals 2–3 mm long, triangular, not caudate, not deflexed; epicalyx segments absent or present, 3–4 mm long, spreading, when present not surpassing the sepals; corolla 2–2.5 cm in diam., lilac to purple, petals 8–10 × 4–5 mm, obovate, apex obtuse; stamens 12, exserted, free portion of the filaments 5.5–6.3 mm long, rose to white, exserted; ovary 1.2–2.1 × 1.5–2 mm, rhombic to rounded, glabrous; style 9–11 mm long, ovules 10–24. Capsule ca. 3.5 × 3.5 mm, globose; seeds 13–16, 1.8–2 × 1.2–1.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

IDENTIFICATION KEY

1. Epicalyx segments absent ……..…… *D. punctatus* var. *punctatus*
1. Epicalyx segments present, 3–4 mm long ……. *D. punctatus* var. *dentatus*

HERBARIUM MATERIAL

T.B. Cavalcanti, 1421, NY, 923958, (NY00923958), CEN, Goiás
J.B.E. Pohl, 2018 (D 946), W, K, (K000528575), G, Goiás, **Typus**
W.J. Burchell, 7659, K, (K000528576), Goiás

FIELD IMAGES / ILLUSTRATIONS

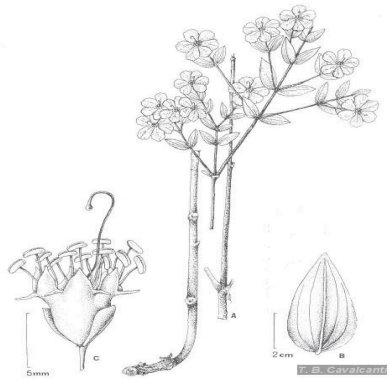


Figure 1: *Diplusodon punctatus* Pohl

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon punctatus Pohl var. *punctatus*

DESCRIPTION

Flowers pedicellate, hypopodium 4–5.5 mm long, epipodium 0.5–1 mm long; prophylls 5–5.5 × ca. 1 mm, surpassing the apex of the floral tube; epicalyx segments absent.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2700, MO, 3394041, CEN, 39918, Goiás
R.C. Forzza, 4600, RB, 452520, (RB00495074), Goiás

Diplusodon punctatus var. *dentatus* T.B.Cavalc.

DESCRIPTION

Flowers pedicellate, hypopodium 2.5–3.5 mm long, epipodium 0–0.5 mm long; prophylls 4–4.5 × 1.5–2 mm, reaching the apex of the floral tube or less; epicalyx segments present, 3–4 mm long, spreading.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2229, CEN, NY, Tocantins
G.P. Silva, 5084, NY, SPF, 166001, (SPF00166001), W, CEN, K, Goiás, **Typus**
G.P. Silva, 4402, NY, MO, CEN, Goiás

REFERENCE

Cavalcanti, T. B. 2004. Novos táxons, novos status, nova sinonímia e lectotipificações em Diplusodon Pohl (Lythraceae). Boletim de Botânica (USP), São Paulo, v. 22, n.1, p. 01-13.

Diplusodon pygmaeus T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/subcordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** patent/erect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Small subshrubs, 3–11 cm tall, branched, caespitose, erect, with a broad xylopodium, not dark-brown when dry. Upper branches cylindrical, wine-colored, unwinged, subsericeous, covered with white trichomes; internodes 0.5–1.5 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1–2 mm long; blades 10–25 × 7–15 mm, subcoriaceous, not discolorous, acrodromous, reticulate, ovate to elliptic, base obtuse to subcordate, apex obtuse or slightly acuminate, margin plane, ciliate, with sparse white trichomes; secondary veins 3–4 on each side, 1–2 of them departing from the base of the midvein, prominent, tertiary veins conspicuous; domatia absent. Synflorescence frondose, botryum type; accessory branches absent, principal florescence 1–2 cm long; bracts similar to the vegetative leaves; flowers subsessile, hypopodium 1.5–2 mm long, epipodium 0.5–1 mm long; prophylls 7–8 mm × 2–3 mm, reaching from the middle to the apex or sometimes surpassing the floral tube, elliptic, unkeeled, base acute, apex obtuse to acute, margin plane; floral tube 9–10 mm long, base green, apex wine-colored, narrowly oblong-urceolate, sericeous, constricted at the middle in fruit; sepals 4–5 mm long, triangular, not caudate, not deflexed, ciliate, sericeous; epicalyx segments 4–5 mm long, wine-colored, erect to spreading, the same size as the sepals, sericeous, cylindrical; corolla ca. 3 cm in diam., rose, petals obovate, apex obtuse; stamens 12, free portion of the filaments 7–9 mm long; ovary 3.5–4 × 2.5–3 mm, obovate, glabrous; ovules 11–14. Capsules 3.5–4 × 2.4–3.5 mm, oblong, sometimes with a narrower base, glabrous; seeds 5–7, 1.8–2 × 2–2.3 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2194, MBM, MO, CEN, Goiás
T.B. Cavalcanti, 1363, SPF, NY, K, F, CEN, MBM, 213103, (MBM0213103), CEN, 18545, (CEN0018545), Goiás, **Typus**

REFERENCE

Cavalcanti, T. B. 1998. New Species of Diplusodon (Lythraceae) From Brazil. Novon, v. 8(4), p. 337 – 351.
Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon quintuplinervius (Nees) Koehne

Has as synonym
basionym *Lythrum quintuplinervius* Nees

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/subcordate; **margin** flat/revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal; **segment of the epicalyx** patent/ suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.5–1.5 m tall, erect, much-branched, glabrous, dark-brown when dry. Upper branches quadrangular with narrow wings at the angles, dark-brown to dark-reddish; internodes 10–25 cm long. Leaves decussate, not imbricate, spreading to suberect, subsessile; petioles 0.5–1 mm long; blades 10–30 × 5–15 mm, dark-brown when dry, coriaceous, not discolorous, acrodromous-basal-supranumerary, ovate or ovate-elliptic to ovate-lanceolate, base obtuse to subcordate, apex acute to obtuse, margin plane, rarely slightly revolute, adaxial surface with veins slightly prominent; secondary veins 4–5 on each side of the midvein; domatia present. Synflorescence frondose-bracteose, diplobotryum to triplobotryum type, congested; accessory branches absent, principal florescence often caducous, paraclades 4–28 cm long; bracts similar to the vegetative leaves, except diminishing in size toward the apex of the branch; flowers subsessile, hypopodium absent, epipodium ca. 1 mm long; prophylls 4.5–5 × 1.8–2.1 mm, reaching the middle or slightly more of the floral tube, elliptic to obovate, sometimes slightly keeled, base acute, apex obtuse, margin plane; floral tube 5–6 mm long, oblong; sepals 2.5–4 mm long, triangular, not caudate, not deflexed, with some papillose trichomes on the margin; epicalyx segments 3–4 mm long, cylindrical to dorsiventrally compressed, spreading to suberect, the same size as the sepals; corolla 2.5–3 cm in diam., rose to violet, petals 13–15 × 6–7 mm, oblong, apex obtuse to acute; stamens 12, free portion of the filaments 7–8 mm long, exserted, ca. 1 mm long; ovary ca. 2 × 2.5 mm, rounded, glabrous, style 13–15 mm long, ovules 10–18. Capsules 3–4 × 2.5–3.5 mm, globose, glabrous; seeds 7–16, 1.9–3 × 1.5–2.2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Caatinga (stricto sensu), Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

H.S. Irwin, 23070, K, P, UB, W, NY, 923961, (NY00923961), Minas Gerais
S.A. Graham, 939, MO, NY, 923963, (NY00923963), Bahia

Coleção Flora do Brasil 2020 - Jardim Botânico do Rio de Janeiro

M.A.P.W. Neuwied, s.n., LE, BR, W, Bahia, **Typus**

Diplusodon ramosissimus Pohl

This treatment is composed of the following taxa: *Diplusodon ramosissimus*, .

Has as synonym
heterotypic *Diplusodon ramosissimus* var. *decipiens* Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous/ acrodromous; **base** obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed; **diam. (cm) corolla** 1 to 3; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs 0.6–1.5 m tall, erect, much-branched, with a xylopodium, not dark-brown when dry. Upper branches subquadrangular to quadrangular, unwinged, lax, internodes 1–2 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 3–9 mm long; blades 40–95 × 12–50 mm, chartaceous, usually discolorous, eucamptodromous to acrodromous, oval-lanceolate, with black punctae, base obtuse, apex acute, rarely obtuse, margin plane, sometimes irregularly inconspicuous denticulate and with sparse, short, appressed trichomes, glabrescent; secondary veins 3–6 on each side, prominent on the abaxial surface, sulcate on the adaxial surface; domatia present. Synflorescence bracteose, triplobotryum type, lax; accessory branches absent, principal florescence 6–19 cm long, botryum type, frequently deciduous, paraclades of the first order 6–22 cm long, paraclades of the second order 2–7 cm long, bracts of the first order 15–45 × 15–23 mm, the same shape as the vegetative leaves; bracts 15–30 × 10–14 mm, the second order bracts elliptic-lanceolate, bracts of the third order 7–15 × 3–8 mm, elliptic-lanceolate; flowers subsessile, hypopodium 1–1.5 mm long, epipodium absent; prophylls 2–2.5 × 1 mm, not reaching the middle of the floral tube, oblong to oblong-lanceolate, keeled, base retuse, apex obtuse, margin plane; floral tube 4.5–5 mm long, funnel-shaped, greenish, glabrous, rarely with some trichomes; sepals 3.5–4 mm long, slightly larger in fruit, with the sepals ca. 1 mm long, triangular, slightly caudate, not deflexed, with trichomes on the apex forming a tuft in bud; epicalyx segments 2–2.5(–3.5) mm long, cylindrical, rarely with some trichomes, deflexed, shorter than the sepals; corolla 2.5–3 cm in diam., rose-magenta, petals 13–16 × 8–12 mm, obovate, base and apex obtuse; stamens 18, free portion of the filaments 7.5–8.5 mm long, surpassing the sepals ca. 1 mm; ovary ca. 3 × 1.8 mm, obovate, glabrous; style ca. 13 mm long; ovules 22–24. Capsules 3.5–5.5 × 4–4.5 mm, globose, glabrous; seeds 9–27, 1–3 × 1.8–2 mm. 2n=30 (Graham & Cavalcanti, 2001).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

J.B.E. Pohl, 2533, G, W, Goiás, **Typus**
T.B. Cavalcanti, 586, SPF, CEN, Distrito Federal
T.B. Cavalcanti, 2712, MO, CEN, Minas Gerais
W.J. Burchell, 7726, K, (K000528551), Goiás, **Typus**
T.B. Cavalcanti, 2502, MO, CEN, Goiás

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon ramosissimus* Pohl

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. & Graham, S. A. 2011. Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed. Brasília: Atalaia, v. 9, p. 131-175.

Diplusodon retroimbricatus Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/subcordate; **margin** subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 18/19 to 55.

ADDITIONAL DESCRIPTION

Shrubs ca. 0.4–1.5 m tall, erect, branched, canescent to sometimes silvery, rarely dark-brown when dry. Upper branches cylindrical, unwinged, canescent, densely velutinous, indumentum long, dense, and whitish, internodes 1.5–5 cm long. Leaves decussate, sometimes imbricate, spreading to suberect, subsessile to short-petiolate; petioles 0.5–3.5 mm long; blades 20–55 × 15–34 mm, coriaceous, discolor, acrodromous-basal-supranumerary, ovate to ovate-lanceolate, base obtuse to subcordate, apex obtuse, subacuminate to acuminate, margin subrevolute, blades densely hirsute to sericeous, covered by long trichomes with the base slightly thickened, whitish to silver, adaxial surface gray-green, abaxial surface white, sometimes silvery; secondary veins 8–10 on each side, 1–2 of them departing from the base of the midvein; domatia absent. Synflorescence frondose-bracteose, botryum type, congested; accessory branches absent; bracts ovate to ovate-lanceolate, 10–15 × 7–10 mm; flowers sessile, prophylls 8.5–10 × 6.5–8 mm, reaching or surpassing the apex of the floral tube, obovate to rhombic, keeled, base acute, apex obtuse, margin plane, sometimes with involute margin at the apex, sericeous; floral tube 7.5–8 mm long, whitish, funnel-shaped, increasing in size on the fruit, densely sericeous; sepals 4.5–5 mm long, triangular, slightly caudate, not deflexed, ciliate, sericeous; epicalyx segments 2–3.5 mm long, triangular, erect, reaching to half the hight of the sepals, sericeous; corolla 5–6 cm in diam., clear rose, petals 18–20 × 10–12 mm, obovate, apex obtuse; stamens (18–) 24–26, free portion of the filaments ca. 9 mm long, slightly exserted; ovary 2–2.9 × 2.9–3.5 mm, obconic, glabrous, style ca. 15 mm long, ovules 20–30. Immature capsules ca. 4 × 4 mm, globose, glabrous; seeds 25–27, 1.9–2 × 1.2–1.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

M.L. Fonseca, 5099, IBGE, CEN, Goiás
A.F.M. Glaziou, 21417, K, (K000528535), BR, P, Goiás, **Typus**
J.F.B. Pastore, 467, CEN, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon rosmarinifolius A.St.-Hil.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** eucamptodromous; **base** acute; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3; **stamen** 15.

ADDITIONAL DESCRIPTION

Subshrubs 0.5–2.5 m tall, erect, much-branched, with a xylopodium, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, lax, covered by stellate trichomes, the young branches rust-colored, internodes ca. 1 cm long. Leaves decussate, not imbricate, spreading, subsessile; petioles ca. 1 mm long; blades 15–20 (–35) × 2–3 (–7) mm, coriaceous, not discolorous, eucamptodromous, linear to linear-lanceolate, base acute, apex acute, margin revolute; secondary veins 1 on each side, prominent on the abaxial surface, sulcate on the adaxial surface, adaxial surface with few trichomes evident, abaxial surface canescent with dense indumentum of stellate trichomes; domatia absent. Synflorescence frondose, pleiobotryum spiciform type, lax; accessory branches absent, principal florescence 6–10 cm long, botryum spiciform type, paraclades 6–20 cm long; bracts 17–25 × 1–5 mm, linear-lanceolate to linear, margins revolute; flowers subsessile, hypopodium 0–0.5 mm long, epipodium 0–0.5 mm long, prophylls 3–3.5 × 1–1.5 mm, less than half the length of the floral tube, oblong-linear, unkeeled, base obtuse, apex obtuse, margin plane; floral tube 3–3.5 mm long, wine-colored, funnel-shaped, covered by inconspicuous stellate trichomes; sepals ca. 2 mm long, triangular, not caudate, not deflexed; epicalyx segments 0.5–1 mm long, cylindrical, spreading to slightly deflexed, not exceeding the length of the sepals; corolla 2–2.5 cm in diam., rose-magenta to clear rose, petals 9–10 × 6–7 mm, obovate, apex obtuse; stamens 15, free portion of the filaments 6–6.5 mm long, exserted, surpassing the sepals ca. 1 mm; ovary ca. 1.5 × 2 mm, rhombic, glabrous; style 7.5–8 mm long, ovules 9–14. Capsules 2.8–3 × 2.8–3 mm, globose, glabrous; seeds 9–12, ca. 2 × ca. 2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)

HERBARIUM MATERIAL

A.F.M. Glaziou, 21424, BR, K, (K000847555), NY, 923984, (NY00923984), Goiás
A. Saint-Hilaire, s.n., P, Goiás, **Typus**
T.B. Cavalcanti, 2491, NY, 923977, (NY00923977), CEN, MO, Distrito Federal

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. & Graham, S. A. . Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed. Brasília: Atalaia, 2011, v. 9, p. 131-175.

Diplusodon rotatus T.B. Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** retuse; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 1–1.5 m tall, erect, much-branched, not dark-brown when dry. Branches lax, the uppermost delicate, rust to wine-colored, cylindrical compressed, unwinged, minutely pubescent, internodes 12–16 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1.5–2 mm long, thick; blades 20–35 × 12–19 mm, light green, chartaceous, petiolate, not discolorous, light green when dry, acrodromous-basal-supranumerary, oblong to ovate, base retuse, apex obtuse, acuminate, margin plane to slightly subrevolute, ciliate with short trichomes, adaxial surface minutely pubescent to glabrescent, abaxial surface minutely pubescent; secondary veins 2–3 on each side, 2 of them departing near the base of the midvein, sulcate on the adaxial surface, slightly prominent on the adaxial surface; domatia absent. Synflorescence frondose, pleiobotryum type, branches rust, thin, delicate, lax; principal florescence truncate; paraclades of the first and second order 15–30 cm long; paraclades of the third order 4–7 cm long; bracts oval to elliptic, spread to suberect, base retuse to slightly subcordate, margin plane to slightly subrevolute, pubescent, ciliate with short trichomes, apex obtuse, slightly acuminate, secondary veins 2–3 on each side of the midvein, with domatia; flowers pedicellate, hypopodium ca. 1.5 mm long, epipodium ca. 0.5 mm long; prophylls 4–4.6 × 1.2–2 mm, inserted in the upper third of the pedicel, surpassing the apex of the floral tube, narrowly elliptic, unkeeled, base attenuate, apex acute, margin plane, minutely pubescent; floral tube 4.2–4.5 mm long, delicate, funnel-shaped, with minute trichomes; sepals 2–2.5 mm long, triangular, not caudate, not deflexed, with minute trichomes; epicalyx segments 4–4.1 mm long, fine, cylindrical, spreading, longer than the sepals, with minute, spiky trichomes; corolla 2–2.5 cm in diam., rose, petals 9–10 × 5–7 mm, obovate, apex obtuse; stamens 12, free portion of the filaments ca. 5 mm long, slightly exserted; ovary 2–2.4 × 2.2–2.9 mm, obovate, glabrous, style 7–8 mm long, ovules 10–12. Capsules 3.6–4 × 3.5–4 mm, globose to oblong, glabrous; seeds 3–4, 2.5–2.9 × 2–2.1 mm.

