

Pteridaceae E.D.M.Kirchn.

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This treatment is composed of the following taxa: Pteridaceae, *Acrostichum*, *Adiantopsis*, *Adiantum*, *Ananthacorus*, *Anogramma*, *Argyrochosma*, *Ceratopteris*, *Cheilanthes*, *Doryopteris*, *Hecistopteris*, *Hemionitis*, *Jamesonia*, *Lytoneuron*, *Myriopteris*, *Ormopteris*, *Pellaea*, *Pityrogramma*, *Polytaenium*, *Pteris*, *Pterozonium*, *Radiovittaria*, *Trachypteris*, *Tryonia*, *Vittaria*.

HOW TO CITE

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DESCRIPTION

Plants terrestrial, rupicolous, aquatic to semiaquatic, or epiphytes. Rhizomes erect or creeping, scaly or hairy. Fronds monomorphic or dimorphic; petioles with 1 to several vascular bundles at base; laminae simple, furcate, or 1–6-pinnate; venation free or anastomosing, the areoles without included veinlets. Sori formed on the lower surface of the lamina, along the veins or protected by a false indusium (formed by the revolute margin of the lamina); spores trilete, globose to tetrahedral-globose or monolete, reniform, without chlorophyll.

COMMENTS

Pteridaceae is a monophyletic group (Pryer *et al.* 1995, Schneider *et al.* 2004; Zhang *et al.* 2005; Prado *et al.* 2007; Schuettpelz *et al.* 2007; PPG I 2016). It can be divided into five lineages, which are recognized as subfamilies: Cryptogammoideae (absent in Brazil) Parkeridoideae (aquatic or semiaquatic ferns; genera in Brazil: *Acrostichum* and *Ceratopteris*), Pteridoideae (terrestrial and rupicolous plants; genera in Brazil: *Anogramma*, *Jamesonia*, *Pityrogramma*, *Pteris*, *Pterozonium*, and *Tryonia*), Vittarioideae (epiphyte plants; genera in Brazil: *Adiantum*, *Ananthacorus*, *Hecistopteris*, *Polytaenium*, *Radiovittaria*, and *Vittaria*) e Cheilanthoideae (terrestrial and rupicolous plants; genera in Brazil: *Adiantopsis*, *Argyrochosma*, *Cheilanthes*, *Doryopteris*, *Hemionitis*, *Lytoneuron*, *Myriopteris*, *Ormopteris*, *Pellaea*, and *Trachypteris*). In total 24 genera occur in Brazil and it is one of the most diverse fern families in our territory.

The main characters to recognize the family are the absence of a true indusium, sporangia formed along veins, and a basic chromosome number of X=30.

Pteridaceae is cosmopolitan and occurs in several kinds of environments, such as swamps, mangroves, high elevations (páramos), and rain forests to deserts. It has 55 genera and about 1211 species (PPG I 2016).

To help the identification of the genera of Pteridaceae in Brazil, we are presenting first a key to distinguish the subfamilies. And for each subfamily a key to their genera.

Life Form

Herb

Substrate

Aquatic, Epiphytic, Rupicolous, 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, Inundated Forest (Igapó), Terra Firme Forest, Inundated Forest (Várzea), Seasonally Deciduous Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Mangrove, Coastal Forest (Restinga), Amazonian Savanna, Aquatic vegetation, Rock outcrop vegetation

Ocean IslandsConfirmed occurrences

Trindade

Geographic DistributionConfirmed occurrences

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 occurrences

North (Acre, Rondônia, Tocantins)

Northeast (Bahia, Maranhão, Paraíba, Pernambuco, Sergipe)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná)

IDENTIFICATION KEY**Key to the subfamilies of Pteridaceae in Brazil**

1. Plants aquatic to semiaquatic **Parkeridoidea**
1. Plants terrestrial, rupicolous, or epiphytes
2. Plants epiphytes **Vittarioideae**
2. Plants terrestrial or rupicolous
3. Sporangia formed on the reflexed margin of the lamina
..... **Vittarioideae (*Adiantum*)**
3. Sporangia formed on the lamina tissue
4. Spores with an equatorial flange **Pteridoideae**
4. Spores without an equatorial flange **Cheilanthoideae**

Key to the genera of Cheilanthoideae

1. Fronds sterile and fertile strongly dimorphic; sori acrostichoid ***Trachypteris***
1. Fronds sterile and fertile monomorphic or slightly dimorphic; sori confined to the margin or near the margin of the laminae/segments or sori formed along the veins
2. Sori along the veins ***Hemionitis***
2. Sori confined to the margin or near the margin of the laminae/segments
3. Laminae typically covered by yellow or white farina ***Argyrochosma***
3. Laminae without farina
4. Laminae with scales or hairs (rarely glabrous in ***Cheilanthes incisa***)
5. Laminae with hydathodes adaxially visible; spores echinate, granulate, or verrucate ***Cheilanthes***
5. Laminae lacking hydathodes; spores cristate or rugulate ***Myriopteris***
4. Laminae glabrous or with scattered hairs (usually near the main veins)
6. Two or three vascular bundle at the petiole base
7. Laminae entire to 1–3-lobed, pedate to pedate-pinnatifid to 2-pinnatifid; two vascular bundles at the petiole base; rachises absent ***Lytoneuron***
7. Laminae pedate, radiate to 1–4-pinnate; three vascular bundles at the petiole base; rachises sulcate and winged adaxially ***Adiantopsis***
6. One vascular bundle at the petiole base
8. Rhizomes erect to suberect; laminae sagittate to 1–3-pinnatifid
..... ***Doryopteris***
8. Rhizomes short-creeping to long-creeping; laminae 1–4-pinnate
9. Sinuses at the segment margins sclerotic (dark brown to black)
..... ***Ormopteris***
9. Sinuses at the segment margins absent ***Pellaea***

Key to the genera of Parkeridoideae

1. Laminae 1-pinnate, coriaceous ***Acrostichum***

1. Laminae 2–4-pinnate, succulent *Ceratopteris*

Key to the genera of Pteridoidea

1. Sori marginal, formed on a vein parallel to the margin of the lamina; junction of costa and costule with an awn on the adaxial side *Pteris*
 1. Sori along the veins; awn absent
 2. Laminae abaxially with farina, the farina yellow or white *Pityrogramma*
 2. Laminae abaxially without farina
 3. Laminae membranaceous; sporophytes annual *Annogramma*
 3. Laminae chartaceous to coriaceous; sporophytes perennial
 4. Ultimate segments larger than 1 cm wide; plants from the Tepuis and Guayanan Shield *Pterozonium*
 4. Ultimate segments narrower than 1 cm wide; plants from Southeastern Brazil
 5. Rachises stramineous *Tryonia*
 5. Rachises dark brown *Jamesonia*

Key to the genera of Vittarioideae

1. Plants terrestrial or rupicolous; sporangia formed on the reflexed margin of the lamina (pseudoindusium) *Adiantum*
 1. Plants epiphytes; sporangia formed on the lamina tissue and indusium absent
 2. Laminae furcate or lobate, veins free *Hecistopteris*
 2. Laminae simple, undivided; veins areolate, at least with a marginal commissural vein
 3. Laminae with 1 row of areoles between midribs and laminar margins; paraphyses present
 4. Laminae usually < 4 mm wide; apical cell of paraphyses narrow *Vittaria*
 4. Laminae usually > 4 mm wide; apical cell of paraphyses obconic (funnel-shaped) *Radiovittaria*
 3. Laminae with 2 or more rows of areoles between midribs and laminar margins; paraphyses present or absent
 5. Sori in 2 lines on both sides of midrib; spores monolete *Ananthacorus*
 5. Sori in (2)3 or 4 lines on both sides of the midrib; spores monolete or trilete *Polytaenium*

REFERENCE

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Acrostichum L.

This treatment is composed of the following taxa: *Acrostichum*, *Acrostichum aureum*, *Acrostichum danaeifolium*.

HOW TO CITE

Hirai, R.Y., Prado, J. 2020. *Acrostichum* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91794>.

DESCRIPTION

Plants terrestrial; rhizomes erect to short-creeping, scaly, scales thick, dark brown to blackish. Fronds slightly dimorphic; the fertile pinnae usually narrower and shorter than the sterile; laminae 1-pinnate, simple, entire, with a conform pinnae, glabrous or pubescent abaxially; veins areolate, without included free veinlets. Sori acrostichoid, with many paraphyses; indusia absent; spores trilete, tuberculate with rodlets, whitish to tan.

COMMENTS

In Brazil *Acrostichum* is represented by two species. Both are widely distributed and they growing associated to swamps and margins of rivers from the coast to inside of the country.

Life Form

Herb

Substrate

Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mangrove, Coastal Forest (Restinga), Aquatic vegetation

Geographic Distribution

Confirmed occurrences

North (Amapá, Pará)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Rio Grande do Norte, Sergipe)

Central-west (Mato Grosso do Sul)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

IDENTIFICATION KEY

Key to the Species of *Acrostichum* in Brazil

1. Pinnae coriaceous, glabrous abaxially; fertile pinnae only toward the apex *A. aureum*
1. Pinnae chartaceous, usually pubescent abaxially; fertile pinnae appearing almost along the entire frond *A. danaeifolium*

Acrostichum aureum L.

DESCRIPTION

Stem: rhizome short/trailling. **Leaf:** petiole sulcate/with/spine. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/without/indusium; **paraphyses** with/many/lobe(s). **Spore:** trilete whitish to yellowish/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, the scales ca. 1.5 cm long, dark brown. Fronds 1–3 m long, petiole grooved distally, short spines frequent on distal petiole, scales on the base with margins often entire; pinnae 10–14(–30) pairs, coriaceous, frequently spaced, glabrous abaxially, proximal pinnae with stalks to 3 cm long; fertile pinnae 1–5 pairs, only toward the apex. Paraphyses with many lobes.

COMMENTS

This species can be easily recognized by the fertile pinnae occurring towards the frond apex and by the pinnae glabrous abaxially.

Life Form

Herb

Substrate

Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mangrove, Coastal Forest (Restinga), Aquatic vegetation

Geographic Distribution

Confirmed occurrences


North (Amapá, Pará)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Rio Grande do Norte, Sergipe)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

Rose, J.N., 19637, RB, 226018,  (RB00638231), NY, Bahia

REFERENCE

Sehnm, A. 1972. Pteridáceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Acrostichum danaeifolium Langsd. & Fisch.

DESCRIPTION

Stem: rhizome erect/to/short/trailling. **Leaf:** petiole slightly/sulcate/without/spine. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/without/indusium; **paraphyses** entire/or/with/few/lobe(s). **Spore:** trilete whitish to yellowish/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes erect to short-creeping; the scales ca. 2.0 cm long, dark brown. Fronds 2–3.5 m long; petiole slightly grooved, without short spines on distal petiole, scales on the base with margins often fimbriate; pinnae 10–40 pairs, chartaceous, frequently imbricate, usually pubescent abaxially, proximal pinnae with stalks to 2 cm long; fertile pinnae more than 5 pairs, appearing almost along the entire frond. Paraphyses entire or with few lobes.

COMMENTS

Acrostichum danaeifolium presents fertile pinnae appearing almost along the entire frond and they are pubescent abaxially.

Life Form

Herb

Substrate

Aquatic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mangrove, Coastal Forest (Restinga)

Geographic Distribution

Confirmed occurrences

North (Amapá, Pará)


Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Rio Grande do Norte)

Central-west (Mato Grosso do Sul)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

G. Hatschbach, 10199, PACA, RB, 444570,  (RB00638223), Paraná

REFERENCE

Sehnm, A. 1972. Pteridáceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Adiantopsis Fée

This treatment is composed of the following taxa: *Adiantopsis*, *Adiantopsis alata*, *Adiantopsis cheilanthoides*, *Adiantopsis chlorophylla*, *Adiantopsis dichotoma*, *Adiantopsis flexuosa*, *Adiantopsis monticola*, *Adiantopsis occulta*, *Adiantopsis perfasciculata*, *Adiantopsis radiata*, *Adiantopsis regularis*, *Adiantopsis senae*, *Adiantopsis timida*, *Adiantopsis trifurcata*, *Adiantopsis tweediana*, *Adiantopsis xaustralopedata*.

HOW TO CITE

Link-Perez, M., Prado, J., Hirai, R.Y. 2020. *Adiantopsis* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91797>.

DESCRIPTION

Plants terrestrial or rupicolous. Rhizomes erect, ascending, or horizontal (short- to long-creeping), scaly, the scales bicolorous, with central band black to dark brown, margins golden, reddish golden, tan, or brown. Fronds erect, caespitose, monomorphic to subdimorphic; stipes dark to light brown or reddish brown, with or without paired adaxial wings, the wings golden or reddish golden; laminae 1–5-pinnate, or 2–3-pinnate-pinnatifid, or 2-pinnate-pinnatilobate, palmate or ternate, apices difform or conform, chartaceous to coriaceous, glabrous or pubescent, the hairs septate, 3-celled long; rachises flexuous or not, dark to light brown, or reddish brown, adaxially winged similarly to the stipes or with reddish pluricellular hairs; pinnae sessile or stalked, articulate or continuous; pinnules anadromous, slightly ascending, patent, or slightly deflexed, articulate and eventually deciduous, oblong, narrowly oblong, ovate, elliptic, lanceolate, or rhombic, bases cuneate, obtuse, acute, or truncate, acroscopic auricles present in some species, margins entire, sinuate, crenulate, or lobed, apices round, lobulate, crenate, acute, or acuminate; veins free, anadromous, occult, obscure, or prominent. Sori marginal, discrete, occasionally confluent; pseudoindusia distinct, lunate, cuspidate, quadrangular, oblong, or triangular, margins entire to slightly erose, or laciniate; spores trilete, tetrahedral-globose or tetrahedral, echinate, echinulate, arachnoid-echinulate, or cristate.

COMMENTS

Adiantopsis has a Neotropical distribution, with species occurring in the Caribbean region, Mexico and Central America, and throughout South America, reaching northern Uruguay. In Brazil occur 14 species plus a hybrid (*A. xaustralopedata*). Because of its variable morphology, the hybrid does not appear in the key for the Flora of Brazil.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Highland Rocky Field, Cerrado (lato sensu), Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest, Coastal Forest (Restinga), Amazonian Savanna

Geographic Distribution

Confirmed occurrences

North (Pará, Rondônia, Roraima, Tocantins)
 Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí)
 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)

IDENTIFICATION KEY

Key to the species of *Adiantopsis* in Brazil

1. Laminae primarily ternate or 1–2-pinnate
2. Laminae primarily ternate, trident-shaped *A. trifurcata*
2. Laminae 1–2-pinnate
3. Rachises not flexuous; laminae 1-pinnate; pinnae sessile, oblong, subdimidiate
 *A. monticola*
3. Rachises flexuous; laminae 1–2-pinnate; pinnae/pinnules stalked (the stalk hairlike),
 rhombic *A. senae*
1. Lamina palmate with 5 or more pinnae, or 2–3-pinnate-pinnatifid, or 2-pinnate-pinnatilobate,
 or 2–5-pinnate
4. Laminae palmate with 5 or more pinnae
5. Fronds subdimorphic; pinnules typically less than 7 mm long..... *A. timida*
5. Fronds monomorphic; pinnules typically more than 7 mm long
6. Wings absent adaxially on the stipes; pinnae apices not elongate, these up to 0.8
 cm in length *A. radiata*
6. Two narrow wings adaxially on the stipes; pinnae apices elongate, these
 frequently to 1.5 cm in length *A. alata*
4. Laminae 2–3-pinnate-pinnatifid, or 2-pinnate-pinnatilobate, or 2–5-pinnate
7. Laminae only 2-pinnate or 2-pinnate-pinnatilobate
8. Laminae 2-pinnate; pinnules entire; rhizomes erect *A. regularis*
8. Laminae 2-pinnate-pinnatilobate; pinnules pinnatilobate; rhizomes long-creeping .
 *A. tweediana*
7. Laminae 2–3-pinnate-pinnatifid or laminae 2–5-pinnate
9. Laminae 2–3-pinnate-pinnatifid
10. Rhizomes short-creeping; stipes light brown to reddish brown
 *A. chlorophylla*
10. Rhizomes ascending or erect; stipes dark brown to black
11. Rhizomes ascending *A. perfasciculata*
11. Rhizomes erect *A. occulta*
9. Laminae 2–5-pinnate
12. Laminae 3–5-pinnate; rachises conspicuously flexuous *A. dichotoma*
12. Laminae 2–3-pinnate; rachises not conspicuously flexuous
13. Fronds monomorphic; pinnules pubescent on both surfaces
 *A. flexuosa*
13. Fronds subdimorphic; pinnules glabrous on both surfaces
 *A. cheilanthoides*

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Adiantopsis alata Prantl

DESCRIPTION

Stem: rhizome erect. **Leaf:** frond palmate/glabrous; **margin** crenulate; **pinna** pedicellate/continuous/lobate; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/lunate. **Spore:** trilete arachnoid echinulate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes erect. Fronds erect, palmate, monomorphic (fertile and sterile segments similar), caespitose; stipes dark brown to reddish brown, with two prominent wings (up to 1.5 mm in width) adaxially, glabrous distally and with sparse scales basally; laminae palmate, chartaceous, with 5–6(–9) pinnae; pinnae spreading radially from stipe apex, fusiform, ending in symmetrical ultimate segment, this basally lobate and with an elongate caudate apex to 1.5 cm long; central pinna larger than the others; pinnules varying 6–36 pairs per pinna, with margins entire, slightly crenate, stalked, apices round to acute; veins free, obscure to occult. Sori lunate, discrete, sometimes confluent; pseudoindusia distinct, lunate; spores arachnoid-echinulate.

COMMENTS

The most distinguishing characters of *Adiantopsis alata* are the long apical segment of the pinnae (more than 1.0 cm long and often up to 1.5 cm in length) and the prominent wings, which are visible with the unaided eye, on the stipes distally. *Adiantopsis alata* is known only from Brazil (Bahia, Minas Gerais, and Espírito Santo States), where it occurs in forests and along roadsides, from 30–1000 m elev.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais)

HERBARIUM MATERIAL

Matos, F.B. et al., 738, UPCB (UPCB0000959), Bahia

REFERENCE

Link-Pérez, M.A., Ludwig, T.G., Ledford, C.J., Seabolt, M.H. & Sessa, E.B. 2016. Lectotypification of *Adiantopsis alata* (Pteridaceae) and descriptions of new palmate species in the Guiana Shield. *Systematic Botany* 41(4): 906–918.

Adiantopsis cheilanthoides R.M.Senna

DESCRIPTION

Stem: rhizome horizontal/short. **Leaf: frond** 2 pinnate/3 pinnate/pinnatifid/coriaceous/glabrous; **margin** entire; **pinna** oblong/deltate; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/oblong. **Spore:** trilete echinate.

ADDITIONAL DESCRIPTION

Plants rupicolous. Rhizomes short-creeping. Fronds erect, subdimorphic (fertile segments narrower), caespitose; stipes light brown to reddish brown, with two narrow wings adaxially, glabrous distally and with sparse scales basally; laminae 2–3-pinnate, coriaceous, glabrous; rachises glabrous, with two narrow wings adaxially; pinnae deltate to oblong; pinnules oblong to round-oblong, 1–2 x 0.6–1.3 mm, margins entire and revolute; veins free. Sori oblong; pseudoindusia distinct, oblong; spores echinate.

COMMENTS

Adiantopsis cheilanthoides is another endemic species of Brazil. It is known only to the South of Brazil in the Rio Grande do Sul State, growing on rocks. This species resembles *A. chlorophylla* but the last species differs in having 2–3-pinnate-pinnatifid laminae (vs. 2–3-pinnate), grows as terrestrial (vs. rupicolous), and has bigger pinnules 0.7–1.5 x 0.5–0.7 cm (vs. 1–2 x 0.6–1.3 mm).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Senna, R.M., 208, PACA, HAS, HBR, Rio Grande do Sul

REFERENCE

Senna, R.M. 2004. *Adiantopsis cheilanthoides* (Pteridaceae – Pteridophyta) uma nova espécie do Rio Grande do Sul, Brasil. *Iheringia, Sér. Bot.* 59(1): 107–110.

Adiantopsis chlorophylla (Sw.) Fée

Has as synonym

basionym *Cheilanthes chlorophylla* Sw.

heterotypic *Hypolepis conifolia* (C. Presl) C. Presl

heterotypic *Hypolepis spectabilis* (Kaulf.) Link

DESCRIPTION

Stem: rhizome horizontal/short. **Leaf: frond** 2 pinnate/3 pinnate/pinnatifid/glabrous; **margin** entire; **pinna** sessile/continuous/oblong/deltate; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/oblong/orbicular. **Spore:** trilete echinate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes short-creeping. Fronds erect, subdimorphic (fertile segments narrower), caespitose; stipes light brown to reddish brown, with two narrow wings adaxially, glabrous distally and with sparse scales basally; laminae 2–3-pinnate-pinnatifid, chartaceous, glabrous; rachises glabrous, with two narrow wings adaxially; pinnae deltate to oblong; pinnules deltate to oblong, deciduous, 0.7–1.5 x 0.5–0.7 cm, margins entire and revolute; veins free. Sori oblong to suborbiculate; pseudoindusia oblong to suborbiculate; spores echinate.