Life Form
Shrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Maranhão)

HERBARIUM MATERIAL

R.C. Oliveira, 1245, HEPH, 14440, CEN, 71996, Maranhão, **Typus**
G. Pereira-Silva, 14965, CEN (CEN00100030), CEN, 100030, Maranhão

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon rotatus* T.B. Cavalc.



Figure 2: *Diplusodon rotatus* T.B. Cavalc.



Figure 3: *Diplusodon rotatus* T.B. Cavalc.

Diplusodon rotundifolius DC.

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** cordate/subcordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 7 to 47 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 6/12.

ADDITIONAL DESCRIPTION

Subshrubs 0.5–2 m tall, erect, branched, without a xylopodium, glabrous, not dark-brown when dry. Branches lax, the upper ones cylindrical, wine-colored, winged, internodes 0.9–1.5 cm long. Leaves decussate, not imbricate, spreading, sessile; blades 15–32 × 17–25 mm, glaucous, coriaceous, not discolorous, acrodromous-basal-typical, ovate-lanceolate, base cordate to subcordate, sometimes amplexicaulous, apex obtuse, slightly acuminate, margin plane with wine-colored margin; secondary veins 3–4 on each side, departing at the base of the midvein, prominent on the abaxial surface; domatia absent. Synflorescence frondose, diplobotryum type, rarely simple botryum or pleiobotryum type; accessory branches absent, principal florescence 7–14 cm long, botryum type, paraclades 5–19 cm long; bracts 7–15 × 6–18 mm, ovate-lanceolate, margins plane; flowers pedicellate, hypopodium 6–7(–10) mm long, epipodium 1–1.5 mm long, prophylls 6–9 × 4.5–9 mm, exceeding the apex of the floral tube, hiding the tube, ovate-lanceolate to suborbicular, unkeeled, base and apex obtuse, margin plane; floral tube 5.5–6 mm long, funnel-shaped, glabrous; sepals 4.5–5 mm long, wine-colored, triangular, not caudate, not deflexed, glabrous; epicalyx segments 3.5–4 mm long, wine-colored, linear-triangular, erect, slightly shorter than the sepals, glabrous; corolla 3–3.5 cm in diam., clear rose to rose-magenta, petals ca. 16 × 14 mm, obovate, apex retuse; stamens 8-12, free portion of the filaments 6.5–7 mm long, included; ovary ca. 3 × 3 mm, rhombic, glabrous; style 15–16 mm long, ovules 14–17. Capsules 3–5 × 3–3.2 mm, globose, glabrous; seeds ca. 14.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

C.F.P. Martius, obs 534, M, G, Minas Gerais, **Typus**
T.B. Cavalcanti, 217, SPF, CEN, K, Minas Gerais
G. Hatschbach, 31704, MBM, MO, W, NY, 923988, (NY00923988), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon rotundifolius* DC.

Diplusodon saxatilis Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** 0.5 the 4.0 mm/bigger than 5 mm; **venation** hyphodromous; **base** cordate/retuse; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs ca. 0.4 m tall, erect, unbranched, sometimes branched just at inflorescence, with a xylopodium, not dark-brown when dry. Upper branches cylindrical, unwinged, hirsute, internodes 0.3–1 cm long. Leaves decussate, slightly imbricate, erect, sessile; blades 6–12 × 3–5 mm, coriaceous, not discolorous, hyphodromous, oblong, base cordate to retuse, apex obtuse, margin revolute, hirsute, blades covered by long, abundant trichomes; secondary veins not visible; domatia absent. Synflorescence frondose, diplobotryum type, congested; accessory branches absent, principal florescence truncate, paraclades 8–11 mm long; bracts similar to the vegetative leaves in shape and size; flowers sessile, concentrated at the apex of the paraclades; prophylls 5–6 × 3–4 mm, reaching the apex of the floral tube, elliptic to ovate, unkeeled, margins plane, base obtuse, hirsute; floral tube 5.5–6 mm long, funnel-shaped, hirsute; sepals 4.5–5 mm long, triangular, not caudate, not deflexed, hirsute; epicalyx segments 2.5–3 mm long, narrowly triangular, erect, hirsute, distinctly shorter than the sepals; corolla lilac, petals not seen; stamens 12, free portion of the filaments 8–8.5 mm long, included within the sepals; ovary ca. 1.8 × 2 mm, obconic, glabrous, style 15–16 mm long, ovules 10. Capsules not seen.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G. Hatschbach, 28923, MBM, MO, P, MBM, 20654, (MBM0020654), Minas Gerais, **Typus**

Diplusodon sessiliflorus Koehne

Has as synonym
heterotypic *Diplusodon crulsianus* Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** cordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.3–1.5 m tall, erect, branched just at inflorescence, sometimes caespitose, with a xylopodium, not dark-brown when dry. Upper branches cylindrical, unwinged, villous, internodes 1–6 cm long. Leaves decussate, sometimes ternate, not imbricate, subsessile to petiolate; petioles 1–2 mm long; blades 20–60 × 10–45 mm, suberect, coriaceous, not discolorous, acrodromous-basal-supranumerary, oval to ovate-lanceolate, very rarely orbicular, base cordate, apex acute to obtuse, generally acuminate to mucronate, margin plane, adaxial and abaxial surface covered by sparse, long white trichomes with a bulbous base; secondary veins 4–6 on each side, 2–3 of them departing from the base of the midvein, and 2–3 of them departing along the midvein; domatia absent. Synflorescence bracteose to frondose-bracteose, botryum spiciform to diplobotryum spiciform type, congested; accessory branches absent, principal florescence 6–20 cm long, paraclades 6–24 cm long; bracts 7–20 × 8–18 mm, orbicular to ovate, base cordate; flowers sessile; prophylls 4–9 × 5–10 mm, reaching the apex of the floral tube, orbicular, wide, keeled, base obtuse, apex obtuse, mucronate or totally flat, margin plane, floral tube 6–9 mm long, whitish, villous, the trichomes with a very enlarged base; sepals 4–6 mm long, triangular, not caudate, not deflexed, golden in color because of the color of the trichomes, covered with secretory trichomes bottle shaped; epicalyx segments 2.5–4 mm long, cylindrical, spreading to slightly deflexed, villous, shorter than the sepals; corolla 5–5.5 cm in diam., rose-magenta, petals 18–24 × 12–15 mm, obovate, apex obtuse; stamens 24–32, free portion of the filaments 7–8 mm long, generally included; ovary 2–2.5 × 3–3.5 mm, obconic, glabrous, style 14–17 mm long, ovules 40–46. Immature capsules ca. 5 × 3.5 mm, glabrous; seeds ca. 7.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Distrito Federal, Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 1233, CEN, Distrito Federal
A.F.M. Glaziou, 21415, P, K, (K000528539), RB, 41738, (RB00540667), G, G00227346, (G00227346), R, 179, (R000000179), R, 179a, (R000000179a), BR, LE, MO, NY, Distrito Federal

G. Gardner, 4573, W, SP, 11291, (SP001125), G, G00227343, (G00227343), K, (K000528534), K, (K000528533), P, G, G00227345, (G00227345), NY, Minas Gerais, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. & Graham, S. A. . Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed. Brasília: Atalaia, 2011, v. 9, p. 131-175.

Diplusodon sigillatus Lourteig

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/cordate; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** suberect; **diam. (cm) corolla** 3.5 to 7; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs to shrubs 1–2 m tall, erect, much-branched, not dark-brown when dry. Upper branches subquadrangular to cylindrical, unwinged, dense pubescent, whitish, internodes 0.7–2 cm long. Leaves decussate, not imbricate, spreading, subsessile; petioles 1–2 mm long; blades 30–50 × 15–25 mm, olive-green, coriaceous, sometimes discolorous, acrodromous-basal-supranumerary, ovate-lanceolate, base subcordate to cordate, apex acute, margin plane; blades covered by dense indumentum, trichomes very short, fine with bulbous base; secondary veins 3–5 on each side of the midvein, prominent on the abaxial surface; domatia absent. Synflorescence bracteose, diplobotryum spiciform to pleiobotryum spiciform type, congested; accessory branches absent, principal florescence 3.5–10 cm long, botryum type, paraclades 4.5–15 cm long; bracts 6–25 × 5–13 mm, orbicular to ovate, margin revolute; flowers sessile, hypopodium and epipodium absent; prophylls 4–5.5 × 3–4.5 mm, reaching or slightly less than the apex of the tube, obovate to elliptic, unkeeled, base acute, apex obtuse, margin plane, veins ca. 3, reddish, evident; floral tube 4–6 mm long, funnel-shaped, covered with short, thick trichomes; sepals 3.5–4 mm long, triangular, not caudate, not deflexed; epicalyx segments 4–4.5 mm long, cylindrical, suberect, longer than the sepals, sometimes the same size, with the same indumentum as the sepals; corolla 3.5 cm in diam., rose-magenta, petals 12–14 × 7–8.5 mm, obovate, apex obtuse; stamens 18, free portion of the filaments 7.5–8 mm long, included; ovary 1.5–2 × 2–2.5 mm, obovate-depressed, glabrous, style 10–13 mm long, ovules 14–34. Capsules ca. 3.5 × 4 mm, globose, glabrous; seeds 2.9–3.1 × 1.5–1.7 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 382, SPF, CEN, NY, K, Goiás
H.S. Irwin, 32190, NY, 923994, (NY00923994), P, RB, 172887, (RB00209593), NY, K, Goiás
H.S. Irwin, 12447, UB, BR, P, W, NY, Goiás, **Typus**
T.B. Cavalcanti, 2198, CEN, NY, 924008, (NY00924008), MO, Goiás

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon sordidus Koehne

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** cordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–3 m tall, 15–20 cm diam., erect, branched, with a xylopodium, glabrous, dark-brown when dry. Upper branches quadrangular, winged, chestnut brown, internodes 1–2 cm long. Leaves decussate, not imbricate, spreading, sessile; blades 20–45 × 15–40 mm, coriaceous, not discolorous, acrodromous-basal type, ovate-lanceolate to ovate or to suborbicular, base cordate, apex obtuse, acuminate, margin plane and yellow in color with inconspicuous glands, adaxial and abaxial surface with dark punctae over the whole surface; secondary veins 3–4 on each side, yellow; domatia absent. Synflorescence frondose, botryum to diplobotryum type, lax; accessory branches absent, principal florescence 18–21 cm long, botryum type, paraclades 11–15 cm long; bracts 10–23 × 7–20 mm, ovate to suborbicular, margins plane; flowers pedicellate, hypopodium 1–1.5 mm long, epipodium 0.5–1 mm long; prophylls 10–12 × ca. 6 mm, surpassing the apex of the floral tube ca. 5 mm, lanceolate to ovate-lanceolate, unkeeled, base obtuse, apex acute, margins plane; floral tube 6–7 mm long, greenish to wine-colored, funnel-shaped, glabrous; sepals ca. 4 mm long., longer in fruit ca. 14 × 11 mm, triangular, not caudate, not deflexed; epicalyx segments 8–11 mm long, wine-colored, cylindrical to linear, spreading to suberect, surpassing the sepals, glabrous, longer than the sepals; corolla 5.5–6 cm in diam., rose-magenta to purple, petals 25–30 × 11–17 mm, obovate, apex obtuse; stamens (26–)28, free portion of the filaments ca. 5 mm long, surpassing the sepals ca. 2 mm; ovary ca. 3 × 2 mm, rhombic, glabrous, style 20–23 mm long, ovules 33–38. Capsules 6.5–7 × 6–6.2 mm, globose, glabrous; seeds 17–46, 4–5 × 3–4 mm. 2n= 30 (Cavalcanti, 1995; Graham & Cavalcanti, 2001).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 662, MO, NY, 924012, (NY00924012), SPF, K, CEN, Goiás
T.B. Cavalcanti, 30, SPF, K, CEN, Goiás
H.S. Irwin, 12636, RB, 150515, (RB00209611), MO, NY, UB, Goiás
A.F.M. Glaziou, 21426, K, (K000528524), R, 169, (R000000169), P, BR, Goiás, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon speciosus (Kunth) DC.

Has as synonym
basionym *Nesaea speciosa* Kunth

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/subcordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/longer than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1 m tall, prostrate to erect, branched just at inflorescence, sometimes caespitose, with a xylopodium, glabrous, not dark-brown when dry. Upper branches cylindrical to subquadrangular, unwinged, internodes 3–8 cm long. Leaves decussate, spreading to suberect, sessile; blades 25–75 × 20–60 mm, slightly glaucous, coriaceous, not discolorous, acrodromous-basal-supranumerary, ovate or ovate-lanceolate to rarely orbicular, base subcordate to obtuse, apex obtuse or rarely acute, margins plane and yellow in color with inconspicuous glands, adaxial surface with tertiary veins evident; secondary veins 4–6 on each side, 3–4 of them departing from the base of the midvein; domatia absent. Synflorescence lax, frondose-bracteose, botryum to diplobotryum type; accessory branches absent, principal florescence 4–15 cm long, botryum type, paraclades 4–19 cm long; bracts 10–20 × 15–20 mm, the same shape as the vegetative leaves, decreasing in size toward the apex of the branch; flowers pedicellate, hypopodium 1–1.5 mm long, epipodium 0.5–1 mm long; prophylls 6–9 × 4–6 mm, reaching or slightly less than the apex of the floral tube, ovate to ovate-lanceolate, rarely oblong, unkeeled, base obtuse, apex obtuse, margins plane; floral tube 6–7 mm long, greenish, funnel-shaped to oblong, elongated in fruit; sepals 3–5 mm long, rose, triangular, not caudate, not deflexed; epicalyx segments 5–6 mm long, filiform, dorsiventrally compressed to cylindrical, spreading to suberect, the same size as or longer than the sepals; corolla ca. 6 cm in diam., clear rose or rose-magenta to violet, petals 21–23 × 13–15 mm, elliptic, apex obtuse; stamens (26–)30–44, free portion of the filaments 8–9 mm long, slightly exserted; ovary 2–2 × 3–3.5 mm, ovate-depressed, glabrous, ovules 36–62. Capsules 4.8–5 × 4–5 mm, globose, glabrous; seeds 20–47, 2–2.5 × 1.5–2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Mato Grosso)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2234, MO, CEN, NY, 924010, (NY00924010), Tocantins
T.B. Cavalcanti, 2243, CEN, NY, 924011, (NY00924011), MO, Tocantins
A.R. Ferreira, s.n., P, Mato Grosso, **Typus**
T.B. Cavalcanti, 86, K, NY, SPF, CEN, MO, Mato Grosso

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon speciosus* (Kunth) DC.

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon stellatus T.B. Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** acute; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1 m tall, erect, much-branched, usually caespitose, with a xylopodium, not dark-brown when dry. Upper branches cylindrical, lax, unwinged, covered by stellate trichomes forming tufts, internodes 0.8–3 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1.5–2 mm long; blades 15–35 × 1.5–4(–6) mm, coriaceous, slightly discolorous, eucamptodromous, narrowly lanceolate or narrowly elliptic to linear, base acute, apex acute, margin revolute, adaxial surface olive-green, covered by dense stellate trichomes forming tufts; abaxial surface canescent, covered by dense stellate trichomes in tufts; secondary veins 1–2 on each side along the midvein, prominent on the abaxial surface; domatia absent. Synflorescence frondose, diplobotryum spiciform to pleiobotryum spiciform type, lax; accessory branches absent, principal florescence 3–5 mm long, botryum spiciform type, paraclades 5–17 mm long; bracts similar to the vegetative leaves, except diminishing in size toward the apex of the branch; 10–17 × 1.5–3 mm wide, linear, margin revolute; flowers subsessile, hypopodium ca. 0.5 mm long, epipodium ca. 0-0.3 mm long; prophylls 3.1–3.2 × 1–1.1 mm, slightly surpassing the middle of the floral tube, narrowly oblong, with strongly prominent midrib, base retuse, apex acute, margin plane; floral tube 4-4.5 mm long, canescent, funnel-shaped, covered by dense stellate trichomes forming tufts; sepals 1.5–1.6 mm long, rose, triangular, not deflexed, not caudate, not ciliate, covered by dense stellate trichomes forming tufts; epicalyx segments 3–4 mm long, rose, cylindrical, erect, exceeding the sepals 2–3 mm, covered by dense stellate trichomes forming tufts; corolla 3.5–4 cm in diam., rose-magenta to lilac, petals 21–22 × 6–7.5-10 mm, obovate, apex obtuse; stamens 12, free portion of the filaments ca. 5.5 mm long, rose, 2–2.1 mm exserted, surpassing the sepals ca. 1 mm; ovary ca. 1.8 × 1.9 mm, obovate-depressed, glabrous, style 10–11 mm long, rose, ovules 10. Capsules 2.5–2.8 × 2.6–2.9 mm, oblong, glabrous; seeds ca. 5, 1.9–2 × 1.2–1.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3162, CEN, 46994, CEN (CEN00046994), Goiás
T.B. Cavalcanti, 684, CEN, 00021148, CEN (CEN00021148), Goiás, **Typus**

Diplusodon strigosus Pohl

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/subcordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal/longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 15/19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.1–1.5 m tall, erect, branched, often caespitose, with a xylopodium, not dark-brown when dry. Upper branches cylindrical to subquadrangular, sometimes with a narrow wing, lax, commonly associated with galls, villous, with bulbous-based trichomes, internodes 3–9 cm long. Leaves decussate, not imbricate, suberect, short-petiolate; petioles 2–3 mm long; blades 30–90 × 20–50 mm, coriaceous, not discolorous, acrodromous-basal-supranumerary, oblong, elliptic, elliptic-lanceolate to ovate-lanceolate or orbicular, base obtuse to subcordate, apex obtuse to acute, generally acuminate, margin plane, adaxial and abaxial surface rough, with a verrucose aspect due to the bulbous base of the trichomes, trichomes sparse and equidistant; secondary veins 6–8 on each side, departing along the midvein, prominent; domatia present. Synflorescence bracteose to frondose, diplobotryum spiciform to botryum spiciform type, lax; accessory branches absent, principal florescence 6–28 mm long botryum spiciform type, paraclades 4–33 mm long; bracts of the first order 30–60 × 24–30 mm, of the second order 10–25 × 8–18 mm, orbicular to ovate, margins plane; flowers sessile to subsessile, hypopodium absent, epipodium 0–0.5 mm long; prophylls 6–9(–13) × 4.8–8(–10) mm, surpassing the floral tube, sometimes hiding the entire tube, ovate to orbicular, keeled, base obtuse, apex obtuse to acute, margin plane, glabrescent; floral tube 5.5–7 mm long, wine-colored to greenish, funnel-shaped, covered by bulbous-based trichomes; sepals 4–5 mm long, triangular, fleshy, not caudate, not deflexed, ciliate, covered by bulbous-based trichomes, longitudinally sulcate; epicalyx segments 3.5–6 mm long, wine-colored at the base, triangular, erect, thick, covered by bulbous-based trichomes, segments the same size or slightly larger or sometimes shorter than the sepals; corolla 4–4.5 cm in diam., bright rose, petals 15–17 × 10–11 mm, obovate, apex obtuse to acute; stamens (15–)22–34, free portion of the filaments 7–9 mm long, included, ovary 2–3.5 × 3.5–4 mm, obconic, glabrous, style 11–17 mm long, ovules 36–84. Capsules 4.9–5 × 4.5–5 mm, globose, glabrous; seeds 23–40, 1.8–2.8 × 1.5–2.1 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Cerrado (lato sensu), Seasonally Deciduous Forest, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Distrito Federal, Goiás, Mato Grosso)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2347, NY, 941154, (NY00941154), MO, CEN, Mato Grosso
K. Calago, 142, MO, NY, CEN, Distrito Federal
J.A. Rizzo, 9744, UFG, Tocantins

J.B.E. Pohl, 1365 (D 945), G, K, (K000528538), W, Goiás, **Typus**
T.B. Cavalcanti, 1086, NY, SPF, CEN, RB, 345420, (RB00210686), Goiás

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon strigosus* Pohl

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon subsericeus Casar. ex Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm/3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous/acrodromous; **base** acute/attenuate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.4–1 m tall, erect, with a xylopodium, branched, young plants unbranched, slightly silvery, not dark-brown when dry. Upper branches subquadrangulate, not winged, hirsute to villous, white to silvery, internodes 1–1.8 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles 1–3 mm long; blades 10–24 × 5–12 mm, usually slightly silvery, coriaceous, not discolorous, acrodromous with supranumerary base to eucamptodromous, elliptic, rarely obtuse, base acute to slightly attenuate, rarely ovate, apex acute, sometimes slightly acuminate, margin plane, blades covered by a short-villous indumentum on both surfaces, slightly silvery; secondary veins 2–4 on each side, 1–2 of them departing from the base of the midvein, sulcate on the abaxial surface; domatia absent. Synflorescence frondose, diplobotryum to pleiobotryum type, congested; accessory branches absent, principal florescence truncate, paraclades 3–15 cm long; bracts similar to the vegetative leaves but smaller in size; flowers subsessile, hypopodium 0–1 mm long, epipodium 0–0.5 mm long; prophylls 5–6.5 × 2.1–2.7 mm, reaching the middle to surpassing the apex of the floral tube, obovate to elliptic, unkeeled, base acute, apex acute to obtuse, margin plane, sericeous; floral tube 6–6.5 mm long, greenish when fresh, sometimes silvery, oblong, sericeous to villous; sepals 3–4.5 mm long, triangular, slightly caudate, not deflexed, sericeous; epicalyx segments 1–1.5 mm long, triangular to lanceolate, dorsiventrally compressed, suberect, much shorter than the sepals, with sericeous indument; corolla ca. 3 cm in diam., rose, petals 12–14 × ca. 8 mm, broadly obovate, apex obtuse; stamens 12, free portion of the filament 6.5–7 mm long, not exserted; ovary ca. 1.9–2.1 × 2.2–2.5 mm, depressed-obovate, glabrous, style 12–15 mm long, stigma capitate, ovules 26–36. Capsules ca. 4.2 × 3.9 mm, oblong, glabrous; seeds ca. 6, ca. 2.1 × 1.9 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3793, CEN, Minas Gerais
T.B. Cavalcanti, 3800, CEN, Minas Gerais
P. Claussen, 113, M, K, P, Minas Gerais, **Typus**
P. Claussen, s.n., K, (K000528541), Minas Gerais

Diplusodon thymifolius Mart. ex DC.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** acute; **margin** subrevolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/longer than sepal; **segment of the epicalyx** patent/ suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 0.5–3 m tall, erect, much-branched, not dark-brown when dry. Upper branches cylindrical to subquadrangular, not winged, pubescent, covered by short trichomes, internodes 0.5–0.7 cm long. Leaves decussate, spreading, subsessile; petioles ca. 0.5 mm long; blades 4–11 × 1–4 mm, coriaceous, not discolorous, eucamptodromous, oblong-lanceolate, narrowly elliptic, apex obtuse, margin subrevolute, base acute, blades covered by very short trichomes, denser and oriented on the veins; secondary veins 1 on each side, sulcate on the adaxial surface, prominent on the abaxial surface, sometimes surfaces sericeous; domatia absent. Synflorescence lax, frondose, diplobotryum to pleiobotryum type; accessory branches absent, principal florescence ca. 10 cm long, paraclades 7–30 cm long; bracts similar to the vegetative leaves in shape and size; flowers subsessile, hypopodium 0.8–1 mm, epipodium 0.1–0.3 mm; prophylls 2.5–2.6(–2.9) × 1–1.2 mm, oblong-lanceolate, obovate to elliptic, apex obtuse, base acute, reaching to the apex of the floral tube or slightly less, inserted in the apex of pedicel; floral tube 2–2.5 mm long, funnel-shaped, covered by very short, inconspicuous trichomes; sepals 1.2–1.3(–2) mm long, triangular, not caudate, not deflexed, covered by very short, inconspicuous trichomes; epicalyx segments 1.1–3 mm long, cylindrical, spreading to suberect, with the same type of indumentum as the sepals; corolla 1.5–2 cm diam., lilac to rose, petals 5–6.5 × 2.2–3 mm, oblong to obovate, apex obtuse; stamens 12, exserted to 1 mm, free portion of the filaments 4–5 mm long; ovary 1.2–1.1(–1.8) × ca. 1.1(–1.9) mm, obovate, glabrous, style 9–10 mm long, ovules ca. 10. Capsules oblong, seeds ca. 6, seeds, 4–5 × 3.5–4 mm long, ca. 3 × 2.9–3 mm long.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Piauí)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

C.F.R. Cardoso, 30, UB, NY, CEN, Bahia
R.M. Harley, 21916, CEPEC, K, Bahia
C.F.P. Martius, s.n., M, Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon thymifolius* Mart. ex DC.

Diplusodon thysanosepalus Lourteig & Sandwith

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** obtuse/subcordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** suberect/erect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs ca. 0.4 m tall, erect, branched. Upper branches quadrangular?, winged?, glabrous, dark-brown when dry. Leaves decussate, not imbricate, coriaceous, sessile; blades 1.1–1.7 × 0.75–1.2 cm, not discolorous, acrodromous-perfect-basal, ovate to oblong-ovate, base obtuse to subcordate, apex acuminate, margin ciliate at the apex of young leaves; secondary veins 2 on each side of the midvein departing from the base; domatia absent. Synflorescence frondose, diplobotryum type, congested, florescence of the botryum type; accessory branches absent; flowers pedicellate, hypopodium ca. 1.5 mm, longer in fruit; prophylls surpassing the apex of the floral tube, obovate, unkeeled, apex subacute; floral tube oblong; sepals ca. 5 × 2.5 mm, triangular, slightly caudate, not deflexed, sparsely ciliate; epicalyx segments ca. 5.5 mm long (in the diagnosis ca. 0.75 mm long), linear, acute, sparsely ciliate, slightly longer than the sepals; corolla ca. 18 × 14 mm, rose, petals obovate; stamens 12; ovary round, glabrous, style very long, twice the length of the calyx, ovules 22. Fruits not seen.

COMMENTS

Leaves, sepals and epicalyx segments glabrous but long-ciliate.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

A.F.M. Glaziou, 21548a, K, P, P00506523, (P00506523), Goiás, **Typus**

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon trigintus T.B.Cavalc.

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** sessile; **width** bigger than 5 mm; **venation** acrodromous; **base** cordate; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm/7 to 47 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs, 0.8–1.3 m, erect, branched, glabrous, not dark-brown when dry. Upper branches cylindrical to subquadrangular, weakly winged, yellow to reddish, glabrous; internodes 2–2.4 cm long. Leaves decussate, not imbricate, erect, sessile; blades 20–30 × 15–26 mm, glaucous, coriaceous, not discolorous, acrodromous-basal-supranumerary, ovate to ovate-lanceolate, base cordate, apex acute or acuminate, margin plane, glabrous, slightly reticulate; secondary veins (3–)4 on each side along the midvein, prominent; domatia absent. Synflorescence bracteose, diplobotryum to triplobotryum type, lax; accessory branches absent, principal florescence when present ca. 12 cm long, paraclades 5.5–18 mm long; bracts similar to the vegetative leaves in shape, base obtuse, smaller; flowers long-pedicellate, hypopodium 6–8.5 mm long, persistent, epipodium ca. 1 mm long; prophylls 1.5–3 × 1–2.5 mm, reaching from the base to the middle of floral tube glabrous, oblong to elliptic, unkeeled, margin plane, base retuse, apex obtuse; floral tube 4–5.5 mm long, campanulate, glabrous; sepals 2.5–3.5 mm long, triangular, not caudate, not deflexed; epicalyx segments 0.3–1 mm long, cylindrical to dorsiventrally compressed, spreading to slightly deflexed, shorter than the sepals; corolla 3.5–4 cm in diam., lilac, petals 14–15 × 9–10 mm, oboval, apex obtuse; stamens 24–32, free portion of the filaments 7.5–8 long, exserted, supassing the sepals ca. 2 mm; ovary 2–2.2 × 3–3.8 mm, rhombic-depressed, glabrous; style 12–15 mm long, ovules 16–20. Immature capsules ca. 4 × 5.5 mm, globose, glabrous; seeds 4–7, 2.1–2.5 × 2–2.2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)

HERBARIUM MATERIAL

A.E. Ramos, 840, HTO, HEPH, Tocantins
J.A. Rizzo, 9904, UFG, Tocantins, **Typus**
B.M.T. Walter, 5273, IBGE, CEN, Tocantins

REFERENCE

Cavalcanti, T. B. 1998. New Species of Diplusodon (Lythraceae) From Brazil. Novon, v. 8(4), p. 337 – 351.

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon ulei Koehne

This treatment is composed of the following taxa: *Diplusodon ulei*, .

Has as synonym
homotype *Diplusodon ulei* Koehne var. *ulei*
heterotypic *Diplusodon ulei* var. *ciliatus* T.B.Cavalc.

DESCRIPTION

Leaf: hair absent; **colour when dry** blackened; **petiole** 3 to 10 mm; **width** bigger than 5 mm; **venation** eucamptodromous; **base** acute; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.50–3 m tall, erect, much-branched, sometimes dark-brown when dry. Upper branches quadrangular to subquadrangular, unwinged, yellow to wine-colored, glabrous, internodes 0.8–2.0 cm long. Leaves decussate, not imbricate, suberect; petioles 3–7 mm long; blades 11–35 × 8–23 mm, nitid, chartaceous, petiolate, not discolorous, eucamptodromous, glabrous, orbicular, wide elliptic to obovate, sometimes ovate, base acute, slightly attenuate, rarely obtuse, apex obtuse to acute or sometimes slightly acuminate, margin plane, winish, slightly thickened with protuberances, not ciliate, adaxial and abaxial surfaces glabrous, abaxial surface with not prominent veins, glabrous; secondary veins 3–5 on each side, along the midvein; domatia absent, when rarely present on the two basal vein pairs, inconspicuous. Synflorescence bracteose to frondose-bracteose, diplobotryum to triplobotryum type, lax; accessory branches absent, principal florescence when present ca. 4 cm long, generally caducous, botryum type, paraclades 4–30 cm long, wine-colored; bracts 7–10 × 3–5 mm, similar to the vegetative leaves in shape, decreasing in size toward the apex of the branch; flowers pedicellate, hypopodium 2–2.5 mm long, epipodium 0.5–2 mm long; prophylls 3.6–4 × 1.5–1.8 mm, reaching the middle to the apex of the floral tube, elliptic or obovate, unkeeled, base acute, apex obtuse, margin plane, not ciliate, inserted in the upper third of the pedicel; floral tube 5–5.5 mm long, green to dark-wine, funnel-shaped, glabrous; sepals 3–3.5 mm long, reddish to dark-wine, triangular, caudate, apex deflexed and papillose, sometimes with 1–2 trichomes, not ciliate; epicalyx segments 4–5 mm long, dorsiventrally compressed with acute apex, spreading, longer than the sepals, not ciliate, sometimes with 1–2 trichomes on the apex; corolla 2.5–3 cm in diam., rose-, petals 9.5–12 × 5.5–8 mm, obovate-elliptic, apex obtuse; stamens 12, free portion of the filaments 7–8.5 mm long, exserted, surpassing the sepals 2–3 mm; ovary 1.8–2 × 2–2.2 mm, obovate, glabrous; style 11–12 mm long, rose, ovules 16–18. Capsules 4.5–4.8 × 5–5.5 mm, globose, glabrous; seeds 4–9, 3–3.2 × ca. 2 mm. 2n= 30 (Graham & Cavalcanti, 2001).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga, Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

R.M. Harley, H 50666, RB, 326577, (RB00209711), CEN, CEPEC, HUEFS, SPF, Bahia
T.B. Cavalcanti, 2452, CEN, Bahia
E.H.G. Ule, 7111, R, P, HBG, Bahia, **Typus**

REFERENCE

Cavalcanti, T. B. 1994. Lythraceae. In B. Stannard. (Org.). Flora do Pico das Almas, Bahia. 1ed. Londres, Inglaterra: Royal Botanic Gardens, p. 411-416.

Diplusodon uninervius Koehne

Has as synonym
heterotypic *Diplusodon candolii* A.St.-Hil.

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** hyphodromous; **base** acute; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm/2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent/suberect; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs 0.5–4 m tall, erect, much-branched, dark-brown when dry. Upper branches subquadrangular, unwinged, pubescent, internodes 0.3–0.5 cm long. Leaves decussate to 3–5-whorled, subsessile; petioles to 1 mm long; blades 4–12 × 0.7–1 mm, suberect, coriaceous, not discolorous, hyphodromous, linear, base acute, apex obtuse, margin revolute, blade glabrous, dense indumentum on the midvein on abaxial surface; lateral veins absent, with dense indumentum. Synflorescence congested, frondose, diplobotryum to pleiobotryum type; accessory branches absent, paraclades 3–20 cm long; bracts similar to the vegetative leaves in shape and size; flowers pedicellate, hypopodium 1–1.5 mm long, epipodium 0.5–1 mm long; prophylls 3–4 × 1.8–2 mm, lanceolate to linear-lanceolate, unkeeled, with conspicuous cilia, margin subrevolute, reaching the apex of the floral tube; floral tube 2.5–3 mm long, funnel-shaped, glabrous; sepals 2–2.5 mm long, triangular, not caudate, not deflexed; epicalyx segments 1.8–2 mm long, cylindrical, suberect to spreading, with conspicuous cilia, shorter than the sepals; corolla ca. 2 mm in diam., rose-magenta, petals 8–11 × 5–7 mm; stamens 12, exserted, free portion of the filaments 7–8 mm long; ovary ca. 1.5 × 2 mm, obovate-depressed, glabrous, style 12–14 mm long, ovules 15–18. Capsules 4–5 × ca. 4.5 mm, globose; seeds 5–10, 2–4 × 2–3.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

H.S. Irwin, 27672, MO, RB, 165354, (RB00209658), NY, P, K, Minas Gerais
T.B. Cavalcanti, CFCR 10313, F, K, MO, MBM, SPF, RB, 379947, (RB00209693), Minas Gerais
A. Riedel, 909, K, (K000528580), LE, G, Minas Gerais, **Typus**

Diplusodon venosus T.B. Cavalc.