COMMENTS

Adiantopsis chlorophylla is distinct in having short-creeping rhizomes, stipes and rachises with two narrow wings on the adaxial side. Additionally, the brown to reddish brown color of the stipes and rachises call attention in this species. This species grows in wet places near the border of gallery forests as terrestrial plants.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest), Coastal Forest (Restinga)

Geographic Distribution

Confirmed occurrences

North (Tocantins)

Northeast (Bahia, Maranhão, Pernambuco)

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

E.P. Heringer, 16576, RB, 455818,  (RB00607344), UB, Distrito Federal

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos. (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantopsis dichotoma (Sw.) T. Moore

Has as synonym

basionym *Cheilanthes dichotoma* Sw.

DESCRIPTION

Stem: rhizome horizontal/short. **Leaf: frond** 3 pinnate/-/5 pinnate/chartaceous/glabrous; **margin** entire; **pinna** pedicellate/continuous/oblong/deltate; **rachis** flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/lunate/oblong. **Spore:** trilete cristate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes short-creeping. Fronds decumbent, monomorphic (fertile and sterile segments similar), caespitose; stipes filiform, dark brown, subterete, glabrous distally and with sparse scales basally; laminae 3–5-pinnate, chartaceous, glabrous; rachises glabrous, conspicuously flexuous, sulcate, with two narrow wings adaxially; pinnae deltate to oblong; pinnules deltate to oblong, 0.2–0.4 x 0.1–0.2 cm, margins entire and revolute; veins free, occult. Sori oblong to lunate; pseudoindusia oblong to lunate; spores cristate.

COMMENTS

Adiantopsis dichotoma can be recognized by its decomposed laminae (3–5-pinnate) with minute (0.2–0.4 x 0.1–0.2 cm), deltate to oblong pinnules, and conspicuously flexuous rachises.

It occurs only in the open fields in the South region of Brazil in the states of Paraná, Santa Catarina, and Rio Grande do Sul.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types


Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

HERBARIUM MATERIAL

A. Sehnem, 7967, PACA, RB, 81266,  (RB00639358), Santa Catarina

REFERENCE

Sehnem, A. 1972. Pteridáceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Adiantopsis flexuosa (Kunze) Link-Pérez & Hickey

Has as synonym

basionym *Cheilanthes flexuosa* Kunze

DESCRIPTION

Stem: rhizome erect. **Leaf:** frond 2 pinnate/3 pinnate/chartaceous/pubescent; **margin** entire; **pinna** oblong; **rachis** flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/oblong/orbicular. **Spore:** trilete cristate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes erect. Fronds erect, monomorphic (fertile and sterile segments similar), caespitose; stipes dark brown to black, sulcate adaxially, pubescent distally and with sparse scales basally; laminae 2–3-pinnate, chartaceous, pubescent on both surfaces, the hairs light brown to whitish; rachises pubescent on both surfaces, sulcate adaxially, slightly flexuous; pinnae deltate; pinnules oblong to suborbiculate, 0.2–0.5 x 0.1–0.3 cm, margins entire, flat to revolute; veins free. Sori oblong to suborbiculate; pseudindusia oblong to suborbiculate; spores cristate.

COMMENTS

Adiantopsis flexuosa is easily recognized by the 2–3-pinnate laminae, rachises slightly flexuous, pubescent laminar tissue of the pinnules on both surfaces, the hairs light brown to whitish.

This species is restricted to the Central Brazilian region occupied by the “Campos Rupestres”.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás, Mato Grosso do Sul)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

Stannard, B.L., H51634, SPF, SP, K, RB, 502033,  (RB00596437), Bahia

REFERENCE

Sehnm, A. 1972. Pteridáceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Adiantopsis monticola (Gardner) T.Moore

Has as synonym

basionym *Cheilanthes monticola* Gardner

homotype *Hypolepis monticola* (Gardner) Hook.

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** pinnate/chartaceous/glabrous; **margin** entire; **pinna** sessile/articulate/oblong; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/oblong/orbicular. **Spore:** trilete echinate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes erect. Fronds erect, subdimorphic (fertile segments narrower), caespitose; stipes dark brown to black, with two narrow wings adaxially, glabrous distally and with sparse scales basally; laminae 1-pinnate, linear-lanceolate, chartaceous, glabrous; rachises glabrous, with two narrow wings adaxially; pinnae sessile, oblong, subdimidiate, deciduous, medial pinnae entire and with an acroscopic lobe at base, proximal and terminal pinnae slightly pinnatifid, 0.5–1 x 0.3–0.5 cm, margins entire and revolute; veins free. Sori oblong; pseudindusia lunate, oblong to suborbiculate, sometimes almost reniform; spores echinate.

COMMENTS

Adiantopsis monticola is known only to Central Brazil (endemic) in the states of Tocantins and Piauí. It grows as terrestrial plants in open vegetation (Cerrado *s.l.*).

It can be distinguished by its 1-pinnate laminae, with the pinnae sessile. *Adiantopsis trifurcata* is the most similar species, but it differs by the ternate laminae and triangular pseudindusia, and grows as rupicolous plants.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

North (Tocantins)

Northeast (Piauí)

HERBARIUM MATERIAL

G. Gardner, 3557, US,  (US00141687), K, Tocantins, **Typus**

REFERENCE

Baker, G.J. 1870. Cyatheaceae et Polypodiaceae. Pp. 306–624. In: C.F.P. Martius & A.G. Eichler (Eds.). *Flora Brasiliensis*, v. 1, part 2. Leipzig: Fleischer.

Adiantopsis occulta Sehnem

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** 2 pinnate/3 pinnate/pinnatifid/chartaceous/glabrous; **margin** entire; **pinna** sessile/oblong/deltate; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/oblong/orbicular. **Spore:** trilete not observed.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes erect. Fronds erect, subdimorphic (fertile segments narrower), caespitose; stipes dark brown to black, with two narrow wings adaxially, glabrous distally and with sparse scales basally; laminae 2–3-pinnate-pinnatifid, chartaceous, glabrous; rachises glabrous, with two narrow wings adaxially; pinnae deltate to oblong; pinnules lineate, 3–5 x 0.1–0.3 cm, margins entire and revolute; veins free. Sori oblong to suborbiculate; pseudindusia oblong to suborbiculate; spores not observed.

COMMENTS

Adiantopsis occulta is recognized here as distinct from *A. per fasciculata* only based on the rhizome morphology: erect rhizomes in *A. occulta* and ascending rhizomes in *A. per fasciculata*.

According to Sehnem (1972), in the Flora of Santa Catarina State, these species also differ by the color of the stipe: black-brown in *A. occulta* versus brown-violet in *A. per fasciculata*. As the color of the stipes is variable, more studies are necessary to corroborate the difference between these species. The most similar species is *A. chlorophylla*, but it can be distinguished in having short-creeping rhizomes.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (São Paulo)

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

HERBARIUM MATERIAL

A. Sehnem, 3568, PACA, Rio Grande do Sul

REFERENCE

Sehnem, A. 1972. Pteridáceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Adiantopsis perfasciculata Sehnem

DESCRIPTION

Stem: rhizome ascending. **Leaf: frond** 2 pinnate/3 pinnate/pinnatifid/chartaceous/glabrous; **margin** entire; **pinna** sessile/oblong/deltate; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/oblong/orbicular. **Spore:** trilete echinate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes ascending. Fronds erect, subdimorphic (fertile segments narrower), caespitose; stipes dark brown to black, with two narrow wings adaxially, glabrous distally and with sparse scales basally; laminae 2–3-pinnate-pinnatifid, chartaceous, glabrous; rachises glabrous, with two narrow wings adaxially; pinnae deltate to oblong; pinnules lineate, 2–5 x 0.1–0.2 cm, margins entire and revolute; veins free. Sori oblong to suborbiculate; pseudoindusia oblong to suborbiculate; spores echinate.

COMMENTS

Adiantopsis perfasciculata can be distinguished by its dark brown to black stipes and by the narrower pinnules. *Adiantopsis chlorophylla* is the most similar species but the short-creeping rhizomes (vs. ascending), wider pinnules 0.5–0.7 cm (vs. 0.1–0.2 cm), and the light brown to reddish brown color of the stipes (vs. dark brown to black) help to distinguish it from *A. perfasciculata*.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Central-west (Distrito Federal, Goiás)

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

HERBARIUM MATERIAL

L.B. Smith, 17, UB, Distrito Federal

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos. (Org.). Flora do Distrito Federal, Brasil, v. IV. 1a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantopsis radiata (L.) Fée

Has as synonym

basionym *Adiantum radiatum* L.

homotype *Cheilanthes radiata* (L.) J.Sm.

homotype *Hypolepis radiata* (L.) Hook.

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** palmate/chartaceous/glabrous; **margin** entire/crenulate; **pinna** pedicellate/continuous/elliptic; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/lunate. **Spore:** trilete echinate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizome erect. Fronds erect, radiate, monomorphic (fertile and sterile segments similar), caespitose; stipes dark brown to reddish brown, wings absent adaxially, glabrous distally and with sparse scales basally; laminae palmate, circular, chartaceous, with (3–)5–7(–9) pinnae; pinnae spreading radially from stipe apex, narrowly elliptic to fusiform, ending in a basally pinnatifid or lobate apical segment, this distally very elongate with an acute apex up to 0.8 cm long; central pinna larger than the others; pinnules varying 6–27 pairs per pinna, with margins entire to crenulate, stalked, apices round to acute; veins free, obscure to occult (sometime prominent due to color), ending submarginally in adaxial hydathodes. Sori lunate, discrete; pseudoindusia distinct, lunate; spores echinate.

COMMENTS

Adiantopsis radiata can be recognized in having monomorphic and radiate fronds with (3–)5–7(–9) pinnae, contracted apices of the apical segments of the pinna up to 0.8 cm long, and lunate pseudoindusia.

Adiantopsis alata and *A. timida* are the other two species with radiate fronds in Brazil, but *A. alata* differs by the long-caudate segment up to 1.5 cm long and *A. timida* differs in having subdimorphic fronds and much smaller pinnules (usu. less than 0.7 cm long, versus more than 0.7 cm in both *A. radiata* and *A. alata*).

Life Form

Herb

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)

Geographic Distribution

Confirmed occurrences

North (Pará, Rondônia, Roraima, Tocantins)


Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco)

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

Gomes, S.M., 76, CEN, RB, 421716,  (RB00638299), Distrito Federal

REFERENCE

- Link-Pérez, M.A. & Hickey, R.J. 2011. Revision of *Adiantopsis radiata* (Pteridaceae) with descriptions of new taxa with palmately compound laminae. *Systematic Botany* 36(3): 565–582.
- Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos. (Org.). *Flora do Distrito Federal, Brasil*, v. IV. 1a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantopsis regularis (Mett.) T.Moore

Has as synonym

basionym *Cheilanthes regularis* Mett.

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** 2 pinnate/chartaceous/glabrous; **margin** entire; **pinna** sessile/articulate/rhombic; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/lunate/orbicular. **Spore:** trilete cristate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes erect. Fronds erect, subdimorphic (fertile segments narrower), caespitose; stipes dark brown, with hairs distally and with sparse scales basally, the hairs light brown, the scales similar to those of the rhizomes; laminae 2-pinnate, chartaceous, glabrous; rachises with hairs, similar to those of the stipes, pinnae 7–9 pairs, lanceolate; pinnules entire, trapeziform to rhombic, deciduous, 0.5–1.0 x 0.4–0.5 cm, margins entire, flat; veins free. Sori oblong to suborbiculate; pseudoindusia lunate to suborbiculate; spores cristate.

COMMENTS

The erect rhizomes, 2-pinnate laminae, as well as the deciduous and entire pinnules distinguish *Adiantopsis regularis*.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

J. Prado, 830, UEC, 68110,  (UEC055014), SP, São Paulo

REFERENCE

Sehnm, A. 1972. Pteridáceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Adiantopsis senae (Baker) Schuettp. & A.Davila

Has as synonym

basionym *Adiantum senae* Baker

heterotypic *Adiantopsis minutula* Sehnem

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** 2 pinnate/pinnate/chartaceous/glabrous; **margin** entire; **pinna** pedicellate/continuous/rhombic; **rachis** flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/oblong/obicular. **Spore:** trilete arachnoid echinulate.

ADDITIONAL DESCRIPTION

Plants rupicolous. Fronds decumbent, very small, 5–10 cm tall. Rhizomes erect, scaly; laminae 1–2-pinnate; rachises flexuous and glabrous; pinnae/pinnules rhombic, small, 1.5–4 x 1–3 mm, stalked, the stalk very thin (hairlike), less than 1 mm long, glabrous, articulate to the rachises; laminae glabrous on both surfaces; terminal pinnule similar to the lateral ones; sterile margins of sterile pinnae/pinnules slightly lobate; veins free. Sori oblong to rounded, borne on lateral margins, 1 or 2 per pinna; pseudoindusia oblong to rounded, glabrous; spores arachnoid-echinulate.

COMMENTS

Adiantopsis senae is easily recognized by the small size of the fronds (5–10 cm tall), 1–2-pinnate laminae, rhombic pinnae/pinnules, small, 1.5–4 x 1–3 mm, stalked, the stalk very thin (hairlike), less than 1 mm long, glabrous, articulate to the rachises, and habit of growth on wet rocks near falls or protected by rocks in wet places.

This species was treated for a long time in the genus *Adiantum* (Schuettpelz *et al.* 2014).

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Amazonian Savanna

Geographic Distribution

Confirmed occurrences

North (Pará, Rondônia)

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

R. Y. Hirai, 714, RB, 167435,  (RB00638998), SP, Mato Grosso

REFERENCE

Schuettpelz, E., Davila, A., Prado, J., Hirai, R.Y. & Yatskievych, G. 2014. Molecular phylogenetic and morphological affinities of *Adiantum senae* (Pteridaceae). *Taxon* 63(2): 258–264.

Adiantopsis timida Link-Pérez Hickey

DESCRIPTION

Stem: rhizome erect/ascending. **Leaf:** frond pinnate/palmate/chartaceous/pubescent; **margin** sinuate; **pinna** pedicellate/articulate/oblong; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/lunate. **Spore:** trilete arachnoid echinulate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizome erect to decumbent. Fronds erect, radiate, subdimorphic (fertile segments narrower), caespitose; stipes dark brown, lustrous, wings adaxially, beginning at midpoint of stipe or 1/3, with scales golden-brown, sparse, only at base and hairs catenate, sparse, more numerous at apex between pinnae attachments; laminae palmate, circular, geniculate, chartaceous, drying dark brownish-black, glabrous adaxially and with sparse hairs abaxially, with (3–)5–7(–9) pinnae; pinnae spreading radially from stipe apex, linear to somewhat fusiform, apices conform, ending in an asymmetrical mitten-shaped apical segment with an (acute) obtuse to rounded apex; central pinna larger than the others; pinnules varying from (9–)15–38 pinnule pairs per pinna, oblong, margins sinuate, stalked, articulate, apices round to round-sinuate, acroscopic auricles variable in size, base cuneate basiscopically, truncate to occasionally acute acroscopically; veins free, occult, ending submarginally in adaxial hydathodes. Sori lunate, discrete; pseudindusia distinct, lunate; spores arachnoid-echinulate.

COMMENTS

Its radiate and subdimorphic fronds characterize *Adiantopsis timida*. The subdimorphic fronds bearing pinnules less than 0.7 cm long distinguish it from *A. radiata* (with pinnules more than 0.7 cm long), which is the most similar species. *Adiantopsis radiata* occurs mainly in the Brazilian Atlantic Rainforest, whereas *A. timida* is primarily an Amazonian species and is known only from the Rondônia State in Brazil.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types


Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Rondônia)

HERBARIUM MATERIAL

Santos, 249, NY,  (NY1746961), Rondônia, **Typus**

REFERENCE

Link-Pérez, M.A. & Hickey, R.J. 2011. Revision of *Adiantopsis radiata* (Pteridaceae) with descriptions of new taxa with palmately compound laminae. *Systematic Botany* 36(3): 565–582.

Adiantopsis trifurcata (Baker) Link-Pérez Hickey

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** pinnate/pinnatifid/ternate/chartaceous/pubescent; **margin** entire; **pinna** sessile/oblong; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/triangular. **Spore:** trilete echinulate.

ADDITIONAL DESCRIPTION

Plants rupicolous. Rhizome erect. Fronds erect, ternate, monomorphic (fertile and sterile segments similar), caespitose; stipes light to dark brown, lustrous, wings adaxially beginning at base of stipe on younger fronds, frequently absent on older fronds, with scales light brown or golden, sparse, restricted to stipe base and apex, with sparse hairs; laminae ternate, trident-shaped, chartaceous, drying grayish-green, olive, or brown, with hairs abaxially, with (1–)3(–5) pinnae; pinnae spreading radially from stipe apex, fasciculate, linear, gradually diminishing in width to a very small pinnatifid apex, apical segment trullate to mitten-shaped with an acute apex (sometimes spatulate); central pinna larger than the others; pinnules from 17–48 pinnule pairs per pinna, oblong, short-stalked, articulate, acroscopic auricles present, base excavate to cuneate basiscopically, truncate to obtuse (acute) acroscopically, margins entire, apices round to lobulate; veins free, occult, ending in hydathodes visible adaxially. Sori triangular, discrete; pseudoindusia distinct, triangular; spores echinulate.

COMMENTS

The most peculiar features of *Adiantopsis trifurcata* are the monomorphic and ternate fronds with fasciculate pinnae that resemble tridents. The rupicolous habit and the triangular pseudoindusia are other good characters to distinguish this species from the other species of the genus in Brazil.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)


Geographic Distribution

Confirmed occurrences

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

HERBARIUM MATERIAL

A.F.M. Glaziou, 22637, K, Goiás, **Typus**

J.R. Pirani, 1314, NY,  (NY01801186), Mato Grosso

REFERENCE

Link-Pérez, M.A. & Hickey, R.J. 2011. Revision of *Adiantopsis radiata* (Pteridaceae) with descriptions of new taxa with palmately compound laminae. *Systematic Botany* 36(3): 565–582.

Adiantopsis tweediana (Hook.) Link-Pérez & Hickey

Has as synonym

basionym *Cheilanthes tweediana* Hook.

DESCRIPTION

Stem: rhizome horizontal/long. **Leaf: frond** 2 pinnate/chartaceous/glabrous; **margin** lobate; **pinna** sessile/continuous/lobate; **rachis** not flexuous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** vertical with/indusium/lunate. **Spore:** trilete cristate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes long-creeping. Fronds erect, subdimorphic (fertile segments narrower), spaced; stipes dark brown, with sparse scales basally; laminae 2-pinnate-pinnatilobate, chartaceous, glabrous; rachises sulcate adaxially, with two lateral wings; pinnae with 7–18 pairs of pinnules, deltate; pinnules pinnatilobate, short to linear-oblong, ca. 3 x 1.5 mm, stalked, margins lobate, flat to revolute; veins free. Sori lobate; pseudoindusia lobate to lunate; spores cristate.

COMMENTS

Adiantopsis tweediana is easily distinguished from the other species of *Adiantopsis* in Brazil by the long-creeping rhizomes and spaced fronds. Additionally, it differs by its 2-pinnate-pinnatilobate laminae, with minute pinnules (ca. 3 x 1.5 mm).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso do Sul)

South (Rio Grande do Sul)

HERBARIUM MATERIAL

E.L.M. Assis, 583, COR,  (COR00015135), Mato Grosso do Sul

REFERENCE

Link-Pérez, M.A., Watson, L.E. & Hickey, R.J. 2011. Redefinition of *Adiantopsis* Fée (Pteridaceae): Systematics, diversification, and biogeography. *Taxon* 60(5): 1255–1268.

Adiantopsis xaustralopedata Hickey et al.

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** 2 pinnate/3 pinnate/palmate/chartaceous; **margin** entire; **pinna** sessile/continuous/oblong/lobate/deltate; **rachis** not flexuous. **Type of sporangium: leptosporangium** not observed. **Sporangium: vertical** not observed. **Spore: trilete** abortive.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizome erect. Laminae pedate; basal pinnae tripinnate, the upper pinnae bipinnate; basiscopic basal pinnules greatly elongate; spores abortive.

COMMENTS

According to Hickey *et al.* (2003), *Adiantopsis radiata* is probably one of the parents of this hybrid because the hybrid individuals found have enlarged basal basiscopic pinnules, reduced leaf dissection, and similar shape of the ultimate segments. The second parent, contributing the pinnate frond architecture, is probably a member of the taxonomically difficult *A. chlorophylla* (Sw.) Fée complex. This hybrid occurs near the border of Brazil and Argentina in the region of Iguazu Falls.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Jürgens, C., 173a, UC, Rio Grande do Sul

REFERENCE

Hickey, R.J., Baker, M.S. & Ponce, M.M. 2003. An *Adiantopsis* hybrid from Northeastern Argentina and vicinity. *American Fern Journal* 93(1): 42–44.

Adiantum L.

This treatment is composed of the following taxa: *Adiantum*, *Adiantum abscissum*, *Adiantum adiantoides*, *Adiantum argutum*, *Adiantum cajennense*, *Adiantum calcareum*, *Adiantum capillus-veneris*, *Adiantum cinnamomeum*, *Adiantum concinnum*, *Adiantum curvatum*, *Adiantum dawsonii*, *Adiantum decoratum*, *Adiantum deflectens*, *Adiantum delicatulum*, *Adiantum digitatum*, *Adiantum diogoanum*, *Adiantum diphyllum*, *Adiantum discolor*, *Adiantum dolosum*, *Adiantum giganteum*, *Adiantum glaucescens*, *Adiantum gracile*, *Adiantum humile*, *Adiantum incertum*, *Adiantum intermedium*, *Adiantum latifolium*, *Adiantum leprieurii*, *Adiantum lindsaeoides*, *Adiantum lorentzii*, *Adiantum lucidum*, *Adiantum macrophyllum*, *Adiantum mathewsianum*, *Adiantum multisorum*, *Adiantum mynsseniae*, *Adiantum nodosum*, *Adiantum nudum*, *Adiantum obliquum*, *Adiantum ornithopodium*, *Adiantum papillosum*, *Adiantum paraense*, *Adiantum patens*, *Adiantum pectinatum*, *Adiantum pentadactylon*, *Adiantum peruvianum*, *Adiantum petiolatum*, *Adiantum philippense*, *Adiantum phyllitidis*, *Adiantum platyphyllum*, *Adiantum poeppigianum*, *Adiantum poiretii*, *Adiantum pseudotinctum*, *Adiantum pulverulentum*, *Adiantum raddianum*, *Adiantum rhizophyllum*, *Adiantum scalare*, *Adiantum serratodentatum*, *Adiantum sinuosum*, *Adiantum subcordatum*, *Adiantum tenerum*, *Adiantum terminatum*, *Adiantum tetragonum*, *Adiantum tetraphyllum*, *Adiantum tomentosum*, *Adiantum villosum*, *Adiantum windischii*, *Adiantum xmoranii*.

HOW TO CITE

Prado, J., Hirai, R. Y. 2020. *Adiantum* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91805>.

Has as synonym

heterotypic *Hewardia* J.Sm.

DESCRIPTION

Rhizomes short- to long-creeping, horizontal rhizomes, or these sometimes compact and suberect; scales borne at rhizome apices and stipe bases; usually castaneous or atropurpureous stipes and rachises. Fronds medium-sized to large, monomorphic, pinnate (rarely undivided in a few extraterritorial species) to 3+ times pinnate, sometimes pedate; veins free or infrequently anastomosing without included free veinlets; linear epidermal idioblasts (false veins) present or not between the true veins. Sori formed on the recurved blade margins (false indusia), on the veins, without paraphyses; globose to tetrahedral, trilete-scarred spores; and $x = 29$ or (usually) 30.

COMMENTS

Adiantum is subcosmopolitan genus with about 225 species, ca. 110 of them occurring in tropical America. Most of the species are tropical and subtropical, but a few occur in temperate regions.

This genus can be easily distinguished by the presence of veins in the indusium.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

Amazonian Campinarana, Carrasco Vegetation, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Terra Firme Forest, Inundated Forest (Várzea), Ombrophyllous Forest (Tropical Rain Forest)

Ocean Islands

Confirmed occurrences

Trindade

Geographic DistributionConfirmed occurrences

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 occurrences

South (Paraná)

IDENTIFICATION KEYKey to the Species of *Adiantum* in Brazil

1. Veins regularly anastomosing (forming regular areoles) 2
1. Veins free or irregularly anastomosing (not forming regular areoles) 4
2. Rhizomes long-creeping; terminal pinna absent *A. diphyllum*
2. Rhizomes short-creeping; terminal pinna conform 3
3. Rachises with few scales and densely hairy; pinnules abaxially glabrous and adaxially sparsely setose along the basal and medial costae *A. adiantoides*
3. Rachises only with hairs; pinnules glabrous on both surfaces ... *A. leprieurii*
4. Fronds 1-pinnate (rarely 2-pinnate at bases) 5
4. Fronds 2-pinnate or more divided 19
5. Pinnae or pinnules articulate 6
5. Pinnae or pinnules not articulate 8
6. Pinnae dimidiately lunate or semi-rounded reniform, long-stalked, stalks 1–2 cm long *A. philippense*
6. Pinnae deltate, flabellate to rhombic, stalked, stalks up to 1 cm long 7
7. Sterile margins ciliate, the cilia ca. 2 mm long; indusia lobate-rounded
..... *A. delicatulum*
7. Sterile margins finely denticulate; indusia oblong to lunate *A. deflectens*
8. Rachises proliferous at apex 9
8. Rachises not proliferous at apex 10
9. Median pinnae incised to digitate; indusia lobate *A. calcareum*
9. Median pinnae entire to bi-tripartite flabellate; indusia oblong to lunate
..... *A. rhizophytum*
10. Rachises glabrous 11
10. Rachises only with scales, or with scales and hairs, or only with hairs
..... 13
11. Pinnae ovate-deltate, opposite, sessile or short-stalked; sori 2 per pinna; indusia linear *A. macrophyllum*
11. Pinnae or pinnules oblong, ovate-lanceolate or suborbicular, alternate, short to long-stalked; sori more than 2 per pinna; indusia oblong or linear-arcuate 12
12. Fronds 1-pinnate; pinnae dimidiate, oblong, short-stalked (stalk 1-2 mm long) *A. nudum*
12. Fronds 1-pinnate (rarely 2-pinnate at base); pinnae or pinnules not dimidiate, ovate-lanceolate or suborbicular, long-stalked (stalk 0.5–2.5 cm long) *A. platyphyllum*
13. Rachises with scales and hairs 14
13. Rachises only with scales or only with hairs 15
14. Pinnae or pinnules glabrous on both surfaces; idioblasts easily visible on adaxial blade surfaces, mostly parallel between veins, not visible abaxially; indusia linear-arcuate *A. petiolatum*
14. Pinnae or pinnules with filiform scales with pectinate bases on both surfaces; idioblasts conspicuous and oblique between veins adaxially and also visible abaxially; indusia oblong *A. obliquum*

15. Laminae with hairs on both surfaces, hairs 1–2 mm long *A. scalare*
15. Laminae with scales on both surfaces, scales with filiform apices and pectinate bases or laminae glabrous on both surfaces 16
16. Laminae glabrous on both surfaces *A. phyllitidis*
16. Laminae with scales on both surfaces 17
17. Veins free; rhizomes long-creeping, non-nodose *A. poeppigianum*
17. Veins anastomosing or irregularly anastomosing; rhizomes short-creeping and nodose 18
18. Pinnae or pinnules 6–9 times longer than wide, 4–5(–6) pairs, bases ± equal-sided, rounded to slightly cuneate; veins anastomosing
..... *A. dolosum*
18. Pinnae or pinnules 2–4 times longer than wide, 10–13 pairs, bases unequal-sided, rounded on acroscopic sides and cuneate on basiscopic sides; veins irregularly anastomosing but mostly free *A. lucidum*
19. Fronds 2- or 3-pinnate or 3–5-pinnate at bases 20
19. Fronds 2-pinnate throughout 41
20. Fronds 3- to 5-pinnate at bases 21
20. Fronds 2- or 3-pinnate at bases 34
21. Fronds forked and pedate at bases 22
21. Fronds not forked at bases 30
22. Pinnules with glandular hairs on both surfaces or glabrous abaxially and puberulent along the costae adaxially 23
22. Pinnules glabrous on both surfaces 24
23. Pinnules dimidiate; sori reniform or rounded *A. patens*
23. Pinnules deltate to lanceolate; sori linear, slightly arcuate .. *A. tetragonum*
24. Pinnules obovate to flabellate or pinnules dimidiate 25
24. Pinnules deltate, rhombic or subcordate to cordiform 28
25. Pinnules obovate to flabellate; rachises glabrous *A. pseudotinctum*
25. Pinnules dimidiate; rachises with hairs 26
26. Stipes glabrous along median and distal portions *A. ornithopodium*
26. Stipes pubescent along median and distal portions, indument of scales and/or hairs 27
27. Rachises pubescent on both sides; apex of the segments rounded
..... *A. lindsaeoides*
27. Rachises glabrous abaxially and pubescent adaxially; apex of the segment long-acuminate to acute *A. mynsseniae*
28. Rachises with hairs adaxially, the hairs reddish *A. papillosum*
28. Rachises glabrous 29
29. Pinnules not articulate; deltate or irregularly rhombic ... *A. pentadactylon*
29. Pinnules articulate, rhombic to subcordate *A. subcordatum*
30. Pinnules articulate or tardily articulate, oblong to trapeziform or flabellate; rachises glabrous 31
30. Pinnules not articulate, dimidiate, orbicular, or flabellate, rhombic-cuneate; rachises pubescent or glabrous 32
31. Pinnules tardily articulate, oblong to trapeziform; sori orbicular to lunate .
..... *A. mathewsianum*
31. Pinnules articulate, flabellate; sori oblong *A. tenerum*
32. Rachises with hairs and some scales; pinnules dimidiate, abaxially with hairs, glabrous adaxially *A. pectinatum*
32. Rachises glabrous; pinnules orbicular to flabellate or rhombic-cuneate, glabrous on both surfaces 33
33. Rhizomes long-creeping; pinnule bases usually symmetric; sori usually with yellow farina among sporangia; indusia membranaceous
..... *A. poiretii*
33. Rhizomes short-creeping; pinnule bases usually asymmetric; sori without farina among sporangia; indusia rigid *A. sinuosum*
34. Pinnules articulate *A. glaucescens*
34. Pinnules not articulate 35
35. Rachises puberulent or with scales and hairs; pinnules digitate-flabellate

- or dimidiate 36
35. Rachises glabrous; pinnules entire to incised, orbicular, orbicular-cuneate, rhombic-cuneate or ovate to rhombic 38
36. Rachises puberulent; pinnules digitate-flabellate, puberulent on both surfaces *A. digitatum*
36. Rachises with scales and hairs; pinnules dimidiate, glabrous on both surfaces 37
37. Indusia glabrous *A. abscissum*
37. Indusia with hairs *A. curvatum*
38. Veins ending into teeth at sterile margins of the pinnules
..... *A. capillus-veneris*
38. Veins ending between teeth at sterile margins of the pinnules 39
39. Proximal pinnules overlying rachises *A. concinnum*
39. Proximal pinnules not overlying rachises 40
40. Pinnules copiously incised on distal margins to 2/3 or more of pinnule length, pinnule bases cuneate and usually symmetric on proximal pinnules and asymmetric on distal pinnules *A. lorentzii*
40. Pinnules entire or sometimes incised on distal margins to 1/2 of the pinnule length, pinnule bases broadly cuneate and usually asymmetric ...
..... *A. raddianum*
41. Rachises glabrous abaxially and with only short-hairs adaxially
..... *A. tomentosum*
41. Rachises only with scales or with scales and hairs 42
42. Rachises with scales and hairs 43
42. Rachises only with scales 44
43. Rhizomes long-creeping; pinnules glabrous on both surfaces; indusia glabrous *A. latifolium*
43. Rhizomes short-creeping, nodose; pinnules abaxially with scales and glabrous adaxially; indusia bearing short-hairs *A. paraense*
44. Rachises with one kind of scales (lanceolate to narrowly lanceolate with pectinate base or filiform-subulate) 45
44. Rachises with two kinds of scales (hairlike and lanceolate with pectinate base or arachnoid and lanceolate with pectinate base) 56
45. Pinnules conspicuously discolorous, light green on the abaxial surface and dark green above and veins not easily visible *A. discolor*
45. Pinnules not discolorous or slightly discolorous; veins easily visible ... 46
46. Pinnules glabrous on both surfaces or rarely with sparse scales abaxially ..
..... 47
46. Pinnules with conspicuous hairs or scales at least on one surface 48
47. 3 or 4 pairs of pinnae per frond; median pinnules trapeziform
..... *A. decoratum*
47. 6–8 pairs of pinnae per frond; median pinnules falcate ... *A. intermedium*
48. Pinnae 2–4 pairs per frond; pinnules abaxially with hairs 49
48. Pinnae 3–10 pairs per frond; pinnules abaxially with scales 50
49. Distal pinnules approximately half the size of largest pinnules; indusia glabrous *A. humile*
49. Distal pinnules less than half the size of largest pinnules; indusia bearing hairs *A. terminatum*
50. Yellow, rounded glands present on abaxial surfaces of pinnules
..... *A. dawsonii*
50. Glands lacking on abaxial surfaces of pinnules 51
51. Pinnules 2(–3) times longer than wide 52
51. Pinnules 3–5 times longer than wide 54
52. Pinnules with scales on both surfaces; indusia with scales
..... *A. multisorum*
52. Pinnules glabrous adaxially or with scales only near the sori; indusia glabrous 53
53. 2–4(–6) pairs of pinnae per frond; 10–32 pairs of pinnules per pinna
..... *A. nodosum*

53. (3–)7–10 pairs of pinnae per frond; 27–43 pairs of pinnules per pinna
 *A. gracile*
54. Pinnules 16–25 pairs per pinna; indusia bearing hairs *A. diogoanum*
54. Pinnules 30–45 pairs per pinna; indusia scaly 55
55. Sterile margins of the pinnules conspicuously incised and denticulate-serrate..... *A. cajennense*
55. Sterile margins of the pinnules serrate to biserrate *A. cinnamomeum*
56. Rhizomes very long-creeping (cord-like) 57
56. Rhizomes moderately long-creeping (not cord-like) or short-creeping .. 61
57. Pinnules abaxially with septate hairs, adaxially glabrous; indusia glabrous
 *A. windischii*
57. Pinnules abaxially with scales, adaxially glabrous; indusia with hairs or
 glabrous 58
58. Scales of abaxial pinnule surfaces lanceolate with pectinate bases and
 filiform, uniseriate apices 59
58. Scales of abaxial pinnule surfaces setiform 60
59. Sterile margin serrulate or entire (not incised) on the acroscopic and
 distal sides of the pinnules; indusia bearing hairs *A. serratodentatum*
59. Sterile margin incised, irregularly and distantly biserrate on the acroscopic
 and distal sides of the pinnules; indusia glabrous *A. giganteum*
60. Pinnules 3–8 pairs per pinna, terminal pinnules larger than distal ones,
 broadly subrhombic, sterile margins biserrate *A. argutum*
60. Pinnules 4–15 pairs per pinna, terminal pinnules reduced, narrowly
 subrhombic, sterile margins finely serrate *A. incertum*
61. Rachises adaxially mostly with filiform scales (hairlike) and abaxially with
 lanceolate scales with pectinate bases; indusia oblong, with hairs, hairs
 reddish brown *A. tetraphyllum*
61. Rachises on both sides mostly with arachnoid scales and some lanceolate
 scales with pectinate bases; indusia linear, lunate, glabrous or with brown
 hairs 62
62. One indusia per pinnule *A. pulverulentum*
62. Two or three indusia per pinnule *A. villosum*

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Adiantum adiantoides (J.Sm.) C.Chr.

Has as synonym

basionym *Hewardia adiantoides* J.Sm.

heterotypic *Adiantum hewardia* Kunze

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** pinnate/2 pinnate; **rachis** with scale/with hair; **sterile margin** entire; **veins** anastomosing; **idioblast** inconspicuous; **pinna or pinnule** continuous/long/petiolate/not dimidiate/adaxial/with hair. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/oblong. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping. Fronds monomorphic, 1- or 2-pinnate (rarely 3-pinnate); rachises with a few scales at the base, adaxially moderately to densely setose, the setae 0.1–0.3 mm long, castaneous; pinnae three pairs plus a terminal conform pinna; pinnae/pinnules stalked, the color of the stalk continuing onto the costae, elliptic, the bases cuneate to obtuse or sometimes truncate, somewhat inequilateral, the apices acuminate or attenuate, the abaxial surfaces glabrous, the adaxial surfaces sparsely setose along the basal and medial costae, the margins entire; venation copiously areolate. Sori elongate and continuous along both sides of the pinna margins; indusia glabrous; spores brown, trilete.

COMMENTS

Adiantum adiantoides is a species that occurs only in the North of Brazil. In general on low elevations of the Amazon Forest (100–400 m). In general, the fronds have a terminal conform pinnae. The other important feature to recognize this species is the venation copiously areolate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará)

HERBARIUM MATERIAL

W.A. Egler, 46707, NY, Amapá

REFERENCE

Sundue, M.A. & Prado, J. 2005. *Adiantum diphyllum*, a rare and endemic species of Bahia State, Brazil and its close relatives. *Brittonia* 57(2): 123–128.

Adiantum argutum Splitg.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** pinnate/2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/not dimidiate/glabrous/adaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizome long-creeping. Fronds pinnate to 2-pinnate, with 3 or 4 pinna-pairs, pinnules acuminate, glabrous adaxially, with scales abaxially, the scales with pectinate base, terminal pinnule subrhombic, bigger than the lateral ones.

COMMENTS

For additional comments on characterization of this species, see Prado & Lellinger (2002). Related to *Adiantum obliquum*, and more broadly to *A. latifolium*, *A. petiolatum*, and allies in the much larger *A. tetraphyllum* clade, similar to many of these in the long-creeping, often cord-like rhizomes. Bipinnate species among the closest allies are notable for having relatively few pinna-pairs. Differing from *A. latifolium* especially by the pinnules abaxially with setiform scales on veins, and margins of sterile pinnules conspicuously biserrate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Maranhão, Pernambuco)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

J. Prado, 1344, RB, 579989,  (RB00791579), HPZ, SP, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum cajennense Willd. ex Klotzsch

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** denticulate/serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiolate/glabrous/adaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/pubescent. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Adiantum cajennense has rachises copiously scaly, pinnules with sterile margins conspicuously incised and denticulate-serrate, ca. 3 times longer than wide, 30–45 pairs per pinna, and pinnules abaxially bearing scales on the veins; the indusia also bear scales with pectinate bases.

COMMENTS

Closely related and similar to other bipinnate species with narrowly lanceolate rachis scales having pectinate bases in the *Adiantum tetraphyllum* group.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Bahia, Maranhão, Pernambuco)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

J. Prado, 1233, INPA, 34149,  (INPA0034149), HPZ, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Adiantum calcareum Gardner

DESCRIPTION

Stem: rhizome erect. **Leaf:** frond pinnate; **rachis** glabrous/with hair/with bud; **sterile margin** denticulate/entire; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/short/petiolate/digitate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes erect. Fronds monomorphic, 1-pinnate; rachises glabrous or with very sparse hairs adaxially, the hairs reddish-brown, abaxially glabrous, proliferous at apex; pinnae deeply incised, almost digitate, short stalked, the color of the stalk not passing into the laminar tissue, 7–12(–15) pairs, not articulate, glabrous on both surfaces, proximal pinnae pair round, margin of the sterile pinnae entire or slightly denticulate, and cartilaginous; veins free. Sori 2–8; indusia lobate, glabrous; spores trilete.

COMMENTS

This species is easily recognized by the proximal pinnae pair round, pinnae deeply incised, sterile margins entire, or slightly denticulate, cartilaginous, and rachises with apex proliferous.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

North (Tocantins)

Northeast (Bahia)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

E.P. Heringer, 8269/463, UB, Distrito Federal

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantum capillus-veneris L.

DESCRIPTION

Stem: rhizome creeping/nodose. **Leaf: frond** 2 pinnate/3 pinnate; **rachis** glabrous; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/short/long/petiolate/flabellate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes creeping, scales with margins entire. Fronds 2- or 3-pinnate proximally, 1-pinnate distally; rachises glabrous; pinnae/pinnules cuneate, entire to incised, not articulate, stalked, stalks 2–10 mm long, color of stalks passing into the pinnule bases, glabrous on both surfaces; veins ending into teeth at pinnule margins; sori 4–6 on distal pinnule margins one in each lobe; indusia oblong, glabrous; spores trilete.