DESCRIPTION

Leaf: hair presence/absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** eucamptodromous/acrodromous; **base** acute/obtuse; **margin** flat; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 18/19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.35–0.7 m tall, erect, branched, glabrescent, not dark-brown when dry. Branches slightly quadrangular and flattened, with a inconspicuous wing, the upper branches straw-colored, with minute and very inconspicuous trichomes to glabrous, internodes 3–4.5 cm long. Leaves decussate, rarely verticillate, not imbricate, erect, subsessile; petioles 0.5–1 mm long; blades 5.5–7 × 0.6–2.6 cm, coriaceous, not discolorous, not glaucous, eucamptodromous to acrodromous-basal-supranumerary, narrowly elliptic, narrowly lanceolate to elliptic, base obtuse to acute, apex acute, slightly acuminate, margin plane, irregular, with minute and inconspicuous cilia, blades glabrescent to glabrous, trichomes when present slightly bulbous at the base, sparse, common on the abaxial surface, very prominent; domatia present, inconspicuous. Synflorescence bracteose, triplobotryum to pleiobotryum type, lax; accessory branches absent, principal florescence botryum type, usually truncate, paraclades 5–25 cm long; bracts 15–30 × 1–4 mm, glabrous, linear to narrowly elliptic; flowers short-pedicellate, hypopodium 0.5–1 mm long, epipodium to 0.5 mm long; prophylls 4–4.2 × 1.5–1.7 mm, surpassing the middle of the floral tube, almost reaching the apex of the floral tube, narrowly elliptic to obovate, keeled, base retuse to acute, apex acute, margin plane; floral tube 4.5–5 mm long, funnel-shaped, glabrous; sepals 2–2.2 mm long, triangular, not deflexed, glabrous; epicalyx segments ca. 2 mm long, slightly dorsiventrally compressed, spreading, glabrous, shorter than the sepals; corolla 3.5–4 cm in diam., lilac to rose-magenta, petals 13–19 × 7–10 mm, obovate, apex obtuse; stamens 18–24, free portion of the filaments 6–6.5 mm long, slightly exserted; ovary 2–2.2 × 2.2–3 mm, obovate-depressed, glabrous, style 7–10 mm long, ovules 22–42. Capsules 4.5–5 × 4–4.5 mm, globose, glabrous; seeds ca. 31, 1.5–2.2 × 1.5–2.8 mm.

Life Form
Shrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
High Altitude Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

T.B. Cavalcanti, 3534, CEN, 00061825, Goiás, **Typus**
J.F. Pastore, 471, CEN, 53423, CEN (CEN00053423)

Diplusodon verruculosus T.B. Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile; **width** 0.5 the 4.0 mm; **venation** hyphodromous; **base** cordate/retuse; **margin** revolute; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 1 to 3; **stamen** 6.

ADDITIONAL DESCRIPTION

Subshrubs, erect, with a xylopodium, strongly branched from the base, caespitose, not dark-brown when dry. Upper branches cylindrical, unwinged, strigose, internodes 0.8–2 cm long. Leaves decussate, slightly imbricate, erect, coriaceous, sessile; blades 3–6 × 1–1.5 mm, not discolorous, hyphodromous, narrow triangular, base retuse to cordate, apex acute, margin revolute to the midvein, strigose, blades covered by sparse bulbous-based trichomes which give the leaf surface a verrucose aspect; lateralveins absent, hispid; domatia absent. Synflorescence frondose, diplobotryum type, congested; accessory branches absent, principal florescence truncate, paraclades 4–9 mm long; bracts similar to the vegetative leaves in shape and size; flowers sessile, concentrated at the apex of the paraclades; prophylls 5–5.5 × 2.8–3 mm, surpassing the apex of the floral tube, elliptic, slightly keeled, margins subrevolute, base acute, with sparse and fine trichomes, almost glabrous; floral tube 3.5–3.8 mm long, funnel-shaped, with sparse and fine trichomes, almost glabrous; sepals 3.8–4 mm long, triangular, caudate, not deflexed, with sparse and fine trichomes, almost glabrous, strongly ciliate; epicalyx segments 3–3.2 mm long, narrowly triangular, erect, ciliate, the same size as or a little shorter than the sepals; corolla ca. 2 cm in diam., deep rose, petals 9–10 × 4.5–5 mm; stamens 6, free portion of the filaments 6–6.5 mm long, included within the sepals; ovary ca. 2.5–2.7 × 2–2.6 mm, obconic, glabrous, style 10–11 mm long, ovules 18–20.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

D.C. Zappi, 2733, CEN, 74415, (CEN00074415), RB, 514271, (RB00652701), CEN, 74415, Minas Gerais, **Typus**
D.C. Zappi, 830, RB, 465076, (RB00524648), RB

Diplusodon vidalii Lourteig

DESCRIPTION

Leaf: hair absent; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** acute/attenuate; **margin** flat; **lateral vein** 0 1 of the each side; **lateral vein** without domatia. **Flower: prophyllum** smaller than or to half of the tube flower/half of the tube floral or to apex of the tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Subshrubs 0.2–1 m tall, erect, much-branched, glabrous, delicate, not dark-brown when dry. Upper branches quadrangular, yellow when young, rust-colored when older, winged, upper internodes slightly compressed, internodes 2–5 cm long. Leaves decussate, not imbricate, erect, petiolate; petioles 1–1.5 mm long; blades 3–4 × 0.5–1.5 cm, membranaceous, not discolorous, punctate, hyphodromous, eucamptodromous, elliptic, base acute or attenuate, apex acute to obtuse, sometimes acuminate, margin plane; veins ca. 3, inconspicuous on the adaxial surface, thin on the abaxial surface, midvein prominent, the secondary veins only sulcate or slightly raised; domatia absent. Synflorescence bracteose, diplobotryum to pleiobotryum type, lax; accessory branches absent, paraclades 4–12 cm long; bracts 10–18 × 2.5–5 mm, elliptic-linear; flowers pedicellate, hypopodium 0.5–1 mm long, epipodium 0–0.5 mm long; prophylls 2–2.5 mm long, reaching the middle or slightly below the middle of the floral tube, linear to linear-spathulate, unkeeled; floral tube 4–4.5 mm long, green, funnel-shaped; sepals 2.7–3 mm long, triangular, sometimes slightly caudate, not deflexed, apex minutely ciliate; epicalyx segments 0.8–1.5 mm long, cylindrical, deflexed to spreading, shorter than the sepals; corolla ca. 2 cm in diam., deep rose to lilac, petals 7–7.5 × 4–4.5 mm, obovate, apex obtuse; stamens 12, free portion of the filaments 7–8 mm long, exserted 4–5 mm; ovary 1.8–2 × 2–2.5 mm, oboval, glabrous, style 13–14 mm long, ovules 23–26. Capsules not seen.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

R.S. Bianchini, 455, CEN, SP, Minas Gerais
T.B. Cavalcanti, 3063, CEN, SP, MO, Minas Gerais
J. Vidal, I-713, R, P, Minas Gerais, **Typus**

Diplusodon villosissimus Pohl

Has as synonym
homotype *Diplusodon lythroides* var. *glabrescens* De Candolle
heterotypic *Diplusodon lythroides* (Mart.) A.DC.
heterotypic *Diplusodon stachyoides* (Cham. et Schltdl.) DC.
heterotypic *Friedlandia stachyoides* Chamisso & Schlechtendal

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** acrodromous; **base** obtuse/subcordate; **margin** flat; **lateral vein** 0 1 of the each side/2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** longer than sepal; **segment of the epicalyx** erect; **diam. (cm) corolla** 3.5 to 7; **stamen** 15/19 to 55.

ADDITIONAL DESCRIPTION

Subshrubs 0.3–0.9 m tall, erect, usually branched just at inflorescence, sometimes caespitose, with a xylopodium, not dark-brown when dry. Upper branches subquadrangular to cylindrical, unwinged, lax, densely covered by long, white trichomes, wine-colored on the younger parts, internodes 2–6 cm long. Leaves decussate, not imbricate, suberect, subsessile; petioles 1–2 mm long; blades 20–60 × 15–45 mm, coriaceous, not discolorous, acrodromous-basal-supranumerary, concave when fresh, villous, ovate or ovate-lanceolate to rarely elliptic, base obtuse to subcordate, apex obtuse, frequently acuminate, margin plane, adaxial and abaxial surface covered by long, white trichomes, sparse on the leaves; veins 4–6 on each side, 2–3 of them departing from each side of the base, 1–2 departing on each side along the midvein, yellow; domatia absent, sometimes present and inconspicuous. Synflorescence frondose-bracteose, botryum to diplobotryum type or rarely triplobotry, congested; accessory branches absent, principal florescence 4–23 cm long, botryum type, paraclades 4–18 cm long; bracts 14–18 × 7–9 mm, slightly shorter than the vegetative leaves, much shorter than the paraclades; flowers pedicellate, hypopodium 1–1.5 mm long, epipodium 0–0.5 mm long; prophylls 6–9 × 3–4 mm, surpassing or the same size as the floral tube, elliptic-lanceolate, unkeeled, apex acute, margins plane, ciliate, densely pilose; floral tube 6.5–7.5 mm long, funnel-shaped, densely covered with long, white trichomes turning grayish, wine-colored under the trichomes; sepals 4–5 mm long, triangular, not caudate, not deflexed, pilose as on the floral tube; epicalyx segments 4.5–6 mm long, cylindrical, erect, pilose as on the floral tube, surpassing the sepals; corolla 4.5–5 cm in diam., lilac to purple, petals 16–22 × 8–14 mm, narrowly-obovate, apex obtuse; stamens 15–19, free portion of the filaments 7.5–8.5 mm long, included; ovary 2–3 × 2.5–3.5 mm, obovate-depressed, glabrous, style 11–13 mm long, ovules 30–56. Capsules 4.8–5 × 4–4.3 mm, globose, glabrous; seeds 16–43, 2–2.2 × 1.7–2.5 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2561, NY, 941159, (NY00941159), MO, CEN, Minas Gerais
C.F.P. Martius, obs 868, W, P, NY, 924039, (NY00924039), K, M, São Paulo
G. Schuch, s.n., W, Minas Gerais, **Typus**

REFERENCE

Cavalcanti, T. B. & Graham, S. A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.

Diplusodon villosus Pohl

Has as synonym
heterotypic *Diplusodon humilis* Koehne
heterotypic *Diplusodon pulchellus* Koehne

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile/0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** acrodromous; **base** obtuse; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 0 to 1.5 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3/3.5 to 7; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs 0.2–1.2 m tall, erect, usually branched just at inflorescence, often caespitose, with a xylopodium, not dark-brown when dry. Upper branches subquadrangular, unwinged, villous-tomentose, internodes 2–5.5 cm long. Leaves decussate, not imbricate, suberect, sessile to subsessile; petioles ca. 1 mm long; blades 20–55 × 10–22 mm, slightly ashy gray, chartaceous, sometimes discolorous, acrodromous-basal-supranumerary, elliptic-lanceolate to less often ovate, base obtuse, apex obtuse to acute or acuminate, margin revolute, adaxial surface with long, sparse trichomes, abaxial surface with long, sparse trichomes more concentrated on the veins; secondary veins 3–4 on each side, 1–2 of them departing from the base of the midven; domatia present. Synflorescence bracteose to frondose-bracteose, diplobotryum or triplobotryum type or less often botryum type, congested; accessory branches absent, principal florescence 7.5–28 cm long, paraclades 4–20 (–30) cm long, botryum type, often truncate; bracts 6–20 × 3–8 mm, elliptic, longitudinally folded, with the same indumentum as the leaves, margins revolute; flowers sessile, prophylls 2–3 × 1–2.5 mm, less than half the length of the floral tube, elliptic to orbicular, unkeeled, base retuse, apex obtuse, margin plane; floral tube 4–5 mm long, funnel-shaped, villous-tomentose; sepals 2.5–3 mm long, wine-colored, triangular, not caudate, not deflexed, villous-tomentose; epicalyx segments 0.5–1.5 mm long, wine-colored, cylindrical to rounded, spreading, longitudinally ciliate, shorter than the sepals; corolla 3–4 mm in diam., rose to rose-magenta, petals 10–12(–17) × 7–9(–12) mm, obovate, apex obtuse to acute; stamens 18, free portion of the filaments 7–8 mm long, exserted 1–2 mm, rose; ovary 2.5–3 × 2.2–2.5 mm, rhombic, glabrous, style 11–12 mm long, rose; ovules 31–38. Capsules 1.5–2.1 × 1.5–2 mm, globose, glabrous. n=15 (Graham, 1985); 2n=30 (Cavalcanti, 1995).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Distrito Federal, Goiás)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

M.A.B. Souza, s.n., UB, Minas Gerais
T.B. Cavalcanti, 3579, CEN, MO, Goiás

T.B. Cavalcanti, 2391, NY, MO, CEN, Distrito Federal
J.B.E. Pohl, 1066 (D 937), M, BR, K, (K000528546), K, (K000528545), W, Tocantins

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Diplusodon virgatus Pohl

This treatment is composed of the following taxa: *Diplusodon virgatus*, *Diplusodon virgatus var. occidentalis*, *Diplusodon virgatus var. virgatus*.

Has as synonym
heterotypic *Diplusodon amoenus* (Cham. et Schltdl.) DC.
heterotypic *Friedlandia amoena* Chamisso & Schlechtendal

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** sessile/3 to 10 mm; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** acute/attenuate/obtuse; **margin** flat/subrevolute; **lateral vein** 2 or more of the each side; **lateral vein** without domatia. **Flower: prophyllum** half of the tube floral or to apex of the tube floral/longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** deflexed/patent; **diam. (cm) corolla** 1 to 3; **stamen** 12/15.

ADDITIONAL DESCRIPTION

Shrubs or subshrubs to small trees, slender or robust when shurbs or subshrubs (0.4–)1.5–4 m tall, erect, much-branched, slender-stemmed, not dark-brown when dry. Upper branches subquadrangular, sometimes with a reduced wing, light-colored, fistulose, lax, glabrous to minutely pilose to pubescent, internodes 1–3 cm long. Leaves decussate, spreading, subpetiolate, rarely subsessile or sessile; petioles (when present) to 8 mm long; blades 1.5–7 × 0.5–3 cm, membranaceous to chartaceous or coriaceous, discolorous, eucamptodromous, elliptic, elliptic-lanceolate to oblong or ovate to ovate-lanceolate, base acute to attenuate to obtuse, apex acute or obtuse to retuse, rarely obtuse, margin plane to subrevolute, blades totally glabrous or with sparse trichomes concentrated on the veins, adaxial surface dark-green, abaxial surface clear green; secondary veins 2–3 on each side, departing along the midvein, inconspicuous on both surfaces; domatia absent. Synflorescence frondose, pleiobotryum type, lax; frequently with development of accessory branches, principal florescence 7–15 cm long, paraclades 5–30 cm long; bracts similar to the vegetative leaves in shape, only decreasing in size toward the apex of the branch; flowers delicate or robust, pedicellate, hypopodium 2–5 mm long, epipodium 0.5–1 mm long; prophylls 4.5–7 × 2.5–5 mm, reaching or sometimes surpassing the apex of the floral tube, ovate to obovate, unkeeled, apex obtuse or sometimes acute, margin plane to subrevolute, ciliate or not; floral tube 4–6 mm long, clear green, slightly fleshy or not, funnel-shaped, glabrous; sepals 4–5 mm long, triangular, caudate or not, deflexed or not, glabrous or ciliate; epicalyx segments 2.5–4.5 mm long, linear or lanceolate, dorsiventrally compressed, slightly revolute, deflexed to spreading, glabrous or generally ciliate or with cilia concentrated only on the apex; corolla 2.5–3 cm in diam., white, petals 13–14 × 7–10 mm, oblong to obovate, apex obtuse; stamens 12–14, free portion of the filaments 5.5–7 mm long, slightly exserted, white; ovary 2–2.5 × 3–3.5 mm, obconic, glabrous, style 9–11 mm long, white, stigma yellow, ovules 38–56. Capsules 4–4.5 × 4–5.2 mm, globose, glabrous; seeds (19–)34–52, 2.5–4 × 2–3 mm.