COMMENTS

This species is easily recognized by the fronds 2- or 3-pinnate, veins ending into teeth at pinnule margins, and indusia oblong.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

E.M.Reineck, 210, US

Adiantum cinnamomeum Lellinger & J.Prado

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/not dimidiate/glabrous/abaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/pubescent. **Spore:** trilete rugate/to tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes stout, short-creeping. Fronds monomorphic, 2-pinnate; rachises with scales, the scales appressed throughout or distally patent, concolorous, cinnamomeous, 4–5 mm long, linear-lanceate with a filiform apex, sometimes long-ciliate at the base, medially copiously toothed-ciliate; pinnae oblong-lanceolate; pinnules 35–40 pairs, ca. 3 times longer than wide, sterile margins of the pinules serrate to biserrate, adaxial surface glabrous, abaxial surface glabrescent, with sparse, cinnamomeous scales, the scales filiform, ca. 1.0–1.5 mm long, pectinate at the base; veins free, prominulous. Sori oblong; indusia with filiform scales, bearing short basal processes, the margins entire to erose; spores trilete.

COMMENTS

Adiantum cinnamomeum is distinguished by its long, narrow pinnules that are acuminate to acute at the apex, presumably because the sori are always lateral. It occurs only in the N Brazil, but may have a wider range in Amazonian South America.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution


Confirmed occurrences

North (Amazonas, Pará, Rondônia)

Northeast (Maranhão)

Central-west (Distrito Federal, Mato Grosso)

HERBARIUM MATERIAL

G.T. Prance, 22691, INPA, 46691,  (INPA0046691), US, MO, NY, Amazonas

REFERENCE

Lellinger, D.B. & Prado, J. 2001. The group of *Adiantum gracile* in Brazil and environs. *American Fern Journal* 91(1): 1–8.

Adiantum concinnum Willd.

DESCRIPTION

Stem: rhizome short/creeping/suberect/not nodose. **Leaf: frond** 2 pinnate/3 pinnate; **rachis** glabrous; **sterile margin** denticulate/entire/lobate/incised; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/subsessile/obovate/flabellate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping to suberect, sparsely nodose. Fronds 2- or 3-pinnate proximally, 2- or 3-pinnate distally; rachises glabrous; pinnae 9–17 pairs, stalked, proximal acroscopic pinnule of each pinna overlapping the main rachis, subsessile, mostly divided into 2 (or 3) ultimate segments; stalked, the stalks non-articulate, with dark color passing into the pinnule bases or slightly so, obovate to flabellate, cuneate at base, sometimes truncate, sterile margins entire, lobed, incised or sometimes denticulate distally, abaxially and adaxially glabrous; veins free, ending at entire thickened pinnule margins or shallow sinuses; sori 4–17 per pinnule; indusia reniform to round-reniform, with often deep sinuses, glabrous; spores trilete.

COMMENTS

Adiantum concinnum is distinguished by its proximal acroscopic pinnule of each pinna overlapping the main rachis, subsessile, mostly divided into 2 (or 3) ultimate segments.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

HERBARIUM MATERIAL

J.M. Pires, 9698a, HB, K, F, M, Goiás

REFERENCE

Hirai, R.Y. & Prado, J. 2019. Neotropical species of the *Adiantum raddianum* group (Pteridaceae). *Willdenowia* 49(3): 295–317.

Adiantum curvatum Kaulf.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 2 pinnate/3 pinnate/furcate; **rachis** with scale/with hair; **sterile margin** crenate/lobate/3 serrate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/petiolute/dimidiate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/pubescent. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping, sparsely nodose. Fronds furcate at base, 2- or 3-pinnate at base; rachises with scales and hairs, the scales linear to linear-lanceolate, the hairs septate, light brown; pinnules stalked, the color of the stalks passing into the segment bases, mostly dimidiate, lacking costa, glabrous on both surfaces, sterile margins triserrate, crenate or shallowly to somewhat deeply lobed; veins free, 2–4 times forked, the veins ending in marginal teeth on the sterile segments. Sori several per pinnules; indusia oblong, pubescent; spores trilete.

COMMENTS

This species is distinct by fronds furcate at base, rachises with hairs and scales. The hairs occur only at the adaxial side of the rachises, abaxially the rachis is glabrous. The most similar species is *Adiantum abscissum* that has indusia glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

Dusén, P.K.H., 15012, RB, 421673,  (RB00638888), MBM, P, GH, MO, Paraná

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum dawsonii Lellinger & J.Prado

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/subsessile/dimidiolate/glabrous/adaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous/pubescent. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes stout, short-creeping. Fronds monomorphic, 2-pinnate; rachises with scales, the scales appressed throughout or sometimes distally patent, concolorous, cinnamomeous, 2–3(4) mm long, very narrowly lanceate with a long, filiform apex, weakly denticulate proximally, except twice as wide, 3–6 mm long, and regularly denticulate; pinnae oblong-lanceate; pinnules 35–40 pairs, ca. 2 times longer than wide, adaxial surface glabrous or with a few hair-like scales, especially near the sori, abaxial surface glaucous, the scales few or none, round, sessile, pale yellow glands often scattered over the surface; veins free, prominulous; sori oblong; indusia glabrous or sparingly catenate-pilosulous, erose-ciliate at maturity; spores trilete.

COMMENTS

Adiantum dawsonii has pinnules abaxially with yellowish, sessile glands; indusia erose-ciliate at maturity. Medial pinnules ca. 2 times longer than wide, usually acute at the sterile apex, nearly round at the fertile apex.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Central-west (Distrito Federal, Goiás, Mato Grosso)

HERBARIUM MATERIAL

Gomes, S.M., 113, RB, 36430,  (RB00638485), CEN, Distrito Federal

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantum decoratum Maxon & Weath.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrulate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiolate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Adiantum decoratum has rachises copiously scaly, the scales filiform-subulate, dark brown; pinnules with sterile margins conspicuously serrulate, ca. 2 or 3 times longer than wide, 3 or 4 pairs per pinna, glabrous on both surfaces; the indusia also glabrous.

COMMENTS

Characterized by other 2-pinnate species of *Adiantum* by the presence of spreading, dense, filiform-subulate scales on the petioles and rachises. These scales are persistent and impart a shaggy appearance to the petioles.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre)

HERBARIUM MATERIAL

C. Ferreira, 10164, NY, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Adiantum deflectens Mart.

DESCRIPTION

Stem: rhizome erect. **Leaf:** frond pinnate; **rachis** glabrous/with bud; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** articulate/long/petiolate/not dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes erect. Fronds monomorphic, 1-pinnate; rachises glabrous, sometimes with proliferous buds at the top; pinnae articulate, flabellate, incised lobate, stalked, the stalk 7–10 mm long, base cuneate, sterile margins finely denticulate, ending into teeth; veins free. Sori oblong to linear; indusia glabrous; spores trilete.

COMMENTS

This species has sterile margins finely denticulate and indusia oblong to lunate, whereas the most similar species *Adiantum delicatulum* has sterile margins ciliate, the cilia ca. 2 mm long; indusia rounded.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

North (Pará, Rondônia, 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)

HERBARIUM MATERIAL

Santos, G.B., 36, UB, RB, 509225,  (RB00618746), Distrito Federal

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantum delicatulum Mart.

Has as synonym

heterotypic *Adiantum filiforme* Gardn.

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** pinnate; **rachis** glabrous/with bud; **sterile margin** ciliate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** articulate/long/petiolulate/not dimidiate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes erect. Fronds monomorphic, 1-pinnate; rachises glabrous, sometimes with proliferous buds at the top; pinnae articulate, flabellate, incised lobate, stalked, the stalk 7–12 mm long, base cuneate, sterile margins ciliate, the cilia ca. 2 mm long; veins free. Sori usually only one per pinna, rounded; indusia glabrous; spores trilete.

COMMENTS

Adiantum deflectens is the most similar species (see the comments of previous species for the differences). Both species grow as rupicolous/terrestrial in open vegetation (Cerrado) and semideciduous forest borders; from 200–1000 m.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Caatinga, Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Bahia, Piauí)

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

D. Andrade-Lima, 1191, PEUFR, Piauí

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum digitatum Hook.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 3 pinnate; **rachis** with hair; **sterile margin** ciliate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/short/petiolulate/not dimidiate/on the both surface/with hair. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes slender, long-creeping (cord-like). Fronds monomorphic, 3-pinnate; rachises pilose, hairs whitish brown; pinnae 2-pinnate; pinnules digitate (deeply incised), flabellate, not articulate, bases broadly cuneate, stalked, stalks 0.3–0.7 cm long; with scattered hairs on both surfaces and margins, terminal pinnae similar to lateral ones, sterile margins denticulate; veins free. Sori oblong; indusia glabrous; spores trilete.

COMMENTS

This species is easily recognized by the digitate pinnules (deeply incised), stalked, flabellate, not articulate to the rachis, and sori copiously oblong.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul, Santa Catarina)

Possible occurrences

South (Paraná)

HERBARIUM MATERIAL

Sacco, J.C., 1241, PACA, RB, 542770,  (RB00702235), Rio Grande do Sul

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum diogoanum Glaz. ex Baker

DESCRIPTION

Stem: rhizome short/to/long/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** denticulate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/short/petiolulate/dimidiate/abaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/pubescent. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short- to moderately long-creeping, nodose. Fronds monomorphic to subdimorphic, 2-pinnate; rachises scaly; pinnae 3–5(–6) pairs; pinnules ca. 3 times longer than wide, 18–20 pairs per pinna, abaxially with scales on veins, these with pectinate bases, sterile margins denticulate; veins free. Sori oblong; indusia bearing reddish brown hairs; spores trilete.

COMMENTS

This species belongs to the *Adiantum tetraphyllum* group, with rhizomes short- to moderately long-creeping, nodose; 2-pinnate fronds, pinnules abaxially with scales on veins, these with pectinate bases and indusia with reddish brown hairs.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Pará)

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

C. Ferreira, 9385, NY, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum diphyllum (Fée) Maxon

Has as synonym

basionym *Hewardia diphylla* Fée

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** pinnate; **rachis** with hair; **sterile margin** entire; **veins** anastomosing; **idioblast** inconspicuous; **pinna or pinnule** continuous/long/petiolate/not dimidiate/adaxial/with hair. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping. Fronds monomorphic, 1-pinnate; rachises adaxially moderately to densely setose, the setae 0.1–0.2 mm long, castaneous; pinnae a single pair, one slightly larger and more apical than the other, or sometimes ternate with a terminal segment, stalked, the color of the stalk continuing onto the costae, ovate-lanceate, the bases rounded to obtuse, somewhat inequilateral, the apices acute, the abaxial surfaces glabrous, the adaxial surfaces sparsely setose along the basal costae, the margins entire; venation copiously areolate. Sori elongate and continuous along both sides of the pinna margins; indusia glabrous; spores brown, trilete.

COMMENTS

Adiantum diphyllum is distinguished by the presence of only one pinnae pair; rachises adaxially moderately to densely setose, the setae 0.1–0.2 mm long, castaneous, and venation copiously areolate. It is a species restricted to the Atlantic Rainforest of Bahia state.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types


Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

HERBARIUM MATERIAL

Thomas, 10570, NY, CEPEC, SP, RB, 30935,  (RB00543315), Bahia, **Typus**

REFERENCE

Sundue, M.A. & Prado, J. 2005. *Adiantum diphyllum*, a rare and endemic species of Bahia State, Brazil and its close relatives. *Brittonia* 57(2): 123–128.

Adiantum dolosum Kunze

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** pinnate; **rachis** with scale; **sterile margin** serrate; **veins** anastomosing; **idioblast** present; **pinna or pinnule** continuous/short/petiolulate/not dimidiate/on the both surface/with scale. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/pubescent. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping. Fronds monomorphic to subdimorphic, usually 1-pinnate laminae (rarely 2-pinnate), lanceolate; rachises scaly; pinnae entire, 6–9 times longer than wide, 4 or 5(6) pairs per frond, with bases approximately equal-sided, stalked ca. 1–3 mm long, abaxially bearing scales with pectinate bases, adaxially with scattered scales similar to abaxial ones, sterile margins serrate; veins irregularly anastomosing. Sori 2, one on each side of a pinna, continuous, linear; indusia with reddish brown hairs; spores trilete.

COMMENTS

Adiantum dolosum is distinguishable by its entire pinnae, 6–9 times longer than wide, abaxially bearing scales with pectinate bases, adaxially with scattered scales similar to abaxial ones; sori 2, one on each side of a pinna, continuous, linear; indusia with reddish brown hairs. Morphologically is similar to *A. lucidum*, that differs by the fronds usually 2-pinnate; pinnae or pinnules 2–4 times longer than wide, bases unequal-sided, rounded on acroscopic sides and cuneate on basiscopic sides; veins irregularly anastomosing but mostly free.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences


North (Acre, Amazonas, Pará, Rondônia)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco)

Central-west (Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

J. Prado, 1249, HPZ., RB, 226025,  (RB00639019), SP, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum giganteum J.Prado

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** biserrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiate/abaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping (cord-like). Fronds monomorphic, 2-pinnate; rachises with two kinds of scales fibrilous to narrowly lanceolate with a filiform apex, strongly ciliate proximally; pinnae (4–)6–10 pairs, plus a terminal conform pinna; pinnules 16–32 pairs, ca. 2x longer than wide, dimidiate, the apices obtuse to acute, the abaxial surfaces glaucous, glabrescent, with patent, sparse, fibrilous scales, the adaxial surface glabrous, sterile margin incised, irregularly and distantly biserrate on the acroscopic and distal sides; venation free. Sori arcuate to oblong; indusia glabrous; spores trilete.

COMMENTS

This species is recognized by its long-creeping rhizome (cord-like); fronds 2-pinnate; rachises with two kinds of scales fibrilous to narrowly lanceolate with a filiform apex, strongly ciliate proximally; 16–32 pairs of pinnules, the pinnules ca. 2x longer than wide, dimidiate, the apices obtuse to acute, the abaxial surfaces glaucous, glabrescent, with patent, sparse, fibrilous scales, the adaxial surface glabrous. It grows on low elevations (ca. 30 m.) in the Brazilian Amazon Forests, near river margins, in clay soils.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Amazonian Campinarana, Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Ceará)

HERBARIUM MATERIAL

I. Mexia, 6013, MO, US, UC, Pará

REFERENCE

Prado, J. 2001. *Adiantum giganteum* (Pteridaceae), a new maidenhair from Amazonia, Brazil. Fern Gazette 16(5): 209–212.

Adiantum glaucescens Klotzsch

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate/3 pinnate; **rachis** glabrous; **sterile margin** serrate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** articulate/subsessile/not dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds 2- or 3-pinnate at bases, 2-pinnate distally, with 3 or 4(5) pairs of lateral pinnae; rachises glabrous, black; pinnules ca. 3 times longer than wide, 10–12 pairs per pinna, reduced toward pinna bases and apices, articulate, with stalks ca. 1 mm, pinnules abaxially decidedly glaucous and glabrous, adaxially glabrous, margins of sterile pinnules serrate. Indusia glabrous.

COMMENTS

Another member of the *Adiantum tetraphyllum* group. In Brazil it occurs mainly in the Amazonia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences


North (Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)

Northeast (Alagoas, Bahia, Maranhão, Pernambuco)

Central-west (Distrito Federal, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

J. Prado, 1954, RB, 375687,  (RB00638821), NY, SP, São Paulo

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum gracile Fée

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** articulate/subsessile/dimidiolate/glabrous/abaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes stout, short-creeping. Fronds monomorphic, 2-pinnate; rachises with scales appressed throughout or sometimes distally patent, concolorous, cinnamomeous, 2–3 mm long, narrowly lanceate with a filiform apex, strongly denticulate proximally; pinnae oblong-lanceate; pinnules 27–43 pairs, ca. 2 times longer than wide, adaxial surface glabrous or sparsely scaly near the sori, abaxial surface glabrescent, with patent, sparse, toothed scales ca. 0.5 mm long; veins free, slightly prominulous. Sori oblong; indusia glabrous, entire to erose; spores trilete.

COMMENTS

Adiantum gracile is easily recognized by the medial pinnules ca. 2 times longer than wide, obtuse to acute at the sterile apex, angular at the fertile apex; indusia glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)


Geographic Distribution

Confirmed occurrences

Central-west (Distrito Federal, Goiás, Mato Grosso)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

E.P. Heringer, 3767, RB, 30963,  (RB00543172), MG, IBGE, MBM, Distrito Federal, **Typus**

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantum humile Kunze

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/subsessile/dimidiate/glabrous/adaxial/with hair. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Fronds have only 2–4 pairs of lateral pinnae; rachises sparsely hairy; pinnules adaxially glabrous, abaxially glaucous, with long septate, brown hairs; margins of sterile pinnules serrulate. Indusia glabrous.

COMMENTS

Closely related to *Adiantum terminatum*; slightly more distant relatives are *A. latifolium* (with which *A. humile* has sometimes been combined) and the 1-pinnate *A. petiolatum*.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)


Northeast (Alagoas, Bahia, Paraíba, Pernambuco)

Central-west (Goiás, Mato Grosso)

Southeast (Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

J. Prado, 1246, SP, RB, 382769,  (RB00638624), Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum incertum Lindm.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/short/petiolulate/not dimidiate/glabrous/adaxial/abaxial/with scale. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping (cord-like). Fronds monomorphic, 2-pinnate; rachises with two kinds of scales (hairlike and lanceolate with pectinate base or arachnoid and lanceolate with pectinate base); pinnae 2–4 pairs; pinnules 4–15 pairs per pinna, apices rounded, abaxially with setiform scales on the veins, adaxially glabrous, margins of sterile pinnules finely serrate; veins free. Sori oblong; indusia glabrous; spores trilete.

COMMENTS

This species belongs to the group of *Adiantum latifolium*, by the laminar 2-pinnate and rhizomes long-creeping (cord-like). It can be recognized by the 2–4 pairs of pinnae; pinnules 4–15 pairs per pinna, apices rounded, abaxially with setiform scales on the veins, adaxially glabrous, margins of sterile pinnules finely serrate and veins free.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

Southeast (São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

G. Hatschbach, 23171, UPCB, PACA, MBM, HB, MO, UC, Paraná

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum intermedium Sw.

Has as synonym

heterotypic *Adiantum glaucinum* Kunze ex Ettingsh.

DESCRIPTION

Stem: rhizome short/to/long/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** denticulate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/short/petiolate/not dimidiate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short- to moderately long-creeping, nodose. Fronds monomorphic to subdimorphic, 2-pinnate; rachises scaly; pinnae 6–8 pairs; pinnules 2–2.5 times longer than wide, (4–)6–20 pairs per pinna, falcate, glabrous on both surface or rarely with scales abaxially, sterile margins denticulate; veins free. Sori 2–4, oblong; indusia glabrous; spores trilete.

COMMENTS

Adiantum intermedium resembles *A. tetraphyllum* by the morphology of the rhizome (short- to moderately long-creeping) and fronds 2-pinnate, but it can be easily distinct by the falcate pinnules, with few sori (2–4) and indusia glabrous (vs. only the falcate apex of the pinnules, more than 4 sori, and pubescent indusia in *A. tetraphyllum*).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

E.P. Heringer, 6901, MG, US, IBGE, MO, RB, 30962,  (RB00629064), Distrito Federal

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantum latifolium Lam.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/subsessile/not dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping (cord-like). Fronds with 1–4 pairs of lateral pinnae; pinnules 10–16 pairs per pinna, apices rounded to acute; pinnules glabrous on both surfaces, abaxially glaucous, margins of sterile pinnules finely serrate.

COMMENTS

A widespread, variable species, together with *Adiantum petiolatum* (1-pinnate), *A. terminatum*, *A. humile*, and probably *A. incertum* all closely related.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types


Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)
 Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí)
 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

J. Prado, 1294, SP, RB, 101660,  (RB00638770), HPZ, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.
 Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum leprieurii Hook.

DESCRIPTION

Stem: rhizome short/creeping. **Leaf: frond** 2 pinnate/3 pinnate/furcate; **rachis** with hair; **sterile margin** serrate/lobate/incised; **veins** anastomosing; **idioblast** inconspicuous; **pinna or pinnule** continuous/long/petiolate/dimidiolate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping. Fronds 2- or 3-forked, 2- or 3-pinnate proximally and 1-pinnate distally; rachises minutely pubescent adaxially and glabrous abaxially; pinnae 4–8 pairs; pinnules 2–3 times longer than wide, 5–10 pairs per pinna, reduced toward pinna bases, not articulate, stalked to 2–5 mm long, pinnules glabrous on both surfaces, margins of sterile pinnules incised to lobate, irregularly serrate; veins areolate. Sori several per pinnule; indusia oblong, glabrous; spores trilete.