Life Form
Shrub, Subshrub, Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Cerrado (lato sensu), Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
North (Tocantins)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais, São Paulo)
Possible ocurrences
Northeast (Maranhão)
Central-west (Mato Grosso do Sul)

IDENTIFICATION KEY

1. Prophylls 2.5–3.5 mm wide, not hiding the entire floral tube; flowers delicate, floral tube thin, 4–4.5 mm long; leaves petiolate, base attenuate; epicalyx segments 2.5–3.5 mm long. ……..…… *D. virgatus* var. *virgatus*
1. Prophylls ca. 5 mm wide, hiding the entire floral tube; floral tube thicker, 5–6 mm long; leaves sessile, base not attenuate; epicalyx segments 3–4.5 mm long. …..……..……..…..……. *D. virgatus* var. *occidentalis*

HERBARIUM MATERIAL

M.M.F. Melo, 194, SP, NY, CEN, São Paulo
J.B.E. Pohl, 773 (D 947), K, (K000528571), W, Goiás, **Typus**
G. Pedralli, 3318, NY, CEN, Tocantins
T.B. Cavalcanti, 2567, NY, MO, CEN, Minas Gerais
C.F.P. Martius, obs 866, MO, M, NY, Mato Grosso
T.B. Cavalcanti, 1266, CEN, UB, F, SPF, NY, MBM, K, Goiás
T.B. Cavalcanti, 2258, CEN, NY, Distrito Federal

REFERENCE

Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.
Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. & Graham, S. A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.
Cavalcanti, T. B. 2004. Flora de Grão Mogol, Minas Gerais: Lythraceae In: Bol. Bot. Univ. São Paulo. , v.22, 283-290.
Cavalcanti, T. B. & Graham, S. A. 2011. Lythraceae. In: Cavalcanti, T.B. & Silva, A.P.. (Org.). Flora do Distrito Federal, Brasil. 1ed. Brasília: Atalaia, v. 9, p. 131-175.

Diplusodon virgatus Pohl var. *virgatus*

DESCRIPTION

Shrubs or subshrubs to small trees (0.4–)1.5–4 m tall. Leaves petiolate, rarely subsessile; petioles 3–8 mm long; blades elliptic or elliptic-lanceolate to oblong, base acute to attenuate, apex acute or rarely obtuse, membranaceous to chartaceous, glabrous or with sparse trichomes concentrated on the veins. Flowers delicate, pedicellate, hypopodium 2–5 mm long, epipodium 0.5–1 mm long; prophylls 4.5–6.5 × 2.5–3.5 mm, reaching the apex of the floral tube, obovate; floral tube 4–4.5 mm long, not fleshy; sepals not caudate, not deflexed; epicalyx segments 2.5–3.5 mm long, spreading to deflexed, lanceolate, dorsiventrally compressed, slightly revolute; ovules 44–56. n=15 (Graham, 1985); 2n=30 (Cavalcanti, 1995).

Life Form
Shrub, Subshrub, Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Cerrado (lato sensu), Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Central-west (Distrito Federal, Goiás, Mato Grosso)
Southeast (Minas Gerais, São Paulo)
Possible ocurrences
Central-west (Mato Grosso do Sul)

HERBARIUM MATERIAL

J.B.E. Pohl, 773, W, Minas Gerais, **Typus**
G. Pedralli, 3312, NY, CEN, Tocantins
H.L. Filho, 14491, UEC, CEN, São Paulo
T.B. Cavalcanti, 571, CEN, SP, Distrito Federal
W.R. Anderson, 9439, NY, MO, Goiás
G. Hastchbach, 52969, MO, MBM, Minas Gerais
C.F.P. Martius, obs 866, M, NY, MO, Mato Grosso
R.C. Forzza, 6316, RB, 526550, (RB00674030), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Diplusodon virgatus var. virgatus* Pohl



Figure 2: *Diplusodon virgatus var. virgatus* Pohl

Diplusodon virgatus var. *occidentalis* T.B.Cavalc. & S.A.Graham

DESCRIPTION

Shrubs robust , 0.7–2 m tall. Leaves sessile; blades coriaceous, ovate to ovate-lanceolate, base obtuse to slightly acute, not attenuate, eucamptodromous, apex obtuse to retuse, glabrous. Flowers robust, pedicellate, hypopodium ca. 2 mm long, epipodium absent; prophylls 5–7 × ca. 5 mm, reaching the apex of the floral tube, hiding the floral tube, ovate; floral tube 5–6 mm long, slightly fleshy; sepals caudate, apex deflexed; epicalyx segments 3–4.5 mm long, deflexed, linear-oblong, not revolute; ovules 38.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso do Sul, Mato Grosso)

HERBARIUM MATERIAL

V.C. Souza, 17830, CEN (CEN00033850), CEN, ESA, Mato Grosso
F.C. Hoehne, 1796, R, Mato Grosso
L. Arroyo, 684, MO, USZ, **Typus**
E. Jacques, 1299, CEN (CEN00058572), CEN, HMS, Mato Grosso do Sul

REFERENCE

Cavalcanti, T.B. & Graham, S.A. 2005. New taxa in Lythraceae from Latin America. Novon, v. 15, n. 1, p. 59-68.

Diplusodon vittatus T.B. Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** non blackened; **petiole** 0 to 2.5 mm; **width** 0.5 the 4.0 mm; **venation** eucamptodromous; **base** acute; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** longer than apex tube floral; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** of the same size than the sepal/shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 3.5 to 7; **stamen** 18.

ADDITIONAL DESCRIPTION

Subshrubs, erect, branched, caespitose, with a xylopodium, not dark-brown when dry. Upper branches subquadrangular, congested, unwinged, hirtellous to rarely pubescent, covered by white and sparse trichomes, internodes 0.7–1.1 cm long. Leaves decussate, not imbricate, suberect, petiolate; petioles ca. 1 mm long; blades 15–35 × 1.5–4(–6) mm, coriaceous, not discolorous, eucamptodromous, narrowly lanceolate, narrowly elliptic, base acute, apex acute, margin revolute, adaxial surface sericeous to hirtellous covered by white and fine trichomes; abaxial surface covered by hirtellous to villous covered by white trichomes; secondary veins 2 on each side of the midvein, almost parallel, prominent on the abaxial surface; domatia present. Synflorescence frondose, diplobotryum spiciform type, lax; accessory branches absent, principal florescence 10–12 mm long, botryum spiciform type, paraclades 5–7 mm long; bracts similar to the vegetative leaves, except diminishing in size toward the apex of the branch, 15–25 × 1.5–3 mm wide, linear, margin revolute; flowers subsessile, hypopodium absent, epipodium ca. 0.5 mm long; prophylls ca. 5.5 × 1.5 mm, slightly surpassing the apex of the floral tube ca. 0.5 mm, narrowly oblong, with 2 inconspicuous veins on each side of the midvein, base acute, apex acute, margin plane; floral tube ca. 5 mm long, funnel-shaped, sparsely covered with white and fine trichomes; sepals 2.8–3 mm long, triangular, not deflexed, not caudate, ciliate, covered by sparse, short, white and trichomes; epicalyx segments 3–3.5 mm long, cylindrical, spreading, covered by sparse, short, white and sparse trichomes; corolla ca. 4 cm in diam., lilac, petals ca. 21 × 6 cm; stamens 18, free portion of the filaments ca. 8 mm long, ca. 1 mm exserted; ovary ca. 2 × 2.5 mm, obovate, glabrous, style ca. 13.5 mm long, ovules ca. 21.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Vegetation Types
High Altitude Grassland

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)

HERBARIUM MATERIAL

J.F.B. Pastore, 234, CEN, 50979, (CEN00050979), CEN, 50979

Diplusodon xiphodon T.B.Cavalc.

DESCRIPTION

Leaf: hair presence; **colour when dry** blackened; **petiole** 0 to 2.5 mm; **width** bigger than 5 mm; **venation** eucamptodromous/ acrodromous; **base** obtuse/retuse; **margin** revolute; **lateral vein** 2 or more of the each side; **lateral vein** with domatia. **Flower: prophyllum** smaller than or to half of the tube flower; **pedicel** 0 to 6.5 mm; **length of the segment of the epicalyx** 2 to 11 mm; **segment of the epicalyx relation sepal** shorter than sepal; **segment of the epicalyx** patent; **diam. (cm) corolla** 1 to 3; **stamen** 12.

ADDITIONAL DESCRIPTION

Shrubs to 1 m tall, erect, branched, dark-brown when dry. Upper branches cylindrical, unwinged, hirtellous to hirsute, trichomes white, thick and sparse, internodes 1.5–4.5 cm long. Leaves decussate, not imbricate, patent to suberect, petiolate; petioles 1–2 mm long; blades 10–20 × 7–15 mm, coriaceous, slightly discolorous, acrodromous with supranumerary base to eucamptodromous, orbicular, ovate to broadly elliptic, base obtuse to retuse, apex obtuse, margin revolute, hirtellous on both surfaces, adaxial surface gray-colored, abaxial surface rust-colored; secondary veins (3–)4 on each side, departing along the midvein; domatia present, inconspicuous. Synflorescence bracteose to frondose-bracteose, diplobotryum to triplobotryum type, lax; accessory branches absent, principal florescence ca. 9 cm long or truncate, paraclades 4–9 cm long, delicate; bracts 4–12 × 3–10 mm, orbicular; flowers subsessile, hypopodium ca. 1 mm long, epipodium 0–0.5 mm long; prophylls ca. 3.5 × 1.8–2 mm, reaching the middle of the floral tube, clavate to spathulate, unkeeled, apex obtuse, margin plane, with sparse, white and thick trichomes, ciliate with thick trichomes; floral tube ca. 3.5 mm long, funnel-shaped with an attenuate base, sparsely covered with white thick trichomes; sepals ca. 2 mm long, triangular, ciliate, slightly caudate, apex deflexed; epicalyx segments ca. 2 mm long, sword-shape, flat, spreading, slightly shorter than the sepals, glabrous but strongly ciliate with thick trichomes; corolla ca. 1.5 cm in diam., dark rose, petals ca. 6 x 4 mm, elliptic, apex obtuse; stamens 12, free portion of the filaments ca. 7 mm long, exserted ca. 2 mm; ovary ca. 2 × 2 mm, slightly rhomboid, glabrous, style 10–18 mm long, ovules ca. 7. Capsules 4.5–5 × 3–3.5 mm, elliptic-fusiform, slightly stipitate, glabrous; seeds 5–6, 2.8–3 × 1.8–2 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Vegetation Types
Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia)

HERBARIUM MATERIAL

R.M. Harley, 55896, HUEFS

Heimia Link

This treatment is composed of the following taxa: *Heimia*, *Heimia apetala*, *Heimia salicifolia*.

HOW TO CITE

Graham, S.A.T., Cavalcanti, T.B., Facco, M.G. 2020. Heimia *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8779.

Has as synonym
heterotypic *Lythri* Spreng.

DESCRIPTION

Shrubs, glabrous, branched. Leaves opposite-crossed to sub-opposites, occasionally 3-verticillate, broquidodromous to hyphodromous. Tyrse with reduction to a single flower. Flowers solitary, actinomorphic, without heterostyly, opposite, axillary, 6-merous, bibracteolate; floral tube urceolate to campanulate, persistent in fruiting; sepals 1/3-1/2 the length of the floral tube; epicalyx segments present; sepals equal to each other; corolla yellow, petals (5-)6(-7); stamens (10-)12(-18); ovary superior, sessile, (3-)4(-6)-locular, placentation axillary. Capsule loculicidal, usually 4-valve; seeds obpiramidal, not winged.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest, Pampa, Pantanal

Vegetation Types
Grassland, Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso do Sul)
Southeast (Minas Gerais, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

IDENTIFICATION KEY

Leaves 5-15 mm wide, flowers sessile to subsessile; floral tube 2-3 mm long ……..... *H. apetala*
Leaves 2-5 mm wide, flowers pedicellate, pedicel 2-4 mm long, floral tube 4-5 mm long …H. salicifolia

Heimia apetala (Spreng.) S.A.Graham & Gandhi

Has as synonym
basionym *Lythrum apetalum* Spreng.
heterotypic *Heimia myrtifolia* Cham. & Schltdl.

DESCRIPTION

Leaf: shape narrowly elliptic; **width** 5 - 15 wide (mm). **Flower: floral tube length** 2 - 3 long (mm); **pedicel** 0 - 0.3 long (mm); **petal length** 5 - 7 long (mm).

ADDITIONAL DESCRIPTION

Shrubs, 1-2 m, branches thin. Leaves 15-60x5-15mm, elliptic to narrow-elliptic, base acute, attenuate, rarely obtuse, apex acute, margin plane. Flowers sessile to subsessile; floral tube 2-3 mm long, petals 5-6 mm long. Capsule semiglobose.

Life Form
Shrub, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (Minas Gerais, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

G.P. Silva, 11197, CEN (CEN00067445), CEN, 67445, Santa Catarina
T.B. Cavalcanti, 3707, CEN, 61995, Paraná
G.P. Silva, 10334, CEN, 77805, Rio Grande do Sul
M. Kuhlmann, 3285, CEN, 27424, Minas Gerais
V.C. Souza, 10600, ESA, CEN, 29141, São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Heimia apetala* (Spreng.) S.A.Graham & Gandhi



Figure 2: *Heimia apetala* (Spreng.) S.A.Graham & Gandhi

Heimia salicifolia (Kunth) Link

Has as synonym
basionym *Nesaea salicifolia* Kunth

DESCRIPTION

Leaf: shape narrowly oblong; **width** 2 - 5 wide (mm). **Flower: floral tube length** 4 - 5 long (mm); **pedicel** 2 - 4 long (cm); **petal length** 10 - 15 long (mm).

ADDITIONAL DESCRIPTION

Shrubs, up to 3 m. Leaves 12-40x2-5 mm, basal leaves 80x12 mm, narrow-oblong to narrow-elliptic, to base acute, attenuate, apex acute, margin plane. Flowers pedicellate,
pedicel 2-4 mm long, floral tube 4-5 mm long; petals 10-15 mm long. Capsule globose.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest, Pampa, Pantanal

Vegetation Types
Grassland

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso do Sul)
Southeast (São Paulo)
South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

G. Hatschbach, 49224, MBM (MBM099657), MBM, Mato Grosso do Sul
G. Hatschbach, 51655, MBM (MBM124567), Mato Grosso do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Heimia salicifolia* (Kunth) Link



Figure 2: *Heimia salicifolia* (Kunth) Link



Figure 3: *Heimia salicifolia* (Kunth) Link

Lafoensia Vand.

This treatment is composed of the following taxa: *Lafoensia*, *Lafoensia acuminata*, *Lafoensia glyptocarpa*, *Lafoensia nummularifolia*, *Lafoensia pacari*, *Lafoensia punicifolia*, *Lafoensia replicata*, *Lafoensia vandelliana*.

HOW TO CITE

Cavalcanti, T.B. 2020. Lafoensia *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8782.

Has as synonym
heterotypic *Calyplectus* Ruiz et Pav.
heterotypic *Lafoensea* Reichenbach
heterotypic *Ptychodon* Klotzsch ex Reichb

DESCRIPTION

Trees, treelets, shrubs to subshrubs. Leaves opposite, brochidodromous, intramarginal vein at the margin, apex with prominent pore. Racemes frondose to bracteose. Flowers opposite, axillary, pedicellate, bibracteolate, bracteoles usually caducous in floral anthesis, actinomorphic, without heterostyly, 8-24-mer; floral tube fleshy, campanulate or urceolate, with or without constriction in the median portion, caducous in fruitification, internally with well-marked stem line, nectar tissue around the basal region, epicalyx absent; sepals equal to each other; petals white, cream or light yellow; stamens 12-32; ovary stipitate, unilocular with incomplete septum, smooth or with depressions in the equatorial portion, placenta basal. Capsule with irregular dehiscence, warts or with longitudinal marks in the equatorial portion; seeds rectangular rare rounded, winged, wing conspicuous.

COMMENTS

Three new species and a new combination are yet to be published in the ongoing synopsis.

Life Form
Subshrub, Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonal Evergreen Forest, Seasonally Semideciduous Forest

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Pará, Rondônia, Tocantins)
Northeast (Bahia, Ceará, Maranhão, Pernambuco, Piauí)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)
Possible ocurrences
Southeast (Minas Gerais)

IDENTIFICATION KEY

1. Subshrubs to shrubs, 1,5-2,5 m alt. Leaves 1-1.5 cm long. Bracteoles present in floral anthesis; floral tube 1-1.7 cm, petals 8 .....…….....… 3. *L. nummularifolia*
1. Treelets to trees, 3-30 m alt. Leaves 3-15 cm long. Bracteoles caducous in floral anthesis; floral tube 2-5 cm, petals 10-12.
2. Leaf apex long-acuminate, acumen 6-20 mm long, 2-3 times longer than wide.
3. Leaves 3-5 times longer than wide; floral tube without constriction in the middle portion; petiole thick, lamina commonly folded longitudinally when fresh and dry .....……1. *L. acuminata*
3. Leaves 2 times longer than wide or as long as wide or slightly longer, petiole thin, lamina not folded longitudinally.
4. Leaf base obtuse; floral tube 3-5 mm long, with a strong constriction in the middle portion ……. 5. *L. punicifolia*
4. Leaf base obtuse; floral tube 1.5-2.3 mm long, without constriction in the middle portion ...….. 2. *L. glyptocarpa*
2. Leaf apex short-acuminate, acumen 0-4 mm long, as long as wide.
6. Leaves elliptic, wide-elliptic to narrow-obovate, petiole 1-9 mm, thickened, drop-shaped.
7. Leaves 2.5-4.5 cm wide, intramarginal and tertiary veins evident on the abaxial surface, petiole 1-4 mm long. Savanna …….....…….....…….4. *L. pacari*
7. Leaves 7-9 cm wide, veins not evident, petiole, 6-9 mm long. Forest .....… 6. *L. replicata*
6. Leaves wide obovate, base acute, petiole 10-12 mm long, thin, not drop-shaped …….....…. 7. *L. vandelliana*

REFERENCE

Koehne, E. Das Pflanzenreich 4 (216): 219. 1903.
Lourteig, A. Revision del gênero *Lafoensia* Vandelli (Litraceas). Mem. Soc. Cienc. Nat. La Salle 45(123): 115-157.