COMMENTS

Adiantum leprieurii is distinguished by the fronds 2- or 3-forked, 2- or 3-pinnate proximally and 1-pinnate distally; rachises minutely pubescent adaxially and glabrous abaxially; and venation areolate. In Brazil, this species occurs only in the Amazon region.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types


Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amapá, Pará)

HERBARIUM MATERIAL

Figueiredo, F.O., 460, RB, 212959,  (RB00629078), INPA, Pará

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum lindsaeoides J.Prado & R.Y.Hirai

DESCRIPTION

Stem: rhizome long/creeping/nodose. **Leaf:** frond 3 pinnate/4 pinnate; **rachis** with scale/with hair; **sterile margin** crenate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/subsessile/dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping, nodose. Fronds monomorphic; laminae 3- or 4-pinnate at base, 3-pinnate distally; rachises 3- or 4-furcate, with hairs short, spreading, mostly erect, ca. 0.1 mm long, brown, 1–3-celled, plus long and filiform scales, sparse and spreading, slightly tortuous, 0.5–1 mm long, brown, (1)2- or 3-celled at base; median segments mostly dimidiate, falcate, lacking costa, glabrous on both surfaces; veins free. Sori mostly oblong to curved; indusia glabrous.

COMMENTS

Adiantum lindsaeoides can be easily recognized by having segments conspicuously falcate, dimidiate, with round apices that resemble those segments of *Lindsaea*. The indument on both sides of the stipes and rachises is dense and composed of short and erect hairs and long, filiform, and slightly tortuous scales.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo)

HERBARIUM MATERIAL

C.M. Mynssen, 921, SP, Bahia, **Typus**

REFERENCE

Prado, J. & Hirai, R.Y. 2013. *Adiantum lindsaeoides* (Pteridaceae), a new fern species from the Atlantic Rain Forest, Brazil. Systematic Botany 38(1): 28–31.

Adiantum lorentzii Hieron.

DESCRIPTION

Stem: rhizome short/creeping/suberect. **Leaf: frond** 3 pinnate/4 pinnate; **rachis** glabrous; **sterile margin** incised; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/long/petiolate/obovate/flabellate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/indusium/pubescent. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping to suberect. Fronds 3- or 4-pinnate proximally, 2- or 3-pinnate distally; rachises rachis not flexuous or slightly flexuous, glabrous, rarely with linear scales (mainly in forks or axes); pinnules conspicuously incised on distal margins to 2/3 or more of pinnule length, obovate to flabellate, not articulate, stalks 2–5 mm long, color of stalks passing into pinnule bases, bases of pinnules cuneate and usually symmetric on proximal part of blade and asymmetric distally; sori with glands and yellow farina among the sporangia.

COMMENTS

This species is easily recognized by the presence of yellow farina among the sporangia and also by the pinnules deeply incised. In all other morphological aspects resembles *Adiantum raddianum*, that has no yellow farina among the sporangia.

Life Form

Herb

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)

Geographic Distribution

Confirmed occurrences

Central-west (Distrito Federal, Goiás)

Southeast (São Paulo)

HERBARIUM MATERIAL

C.A. Mendez, 6, SJRP, São Paulo

REFERENCE

- Hirai, R.Y. & Prado, J. 2019. Neotropical species of the *Adiantum raddianum* group (Pteridaceae). *Willdenowia* 49(3): 295–317.
- Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). *Flora do Distrito Federal, Brasil*, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantum lucidum (Cav.) Sw.

This treatment is composed of the following taxa: *Adiantum lucidum*, .

Has as synonym

basionym *Pteris lucida* Cav.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** anastomosing; **idioblast** present; **pinna or pinnule** continuous/short/petiolulate/not dimidiate/on the both surface/with scale. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/pubescent. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping. Fronds monomorphic to subdimorphic, usually 2-pinnate, sometimes 1-pinnate; rachises scaly; pinnae (or pinnules) lanceolate, entire, 2–4 times longer than wide, 10–13 pairs per frond, stalked ca. 1–3 mm, abaxially with scattered scales, adaxially with very few similar scales, sterile margins serrate; veins irregularly anastomosing, mostly free. Sori 2, one on each side of a pinna, continuous, usually not reaching pinna apices; indusia with reddish brown hairs.

COMMENTS

Similar to *Adiantum dolosum* by the 1-pinnate fronds (see comments in *A. dolosum*). Both species occurs in forests, mostly in low elevations (0–300 m).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences


North (Acre, Amazonas, Amapá, Pará, Rondônia)

Northeast (Bahia, Ceará, Maranhão, Pernambuco)

Central-west (Mato Grosso)

Southeast (Espírito Santo, Minas Gerais)

HERBARIUM MATERIAL

G.T. Prance, 14632, R, NY, INPA, 32848,  (INPA0032848), Amazonas

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. Biota Neotropica 20(4): e20201119.

Adiantum macrophyllum Sw.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** pinnate; **rachis** glabrous; **sterile margin** entire; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/subsessile/short/petiollulate/not dimidiate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds monomorphic, 1-pinnate; rachises glabrous; pinnae ovate-deltate, opposite, glabrous on both surfaces, sessile or short-stalked, the stalk 1–2 mm long; veins free. Sori 2 per pinna; indusia linear, glabrous; spores trilete.

COMMENTS

This species is easily distinguished by its reddish young fronds and strictly opposite pinnae.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

North (Acre, Amazonas, Amapá, Roraima)

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

Toler, R., 19, RB, 258496,  (RB00638865), SJRP, São Paulo

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum mathewsianum Hook.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 3 pinnate/4 pinnate; **rachis** glabrous; **sterile margin** lobate; **veins** free; **idioblast** present; **pinna or pinnule** articulate/short/petiolate/dimidiolate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds monomorphic, 3- or 4-pinnate proximally, 3-pinnate distally; rachises glabrous; pinnae 4–6 pairs; pinnules oblong to trapeziform, incised on acroscopic and distal margins, tardily articulate, short-stalked to stalked, the stalks 0.3–1 cm long, abaxially and adaxially glabrous, bases of pinnules overlying rachises, sterile margins lobate and lobes dentate to serrate; veins free. Sori borne on acroscopic and distal margins on small lobes; indusia orbicular to lunate, glabrous; spores trilete.

COMMENTS

Adiantum mathewsianum has trapeziform and short-stalked to stalked pinnules, base of the pinnules overlapping the glabrous rachises.

Life Form

Herb

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)

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso do Sul, Mato Grosso)

Southeast (São Paulo)

South (Paraná)

HERBARIUM MATERIAL

R.C. Forzza, 828, SP, RB, 393541,  (RB00639052), SPF, Mato Grosso

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum multisorum A. Samp.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiolate/on the both surface/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/pubescent. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds 2-pinnate, with 4 or 5 pairs of lateral pinnae; rachises copiously scaly, scales with pectinate bases, ciliate margins, and filiform apices; pinnules dimidiolate, ca. 2 times longer than wide, (20–)35–45 pairs per pinna, reduced toward pinna bases and apices, on both surfaces with scales on veins, margins of sterile pinnules serrate; veins free. Sori contiguous; indusia oblong, bearing filiform scales.

COMMENTS

This species is distinguished by the fronds 2-pinnate, pinnules with several contiguous sori, and indusia with filiform scales.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)


Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará, Rondônia, Roraima)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

J. Prado, 1358, HPZ, RB, 356017,  (RB00639079), SP, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Adiantum mynsseniae J.Prado

DESCRIPTION

Stem: rhizome long/creeping/nodose. **Leaf:** frond 4 pinnate/5 pinnate; rachis with hair; **sterile margin** crenate/biserrate/lobate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/petiolate/dimidiolate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping, nodose. Fronds forked, 4- or 5-pinnate at base, 2-pinnate distally; rachises hairy, the hairs scattered, appressed throughout or patent, light brown, minute 0.1–0.2 mm long; pinnules stalked, the color of the stalks ending abruptly at segment bases, mostly dimidiolate, lacking costa, glabrous on both surfaces, glaucous abaxially, trapeziform, margins of sterile biserrate, crenate or shallowly to somewhat deeply lobed; veins free, flabellately several-times forked, the veins ending in marginal teeth on the sterile segments. Sori several per pinnules; indusia ellipsoid to curved-oblong, glabrous; spores trilete.

COMMENTS

Adiantum mynsseniae can be recognized by its long-creeping rhizomes, rachises with scattered minute and light brown hairs, glaucous laminae abaxially, median segments curved basiscopically, apices mostly long-acuminate or acute, and glabrous indusia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

Mynssen, C.M., 356, MBM, UC, RB, 484394,  (RB00568632), RB, RUSU, NY, SP, Rio de Janeiro

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum nodosum J.Prado, R.Y. Hirai & A.R. Sm.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** denticulate/serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/not dimidiate/glabrous/adaxial/abaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, densely nodose. Fronds usually 2-pinnate; rachises with scales linear, base with several processes and arachnoid scales; pinnae (1) 2–4(–6) pairs; pinnules 10–32 pairs per pinnae, not articulate, trapeziform, abaxial surface sparsely scaly, scales borne on veins, light brown, 0.5–1 mm long, base pectinate, apex filiform and tortuous, glabrous adaxially, sterile margins irregularly denticulate or serrate; veins free. Sori several per pinnule; indusia lunate, glabrous; spores trilete.

COMMENTS

The morphology of the rhizome, with approximate stipes, leading to a nodose appearance of the rhizomes gives the species name. *Adiantum nodosum* resembles *A. tetraphyllum*, but the latter differs in having thicker rhizomes (> 5 mm in diam.), sterile pinnules with acute apices that are curved toward the pinna apices, and rachises with filiform scales adaxially and lanceolate scales abaxially.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Amazonian Campinarana, Inundated Forest (Várzea)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Pará)

HERBARIUM MATERIAL

J. Prado, 1873, SP, Amazonas

F.O. Figueiredo et al., 1372, INPA, Pará

REFERENCE

Prado, J., Hirai, R.Y., Smith, A.R. & Tuomisto, H. 2017. Novelty in *Adiantum* (Pteridaceae) from South America. *Willdenowia* 47(3): 237–242.

Adiantum nudum A.R.Sm.

DESCRIPTION

Stem: rhizome long/creeping/nodose. **Leaf:** frond pinnate; rachis glabrous; sterile margin serrulate; veins free; idioblast present; pinna or pinnule continuous/subsessile/dimidiolate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping, nodose. Fronds usually 1-pinnate; rachises glabrous; pinnae glabrous on both surfaces, glaucous abaxially, margins of sterile serrulate; veins free. Sori several per pinnae/pinnules; indusia linear-arcuate, glabrous; spores trilete.

COMMENTS

It resembles *Adiantum petiolatum* by its 1-pinnate laminae, but differs by the petiole and rachises glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest


Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará, Rondônia)

Central-west (Mato Grosso do Sul, Mato Grosso)

HERBARIUM MATERIAL

C. Ferreira, 8854, NY, RB, 511143,  (RB00646475), Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Adiantum obliquum Willd.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** pinnate; **rachis** with scale/with hair; **sterile margin** biserrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiolate/on the both surface/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous/pubescent. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds usually 1-pinnate (rarely 2-pinnate at bases); rachises with scales and hairs; pinnae or pinnules with filiform scales with pectinate bases on both surfaces, margins of sterile pinnae biserrate; veins free. Sori several per pinnae/pinnules; indusia oblong, glabrous or with hairs; spores trilete.

COMMENTS

This species has conspicuous oblique idioblasts between veins adaxially and also visible abaxially.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco)

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

J. Prado, 1259, RB, 224634,  (RB00639093), HPZ, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum ornithopodum C.Presl ex Kuhn

DESCRIPTION

Stem: rhizome short/creeping/not nodose. **Leaf: frond** 3 pinnate/4 pinnate/furcate; **rachis** with hair; **sterile margin** serrate/lobate/incised; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping. Fronds 2- or 3-forked, 3- or 4-pinnate proximally and 2-pinnate distally; rachises glabrous or with very few scattered articulate hairs; pinnules 2–2.5 times longer than wide, 7–15 pairs per pinna, reduced toward pinna bases and apices, not articulate, stalked to 1 mm, pinnules dimidiate, glabrous on both surfaces, margins of sterile pinnules incised to lobate, irregularly serrate. Sori several per pinnule; indusia, oblong, glabrous; spores trilete.

COMMENTS

Adiantum ornithopodum can be recognized by the fronds 2- or 3-forked, 3- or 4-pinnate proximally and 2-pinnate distally; rachises glabrous or with very few scattered articulate hairs.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

Valente, G., 880, VIC, SP, Rio de Janeiro

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum papillosum Handro

DESCRIPTION

Stem: rhizome creeping/not nodose. **Leaf: frond** 2 pinnate/3 pinnate/4 pinnate; **rachis** with hair; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/long/petiolulate/not dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes creeping, not nodose. Fronds forked, 2–4-pinnate; rachises with unicellular hairs, rhombic, reddish-brown; pinnules cordiform, glabrous on both surfaces. Indusia glabrous.

COMMENTS

This species is endemic from Brazil and occurs only in the Atlantic Rainforest.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

Graçano, D., 159, VIC, SPF, 83813,  (SPF00083813), Minas Gerais, **Typus**

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum paraense Hieron.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** dentate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiolate/glabrous/adaxial/abaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/pubescent. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds 2-pinnate, with 2–5 pairs of lateral pinnae; rachises with scales; pinnules dimidiolate, imbricate, ca. 2 times longer than wide, 20–25 pairs per pinna, abaxially with pectinate scales, adaxially glabrous, margins of sterile pinnules irregularly dentate. Sori several per pinnule; indusia with conspicuous reddish-brown hairs; spores trilete.

COMMENTS

Adiantum paraense is distinct by its fronds with usually few pairs (2–5) of lateral pinnae and indusia with conspicuous reddish-brown hairs.

With the group of *Adiantum tetraphyllum*, *A. cajennense* and allies, and similarly scaly on the rachises and laminar tissue abaxially.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Maranhão)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

G.T. Prance, 6445, UC, INPA, NY, INPA, 23203,  (INPA0023203), Rondônia

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum pentadactylon Langsd. & Fisch.

DESCRIPTION

Stem: rhizome short/to/long/creeping/nodose. **Leaf: frond** 3 pinnate/4 pinnate; **rachis** glabrous; **sterile margin** denticulate/incised; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/petiolulate/rhombic/deltate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short to long-creeping, nodose. Fronds 3- or 4-pinnate; rachises glabrous; pinnules stalked, the color of the stalks into the segment bases, irregularly rhombic, deltate, lacking costa, glabrous on both surfaces, margins of sterile incised and denticulate; veins free, flabellately several-times forked, the veins ending in marginal teeth on the sterile segments. Sori several per pinnules; indusia oblong, glabrous; spores trilete.

COMMENTS

Adiantum pentadactylon can be recognized by its short to long-creeping rhizomes, fronds 3- or 4-pinnate, rachises glabrous, pinnules irregularly rhombic, deltate, lacking costa, glabrous on both surfaces, margins of sterile incised and denticulate and glabrous indusia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)


Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

Eiten, G., 2081, SP, FURB, 37404,  (FURB00270), US, São Paulo

REFERENCE

Prado, J. 2004. Criptógamos do Parque Estadual das Fontes do Ipiranga, São Paulo, SP. Pteridophyta: 17. Pteridaceae. Hoehnea 31(1): 39–49.

Adiantum peruvianum Klotzsch

DESCRIPTION

Stem: rhizome short/creeping/not nodose. **Leaf: frond** 3 pinnate; **rachis** glabrous; **sterile margin** serrate/crenate/incised; **veins** free; **idioblast** present/inconspicuous; **pinna or pinnule** articulate/long/petiolulate/not dimidiate/rhombic/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

COMMENTS

This is a cultivated species in Brazil.

Life Form

Herb


Substrate


Epiphytic, Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

HERBARIUM MATERIAL

S. G. E. Saunders, 575, F, C0675701F,  (C0675701F)

Wm Edwards, s.n., NY, C0675701F,  (NY00891353)

Adiantum petiolatum Desv.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** pinnate; **rachis** with scale/with hair; **sterile margin** serrulate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds usually 1-pinnate (rarely 2-pinnate at base); rachises with scales and hairs; pinnae dimidiate, glabrous on both surfaces, glaucous abaxially, margins of sterile serrulate; veins free. Sori several per pinnae/pinnules; indusia linear-arcuate, glabrous; spores trilete.

COMMENTS

This species has pinnae/pinnules glabrous on both surfaces and conspicuously glaucous abaxially. The indusia linear-arcuate is another good morphological character to recognize this species.

It resembles *Adiantum nudum* by its 1-pinnate laminae, but differs by the rachises with filiform scales and hairs.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí)

Central-west (Goiás, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

J. Prado, 1275, INPA, 37619,  (INPA0037619), SP, HPZ, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Adiantum philippense L.

Has as synonym

heterotypic *Adiantum lunulatum* Burm.f.

DESCRIPTION

Stem: rhizome erect. **Leaf: frond** pinnate; **rachis** glabrous/with bud; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** articulate/long/petiolulate/flabellate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes erect. Fronds monomorphic, 1-pinnate; rachises glabrous, proliferous at apex; pinnae articulate, flabellate, incised lobate, stalked, the stalk 7–10 mm long, base truncate, sterile margins finely denticulate, ending into teeth, glabrous on both surfaces; veins free. Sori oblong to linear; indusia oblong, glabrous; spores trilete.

COMMENTS

This species has sterile margins finely denticulate and indusia oblong, whereas the most similar species *Adiantum delicatulum* has sterile margins ciliate, the cilia ca. 2 mm long; indusia rounded.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Bahia, Pernambuco)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

T.C. Plowman, 8513, US, GH, NY, Pará

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum phyllitidis J.Sm.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** pinnate; **rachis** with hair; **sterile margin** serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/not dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping, sparsely nodose. Fronds 1-pinnate; rachises with hairs adaxially, the hairs reddish; pinnae short-stalked, the stalk ca. 2 mm, color of stalks passing into pinna bases, pinnae not dimidiate, ovate-lanceolate, apices long-acute to long-acuminate, glabrous on both surfaces, sterile margins serrate; veins free, ending in teeth at pinna margins. Sori 2 per pinna, one of each side of the pinna; indusia oblong, linear, glabrous; spores trilete.

COMMENTS

Adiantum phyllitidis is recognized by its fronds 1-pinnate; rachises with hairs adaxially, the hairs reddish; color of pinnae stalks passing into pinna bases, ovate-lanceolate, apices long-acute to long-acuminate, glabrous on both surfaces, margins of sterile serrate; veins free, ending in teeth at pinna margins. Sori 2 per pinna, one of each side of the pinna.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)


Geographic Distribution

Confirmed occurrences

North (Roraima)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

W.W. Thomas, 10570, RB, 30932,  (RB00638969), NY, Bahia

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum platyphyllum Sw.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** pinnate; **rachis** glabrous; **sterile margin** serrulate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/long/petiolulate/not dimidiate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds usually 1-pinnate (rarely 2-pinnate at base); rachises glabrous; pinnae stalked, the stalk 0.5–2.5 cm, color of stalks passing into pinna bases, pinnae not dimidiate, ovate-lanceolate, apices long-acute to long-acuminate, glabrous on both surfaces, glaucous abaxially, sterile margins serrulate; veins free, ending in teeth at pinna margins. Sori several per pinnae/pinnules; indusia oblong, linear-arcuate, glabrous; spores trilete.

COMMENTS

This species is easily recognized by its stalked pinnae, color of the stalk passing into pinna base, pinnae ovate-lanceolate with apice long-acuminate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Amazonian Campinarana, Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

North (Acre, Rondônia)

Northeast (Bahia, Ceará)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

Pietrobon-Silva, M.R., 2114, SJRP, MBM, SPF, SP, 21380,  (SP010455), São Paulo

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum poeppigianum (Kuhn) Hieron.

Has as synonym

basionym *Adiantum lucidum* var. *poeppigianum* Kuhn

basionym *Pteris lucida* var. *poeppigianum* Kuhn

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/not dimidiate/abaxial/with scale. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping, non-nodose. Fronds 2-pinnate; rachises with only scales with pectinate base; pinna bases asymmetric, subcordate, rounded on acroscopic sides and curved-cuneate on basiscopic sides, stalks ca. 1 mm long, color of stalks passing into pinnule bases; pinnae or pinnules abaxially with scattered scales on veins, sterile margins serrate; veins free. Sori 2 per pinna, one on each side, usually continuous (sometimes interrupted, forming 2 or 3 sori), linear, usually not reaching pinna apices; indusia glabrous; spores trilete.