Lafoensia acuminata Ruiz et Pav.

Has as synonym
basionym *Calyplectus acuminatus* Ruiz et Pav.
heterotypic *Calyplectus dependens* Ruiz ex Koehne
heterotypic *Calyplectus speciosus* Kunth
heterotypic *Lafoensia speciosa* A.DC.

DESCRIPTION

Stem: height 2 - 5 height (m)/10 - 30 height (m). **Leaf: length** 5 - 15 long (cm); **width** 2 - 4.5 wide (cm); **relation length width** 3 - 5 times longer than broad; **apex** acute/obtuse; **acumen** 6 - 20 long (mm); **base** obtuse; **petiole** 1 - 1.5 wide (mm); **petiole** 10 - 20 mm long; **intramarginal vein** not evident; **tertiary vein abaxial surface** not evident. **Inflorescence: bracteole(s)** absent in floral anthesis. **Flower: floral tube** not constricted in the median portion; **floral tube** 3 - 5 long (cm); **petal** 12.

ADDITIONAL DESCRIPTION

Trees, 6-20 m alt, 18-45cm DBH, crown wide, trunk straight, bark smooth, verrucous, or striated, reddish-brown to greyish. Leaves 5-12x2.5-4.5 cm, 4-5 times longer than wide, membranaceous to chartaceous petiolate, oblong, sometimes elliptic, commonly folded longitudinally when dry, base obtuse, margin plane, apex obtuse to acute, long-acuminate, acumen (4-6-)10-20xXX mm, primary vein elevated on the abaxial face, petiole 10-12x1-1.5 mm. Racemes multiflorous, pedicel 2.5-4 cm, branches quadrangular, not winged, slightly flattened, bracteoles caducous in floral anthesis; floral tube 2.5-4.5 cm long, campanulate, angular at the base, without constriction in the middle portion, green to purplish-green, corolla 6-8 cm diam., petals 12, white or light-yellow, stamens 12, filets ca. 20 cm long, style 7-10 cm long. Capsules 2.5-4.5x2.5-3.5 cm. rounded, base obtuse, apex obtuse, brown to beige, smooth surface.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Terra Firme Forest

Geographic Distribution
Confirmed ocurrences
North (Rondônia)

HERBARIUM MATERIAL

C.A. Ferreira, 8951, K (K001076458), Rondônia

Lafoensia glyptocarpa Koehne

DESCRIPTION

Stem: height 2 - 5 height (m)/10 - 30 height (m). **Leaf: length** 2.5 - 4.5 long (cm)/5 - 15 long (cm); **width** 2 - 4.5 wide (cm); **relation length width** 2 times longer than broad; **apex** acute; **acumen** 6 - 20 long (mm); **base** obtuse; **petiole** 1 - 1.5 wide (mm)/2 - 4 wide (mm); **petiole** 0 - 5 mm long; **intramarginal vein** not evident; **tertiary vein abaxial surface** not evident. **Inflorescence: bracteole(s)** absent in floral anthesis. **Flower: floral tube** not constricted in the median portion; **floral tube** 1.5 - 2.7 long (cm); **petal** 12.

ADDITIONAL DESCRIPTION

Trees, 3-20 m alt., DBH 50 cm, crown wide, trunk straight, bark verrucous, or striated, reddish-brown to greyish. Leaves 2.8-7.5 x 2-3.5 cm, 2 times longer than wide, membranaceous, petiolate, wide-elliptic to ovate, base acute (sometimes obtuse), margin plane, apex acute, long-acuminate, acumen 6x3 mm, petiole ca. 4mm. Racemes 10-12 cm long, multiflorous, branches quadrangular, not winged, pedicel 2-2.5 cm, flattened, sometimes slightly winged, bracteoles caducous in floral anthesis; floral tube 1.5-2.3x1.6-2 cm, campanulate, without constriction in the middle portion, petals 12, white, style 7-10 cm long. Capsules 2.8-3x2-2.5 cm, forma, base acute, apex obtuse, vinaceous when immature, warty surface; seeds 0.6-0.7x0.6 cm, orbicular.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Bahia, Pernambuco, Piauí)

HERBARIUM MATERIAL

J.S. Blanchet, 110, W, K, (K000528509), K, (K000528510), P, Bahia
F. França, 1325, HUEFS, 20632, Bahia
E.B. Miranda, 17, HUEFS, 29941, Bahia
M. Oliveira, 3580, CEN, 79230, Pernambuco
M.S. Gomes, 27, UB, Piauí

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Lafoensia glyptocarpa* Koehne



Figure 2: *Lafoensia glyptocarpa* Koehne



Figure 3: *Lafoensia glyptocarpa* Koehne



Figure 4: *Lafoensia glyptocarpa* Koehne

Lafoensia nummularifolia A.St.-Hil.

Has as synonym
homotype *Ptychodon nummularifolius* Klotzsch ex Koehne

DESCRIPTION

Stem: height 1.5 - 2 height (m). **Leaf: length** 1 - 1.5 long (cm); **width** 0.6 - 1.1 wide (cm); **relation length width** more or less as long as broad or slightly longer than broad; **apex** obtuse; **acumen** 0.1 - 1 long (mm); **base** obtuse; **petiole** 1 - 1.5 wide (mm); **petiole** 0 - 5 mm long; **intramarginal vein** not evident; **tertiary vein abaxial surface** not evident. **Inflorescence: bracteole(s)** present in floral anthesis. **Flower: floral tube** not constricted in the median portion; **floral tube** 1.5 - 2.7 long (cm); **petal** 8 - 10.

ADDITIONAL DESCRIPTION

Subshrubs to shrubs, 1,5-2,5 m alt. Leaves 1-1.5x0.6-11 mm, as long as wide or slightly longer than wide, coriaceous, sessile to subsessile, ovate to orbicular, base obtuse, margin plane, apex obtuse, minutely acuminate, acumen 0-1.5 mm. Racemes 2-8 cm long, paucifloros, branches not winged, pedicel flattened, sometimes slightly winged, bracteoles persistent in floral anthesis; floral tube 1-1.7 cm, campanulate, . Flores concentradas no ápice dos ramos, bractéolas presentes na antese; tubo floral campanulado, without constriction in the middle portion, petals 8, white, stamens 16. Capsules 1.2-1.5 cm long, rounded, base acute, apex obtuse, vinaceous; seeds 0.6-0.7x0.6 cm, orbicular.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types
Cerrado (lato sensu)

Geographic Distribution
Confirmed ocurrences
Southeast (São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

V.C. Souza, 10503, ESA, CEN, 29143, São Paulo
D.A. Estevan, 767, CEN, 65602, Paraná
P.K.H. Dusen, 15977, NY, 445825, Paraná
O. Bueno, 7543, ICN, 127760, Rio Grande do Sul
D.A. Estevan, 768, RB, 533423, (RB00682140), Paraná
A. Saint-Hilaire, 1366, P, RB, 41746, (RB00540674), São Paulo, **Typus**
A.R. Reitz, 3689, HBR, Santa Catarina
A.E. Muelbert, 27, RB, 501005, (RB00594544), Paraná

REFERENCE

Lourteig, A. Revision del gênero *Lafoensia* Vandelli (Litraceas). Mem. Soc. Cienc. Nat. La Salle 45(123): 115-157.

Cavalcanti, T. B. & Graham, S. A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.

Lafoensia pacari A.St.-Hil.

This treatment is composed of the following taxa: *Lafoensia pacari*, .

Has as synonym
heterotypic *La* f. *ensia pacari subsp. cunei* Koehne
heterotypic *La* f. *ensia pacari subsp. pacari* Koehne
heterotypic *La* f. *ensia pacari subsp. pacari* Koehne
heterotypic *Lafoensia densiflora* var. *callosa* Koehne
heterotypic *Lafoensia densiflora* var. *cucullata* Koehne
heterotypic *Lafoensia densiflora* Pohl
heterotypic *Lafoensia lucida* Klotzsch ex Koehne
heterotypic *Lafoensia pacari* A.St.-Hil. subsp. *pacari*
heterotypic *Lafoensia sessilifolia* Klotzch ex Koehne

DESCRIPTION

Stem: height 2 - 5 height (m). **Leaf: length** 5 - 15 long (cm); **width** 2 - 4.5 wide (cm); **relation length width** 2 times longer than broad/more or less as long as broad or slightly longer than broad; **apex** acute/obtuse; **acumen** 0.1 - 1 long (mm)/2 - 4 long (mm); **base** acute/obtuse; **petiole** 2 - 4 wide (mm); **petiole** 0 - 5 mm long; **intramarginal vein** evident; **tertiary vein abaxial surface** evident. **Inflorescence: bracteole(s)** absent in floral anthesis. **Flower: floral tube** not constricted in the median portion; **floral tube** 1.5 - 2.7 long (cm); **petal** 12.

ADDITIONAL DESCRIPTION

Treelets to trees, 2-4 m alt., crown sparse, trunk tortuous, bark corky, reddish-brown to greyish. Leaves 6.5-8.5x2.5-4.5 cm, as long as wide or slightly longer than wide, chartaceous to subcoriaceous, petiolate, oblong, wide-elliptic to narrow-obovate, base obtuse to acute, margin plane, apex obtuse, short-acuminate, acumen as long as wide, 0-3x2-3 mm or reflex or inconspicuous in emarginated apex, pore prominent, tertiary veins evident on the abaxial surface, intramarginal vein prominent, petiole 1-4x3 mm, thickened and drop-shaped, as long as wide. Racemes 9-17 cm long, pauci-multiflorous, 2-22 flowers per raceme), branches cylindrical to subquadrangular, flattened, not winged; bracts 1.5-4x0.6-1.5 cm, pedicel 1.8-3.6 cm, cylindrical to flattened, sometimes slightly winged, bracteoles caducous in floral anthesis; floral tube 2-2.2x1.2-1.5 cm, campanulate, without constriction in the middle portion, petals 12, white.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu), Riverine Forest and/or Gallery Forest

Geographic Distribution
Confirmed ocurrences
North (Tocantins)
Northeast (Bahia, Maranhão)
Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais, São Paulo)
South (Paraná)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2201, CEN, 26525, MO, Goiás
A. Saint-HIlaire, B1 1868, P, Minas Gerais, **Typus**
G.P. Silva, 6677, CEN, 48341, Distrito Federal
G.P. Silva, 6491, 49885, Tocantins
T.B. Cavalcanti, 2350, CEN, 27102, Mato Grosso

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Lafoensia pacari* A.St.-Hil.



Figure 2: *Lafoensia pacari* A.St.-Hil.



Figure 3: *Lafoensia pacari* A.St.-Hil.



Figure 4: *Lafoensia pacari* A.St.-Hil.



Figure 5: *Lafoensia pacari* A.St.-Hil.

REFERENCE

Cavalcanti, T. B. 2004. Flora de Grão Mogol, Minas Gerais: Lythraceae In: Bol. Bot. Univ. São Paulo. , v.22, 283-290.

Cavalcanti, T. B. & Graham, S. A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.
Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.
Cavalcanti, T. B. 1990. Flora da Serra do Cipó: Lythraceae. Bolm Botanica Univ. São Paulo 12:67-93.

Lafoensia punicifolia Bertero ex DC.

Has as synonym
homotype *Calyplectus punicifolius* Bertero ex Koehne
heterotypic *Lafoensia mexicana* Moc. & Sessé ex DC.

DESCRIPTION

Stem: height 10 - 30 height (m). **Leaf: length** 5 - 15 long (cm); **width** 2 - 4.5 wide (cm); **relation length width** more or less as long as broad or slightly longer than broad; **apex** acute/obtuse; **acumen** 6 - 20 long (mm); **base** acute; **petiole** 1 - 1.5 wide (mm); **petiole** 10 - 20 mm long; **intramarginal vein** not evident; **tertiary vein abaxial surface** not evident. **Inflorescence: bracteole(s)** absent in floral anthesis. **Flower: floral tube** constricted in the median portion; **floral tube** 3 - 5 long (cm); **petal** 12.

ADDITIONAL DESCRIPTION

Trees, 10-30 m alt., DBH 12-35 cm, crown wide, trunk straight, bark scaly, brown. Leaves 6-15x2-6 cm, as long as wide or slightly longer than wide, membranaceous, petiolate, elliptic, base acute, margin plane, apex obtuse to acute, long-acuminate, acumen ca. 10x1-2 mm, often dumbbell shaped, petiole 10-15x1-1.5 mm, thin. Racemes short, pauciflorous, flowers grouped in the apex of the branches, branches cylindrical to subquadrangular, flattened, not winged; bracts 1.5-4x0.6-1.5 cm, pedicel 3 cm, cylindrical to flattened, sometimes slightly winged, bracteoles caducous in floral anthesis; floral tube 3-5x1.2-1.5 cm, campanulate, with a strong constriction in the middle portion, red, petals 12, light-yellow.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Terra Firme Forest, Seasonal Evergreen Forest

Geographic Distribution
Confirmed ocurrences
North (Acre)

HERBARIUM MATERIAL

Ary Vieira de Paiva, s/n, CEN (CEN00098728), CEN (CEN00098727), Acre

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Lafoensia punicifolia* Bertero ex DC.



Figure 2: *Lafoensia punicifolia* Bertero ex DC.



Figure 3: *Lafoensia punicifolia* Bertero ex DC.



Figure 4: *Lafoensia punicifolia* Bertero ex DC.



Figure 5: *Lafoensia punicifolia* Bertero ex DC.

Lafoensia replicata Pohl

This treatment is composed of the following taxa: *Lafoensia replicata*, .

Has as synonym
homotype *Lafoensia adenophylla* Steud.
homotype *Lafoensia replicata* Pohl subsp. *replicata*
homotype *Lafoensia vandelliana* subsp. *replicata* (Pohl) Lourteig
heterotypic *Calyplectus adenophyllus* Schott x Mart.
heterotypic *La* f. *ensia pacari subsp. cunei* Koehne
heterotypic *La* f. *ensia pacari subsp. cunei* Koehne
heterotypic *La* f. *ensia replicata subsp. replicata* Koehne

DESCRIPTION

Stem: height 2 - 5 height (m). **Leaf: length** 5 - 15 long (cm); **width** 6 - 11 wide (cm); **relation length width** 2 times longer than broad; **apex** obtuse; **acumen** 2 - 4 long (mm); **base** obtuse; **petiole** 2 - 4 wide (mm); **petiole** 6 - 9 mm long; **intramarginal vein** evident; **tertiary vein abaxial surface** not evident. **Inflorescence: bracteole(s)** absent in floral anthesis. **Flower: floral tube** not constricted in the median portion; **floral tube** 1.5 - 2.7 long (cm); **petal** 12.

ADDITIONAL DESCRIPTION

Trees, ca. 3 m alt., Leaves 6.5-13.5x7-9 cm, 2 times longer than wide, membranaceous, petiolate, wide-elliptic, base obtuse, margin plane, apex obtuse, short-acuminate, acumen 1-2x1-2 mm, petiole 6-9x2-3 mm, thick. Racemes short, pauciflorous; floral tube 2.5x2 cm, campanulate, without constriction in the middle portion, petals 12, white.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Central Brazilian Savanna

Vegetation Types
Riverine Forest and/or Gallery Forest, Seasonally Semideciduous Forest

Geographic Distribution
Confirmed ocurrences
Central-west (Goiás)
Possible ocurrences
Southeast (Minas Gerais)

HERBARIUM MATERIAL

J.B.E. Pohl, 689 = D 961, W, K, (K000528511), K, (K000528512), Minas Gerais, **Typus**
G. Pereira-Silva, 4914, CEN, 42108

REFERENCE

Lourteig, A. Revision del gênero *Lafoensia* Vandelli (Litraceas). Mem. Soc. Cienc. Nat. La Salle 45(123): 115-157.

Lafoensia vandelliana Cham. & Schltdl.

This treatment is composed of the following taxa: *Lafoensia vandelliana*, .