COMMENTS

It can be recognized by the fronds 2-pinnate, sori 2 per pinna, one on each side, usually continuous (sometimes interrupted, forming 2 or 3 sori), linear, usually not reaching pinna apices and indusia glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre)

HERBARIUM MATERIAL

C. Ferreira, 9810, HPZ, NY, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum poiretii Wikstr.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 3 pinnate/4 pinnate; **rachis** glabrous; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/short/petiolate/flabellate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping, scales with margins short-ciliate, rarely entire or sparsely denticulate. Fronds 3- or 4-pinnate proximally, 2- or 3-pinnate distally; rachises glabrous; pinnules entire, orbicular to flabellate, not articulate, stalked, stalks 1–3 mm long, color of stalks slightly passing into pinnule bases, bases usually symmetric, glabrous on both surfaces, sterile margins denticulate; veins ending in sinuses at pinnule margins; sori borne on distal pinnule margins, usually with yellow farina among sporangia; indusia large, occupying 1/3 of pinnule length, lunate to oblong, glabrous; spores trilete.

COMMENTS

This species differs of the most similar ones, *Adiantum raddianum*, by its veins ending in sinuses at pinnule margins; sori borne on distal pinnule margins, usually with yellow farina among sporangia; indusia large, occupying 1/3 of pinnule length, lunate to oblong, glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo)

South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

Lindman, A., 983, GH, BM, K, Rio Grande do Sul

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum pseudotinctum Hieron.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 3 pinnate/4 pinnate; **rachis** glabrous; **sterile margin** lobate/incised; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/short/long/petiolate/obovate/flabellate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes slender, long-creeping, sparsely nodose. Fronds 3- or 4-pinnate proximally, 1–3-pinnate distally; rachises glabrous; pinnae (6–)8–10 pairs, proximal acroscopic pinnule of each pinna not overlapping the main rachis, the 1st pinna as long as the length of the lamina; stalked, the stalks 2–10 mm long, non-articulate, with dark color passing into the pinnule bases, obovate to flabellate, cuneate at base, apices rounded, sterile margins lobed and incised distally, abaxially and adaxially glabrous; veins free, forking, ending at the sinuses; sori (2–)7–16 per pinnule; indusia orbicular to reniform, with deep sinuses, glabrous; spores trilete.

COMMENTS

This species differs from *Adiantum raddianum* by its long-creeping rhizome.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Mato Grosso do Sul)

Southeast (Minas Gerais, São Paulo)

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

HERBARIUM MATERIAL

A.R. Reitz, 6700, FURB, 26902,  (FURB00271), HBR, Santa Catarina

REFERENCE

Hirai, R.Y. & Prado, J. 2019. Neotropical species of the *Adiantum raddianum* group (Pteridaceae). Willdenowia 49(3): 295–317.

Adiantum pulverulentum L.

DESCRIPTION

Stem: rhizome long/creeping/nodose. **Leaf:** frond 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiolate/abaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous/pubescent. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes moderately long-creeping, nodose. Fronds monomorphic, 2-pinnate; rachises with two kinds of scales, on both sides mostly with arachnoid scales and some lanceolate scales with pectinate bases; pinnae 3–8(–10) pairs; pinnules 25–35 pairs per pinna, 2–3 times longer than wide, abaxially with scales on veins, margins of sterile pinnules serrate; veins free. Sori 1; indusia linear, lunate, glabrous or with hairs, the hairs brown; spores trilete.

COMMENTS

Adiantum pulverulentum is characterized by 25–35 pairs per of pinnules per pinna, the pinnules 2–3 times longer than wide, abaxially with scales on veins, margins of sterile pinnules serrate; veins free, sori 1 with indusialinear, lunate, glabrous or with hairs, the hairs brown.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences


North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Sergipe)

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

C. Ferreira, 7365, NY, HPZ, RB, 225980,  (RB00638943), Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum raddianum C.Presl

DESCRIPTION

Stem: rhizome short/creeping/suberect/nodose. **Leaf: frond** 2 pinnate/3 pinnate/4 pinnate; **rachis** glabrous; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/short/petiolate/not dimidiate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping or suberect, sometimes nodose, with linear-lanceolate scales, margins entire. Fronds 2-pinnate to 4-pinnate; rachises glabrous; pinnules entire or incised on distal margins to 1/2 of pinnule length, obovate to rhombic, not articulate, stalks 2–5 mm long, color of stalks passing into pinnule bases, glabrous; veins ending in sinuses at pinnule margins. Sori borne at tips of lobes or on distal pinnule margins; indusia small, rounded to round-reniform, glabrous.

COMMENTS

It is very common species. The closely species is *Adiantum lorentzii*, but it differs by indusia with yellow-farina.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Ocean Islands

Confirmed occurrences

Trindade

Geographic Distribution

Confirmed occurrences

North (Pará)


Northeast (Bahia, Ceará, Pernambuco)

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

H.S. Irwin, 14011, MO, US, GH, NY, SP, 21369,  (SP010456), Distrito Federal

REFERENCE

Hirai, R.Y. & Prado, J. 2019. Neotropical species of the *Adiantum raddianum* group (Pteridaceae). Willdenowia 49(3): 295–317.

Adiantum rhizophytum Schrad.

DESCRIPTION

Stem: rhizome erect. **Leaf:** frond pinnate; **rachis** with hair/with bud; **sterile margin** dentate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/short/petiolate/flabellate/deltate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes erect. Fronds monomorphic, 1-pinnate; rachises with long and septate hairs mostly on the adaxial side, the hairs reddish-brown, abaxially almost glabrous, proliferous at apex; pinnae entire or 1- to bi-tripartite, deltate to flabellate, short stalked, the color of the stalk not passing into the laminar tissue, 10–20 pairs, not articulate, glabrous on both surfaces, proximal pinnae pair round, copiously flabellate, sterile margins dentate; veins free ending into teeth at pinnae margin. Sori 2–4; indusia lunate, oblong, glabrous; spores trilete.

COMMENTS

This species is easily recognized by the proximal pinnae pair round, copiously flabellate, and rachises with apex proliferous and with long and septate hairs mostly adaxially. The median pinnae entire to bi-tripartite.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás)

Southeast (Espírito Santo, Minas Gerais, São Paulo)

HERBARIUM MATERIAL

Pietrobom-Silva, M.R., 1779, MBM, MO, SJRP, RB, 30330,  (RB00339530), São Paulo

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum scalare R.M.Tryon

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** pinnate; **rachis** with scale; **sterile margin** serrate; **veins** anastomosing; **idioblast** present; **pinna or pinnule** continuous/short/petiolulate/not dimidiate/on the both surface/with hair. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/pubescent. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, nodose. Fronds monomorphic, 1-pinnate; rachises scaly, the scales lanceolate with copiously ciliate margins; pinnae 7–10 pairs per frond, stalked ca. 1–3 mm, 6–8 times longer than wide, narrowly long-triangular, entire, apices long-attenuate, pubescent on both surfaces, hairs 1–2 mm long, sterile margins serrate; veins irregularly anastomosing, mostly free. Sori 2 per pinna, one on each side of a pinna, continuous, linear, usually not reaching the pinna apex and base; indusia densely pilose, hairs reddish brown; spores trilete.

COMMENTS

In Brazil this species occurs only in the Acre state. It can be recognized by fronds 1-pinnate, 7–10 pairs per frond, stalked ca. 1–3 mm, 6–8 times longer than wide, narrowly long-triangular, entire, apices long-attenuate, pubescent on both surfaces, hairs 1–2 mm long. The presence of only 2 sori per pinna, with indusia densely pilose, the hairs reddish brown are another important morphological features to distinguish this species.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre)

HERBARIUM MATERIAL

G.T. Prance, 7335, INPA, 24134,  (INPA0024134), K, NY, Acre

REFERENCE

- Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.
Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum serratodentatum Willd.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** denticulate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiate/glabrous/adaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous/pubescent. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes very long-creeping and cord-like. Fronds 2-pinnate, with 2–6 pairs of lateral pinnae; rachises with two kinds of scales: lanceolate with pectinate, at bases and arachnoid; pinnules 2–3 times longer than wide, 10–15(–25) pairs per pinna, abaxially with lanceolate scales, adaxially glabrous, sterile margin serrulate or entire (not incised) on the acroscopic and distal sides; indusia bearing hairs less than 1 mm.

COMMENTS

A distinctive species of cerrado, and within the large group of *Adiantum tetraphyllum*, *A. argutum*, *A. latifolium*, and *A. obliquum*, with generally more ascending pinnae and more coriaceous, entire pinnules than allies.

Life Form

Herb

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)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)

Northeast (Alagoas, Bahia, Maranhão, Pernambuco)

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

J.R. Pirani, 3194, RB, 356026,  (RB00639453), SP, SPF, São Paulo

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum sinuosum Gardner

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 3 pinnate/furcate; **rachis** glabrous; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/short/petiolate/not dimidiate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping. Fronds 3-pinnate proximally, pinnate distally; rachises glabrous; pinnules entire, orbicular to flabellate or subrhombic, stalked 1–5 mm bases of pinnules broadly cuneate to truncate and usually asymmetric, pinnules glabrous on both sides; veins free, ending in teeth at pinnule margins. Indusia lunate to round-reniform, sometimes becoming dark brown to black, glabrous.

COMMENTS

This species occurs mainly in the cerrado vegetation.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences


North (Pará, Tocantins)

Northeast (Maranhão)

Central-west (Distrito Federal, Goiás, Mato Grosso)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

E.P. Heringer, 16727, IBGE, RB, 471640,  (RB00533616), Distrito Federal

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Adiantum subcordatum Sw.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 3 pinnate/4 pinnate; **rachis** glabrous; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** articulate/long/petiolute/not dimidiate/glabrous/on the both surface. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizome long-creeping, ca. 0.5 cm diam. Fronds ca. 80 cm long., 20–40 cm wide, 3- or 4-pinnate; rachises glabrous; ultimate segments subcordate, deltoid or rhombic, segments articulate; veins free. Indusia glabrous.

COMMENTS

This is another endemic species from Brazil. It occurs in the Atlantic Rainforest. It is easily recognized by the ultimate segments articulate, glabrous, and subcordiform.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

Hoehne, W., 3260, RB, 43756,  (RB00639210), SPF, São Paulo

REFERENCE

Prado, J. 2004. Criptógamos do Parque Estadual das Fontes do Ipiranga, São Paulo, SP. Pteridophyta: 17. Pteridaceae. Hoehnea 31(1): 39–49.

Adiantum tenerum Sw.

DESCRIPTION

Stem: rhizome short/creeping. **Leaf: frond** 3 pinnate/5 pinnate; **rachis** glabrous; **sterile margin** denticulate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** articulate/short/petiolulate/rhombic/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping, scales with margins fimbriate-ciliate. Fronds 3- or 5-pinnate proximally, 2- or 3-pinnate distally; rachises glabrous; pinnules entire, trapeziform to rhombic-oblong, articulate, deciduous, stalked, stalks 2–4 mm long, color of stalks stopping at pinnule bases, glabrous on both surfaces or with minutely puberulous abaxially, sterile margins denticulate; veins free ending in the teeth at pinnule margins. Sori borne in pairs on distal pinnule margins on each of the lightly bifid lobes; indusia oblong, glabrous; spores trilete.

COMMENTS

This species is easily recognized by the fronds 3- or 5-pinnate with pinnules conspicuously deciduous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Caatinga, Central Brazilian Savanna

Vegetation Types

Carrasco Vegetation, Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Northeast (Ceará)

HERBARIUM MATERIAL

A.Santiago & A.A.F.Saraiva, 1303, SP, Ceará

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum tetragonum Schrad.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 3 pinnate/4 pinnate/5 pinnate; **rachis** with hair; **sterile margin** crenate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/long/petiolulate/not dimidiate/adaxial/with hair. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping. Fronds monomorphic, 3–5-pinnate; rachises bifurcating 2–4 times, castaneous to orange-brown, lustrous, the adaxial surfaces puberulent, the hairs 0.1 mm long, curved, light brown to hyaline; pinnules essentially conform, narrowly deltate to lanceolate, stalked, the color of the stalks passing onto the bases of the pinnules, bases asymmetric, truncate to obtuse, the apices gradually tapered to slightly attenuate, the basal pinnules sometimes with a basispic lobe, the lobes ca. 2 cm long, acute, the margins of sterile pinnules crenate, the margins of fertile pinnules shallowly lobed, the lobes truncate, each lobe bearing a single sorus, abaxial lamina surfaces glabrous, adaxial lamina surfaces puberulent along the costae; veins free. Sori 6–12 along each margin of the pinnules, linear or slightly arcuate; indusia brown, glabrous; spores trilete.

COMMENTS

This species is distinguished by the fronds 3–5-pinnate; rachises bifurcating 2–4 times, castaneous to orange-brown, lustrous, the adaxial surfaces puberulent, the hairs 0.1 mm long, curved, light brown to hyaline and the basal pinnules sometimes with a basispic lobe, the lobes ca. 2 cm long. It is an endemic species of Bahia and Minas Gerais states, growing in the extensions of the dry portions of the Atlantic Rainforest.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

J.G. Jardim, 3153, NY, CEPEC, Bahia

REFERENCE

Prado, J. & Sundue, M.A. 2005. Typification and identity of *Adiantum tetragonum* (Pteridaceae). American Fern Journal 95(3): 89–93.

Adiantum tetraphyllum Willd.

DESCRIPTION

Stem: rhizome short/creeping/nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiolate/glabrous/adaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/pubescent. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes moderately long-creeping. Fronds with 3–6(–7) pairs of lateral pinnae; pinnules ca. 3–4 times longer than wide, 16–30 pairs per pinna, reduced toward pinna bases and apices, margins of sterile pinnules serrate to biserrate; rachises with two kinds of scales: most scales filiform (hairlike) adaxially, lanceolate with pectinate bases abaxially; pinnules abaxially with few scales on veins. Indusia oblong, with reddish brown hairs.

COMMENTS

A widespread, highly variable species, most easily confused with, and similar to *Adiantum diogoanum*, differing especially by the pinnule apices acute and curved toward pinna apices.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Terra Firme Forest, Ombrophylloous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)


Northeast (Bahia, Ceará, Pernambuco)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

C. Ferreira, 11878, NY, RB, 167433,  (RB00639254), Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Adiantum tomentosum Klotzsch

DESCRIPTION

Stem: rhizome short/creeping/not nodose. **Leaf:** frond 2 pinnate; **rachis** with hair; **sterile margin** serrate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/subsessile/dimidiolate/glabrous/on the both surface. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping. Fronds monomorphic, 2-pinnate; rachises puberulent adaxially, the hairs less than 0.1 mm, abaxially glabrous; pinnae 4–6 pairs; pinnules entire, 30–35 pairs per frond, 2–2.5 times longer than wide, reduced toward pinna bases, margins of sterile pinnules serrate, glabrous on both surfaces; veins free. Sori oblong; indusia glabrous.

COMMENTS

Distinguished by fronds 2-pinnate, having more numerous (30–35) pairs of imbricate pinnules and rachises lacking scales, but puberulent adaxially, hairs less than 0.1 mm, abaxially glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

G.T. Prance, 8197, 840,  (INPA0000840), NY, INPA, Amazonas

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Adiantum villosum L.

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** denticulate; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/not dimidiate/abaxial/with scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes moderately long-creeping. Fronds monomorphic, 2-pinnate; rachises with two kinds of scales, on both sides mostly with arachnoid scales and some lanceolate scales with pectinate bases; pinnae 3–5 pairs; pinnules 20–35 pairs per pinna, 2–3 times longer than wide, trapeziform, abaxially with scales on veins, with pectinate bases, adaxially glabrous, margins of sterile pinnules denticulate, ending into teeth at pinnules margins; veins free. Sori 1–3(–6) with indusia linear, slightly lunate, glabrous; spores trilete.

COMMENTS

Adiantum villosum is characterized by 20–35 pairs per of pinnules per pinna, the pinnules 2–3 times longer than wide, abaxially with scales on veins, margins of sterile pinnules denticulate; veins free and sori 1–3(–6) with indusia linear, slightly lunate, glabrous; spores trilete.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Bahia, Ceará, Paraíba, Pernambuco)

Southeast (Espírito Santo, Rio de Janeiro)

HERBARIUM MATERIAL

A. Sehnem, 9884, PACA, Ceará

REFERENCE

Prado, J. & Hirai, R.Y. 2020. *Adiantum* (Pteridaceae) in Brazil: Key to the species and illustrations. *Biota Neotropica* 20(4): e20201119.

Adiantum windischii J.Prado

DESCRIPTION

Stem: rhizome long/creeping/not nodose. **Leaf: frond** 2 pinnate; **rachis** with scale; **sterile margin** serrate; **veins** free; **idioblast** inconspicuous; **pinna or pinnule** continuous/subsessile/dimidiate/abaxial/with hair. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping (cord-like). Fronds monomorphic, 2-pinnate; rachises with two kinds of scales (narrow triangular with a filiform apex, strongly ciliate proximally, sparsely denticulate at margins plus arachnoid scales, basally stellate, processes narrow); pinnae 1–3 pairs; pinnules (5–)14–16(–20) pairs per pinna, dimidiate, apices obtuse to acute, abaxially with hairs, the hairs light brown to brown on the veins, adaxially glabrous, margins of sterile pinnules finely and regularly serrate; veins free. Sori arcuate to oblong; indusia glabrous; spores trilete.

COMMENTS

This species belongs to the group of *Adiantum latifolium*, by the laminar 2-pinnate and rhizomes long-creeping (cord-like). It can be recognized by the 1–3 pairs of pinnae; pinnules (5–)14–16(–20) pairs per pinna, apices obtuse to acute, abaxially with hairs, the hairs light brown to brown on the veins, adaxially glabrous, margins of sterile pinnules finely and regularly serrate and veins free.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará)

Northeast (Bahia, Pernambuco)

Central-west (Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, São Paulo)

HERBARIUM MATERIAL

J. Prado, 1276, UEC, 163621,  (UEC019039), SP, HPZ, Acre

REFERENCE

Prado, J. 2005. A new species and hybrid in *Adiantum* (Pteridaceae) from South America. *Kew Bulletin* 60(1): 117–121.

Adiantum xmoranii J.Prado

DESCRIPTION

Stem: rhizome not. **Leaf:** frond 2 pinnate; **rachis** with scale/with hair; **sterile margin** lobate/incised; **veins** free; **idioblast** present; **pinna or pinnule** continuous/subsessile/dimidiolate/oblong/obovate/obovate-oblong/obovate-oblong/obovate-oblong/with hair. **Type of sporangium:** leptosporangium pedicellate/oblong/obovate-oblong/obovate-oblong/obovate-oblong. **Sporangium:** annulus vertical/with/indusium/oblong/obovate-oblong. **Spore:** trilete rugate/to/tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes not seen. Fronds 2-pinnate at base; rachises with scales and hairs; pinnae/pinnules oblanceolate, sparsely pubescent abaxially, the hairs reddish-brown, glabrous adaxially, sterile margins incised or lobate; veins free. Sori several per pinnae/pinnules; indusia linear, arcuate or oblong, glabrous; spores trilete.

COMMENTS

This hybrid shows intermediate morphology between *Adiantum humile* and *A. petiolatum*. It resembles more *A. humile* than *A. petiolatum* because the fronds 2-pinnate and indument of the pinnules with reddish-brown hairs abaxially. The sori resemble *A. petiolatum* by linear-arcuate indusia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Pernambuco)

HERBARIUM MATERIAL

G.T. Prance, 13949, UC, Amazonas

REFERENCE

Prado, J. 2005. A new species and hybrid in *Adiantum* (Pteridaceae) from South America. *Kew Bulletin* 60(1): 117–121.

Ananthacorus Underw. & Maxon

This treatment is composed of the following taxa: *Ananthacorus*, *Ananthacorus angustifolius*.

HOW TO CITE

Schuettpelz, E., Prado, J., Hirai, R.Y. 2020. *Ananthacorus* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91866>.

DESCRIPTION

Plants epiphytic. Rhizome dorsiventral. Leaf arrangement distichous; leaves simple, costate, venation pluriseriate areolate. Sori linear, restricted to submarginal commissures; soral paraphyses with slender apical cells. Spores monoete.

COMMENTS

The genus is characterized by narrowly elliptic-linear leaves, several rows of areoles between the costae and margins, and sori parallel to the laminar margins.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Pernambuco)

Central-west (Mato Grosso do Sul, Mato Grosso)

REFERENCE

PPG I. 2016. A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54(6): 563–603.

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Schuettpelz, E., Chen, C.W., Kessler, M., Pinson, J.B., Johnson, G., Davila, A., Cochran, A.T., Huiet, L. & Pryer, K.M. 2016. A revised generic classification of vittarioid ferns (Pteridaceae) based on molecular, micromorphological, and geographic data. *Taxon* 65(4): 708–722.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Ananthacorus angustifolius (Sw.) Underw. & Maxon

Has as synonym

heterotypic *Vittaria costata* Kunze

DESCRIPTION

Rhizome scales linear to lanceolate. Fronds entire; petioles flattened, narrowly winged, laminae linear-elliptic, thick; veins areolate with 2 or 3 rows of areoles between the costa and margin. Sori submarginal on each side of the costa, nearly continuous; indusia absent with paraphyses, the paraphyses slender, without a swollen apical cell; spores non-green, reniform, monolete.