Has as synonym
homotype *Lafoensia vandelliana* Cham. & Schltdl. subsp. *vandelliana*
heterotypic *La* f. *ensia pacari subsp. petiolata var. hemisphaerica* Koehne
heterotypic *La* f. *ensia pacari subsp. petiolata var. hemisphaerica* Koehne
heterotypic *Lafoensia emarginata* Koehne
heterotypic *Lafoensia illustris* Vellozo
heterotypic *Lafoensia kielmeyeraefolia* A. St.-Hil
heterotypic *Lafoensia microphylla* Pohl
heterotypic *Lafoensia pacari* subsp. *cuneifolia* (Klotzch ex Koehne) Koehne
heterotypic *Lafoensia pacari* subsp. *petiolata* Koehne
heterotypic *Lafoensia pacari* var. *campanulata* Koehne
heterotypic *Lafoensia pacari subsp. petiolata* var. *hemisphaerica* Koehne
heterotypic *Lafoensia petiolata* Klotzsch ex Koehne
heterotypic *Lafoensia replicata* subsp. *adenophylla* Schott ex Koehne
heterotypic *Lafoensia sellowiana* Klotzsch ex Koehne

DESCRIPTION

Stem: height 2 - 5 height (m)/10 - 30 height (m). **Leaf: length** 2.5 - 4.5 long (cm)/5 - 15 long (cm); **width** 2 - 4.5 wide (cm); **relation length width** more or less as long as broad or slightly longer than broad; **apex** obtuse; **acumen** 2 - 4 long (mm); **base** acute; **petiole** 1 - 1.5 wide (mm); **petiole** 6 - 9 mm long/10 - 20 mm long; **intramarginal vein** not evident; **tertiary vein abaxial surface** not evident. **Inflorescence: bracteole(s)** absent in floral anthesis. **Flower: floral tube** not constricted in the median portion; **floral tube** 1.5 - 2.7 long (cm); **petal** 12.

ADDITIONAL DESCRIPTION

Shrubs, treelets to trees, 2.5-20 m alt. Leaves (2.5-4.5)6-11x2.5-5 cm, as long as wide or slightly longer than wide, chartaceous to subcoriaceous, petiolate, obovate sometimes oblong, base acute, attenuate, margin plane, apex obtuse, short-acuminate, acumen as long as wide, 2-4x3-4 mm, petiole 10-12x1-1.5, canaliculate. Racemes 13-15 cm long, pauciflorous, lax, 10-20 flowers per raceme, branches cylindrical, not winged; bracts 3x1.3 cm, elliptic, pedicel 3-8 cm, flattened, not winged, bracteoles caducous in floral anthesis; floral tube 1.5-2.7x2-2.4 cm, campanulate, without constriction in the middle portion, petals 12, white.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Atlantic Rainforest

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Pará)
Northeast (Ceará, Maranhão)
Central-west (Goiás, Mato Grosso)
Southeast (Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

R. Goodland, 485, NY, 939914, (NY00939914), Goiás
J.M. Pires, 4250, P, IAN, US, Pará
G. Hatschbach, 21769, P, MBM, Mato Grosso
N. Silva, 1231, P, Amazonas
Jobert, 1215, P, Maranhão
G. Hatschbach, 30184, P, MBM, Minas Gerais
Ferreira, 132, P, Rio de Janeiro
G. Hatschbach, 13146, MBM, P, Paraná
A.R. Reitz, 6171, HBR, P, Santa Catarina
A. Riedel, s.n., P, W, São Paulo
P. Luetzelburg, 26396, M, Ceará
F. Sellow, s.n., B, **Typus**
B.A. Krukoff, 5218, US, M, NY
A. Ferreira, s.n., P, **Typus**

REFERENCE

Lourteig, A. Revision del gênero *Lafoensia* Vandelli (Litraceas). Mem. Soc. Cienc. Nat. La Salle 45(123): 115-157.

Lagerstroemia L.

This treatment is composed of the following taxa: *Lagerstroemia*, *Lagerstroemia indica*, *Lagerstroemia speciosa*.

HOW TO CITE

Facco, M.G., Cavalcanti, T.B., Graham, S.A.T. 2020. Lagerstroemia *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB610009.

DESCRIPTION

Shrubs or trees. Young twigs terete or 4-angled, glabrous or hairy, often glabrescent. Leaves (sub)opposite or alternate (distichous), (sub)sessile or petiolate; stipules absent or rudimentary. Inflorescences terminal or axillary, paniculate, cymose (or raceme- De Wilde & Duyfjes — Lythraceae 23 like); bracts small, caducous. Flowers often showy, actinomorphic (but see note 3), 5–7(–9)-merous; floral tube (calyx tube) campanulate or turbinate, less than 2 times as long as wide, leathery, smooth or with broad or narrow ribs or ridges, at base gradually or ± abruptly narrowed into a shorter or longer stipe (pseudopedicel; see note 2); calyx lobes (sepals) glabrous or hairy, (long-)triangular, sometimes subtended within by a line-shaped annulus (China); epicalyx appendages (auricles) absent or alternating with sepals, small or prominent; petals 6(–12), pink, purple or white, slenderly clawed; stamens 12–100 or more, inserted inside halfway or near base of floral tube, exserted, dimorphic in most species: 6 solitary in front of sepals with thick filaments and larger anthers, 12–100 or more in clusters in front of petals with thin filaments and small anthers, rarely monomorphic, then all filaments thin, subequal; ovary superior, sessile, (largely) free from calyx tube (floral tube), globose or ellipsoid, 3–6-locular; style long-exserted; stigma small, capitate. Fruit a dry, hard capsule, at base more or less adnate to the base of the calyx tube, globose or ellipsoid, glabrous or (partially) hairy, loculicidally dehiscent, 3–6-valved, apex rounded or pointed. Seeds numerous, flattish, obpyramidal, with wing from raphe, without sarcotesta; cotyledons convolute, equal in size. (From De Wilde & Duyfjes 2016)

Life Form
Shrub, Tree

Substrate
Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

REFERENCE

Linnaeus, C. Syst. Nat., ed. 10. 2: 1068, 1076, 1372 (1759).
Lagerstroemia. In: Lythraceae. *Flora Malesiana*. de Wilde, W. J. J. O., & Duyfjes, B. E. E. 2016. - *Series 1*, *Spermatophyta*, *22*, 1–64.

Lagerstroemia indica L.

DESCRIPTION

Shrubs or small trees, to 3 m tall; bark smooth, flaky. Leaves (sub)sessile; lamina minutely hairy on both surfaces when young, glabrescent, 3–6(–10) cm long; lateral veins 5–7 on each side; intercostal venation reticulate. Inflorescences terminal, glabrous, lax, 5–20 cm long. Flowers c. 35 mm diam.; bud glabrous, globose, 5–6 mm diam., pseudopedicel 2–10 mm long; calyx tube glabrous, 3–4 mm long, not ridged or ridges faintly developed, narrow annulus in the throat present, auricles absent; calyx lobes (sepals) 6, glabrous within, 3–4 mm long; petals pink, lilac or white, blade suborbicular, 8–10 mm long, margin undulate and crispate, claw c. 10 mm long; stamens radially dimorphic (4 or 6 outer stamens longer than numerous inner ones), longer filaments pale purplish, shorter ones whitish, all anthers yellow; ovary glabrous, style c. 10 mm long. Capsules smooth (not shagreen), glabrous, subglobose, c. 10 mm long, 4–6-valved; fruiting calyx tube not ridged, lobes thin, persistent or caducous; fruiting pseudopedicel c. 8 mm long. (From De Wilde & Duyfjes 2016)

Life Form
Shrub, Tree

Substrate
Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

HERBARIUM MATERIAL

E. O. Miranda, 13, CEN (CEN00038238), Minas Gerais
Rosalina Ferreira de Campos, s/n, CEN (CEN00025493), São Paulo

Lagerstroemia speciosa Pers.

DESCRIPTION

Trees, 5–30 m tall; bark light brown, black when old, coarsely vertically cracked and slightly flaking. Leaves: petiole 0.5–1 cm long; lamina glabrous, dull, elliptic or obovate, 10–20(–30) cm long; lateral veins (6–)8–14 on each side; intercostal venation 46 Flora Malesiana, Ser. I, Vol. 22 (2016) reticulate or reticulate-scalariform. Inflorescences terminal, lax or elongate, 15–25(–30) cm long, young densely short stellate-hairy, glabrescent. Flowers c. 50 mm diam.; bud finely farinose, grey or brown, subglobose, 7–8 mm diam., not nippled or 0.5(–1) mm nippled at apex, pseudopedicel 3–8 mm long; calyx tube 6–8 mm long, distinctly 12-ridged, the ridges low; calyx lobes (sepals) 6, glabrous within, to 5 mm long, auricles between the sinuses absent or as minute warts; petals purple, blade obovate, c. 20 mm long, upper part of margin irregularly undulate, claw c. 5 mm long; stamens monomorphic (all about the same length), filaments purple, anthers yellow; ovary glabrous. Capsules brown or black, dull, smooth (not shagreen), glabrous, 15–25 mm long, 6-valved; fruiting calyx 12-ridged, the ridges not winged; calyx lobes glabrous within, ± thin, often reflexed, without auricles; fruiting pseudopedicel 5–10(–12) mm long. (From De Wilde & Duyfjes 2016)

Substrate
Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

Lythrum L.

This treatment is composed of the following taxa: *Lythrum*, *Lythrum hyssopifolia*, *Lythrum maritimum*.

HOW TO CITE

Facco, M.G., Cavalcanti, T.B., Graham, S.A.T. 2020. Lythrum *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8785.

DESCRIPTION

Herbs or shrubs, annual or perennial, young branches 4-angled. Leaves opposite or 3-whorled, sessile or subsessile. Racemes, cymes, or solitary flowers; flowers 6-merous, mono-di-trimorphic, shortly pedicellate. Floral tube elongate, cylindric, 10-12-veined, persistent, sepals 6; epicalyx present; petals 6, lilac, rose, pink; stamens 2–6; ovary bilocular, style of three lengths, capitate stigma. Capsule elongated, 2-valved, dehiscence septicidal; seeds numerous, red-brown, elongate, compressed, ca. 1 mm.

Life Form
Herb, Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest, Pampa

Vegetation Types
Anthropic area, Grassland, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
South (Rio Grande do Sul, Santa Catarina)

IDENTIFICATION KEY

1. Floral tube 3.5-5 mm long; stamens included in the floral tube. Leaves sessile. Ovary sessile ….. *L. hyssopifolia*
1. Floral tube 5-8 mm long; stamens well-exserted. Leaves short-petiolate. Ovary briefly stipitate …. .*L. maritimum*

Lythrum hyssopifolia L.

This treatment is composed of the following taxa: *Lythrum hyssopifolia*, .

DESCRIPTION

Leaf: petiole absent. **Flower: floral tube** 3.5 - 5 long (mm); **stamen** included; **ovary** sessile. **Fruit: capsule valve** apex bilobed.

ADDITIONAL DESCRIPTION

Herbs, up to 1 m alt., glabrous, branches 4-5-angular, slightly winged. Leaves opposite to alternate, 7x30x1-7 mm, sessile, linear to narrow-oblong, apex obtuse to acute, base obtuse, glabrous or pubescent. Flowers axillary, homeomorphic, pedicel 0.5-1 mm long; floral tube 3.5-5 mm long; petals 4-6, 2-3 mm long, as long as the floral tube, rose, apex obtuse; stamens 2-6, included, in the middle of the tube, ovary narrow, sessile. Capsule 4-7 mm long. Capsules valves apex bilobed, not curved; seeds 0.4-0.6 mm.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest, Pampa

Vegetation Types
Anthropic area, Grassland

Geographic Distribution
Confirmed ocurrences
South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

J.C. Sacco, 1401, ESA, 49934, CEN, Rio Grande do Sul
J.F.M. Valls, 14899, CEN, 51178, Rio Grande do Sul
s.c., s.n., RB, 41749, (RB00210037)
A. St.-Hil., 243, P, P04714694, (P04714694), Santa Catarina

Lythrum maritimum Kunth

Has as synonym
heterotypic *Lythrum hyssopifolia* var. *virgultosum* A. St.-Hil

DESCRIPTION

Leaf: petiole short petiolate. **Flower: floral tube** 5 - 8 long (mm); **stamen** exserted; **ovary** short stipitate. **Fruit: capsule valve** apex not bilobed.

ADDITIONAL DESCRIPTION

Subshrub, 0.1-0.4 cm alt., glabrous, branched, stems and branches angular. Leaves 7-33x2-14 mm, briefly petiolate, apex obtuse, mucronate, base obtuse, glabrescent, oblong or linear-lanceolate. Flowers axillary, homeomorphic, pedicel 1-2 mm; floral tube 5-8 mm long, winged on the veins, epicalyx long, erect, corniform appendages, petals 6, shorter than the floral tube, stamens 6, exserted, ovary anguste-oblong, briefly stipulate, stylet twice the length of the ovary. Capsule valves not bilobed, slightly curved.

Life Form
Herb

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Pampa

Vegetation Types
Grassland, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
South (Rio Grande do Sul)

HERBARIUM MATERIAL

Humboldt & Bonpland, s.n., P, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Lythrum maritimum* Kunth



Figure 2: *Lythrum maritimum* Kunth

Physocalymma Pohl

This treatment is composed of the following taxa: *Physocalymma*, *Physocalymma scaberrimum*.

HOW TO CITE

Cavalcanti, T.B., Graham, S.A.T., Facco, M.G. 2020. Physocalymma *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB23479.

Has as synonym
heterotypic *Diplodon* Poepp.

DESCRIPTION

Tree 3-25 m high, deciduous, thick, bark cracked longitudinally: young branches cylindrical to quadrangular, pubescent. Leaves opposite, scabrous, chartaceous, petiolate, sometimes cinereous, blades 5-12x3.5-8 cm, apex obtuse, acuminate, margin flat, base obtuse, sometimes oblique, pubescent to villous; petiole 1-1.5 cm. Racemes terminal, lax, deciduous; flowers opposite, pedicellate, bibracteolate; floral tube without epicalyx, dark purple, campanulate to urceolate, pubescent; petals pink to purplish; stamens exserted. Capsules ca..6x4 mm, brown; seeds winged, rounded.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu), Seasonally Semideciduous Forest

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Pará, Rondônia, Tocantins)
Central-west (Distrito Federal, Goiás, Mato Grosso)

REFERENCE

Pohl, J.B.E. 1827. Pl. Brasil. icon. I. 99.

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Physocalymma scaberrimum Pohl

This treatment is composed of the following taxa: *Physocalymma scaberrimum*, .

Has as synonym
heterotypic *Lafoensia scaberrima* Poepp. e Koehne
heterotypic *Physocalymma floridum* Pohl
heterotypic *Physocalymma scaberrimum* f. *rm. angusti* Pohl
Physocalymma scaberrima Pohl

DESCRIPTION

Tree 3-25 m high, deciduous, thick, bark cracked longitudinally: young branches cylindrical to quadrangular, pubescent. Leaves opposite, scabrous, chartaceous, petiolate, sometimes cinereous, blades 5-12x3.5-8 cm, apex obtuse, acuminate, margin flat, base obtuse, sometimes oblique, pubescent to villous; petiole 1-1.5 cm. Racemes terminal, lax, deciduous; flowers opposite, pedicellate, bibracteolate; floral tube without epicalyx, dark purple, campanulate to urceolate, pubescent; petals pink to purplish; stamens exserted. Capsules ca..6x4 mm, brown; seeds winged, rounded.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Central Brazilian Savanna

Vegetation Types
Cerrado (lato sensu), Seasonally Semideciduous Forest

Geographic Distribution
Confirmed ocurrences
North (Acre, Amazonas, Pará, Rondônia, Tocantins)
Central-west (Distrito Federal, Goiás, Mato Grosso)

HERBARIUM MATERIAL

T.B. Cavalcanti, 2675, CEN, 39959, MO, Goiás
W.E. Kerr, s.n., INPA, 58851, Amazonas
B.M.T. Walter, 5572, CEN, Tocantins
S.R. Lowrie, 657, INPA, 109797, Acre
G.P. Silva, 8931, CEN, 59174, Pará
G.P. Silva, 15649, CEN, 77644, Rondônia
L.C. Bernacci, 2608, CEN, 33991, Mato Grosso
T.B. Cavalcanti, 2512, CEN, 34175, Distrito Federal
V.C. Souza, 20433, CEN, 33993, ESA, Mato Grosso
J.B.E. Pohl, D 938, K, (K000528694), Goiás, **Typus**
J.B.E. Pohl, D 938, K, (K000528695), Goiás, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Physocalymma scaberrimum* Pohl



Figure 2: *Physocalymma scaberrimum* Pohl



Figure 3: *Physocalymma scaberrimum* Pohl

REFERENCE

Cavalcanti, T. B.; Graham, S. A.; Silva, M. C. 2001. Lythraceae. In: José Ângelo Rizzo. (Org.). Flora dos Estados de Goiás e Tocantins, Coleção Rizzo. 1ed. Goiânia: Universidade Federal De Goiás, v. 28, p. 1-150.

Pleurophora D.Don

This treatment is composed of the following taxa: *Pleurophora*, *Pleurophora anomala*, *Pleurophora pulchra*, *Pleurophora saccocarpa*.

HOW TO CITE

Cavalcanti, T.B., Graham, S.A.T., Facco, M.G. 2020. Pleurophora *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8788.

Has as synonym
heterotypic *Anisotes* Lindl.
heterotypic *Xeraenanthus* Mart.ex Koehne

DESCRIPTION

Annual herbs or shrubs, branches alternate. Leaves opposite to fasciculate. Racemes frondosous. Flowers zygomorphic, hexamerous, floral tube elongate, persistent in fructification, sepals equals, epicalyx segments present to rudimentary, petals 6, 2 dorsal, 4 ventral, usually unequal; anthers basifixed, ovary bilocular, dorsal locule multi-ovulate, the ventral locule sometimes smaller and sterile.