COMMENTS

Characterized by thick laminae, 2 or 3 rows of areoles between the costa and margin (these often hard to see because of the thick laminae), sori submarginal on each side of the costa, nearly continuous, indusia absent with paraphyses abundant, slender, without a swollen apical cell

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution


Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Pernambuco)

Central-west (Mato Grosso do Sul, Mato Grosso)

HERBARIUM MATERIAL

C. Ferreira, 7495, NY, RB, 116226,  (RB00710598), Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Anogramma Link

This treatment is composed of the following taxa: *Anogramma*, *Anogramma lorentzii*.

HOW TO CITE

Hirai, R.Y., Prado, J. 2020. *Anogramma* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91870>.

DESCRIPTION

Plants terrestrial. Rhizome erect, hairy. Fronds small, fasciculate; petiole as long or slightly longer than the lamina, elongate-triangular, 1–4-pinnate, not farinose, thin; rachises grooved adaxially; veins free. Sori borne along the veins, without paraphyses; indusia absent; spores trilete.

COMMENTS

Anogramma has five species, but in Brazil the genus is represented by only one species, that occurs only in Rio Grande do Sul state.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Riverine Forest and/or Gallery Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

REFERENCE

Sehnm, A. 1972. Pteridáceas. In: R. Reitz (Ed.). *Flora Ilustrada Catarinense*, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Anogramma lorentzii (Hieron.) Diels

DESCRIPTION

Rhizome hairy, these hairs are usually also at the base of the petiole. Fronds 3–4 cm long, rachises greenish, winged; lamina membranaceous to herbaceous, slightly lanceolate; petiole 1 cm long, 1-pinnate, pinnae 2–4 pairs, round, lobate, glabrous. Spores dark-brown.

COMMENTS

This species is represented by very tiny plants (3–4 cm long) that grow in wet places on the banks of roads.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Riverine Forest and/or Gallery Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Eugênio-Leite, J., 1850, SP, Rio Grande do Sul

REFERENCE

Sehnen, A. 1972. Pteridáceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Argyrochosma (J.Sm.) Windham

This treatment is composed of the following taxa: *Argyrochosma*, *Argyrochosma nivea*.

HOW TO CITE

Hirai, R.Y., Prado, J. 2020. *Argyrochosma* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91875>.

DESCRIPTION

Plants rupicolous. Rhizomes erect to horizontal, scaly, the scales yellow-brown to black, concolorous, margins entire. Fronds monomorphic; laminae 2–6-pinnate, chartaceous to coriaceous, abaxially covered by whitish or yellow farina, rarely glabrous, adaxially glabrous or sparsely glandular, dull, segments often articulate, deciduous; veins of ultimate segments free, usually obscure. Sori along veins abaxially, generally submarginal; indusia absent to slightly differentiated formed by the margin of the lamina revolute; sporangia intermixed with farina; spores trilete.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Highland Rocky Field, Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

Southeast (Minas Gerais)

South (Santa Catarina)

REFERENCE

Ponce, M.M. 1996. Nuevas combinaciones en *Argyrochosma* (Pteridaceae). *Hickenia* 2(38–43): 177–178.

Argyrosma nivea (Poir.) Windham

This treatment is composed of the following taxa: *Argyrosma nivea*, *Argyrosma nivea* var. *flava*, *Argyrosma nivea* var. *tenera*.

Has as synonym

basionym *Pteris nivea* Poir.

DESCRIPTION

Rhizome erect, scales castaneous, linear-lanceolate to lanceolate. Fronds 7–30 cm long, petiole about the same length of the lamina, lamina linear-lanceolate to lanceolate, 2- or 3-pinnate, the ultimate segments sessile to stalked, densely farinose or glabrous abaxially, glabrous adaxially. Sporangia borne on the veins abaxially, submarginal; indusia absent, margin unmodified, flat to rarely recurved or partially protect by the revolute margin.

COMMENTS

This species presents three varieties, and in Brazil occurs two of them.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Highland Rocky Field, Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

Southeast (Minas Gerais)

South (Santa Catarina)

IDENTIFICATION KEY

Key to the Varieties of *Argyrosma nivea* in Brazil

1. Fronds 3-pinnate; lamina farinose abaxially, the farina yellow
..... *A. nivea* var. *flava*
1. Fronds 2-pinnate; lamina without farina abaxially
..... *A. nivea* var. *tenera*

Argyroschisma nivea var. *flava* (Hook.) Ponce

Has as synonym

basionym *Notholaena nivea* var. *flava* Hook.

DESCRIPTION

Rhizome scales linear-lanceolate. Fronds 10–30 cm long; laminae lanceolate, 3-pinnate, 5–10 cm long; the ultimate segments stalked, densely yellow-farinoso abaxially. Indusia absent, margin unmodified, flat to rarely recurved.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

South (Santa Catarina)

HERBARIUM MATERIAL

A.R. Reitz, 3335, RB, HBR, Santa Catarina

REFERENCE

Ponce, M.M. 1996. Nuevas combinaciones en *Argyroschisma* (Pteridaceae). *Hickenia* 2(38–43): 177–178.

Argyroschisma nivea var. *tenera* (Gillies ex Hook.) Ponce

Has as synonym

basionym *Notholaena tenera* Gillies ex Hook.

DESCRIPTION

Rhizome scales lanceolate. Fronds 7–12 cm long, lamina linear-lanceolate, 2-pinnate, 4–7 cm long, the ultimate segments sessile to stalked, glabrous abaxially. Sporangia partially protect by the revolute margin.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

Southeast (Minas Gerais)

REFERENCE

Ponce, M.M. 1996. Nuevas combinaciones en *Argyroschisma* (Pteridaceae). *Hickenia* 2(38–43): 177–178.

Ceratopteris Brongn.

This treatment is composed of the following taxa: *Ceratopteris*, *Ceratopteris pteridoides*, *Ceratopteris thalictroides*.

HOW TO CITE

Hirai, R.Y., Prado, J. 2020. *Ceratopteris* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91878>.

DESCRIPTION

Plants aquatic, free-floating or rooting in mud. Fronds dimorphic, the petiole with 4–many vascular bundles; sterile lamina simple or deeply lobed to pinnatifid or 1–3-pinnate, glabrous, succulent to herbaceous; veins areolate, without included veinlets, vegetative buds often presents in sinuses of pinnae; fertile lamina 2–4-pinnate, erect, taller than the sterile. Sori marginal, covered by the margins enrolled, paraphyses absent; annulus vestigial to well developed. Spores trilete, with ridges radiate.

COMMENTS

Ceratopteris grows in aquatic habitat. In Brazil it is represented by two species, widely distributed in the country from North to South and from East to West.

Life Form

Herb

Substrate

Aquatic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest, Pantanal

Vegetation Types

Flooded Field (Várzea), Inundated Forest (Igapó), Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)

Central-west (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)

IDENTIFICATION KEY

Key to the Species of *Ceratopteris* in Brazil

1. Plants generally free-floating; sterile lamina simple or pinnatifid, the proximal pinnae (or lobes) opposite; petioles frequently inflated or enlarged distally *C. pteridoides*
1. Plants generally rooted in mud; sterile lamina pinnate, the proximal pinnae alternate; petioles not inflated distally, almost with the same width *C. thalictroides*

Key to the Species of *Ceratopteris* in Brazi

REFERENCE

- Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.
- Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.
- Sehnem, A. 1979. Parkeriáceas. In: R. Reitz (Ed.). *Flora Ilustrada Catarinense, parte I. Fasc. PARK*. Itajaí: Herbário Barbosa Rodrigues. 5p.

Ceratopteris pteridoides (Hook.) Hieron.

Has as synonym

basionym *Parkeria pteridoides* Hook.

DESCRIPTION

Root: type free floating. **Leaf:** petiole inflated; **sterile blade** simple palmate and 3 lobate or pinnatifid and 5 lobate; **proximal pinna** opposite. **Sporangium:** annulus absent or vestigial.

ADDITIONAL DESCRIPTION

Plants generally free-floating. Sterile fronds more or less prostrate, ca. 10–40 cm long, with a broad, fleshy, usually inflated petiole, lamina simple and palmately 3-lobed or pinnatifid and 5-lobed; the proximal pinnae (or lobes) opposite, thin-herbaceous, old leaves often with buds in sinuses. Fertile fronds more or less erect, ca. 20–40 cm long; pinnae 4–9 pairs, with a large inflated petiole, with linear segments, the proximal pinnae often opposite. Sporangia with annulus absent or vestigial.

COMMENTS

This species can be recognized by petioles frequently inflated or enlarged distally. In general, this species occurs as a floating plant.

Life Form

Herb

Substrate

Aquatic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest, Pantanal

Vegetation Types

Flooded Field (Várzea), Inundated Forest (Igapó), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Roraima)


Northeast (Bahia, Ceará, Maranhão, Pernambuco, Piauí)

Central-west (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

O.Berg, P19774, INPA, INPA, 43258,  (INPA0043258), Amazonas

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Ceratopteris thalictroides (L.) Brongn.

Has as synonym

basionym *Acrostichum thalictroides* L.

heterotypic *Ceratopteris froesii* Brade

DESCRIPTION

Root: type rooted. **Leaf: petiole** not/inflated; **sterile blade** 1 to 3 pinnate; **proximal pinna** alternate. **Sporangium: annulus** present developed.

ADDITIONAL DESCRIPTION

Plants generally rooted in mud. Sterile fronds more or less prostrate, ca. 20–50 cm long, with a narrow, fleshy, petiole not inflated distally, almost with the same width; laminae 1–3-pinnate; the proximal pinnae alternate, thin-herbaceous, buds absent or sometimes present in sinuses. Fertile fronds more or less erect, ca. 25–45 cm long; pinnae 4–6 pairs, petiole not inflated distally, almost with the same width, with linear segments; the proximal pinnae subopposite to alternate. Sporangia with annulus present, well developed.

COMMENTS

Ceratopteris thalictroides occurs as rooted plants in muds and the petiole is not inflated.

Life Form

Herb

Substrate

Aquatic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pantanal

Vegetation Types

Flooded Field (Várzea), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará, Rondônia)


Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco, Piauí, Rio Grande do Norte, Sergipe)

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

P.H. Labiak, 5140, RB, 476407,  (RB00549394), RB, Espírito Santo

REFERENCE

Sehnm, A. 1979. Parkeriaceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PARK. Itajaí: Herbário Barbosa Rodrigues. 5p.

Cheilanthes Sw.

This treatment is composed of the following taxa: *Cheilanthes*, *Cheilanthes bradei*, *Cheilanthes eriophora*, *Cheilanthes geraniifolia*, *Cheilanthes goyazensis*, *Cheilanthes hassleri*, *Cheilanthes hieronymi*, *Cheilanthes incisa*, *Cheilanthes juergensii*, *Cheilanthes micropteris*, *Cheilanthes obducta*, *Cheilanthes pantanalensis*, *Cheilanthes pohliana*, *Cheilanthes regnelliana*.

HOW TO CITE

Ponce, M.M., Dittrich, V.A.O., Gasper, A.L., Lima, L.V. 2020. *Cheilanthes* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91881>.

DESCRIPTION

Plants terrestrial, saxicolous, in general of small size, 5-30(40) cm tall. Rhizomes decumbent to shortly creeping, rarely erect, compact, nodose, sometimes branched, scaly. Rhizome scales linear-lanceolate to ovate-lanceolate, concolorous, ferruginous, pale to dark castaneous, less commonly bicolorous, with dark central stripe and hyaline margins; glandular cells usually present in the apex or margins of the scales. Fronds monomorphic, fasciculate; petioles terete or semiterete, sometimes grooved adaxially, light to dark castaneous; laminae linear-elliptical, ovate-triangular, narrowly triangular or less commonly pentagonal in outline, 1-2-pinnate-pinnatifid, rarely 3-pinnate basally; ultimate segments sessile, adnate or briefly petiolulate, not articulate; rachises terete, sometimes grooved adaxially with lateral edges acute or obtuse, light to dark castaneous, rarely green alate; free veins, 1-4-forked, sometimes sunken into lamina, widened at the apex (hydathodes). Indument with glandular and simple or squamiform trichomes, or partially or totally scaly, glandular trichomes always present, 2-pluricellular, sometimes minute. Sporangia at the end of the veins, protected by the recurved foliar margin, continuous or discrete, slightly to strongly modified (false indusium). Spores globose or globose-tetrahedral, of (35-) 40-60 (-70) μm of equatorial diameter, with 1-3 layered perispore, compact to reticulate, rugate, granulate, cristate, reticulate-cristate, or rarely verrucate surface; 32 or 64 spores per sporangium in sexual condition, or 16-32 spores per sporangium in asexual condition. Gametophyte orbicular, cordiform or elongated-cordiform, or ribbon-like, glabrous, rarely with glandular (not farinose) trichomes, unisexual, bisexual or vegetative, sometimes with propagules. Chromosomes basic number, $x = 30$.

COMMENTS

In a strict circumscription *Cheilanthes* comprises about 70 species that occur mostly in South America, South Africa, Madagascar, Oceania and, in a lesser extent, Southeast Asia. *Cheilanthes* species inhabit in arid or semi-arid, mountainous and rocky regions with seasonal climates, between 200-4500 m of altitude. In the Neotropics the greatest diversity occurs along the Andes, from Venezuela and Colombia to Argentina and Chile. The second center of diversity occurs along the "peripampasic orogenic arc" from southern Brazil through Uruguay to central Argentina, and finally the Pantanal of central-western Brazil, Bolivia and Paraguay, and the Guayana highlands in northern South America. In each phytogeographic region endemisms are frequent. The classic works on *Cheilanthes* define widely the genus based on traditional morphological characters (Tryon et al. 1990) which could encompass most of the species of the cheilanthoid ferns (Cheilanthoideae sensu PPG I, 2016). Currently some taxonomic works (Zhang & Yatskiyevych, 2013; Ponce, 2016) treat the cheilanthoids according to the phylogenies that circumscribe more strictly the subfamily and genera (Eiserhardt et al. 2011). Additionally, some morpho-anatomical characters studied seem to be useful in separating genera: *Cheilanthes* differ from *Myriopteris* and pellaeids by possessing the termination of veins widened (hydathodes) vs. not or slightly widened vein tips (Pryer et al. 2010; Hernández 2019). *Cheilanthes* also differs from the *Adiantopsis-Doryopteris* group by root anatomy: the whole cortex with thin cell walls or gradually thickened cell walls and wide lumen vs. the inner cortex with strongly thickened cell walls and narrow lumen (Hernández 2019). *Cheilanthes* differs from *Hemionitis* in the disposition of the sori: at the vein tip vs. along the vein, and also because *Hemionitis* [*H. tomentosa* (Lam.) Raddi] has pilose gametophytes vs. glabrous gametophytes in *Cheilanthes* (Martínez et al. 2018; Hernández 2019). Also, traits such as spores per sporangium numbers (16 or 32 in apogamy condition and 32 or 64 in sexual condition) and gametophyte characteristics have an important diagnostic value (Grusz & Windham, 2013; Martínez et al. 2018; Ponce & Scataglini, 2018). In this treatment of the genus for Brazil we accept 13 species divided into three groups phylogenetically distant: the *C. geraniifolia* group; *C. regnelliana* + *C. pohliana*; and *Cheilanthes* s.s. (Ponce & Scataglini 2018, 2020 in press). To validate taxonomic segregations and new combinations we need more samples for anatomical and molecular analyses.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

High Altitude Grassland, Grassland, Highland Rocky Field, Cerrado (lato sensu), Ombrophylous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic DistributionConfirmed occurrences

North (Amazonas, Pará, Rondônia, Tocantins)

Northeast (Bahia, Maranhão, Piauí)

Central-west (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 occurrences

Northeast (Bahia)

Southeast (Rio de Janeiro)

IDENTIFICATION KEY

1. Blades lobed to pinnatifid, rarely pinnate at the base, pentagonal to triangular. Stipes longer than the blades
2. Stipe hairs more or less straight, perpendicular to semiperpendicular to the rachis, topped with a glandular cell. Blade base pinnate with free, remote pinnae, pinnatifid towards median and distal parts, the ultimate segments crenate to lobulate *C. bradei*
2. Stipe hairs curved or curly, matted, eglandular or rarely glandular. Blade pinnatifid to 2-pinnatifid throughout
3. Basal segments pinnatifid, the median and distal ones entire or lobulate, obtuse. Stipes 0,1-0,5 mm diam., finely villous *C. eriophora*
3. Segments pinnatifid or pinnatisect, acute. Stipes 1-3 mm diam., matted-lanate or appressed-lanate, floccose to glabrescent
4. Rhizomes horizontal, creeping; stipes subremote along the rhizome, glabrous or glabrescent, up to 3-4 times longer than the blades. Adaxial surface of the blade with rigid hairs, mostly antrorse . *C. geraniifolia*
4. Rhizomes decumbent to obliquely creeping; stipes approximate or fasciculate at the apex, lanate or floccose, up to 2 times longer than the blades. Adaxial surface of the blade with undulate hairs, mostly matted *C. goyazensis*
1. Blades 1-3-pinnate-pinnatifid, linear, elliptic or ovate, rarely pentagonal. Stipes shorter than or as long as the blades
5. Rhizomes long-creeping, sometimes branched; rhizome scales sclerotic, bicolorous; pinnules (ultimate segments) markedly petiolulate
6. Blades 2-pinnate, pinnules orbicular, blade margins continuous, recurved *C. regnelliana*
6. Blades distally pinnate-pinnatifid to 2-pinnate proximally; pinnules ovate, blade margins discrete, with reflexed lobes *C. pohliana*
5. Rhizomes suberect, decumbent or short-creeping, congested or nodulose; rhizome scales concolorous, light brown, reddish or dark brown; ultimate segments adnate to the rachis or narrowed to the rachis, sometimes minutely petiolulate
7. Fronds glabrous. Blades 2-3-pinnate-pinnatifid, linear to ovate-triangular; segments oblong, dentate, veins immersed, not visible; false indusium discrete, lobulate-laciniate. Plants 3-8 cm tall *C. incisa*
7. Fronds pilose-glandulose, either with hairs topped with an apical glandular cell, 2-6-celled, sometimes inconspicuous, or with simple hairs and scales. Blades pinnate to several times divided; segments ovate, orbicular or elliptic, veins visible (sometimes hidden by a dense layer of hairs or scales); false indusium

continuous or discrete, more or less modified. Plants 10-30 cm tall

- 8. Blades pentagonal, 3-pinnate-pinnatifid, abaxially with inconspicuous, glandular, 2-celled hairs *C. hieronymi*
- 8. Blades linear, elliptic or ovate, pinnate to pinnate-pinnatifid, rarely 2-pinnate, either with conspicuous, glandular, multicellular hairs or hairs and scales
 - 9. Fronds with scales or scale-like hairs; blade margins entire, slightly modified
 - 10. Blades at both surfaces with ferruginous scale-like hairs composed by a series of caudate cells
 - 11. Blades 2-pinnate, ultimate segments oblong-lanceolate or deltate-lanceolate *C. obducta*
 - 11. Blades 3-pinnate, ultimate segments ovate or orbicular *C. pantanalensis*
 - 10. Blades adaxially with catenate, translucent, simple hairs; abaxially with ovate-lanceolate scales ..
..... *C. hassleri*
 - 9. Fronds with 2-6 celled glandular hairs; blade margins modified, papillate
 - 12. Blades 3-pinnate-pinnatifid; rachises subflexuous *C. juergensii*
 - 12. Blades pinnate-pinnatifid; rachises straight *C. micropteris*

REFERENCE

- Eisenhardt, W.L., Rohwer, J.G., Russell, S. J., Yesilyurt, J.C. & Schneider, H. (2011) Evidence for radiations of cheilanthoid ferns in the Greater Cape Floristic Region. *Taxon* 60(5): 1269–1283.
- Grusz, A.L. & Windham, M.D. (2013) Toward a monophyletic *Cheilanthes*: The resurrection and recircumscription of *Myriopteris* (Pteridaceae). *PhytoKeys* 32: 49–64.
- Hernández, M.A. (2019) Estudios anatómicos y reproductivos en helechos cheilanthoides del Noroeste de Argentina, su implicancia en la filogenia de la familia Pteridaceae. Tese (Doutorado em Ciências Biológicas). Salta. Facultad de Ciencias Naturales: Universidad Nacional de Salta. Pp. 1-306.
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- Ponce, M.M. (2016) Pteridaceae: *Cheilanthes*. Pp. 288– 299. In: M.M. Ponce & M.D. Arana (coords.), F.O. Zuloaga & M.J. Belgrano (eds.). *Flora Vascular de la República Argentina*. v. 2: Licofitas, Helechos y Gymnospermae. San Isidro: IBODA, CONICET.
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- Pryer, K.M., Schuettpelz, E., Huiet, L., Grusz, A.L., Rothfels, C.J., Avent, T. & Windham, M.D. (2010) DNA barcoding exposes a case of mistaken identity in the fern horticultural trade. *Molecular Ecology Resources* 10(6): 979–985.
- Tryon, R.M., Tryon, A.F. & Kramer, K.U. (1990) Pteridaceae. Pp. 230–256. In: K. U. Kramer & P.S. Green (vol. eds.), *Pteridophytes and Gymnosperms*. In: K. Kubitzki, (ed.). *The Families and Genera of Vascular Plants*. v. 1. Berlin, Springer-Verlag.
- Zhang, G.M. & Yatskievych, G. (2013) *Cheilanthes*. Pp. 218–224. In: Z. Wu, P.H. Raven & D. Hong (eds.) *Flora of China*. v. 2–3: Lycopodiaceae through Polypodiaceae. Beijing: Science Press; Saint Louis: Missouri Botanical Garden Press.