COMMENTS

Pleurophora is a genus of zygomorphic flowers represented by annual herbs and perennial subshrubs. Six species of *Pleurophora* are currently accepted, although more than twice as many have been described. The genus occurs in Argentina, Bolivia, Brazil, Chile, and Paraguay. In Brazil. the genus is represented by three species, *P. anomala* (A. St-Hil.) Koehne and *P. saccocarpa* Koehne, and *P. pulchra* found mainly in locally moist places, in dry rocky habitats and fields and in the seasonally dry forests of semi-arid regions, known as Caatinga (Cavalcanti and Graham 2009, 2013). The genus is morphologically and phylogenetically related to *Cuphea* (Graham et al. 2006).

Life Form
Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Caatinga, Pantanal

Vegetation Types
Caatinga (stricto sensu), Carrasco Vegetation, Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Alagoas, Bahia, Ceará, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)
Central-west (Mato Grosso do Sul)
Southeast (Minas Gerais)

IDENTIFICATION KEY

1. Floral tube 4.5-6 mm mm long. epicalyx present; petals rose-purple, fading with age to pale pink or white
 2. Leaf apex acute. Ovary with both locules fertile ……..... *P. saccocarpa*

2. Leaf apex obtuse. Ovary with just the dorsal locule fertile, the ventral locule missing ovules. Brazil: Northeast ..... *P. anomala*
1. Floral tube 9-11 mm long. epicalyx absent or rudimentary petals bright red to orange-red .... *P. pulchra*

REFERENCE

Koehne, E. (1903). Lythraceae: Pleurophora. *In:* ENGLER, A. (ed.), *Pflanzenr.* 17: 179-183.
Koehne, E. (1907). Lythraceae. Nachträge: Pleurophora. *Bot. Jahrb. Syst.* 41: 97-98.
Molero, J. & R. Duré (2000). Sinónimos nuevos en Pleurophora saccocarpa Koehne (Lythraceae). *Candollea* 55: 315-318.
Siqueira, J.A., Cotarelli, V.M., Pastore, J.F., Graham, S.A. & T.B. Cavalcanti. 2015. A remarkable new species of Pleurophora (Lythraceae) from Caatinga of Pernambuco, Brasil. Systematic Botany 40(1): 185-190.

Pleurophora anomala (A. St.-Hil.) Koehne

Has as synonym
homotype *Lythrum anomalum* A. St.-Hil
heterotypic *Anisotes hilariana* Meisn.
heterotypic *Lythrum bahiense* Casar. ex Koehne

DESCRIPTION

Leaf: apex obtuse; **width** 0.7 - 1.5 wide (mm); **margin** plane. **Flower: floral tube length** up to 7 long (mm); **dorsal petal width** up to 2 wide (mm); **dorsal petal colour** lilac to white; **epicalyx segment** present; **ovary ventral locule** sterile.

ADDITIONAL DESCRIPTION

The content of this field was omitted due to formatting problems, please consult our page directly (http://floradobrasil.jbrj.gov.br/).

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga

Vegetation Types
Caatinga (stricto sensu), Carrasco Vegetation

Geographic Distribution
Confirmed ocurrences
Northeast (Alagoas, Bahia, Ceará, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

G. Hatschbach, 75419, CEN, 283914, MO, MBM, Bahia
T.B. Cavalcanti, 2315, CEN, 27068, MO, Minas Gerais
M.A. Figueiredo, 601, HUEFS, 144828, Ceará
J.G. Jardim, 5525, UFRN, 10138, Rio Grande do Norte
D.A. Lima, 60, MAC, 1918, Alagoas
S. Ribeiro, 148, CEN, 69658, Sergipe
V.M. Cotarelli, 1612, HVASF, 15212, Paraíba
P. Schwacke, 707, Piauí
A.P.B. Santos, 20, HVASF, 5824, (HVASF005824), Pernambuco
J.A.S. Filho, 2529, HVASF, 12176, (HVASF012176), Pernambuco
A. Krapovickas, 12831, RB, 318873, (RB00210033), Bahia
A. Saint-HIlaire, s.n., P, Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Pleurophora anomala* (A. St.-Hil.) Koehne



Figure 2: *Pleurophora anomala* (A. St.-Hil.) Koehne

REFERENCE

Cavalcanti, T. B. 1994. Lythraceae. In B. Stannard. (Org.). Flora do Pico das Almas, Bahia. 1ed. Londres, Inglaterra: Royal Botanic Gardens, p. 411-416.

Pleurophora pulchra J.A.Siqueira et al.

DESCRIPTION

Leaf: apex acute; **width** 3 - 5 wide (mm); **margin** plane/revolute. **Flower: floral tube length** 11 - 16 long (mm); **dorsal petal width** 4.5 - 5 wide (mm); **dorsal petal colour** red to orange; **epicalyx segment** absent; **ovary ventral locule** not sterile.

ADDITIONAL DESCRIPTION

Subshrubs 0.3–1 m, erect, sparsely branched, branches pubescent to puberulous, Leaves (3–)11–25 mm long, (1–)3–5 mm wide, concentrated at apex of the branches, sessile to subsessile, narrow-oblanceolate, green adaxially, whitish abaxially, margin entire, revolute, apex acute to attenuate, surface, prominent on the abaxial one, secondary veins not conspicuous; petioles ca. 0.1 mm long. Flowers solitary, pedicel 1–2 mm long, bracteoles ca. 2 mm long, puberulous, linear-lanceolate, floral tube 11–16 mm long, 3–4 mm wide, villose, pale pink at the base turning dark-red towards the apex, with conspicuous veins; epicalyx rudimentary or absent; petals unequal, vivid-red to orange, 2 dorsal petals 6 mm long, 4.5–5 mm wide, suborbicular, base cuneate, apex obtuse, other 4 petals small to rudimentary; ovary with the dorsal locule multi-ovulate, the ventral locule smaller, sterile.

Life Form
Subshrub

Substrate
Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains
Caatinga

Vegetation Types
Caatinga (stricto sensu)

Geographic Distribution
Confirmed ocurrences
Northeast (Pernambuco)

HERBARIUM MATERIAL

V.M. Cotarelli, 1833, CEN, 82439, HVASF, 15580, Pernambuco
V.M. Cotarelli, 1065, CEN, 78256, HVASF, 12467, Pernambuco
A.P. Fontana, 7910, HVASF, 22233, Pernambuco
A.P. Fontana, 6195, CEN, 78272, HVASF, 6422, Pernambuco
V.M. Cotarelli, 2172, CEN, 82440, HVASF, 16581, Pernambuco, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Pleurophora pulchra* J.A.Siqueira et al.

Pleurophora saccocarpa Koehne

DESCRIPTION

Leaf: apex acute; **width** 0.7 - 1.5 wide (mm); **margin** revolute. **Flower: floral tube length** up to 7 long (mm); **dorsal petal width** up to 2 wide (mm); **dorsal petal colour** lilac to white; **epicalyx segment** present; **ovary ventral locule** not sterile.

ADDITIONAL DESCRIPTION

Leaves linear, 1-1.5 mm wide, margin revolute, apex acute, pubescent to hirtellous. Floral tube 6 mm long, canescent-hirtellous; 2 dorsal petals longer than 4 ventral petals; ovary gibbose dorsally, both locules fertile, multiovulate.

Life Form
Subshrub

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Pantanal

Vegetation Types
Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Central-west (Mato Grosso do Sul)

HERBARIUM MATERIAL

G. Hatschbach, 49292, MO, 3156180, CEN, MBM, 99658, Mato Grosso do Sul
V.J. Pott, 7825, MBM, CEN, 68835, Mato Grosso do Sul
V.J. Pott, 7619, CEN, 58535, Mato Grosso do Sul
J.A.S. Filho, 2800, HVASF, 15599, (HVASF015599), Mato Grosso do Sul

Punica L.

This treatment is composed of the following taxa: *Punica*, *Punica granatum*.

HOW TO CITE

Facco, M.G., Graham, S.A.T., Cavalcanti, T.B. 2020. Punica *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB593452.

DESCRIPTION

Shrub to treelet, 1.5-4 m, Leaves opposite. Inflorescence cymose, flowers actinomorphic, 1-5 per inflorescence branch, sessile or short pedicel, floral tube red to orange. Fruit red to greenish, 5-10 cm diam.; seeds triangular, with red aril.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

REFERENCE

Graham, S.A. 2007. Lythraceae. In: K. Kubitzki (Ed.). Flowering Plants – Eudicots. Vol. 9. Berlin, Heidelberg: Springer Berlin Heidelberg. pp. 226–246.
Graham, S.A. & Graham, A. 2014. Ovary, Fruit, and Seed Morphology of the Lythraceae. International Journal of Plant Sciences, 175(2): 202–240.

Punica granatum L.

DESCRIPTION

Shrubs or trees, 0.5-5 m; branches often ending in thorns. Leaves 1-6x0.5-2.5 cm, oblong-lanceolate. Flowers solitary, terminal or 1-5 in axillary or terminal groups, floral tube urceolate to campanulate, coriaceous, red or yellow, 2-3 cm long; sepals 5-8, persistent; petals 10-30 x 10-20 mm, red; stamens numerous, covering the inner surface of the floral tube from the edge to the ovary; ovary inferous to semi-inferous, globose, with two twisted whorls of carpels, an upper whorl of 8-9 carpels, superimposed on a lower whorl of 3 or 4 carpels; thick septa, extending to the apex of the ovary; placentation axillary in the lower whorl, parietal in the upper whorl; ovules 100-+. Berry, 5–12 cm in diam., subglobose to globose, coriaceous, yellow to red or reddish-brown, “crown” of sepals and stamens persistent at the apex of the fruit. Seeds 100-+, 9-12x7-9.5 mm, including translucent, ruby-red, pink or yellowish-white sarcotesta.

Life Form
Tree

Substrate
Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

HERBARIUM MATERIAL

Afonso, S.R., s.n., ESA (ESA007653), São Paulo
Alencar, 10955, CEN (CEN00096886)

Rotala L.

This treatment is composed of the following taxa: *Rotala*, *Rotala mexicana*, *Rotala ramosior*, *Rotala rotundifolia*.

HOW TO CITE

Facco, M.G., Graham, S.A.T., Cavalcanti, T.B. 2020. Rotala *in* **Flora do Brasil 2020.** Jardim Botânico do Rio de Janeiro. Available at: http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8791.

DESCRIPTION

Aquatic or terrestrial herbs, annual or perennial, glabrous, simple or branched. Opposite-crossed or 3-8 verticilate leaves, broquidodromous to hifodromous. Flowers in racemes or umbels, actinomorphic, without heterostyly, 4-mer, bibracteolate or not; floral tube tubular to campanulate; epicalyx present or absent; sepals equal to each other; white, lilac to purple, petals 0 or 4; stamens 1-4; ovary sessile, 2-4-locular, placentation axillary. Capsule septicidal 2-4-valvar; oval, elliptical, seeds not winged.

COMMENTS

Genus with about 45 species, mainly African and Asian, and with some representatives in the Americas. The species found in Brazil may have been introduced along with some cultivation or, like aquarium plants, where it is widely used.

Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Naturalized, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest, Atlantic Rainforest

Vegetation Types
Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Pará)
Northeast (Alagoas, Piauí, Rio Grande do Norte)
Central-west (Mato Grosso do Sul, Mato Grosso)
Southeast (Minas Gerais, São Paulo)
South (Rio Grande do Sul)
Possible ocurrences
North (Rondônia)

IDENTIFICATION KEY

1. Leaves orbicular, oval, oboval, spathulate, 2.5-8mm wide, opposite, apex obtuse. Floral tube 1.5-3 mm long, petals 4.
2. Leaves orbicular to oval; raceme bracteose ..... 3. *R. rotundifolia*
2. Leaves narrow-obovate, narrow-spathulate; raceme frondosous …..... 2. *R. ramosior*
1. Leaves linear, 0.5-1mm wide, 3-4-verticilate, apex acute. Floral tube 0.5-0.7 mm long, petals absent … 1. *R. mexicana*

Rotala mexicana Cham. & Schltdl.

This treatment is composed of the following taxa: *Rotala mexicana*, .

Has as synonym
homotype *Rotala mexicana* Cham. & Schltdl. var. *mexicana*
heterotypic *Rotala mexicana* var. *spruceana* (Benth.) Koehne
heterotypic *Rotala mexicana var. mexicana* f. *minima* Koehne
heterotypic *Rotala mexicana var. mexicana* f. *minima* Koehne

DESCRIPTION

Leaf: phylotaxy fasciculate; **apex** acute; **shape** linear. **Inflorescence: inflorescence** frondose. **Flower: floral tube** 0.5 - 0.7 long (mm); **petal** absent.

ADDITIONAL DESCRIPTION

Herbs, annual aquatic or terrestrial, simple or little branched. Leaves linear 3-4-verticilate, base acute, apex acute, 5-15x0.5-1mm. Raceme frondose, indistinct. Flowers without heterostyly, sessile, occasionally cleistogamous; bracteoles small, short, not reaching the apex of the sepals; floral tube globose, 0.5-0.7mm, reddish to vinaceous; epicalyx absent, petals absent; stamens 1-4.

Life Form
Herb

Substrate
Aquatic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains
Amazon Rainforest

Vegetation Types
Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Pará)
Central-west (Mato Grosso)
Southeast (São Paulo)
Possible ocurrences
North (Rondônia)

HERBARIUM MATERIAL

L.Y.S. Aona, 137, CEN, UEC, UEC, 106547, (UEC055036), Pará
R. Spruce, 805, G, LE, M, G, G00227384, (G00227384), Pará
C.J.W. Schiede, 566, HAL, **Typus**
G.S. PINHEIRO, 321, RB, 271327, (RB00209964), São Paulo
A.L. Prado, 962, UEC, 123368, (UEC063413), Mato Grosso
P.W. Richards, 6313, U, NY, 939954, (NY00939954), Mato Grosso
E.H.G. Ule, 8254, G, L, Rondônia

REFERENCE

Cook, C.D. 1979. A revision of the genus *Rotala* (Lythraceae). Boissiera 29: 7-155.

Rotala ramosior (L.) Koehne

DESCRIPTION

Leaf: phylotaxy opposite; **apex** obtuse; **shape** narrowly spathulate. **Inflorescence: inflorescence** frondose. **Flower: floral tube** 2.5 - 3 long (mm); **petal** 4.

ADDITIONAL DESCRIPTION

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Life Form
Herb

Substrate
Aquatic, Terrestrial

DISTRIBUTION

Naturalized, Not endemic to Brazil

Vegetation Types
Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
North (Pará)
Northeast (Alagoas, Piauí, Rio Grande do Norte)
Central-west (Mato Grosso do Sul)
Southeast (Minas Gerais)

HERBARIUM MATERIAL

A.M. Giulietti, 1973, HUEFS, CEN, CEN, 9593 (CEN00042326)
B.M.T. Walter, 6647, CEN, 85494, CEN (CEN00085494), Piauí
M.N. Rodrigues, 1273, MAC, 9593, MAC, 9593, (MAC0009593), Alagoas
F.E. Drouet, 1976, NY, 02108628, Pará
V.J. Pott, 6145, CEN, 52672, CEN, 52672, (CEN00052672), Mato Grosso do Sul

Rotala rotundifolia (Roxb.) Koehne

Has as synonym
basionym *Ammannia rotundifolia* (Buch.-Ham. ex Roxb.) Koehne

DESCRIPTION

Leaf: phylotaxy opposite; **apex** obtuse; **shape** orbicular to ovate. **Inflorescence: inflorescence** bracteose. **Flower: floral tube** 1.5 - 2 long (mm); **petal** 4.

ADDITIONAL DESCRIPTION

Herbs, annual aquatic or terrestrial, simple or little branched. Leaves opposite, ovate, obovate to orbicular, apex obtuse, 3-10x2.5-8mm. Raceme bracteose, terminal, long, distinct. Flowers without heterostyly, sessile, bracteoles reaching the apex of the sepals; floral tube campanulate, 1.5-2mm long, lilac, epicalyx absent, petals 4, stamens 4.

Life Form
Herb

Substrate
Aquatic

DISTRIBUTION

Naturalized, Not endemic to Brazil

Phytogeographic Domains
Atlantic Rainforest

Vegetation Types
Aquatic vegetation

Geographic Distribution
Confirmed ocurrences
Southeast (São Paulo)
South (Rio Grande do Sul)

HERBARIUM MATERIAL

L.Y.S. Aona, 99/146, CEN, SP, São Paulo
L.C. Abreu, 387, São Paulo
J.G. Dani, 37, FURB (FURB66167), FURB, 66167, Rio Grande do Sul

REFERENCE

Cook, C.D. 1979. A revision of the genus *Rotala* (Lythraceae). Boissiera 29: 7-155.

Cavalcanti, T. B. & Graham, S. A. 2002. Lythraceae. In Wanderley, M.G.L. et al. (eds.) Flora Fanerogâmica do Estado de São Paulo. São Paulo: v. 2, p. 163-180.