Cheilanthes bradei J.Prado & A.R.Sm.

Has as synonym

homotype *Cheilanthes venusta* (Brade) R.M. Tryon & A.F. Tryon

homotype *Notholaena venusta* Brade

DESCRIPTION

Stem: scale subulate; scale bicolor discolorous; **form** trailing. **Leaf: blade** triangular/pentagonal; **petiole** pilose.

ADDITIONAL DESCRIPTION

Rhizomes creeping, branched, ca. 2 mm diam., with subulate, bicolorous, reddish-brown to blackish-brown scales, with hyaline, dentate-glandular margin, and ciliate-glandular, curly apex; *fronds* aggregated along the rhizome, (3)5–15 cm long; petioles terete, 3-5 times longer than the lamina, ca. 0.5 mm diam., with capitate, multicellular, uniseriate hairs arranged more or less perpendicular to the axis; laminae triangular or pentagonal, distally pinnatifid and basally pinnate, 1-2 pairs of basal pinnae visibly separated from the rest of the segments, the basal pair pinnatifid, inequilateral, with basiscopic segments elongate; adaxial surface green grayish, with multicellular, curly and tangled hairs, abaxial surface brownish or ferruginous, with paucicellular hairs, densely matted; ultimate segments entire or lobed, with rounded apex, margin curved, slightly modified; veins free, bifurcate, apex widened; *sori* at the vein apex, covered by a crenate-lobed, hyaline false indusium; *spores* rugose-cristate, (32)64 per sporangium.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Highland Rocky Field, Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Northeast (Piauí)

Central-west (Goiás)

Southeast (Minas Gerais)


Possible occurrences

Northeast (Bahia)

HERBARIUM MATERIAL

A.C. Brade, 13949, RB, 30924,  (RB00543350), Minas Gerais, **Typus**

P.L.Krieger, 21272, RB, 490507,  (RB00577988), Minas Gerais

R.J.V. Alves, 924, R,  (R010000345), Minas Gerais

E.Schuettelpelz, 1425, RB, 542769,  (RB00702233), RB, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cheilanthes bradei* J.Prado & A.R.Sm.

REFERENCE

- Prado J. & Smith, A. R. 2002. Novelties in Pteridaceae from South America. *American Fern Journal* 92(2): 105-111.
- Ponce, M.M. & Scataglini, M.A. 2020 (in press). Phylogenetic position of South American *Cheilanthes* (Cheilanthesoideae, Pteridaceae): advances in the generic circumscription and segregation of the new genus *Mineirella*. *Journal of Systematics and Evolution*.
- Weatherby, C.A. 1946. *Notholaena* in Brazil. *Journal of the Arnold Arboretum* 27: 361-370.

Cheilanthes eriophora (Fée) Mett.

Has as synonym

basionym *Notholaena eriophora* Fée

DESCRIPTION

Stem: scale subulate; scale bicolor discolorous; **form** trailing. **Leaf: blade** pentagonal; **petiole** pilose.

ADDITIONAL DESCRIPTION

Rhizomes creeping, compact, sometimes branched, ca. 2 mm diam., with subulate, bicolorous scales with ferruginous to blackish brown center and hyaline margin with sparse blunt teeth and filiform, sinuous apex; *fronds* approximate, 3–10(13) cm long; petioles terete or subterete, 3-4 times longer than the lamina, ca. 0.5 mm diam., villose, hairs simple, multicellular, not capitate, loosely arranged; *laminae* ovate-pentagonal or pentagonal, pinnatifid, middle and distal segments entire, rounded apex, the basal ones inequilateral, lobulate to pinnatifid, basiscopically elongated, adaxially whitish or grayish, villose, abaxially ferruginous, lanate or matted with simple hairs, 5-6-celled, margin lobed, slightly modified; veins free, bifurcate, with widened apex; *sori* with few sporangia, at the vein apex, false indusium narrow, lobed, hyaline; *spores* globose-tetrahedral, rugose-cristate, (32)64 per sporangium.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Caatinga, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Pará, Rondônia)


Northeast (Bahia, Piauí)

Central-west (Goiás)


Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

Schwacke, 2545, RB, 36495,  (RB00641188), Paraná



A.F.M. Glaziou, 14409, B (B 20 0128135)

G. Gardner, 2390, US,  (US00142017), Minas Gerais


G. Gardner, 2390, NY,  (NY00144390), Goiás

E. H. G. Ule, 46, Ba, B (B 20 0128127)


Limminghe, s.n., P (P01333771)

A.F.M. Gardner, 2390, P,  (P00274406), P,  (P00274407), Piauí, **Typus**


Gardner, 2390, W (W0055362), Piauí, **Typus**


G. Gardner, 2390, US,  (US00142017), Minas Gerais, **Typus**

E. H. G. Ule, 7423, B (B 20 0128128)

H.S. Irwin, 31492, US,  (US01499102), Bahia

Müller, 85, P (P01274907)

G. Gardner, 2390, NY,  (NY00144390), Goiás, **Typus**

Gardner, 2390, W,  (W18890199451), Piauí, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cheilanthes eriophora* (Fée) Mett.

REFERENCE

Ponce, M.M. & Scataglini, M.A. 2020 (in press). Phylogenetic position of South American *Cheilanthes* (Cheilanthesoideae, Pteridaceae): advances in the generic circumscription and segregation of the new genus *Mineirella*. *Journal of Systematics and Evolution*.

Smith, A. R. 2005. Pteridophytes. In: J. A. Steyermark, P. E. Bery & B. K. Holst (ed.). *Flora of the Venezuelan Guayana*. Pteridophytes, Spermatophytes: Acanthaceae-Arecaceae. Vol. 2. 706 p.

Weatherby, C.A. 1946. *Notholaena* in Brazil. *Journal of the Arnold Arboretum* 27: 361-370.

Cheilanthes geraniifolia (Weath.)

R.M.Tryon & A.F.Tryon

Has as synonym

basionym *Notholaena geraniifolia* Weath.

DESCRIPTION

Stem: scale subulate; scale bicolor discolorous; **form** trailing. **Leaf: blade** pentagonal; **petiole** glabrous.

ADDITIONAL DESCRIPTION

Rhizomes creeping, horizontal, 3–4 mm diam., with subulate, bicolorous, sclerotic scales, blackish brown at the center, hyaline margin, retrorse-serrate, with filiform, sinuous apex; fronds erect, sub-remote along rhizome, 10–25(30) cm long; petioles subterete or semiterete, much longer (3–6 times) than the lamina, slender, 1–2 mm diam., atropurpureous, glabrous or glabrescent; laminae pentagonal, pinnate-pinnatifid to bipinnatifid at the base; ultimate segments or lobes triangular, with acute apices, adaxial surface with rigid, sharp, antrorsely arranged hairs, abaxial surface with multicellular, ferruginous, matted hairs in two layers, an internal one of flexuous and tangled hairs, and a superficial one of rigid, antrorse hairs on the costae, margin lobed; veins free, bifurcate, widened at the apex; *sori* with few sporangia at the vein apex, false indusium lobed, hyaline; *spores* rugose-cristate, 64 per sporangium.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pantanal

Vegetation Types

Highland Rocky Field, Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Rondônia)

Northeast (Bahia)

Central-west (Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais)

Possible occurrences


Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

P.G.Windisch, 6743, SJRP,  (SJRP00018508), Mato Grosso

Ferreira, J.L., 278, HUEFS (HUEFS133683), Bahia




E. H. G. Ule, 7239, B (B 20 0128133)

Pott, V. J., 4902, COR,  (COR00015217), Mato Grosso

P. Labiak, 4145, MBML (MBML031312), Espírito Santo

Ferreira, J.L., 328, HUEFS (HUEFS144508), Bahia

Melo, E., 1967, HUEFS (HUEFS026373), Bahia

Kollmann, L., 4347, UPCB (UPCB0008268), Espírito Santo
 Giulietti, A.M., 1652, HUEFS (HUEFS042487), Bahia
 R.R. Vervloet, 2563, MBML (MBML021513), Espírito Santo
 L. Kollmann, 4347, MBML (MBML014956), Espírito Santo
 A. F. M. Glaziou, 14408, B (B 20 0128134)
 L. Kollmann, 10950, MBML (MBML034848), Espírito Santo
 H. Q. Boudet Fernandes, 2979, MBML (MBML005976), Espírito Santo
 Hatschbach, G, 75797, MBM (MBM283798), Bahia
 Assis, E.L.M., 492, UPCB (UPCB0008266), Mato Grosso do Sul
 Queiroz, L.P.de, 12197, HUEFS (HUEFS110606), Bahia
 P. H. Labiak E., 4145, NY,  (NY00886563), Espírito Santo
 Black, GA, 15194, IAN (IAN077082), Rondônia
 L. Kollmann, 8350, MBML (MBML024955), Espírito Santo
 L. Kollmann, 8711, MBML (MBML025678), Espírito Santo
 R. C. Forzza, 5756, MBML (MBML040889), Espírito Santo
 Pereira, O.J., 2333, VIES (VIES005734), Espírito Santo
 Assis, E.L.M., 492, UPCB, COR, SI, Mato Grosso do Sul
 P. Labiak, 4145, MBML (MBML031312), Espírito Santo
 H. Q. Boudet Fernandes, 2301, MBML (MBML004439), Espírito Santo
 V. Demuner, 992, MBML (MBML012594), Espírito Santo
 A. de Saint-Hilaire, 1489, P,  (P00274392), Minas Gerais, **Typus**
 Melo, E., 1982, HUEFS (HUEFS026388), Bahia
 Melo, E., 3894, HUEFS (HUEFS096282), Bahia
 Melo, E., 4302, HUEFS (HUEFS108143), Bahia
 R.W.Windisch, 528, RB,  (RB01385418), Bahia
 H. Q. Boudet Fernandes, 1722, MBML (MBML000181), Espírito Santo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cheilanthes geraniifolia* (Weath.) R.M.Tryon & A.F.Tryon



Figure 2: *Cheilanthes geraniifolia* (Weath.) R.M.Tryon & A.F.Tryon

REFERENCE

- Ponce, M.M. & Scataglini, M.A. 2020 (in press). Phylogenetic position of South American *Cheilanthes* (Cheilanthoideae, Pteridaceae): advances in the generic circumscription and segregation of the new genus *Mineirella*. *Journal of Systematics and Evolution*.
- Weatherby, C.A. 1946. *Notholaena* in Brazil. *Journal of the Arnold Arboretum* 27: 361-370.

Cheilanthes goyazensis (Taub.) Domin

Has as synonym

basionym *Notholaena goyazensis* Taub.

DESCRIPTION

Stem: scale subulate; scale bicolor discolorous; **form** decumbent/trailing. **Leaf:** blade pentagonal; **petiole** pilose.

ADDITIONAL DESCRIPTION

Rhizomes decumbent or creeping, simple or branched, 4–6 mm diam., with subulate, bicolorous scales, brown or brown-ferruginous at the center, hyaline entire margin with blunt, remote teeth and slightly curved, apiculate apex; *fronds* approximate or fasciculate at the rhizome apex, 10–23(27) cm long; petioles 2–3 mm diam., covered with woolly hairs, partially detached (floccose in appearance); laminae pentagonal, bipinnate-pinnatifid, proximal segments pinnate-pinnatifid, basiscopically elongate, middle and distal segments pinnatifid, ultimate segments or lobes triangular with subacute apices, adaxial surface loosely hairy, grayish or whitish, adaxial surface with matted, simple, paucicellular, light brown or light ferruginous hairs, entire or erose margins; veins free, bifurcate, widened at the apex; *sori* with few sporangia at the apex of the veins, covered by a continuous, hyaline false indusium; *spores* rugose-cristate, 64 per sporangium.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pantanal

Vegetation Types

Highland Rocky Field, Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, São Paulo)

South (Paraná)

Possible occurrences

Southeast (Rio de Janeiro)


HERBARIUM MATERIAL

s.c., s.n., W (W0055361)

L. B. Damazio, 1859, B (B 20 0128138)

A.F.M. Glaziou, 16643, B (B 20 0128137)

A.F.M. Glaziou, 22625, B (B 20 0128136)

A. Salino, 155, SJRP,  (SJRP00021933), São Paulo




R. Mello-Silva, 624, MBM (MBM160907), Minas Gerais

Couto, D.R., 1874, VIES (VIES020330), Espírito Santo

A. P. Fontana, 4867, MBML (MBML034419), Espírito Santo

C.N. Fraga, 3566, UPCB (UPCB0029434), Espírito Santo

R. Mello-Silva, 624, RB, 356064,  (RB00639361), Minas Gerais

C.M. Sakuragui, s.n., NY,  (NY00875447), Minas Gerais
E.L.M. Assis, 303, COR,  (COR00015136), Mato Grosso do Sul
J. Prado, 1403, SP, NY, UC, Minas Gerais
A. Salino, 8035, BHC B, 74336,  (BHC B002175), Minas Gerais

REFERENCE

- Ponce, M.M. & Scataglini, M.A. 2020 (in press). Phylogenetic position of South American *Cheilanthes* (Cheilanthesoideae, Pteridaceae): advances in the generic circumscription and segregation of the new genus *Mineirella*. *Journal of Systematics and Evolution*.
- Weatherby, C.A. 1946. *Notholaena* in Brazil. *Journal of the Arnold Arboretum* 27: 361-370.

Cheilanthes hassleri (Weath.) Ponce

Has as synonym

basionym *Notholaena hassleri* Weath.

DESCRIPTION

Stem: scale subulate; scale concolor; **form** decumbent/trailing. **Leaf: blade** triangular/oblong/lanceolate; **petiole** squamose.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping or decumbent, *ca.* 1.5–2.5 mm diam., with linear-subulate scales, concolorous, light brown to dark, or bicolorous with sclerotic, blackish center and lighter, somewhat dentate margins; *fronds* caespitose, 10–20 cm long; petioles terete, equal or shorter than the lamina, 0.8–1.3 mm diam., dark brown, scaly, with ovate-lanceolate, serrate-pectinate, straw-coloured to whitish scales; laminae triangular, oblong or lanceolate, truncate to more or less attenuate at base, 2-pinnate-pinnatifid to 3-pinnate basally; first order rachises terete or almost so, second order rachises and costae sulcate adaxially, greenish to dark brown, with scales all over the rachis, and abaxially on costae, the scales ovate-lanceolate, light brown to whitish with cordate base and serrate-pectinate margin; pinnae oblong-lanceolate or narrowly triangular, not reduced basally, the basal pinnae inequilateral with larger basiscopic segments, adaxially with uniseriate, multicellular, catenate simple hairs or bearing an apical gland, abaxially with scales on costules and veins; free veins slightly widened at the apices; margins with short, scarious lobes with entire border; *sori* somewhat elongated, covered by short, rounded, hyaline lobes; *spores* cristate, 32 per sporangium.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso do Sul)

HERBARIUM MATERIAL

D.E. Hassler, 10996, NY,  (NY00888320), **Typus**

Damasceno Jr., G.A. et al., 4196, SI, Mato Grosso do Sul

REFERENCE

Assis, E.L.M. 2007. *Pteridófitas da borda oeste do Pantanal sul-matogrossense, Brasil*. Dissertação (Mestrado em Botânica). Curitiba. Setor de Ciências Biológicas: Universidade Federal do Paraná. 187 p.

Ponce, M.M., Assis, E.L.M. & Labiak, P.H. 2008. A new species and two new records of *Cheilanthes*. *American Fern Journal* 98(4): 202-207.

Cheilanthes hieronymi Herter

DESCRIPTION

Stem: scale oval-lanceolate; **scale** concolor; **form** decumbent/trailing. **Leaf: blade** pentagonal; **petiole** glabrous.

ADDITIONAL DESCRIPTION

Rhizomes short-creeping or decumbent, ca. 2 mm diam. (ca. 6 mm with the scales and petiole bases), with ovate-lanceolate scales, concolorous, dark brown, somewhat shining, the margins entire with an apical gland; *fronds* caespitose, 5–20 cm long; petioles semiterete, 2/3-3/4 of the frond total length, 0.5–1 mm diam., dark brown to blackish, glabrous; laminae ovate-deltate or slightly pentagonal, 2-pinnate-pinnatifid to 3-pinnate-pinnatifid basally; first and second order rachises sulcate, with greenish edges; ultimate segments ovate-elliptic, often with 1-2 basal lobes, adaxially glabrous, abaxially with glandular, 2-celled, clavate hairs; margin fully modified with recurved lobes; veins bifurcate, widened at the apices; *sori* marginal, circular, with few sporangia; false indusia subcontinuous, greenish or hyaline with papillary border; *spores* shortly reticulate, the surface with low ridges and strands, 32 per sporangium.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

W. G. Herter, 3153, US,  (US00141835), NY,  (NY00144364), Rio Grande do Sul, **Typus**

REFERENCE

Ponce, M. & Scataglini, A. 2016. Do two South American species of *Cheilanthes* (Pteridaceae) traditionally linked to the *Cheilanthes marginata* group, belong to *Gaga*? *Phytotaxa* 257(2): 149–157.

Cheilanthes incisa Kunze ex Mett.

Has as synonym

homotype *Hypolepis incisa* (Kunze ex Mett.) C.Chr.

heterotypic *Hypolepis serrata* Fée

DESCRIPTION

Stem: scale lanceolate; **scale** concolor; **form** erect/decumbent. **Leaf: blade** linear/ovate triangular; **petiole** squamose.

ADDITIONAL DESCRIPTION

Rhizomes suberect to decumbent, 1.5–2 mm diam., with linear-lanceolate scales, concolorous, light brown, margin entire; *fronds* fasciculate, 3–8 cm long; petioles as long as or longer than the lamina, 0.5–1 mm diam., semiterete, adaxially sulcate, with scales in the basal portion; laminae linear to ovate-triangular, 2-pinnate-pinnatifid, 2–5 cm wide, glabrous, chartaceous; rachis sulcate, winged; pinnae 4–6(8) pairs, ovate-deltate, petiolules winged; segments oblong, dentate or dentate-mucronate, entire margins; veins sunken; *sori* semicircular or elliptical, 1–2 per segment, false indusia discrete, lobate-laciniate, membranaceous; *spores* subglobose, rugulate or slightly rugulate-cristate (no data on the number per sporangium).

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types


Ombrophyllous Forest (Tropical Rain Forest)


Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Rio de Janeiro)

HERBARIUM MATERIAL

J.M.A. Braga, 4427, RB, 389896,  (RB00529223), Rio de Janeiro

A.C. Brade, 16288, RB, 42471,  (RB00639371), Rio de Janeiro, **Typus**

REFERENCE

- Ponce, M.M., Prado, J. & Morbelli, M. 2007. Typification and relationships of *Cheilanthes incisa* (Pteridaceae). *American Fern Journal* 97(3): 140–148.
- Prado, J., Maurenza, D., Barros, F.S.M. & Borges, R.A.X. 2013. Pteridaceae. In: G. Martinelli & M.A. Moraes (orgs.). *Livro vermelho da flora do Brasil*. Andrea Jakobsson/Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Rio de Janeiro, pp. 904–914.
- Schwartzburd, P.B. & Prado, J. 2015. Retyfication of *Cheilanthes incisa* (Pteridaceae). *American Fern Journal* 105(3): 257–261.

Cheilanthes juergensii Rosenst.

Has as synonym

heterotypic *Cheilanthes thellungii* Herter

DESCRIPTION

Stem: scale linear; **scale** concolor; **form** erect/decumbent/trailing. **Leaf: blade** oval-lanceolate; **petiole** squamose/pilose.

ADDITIONAL DESCRIPTION

Rhizomes suberect, decumbent to short-creeping, ca. 3 mm diam., with linear scales, concolorous, light brown, not sclerotic, margins entire; *fronds* caespitose, 15–40(45) cm long; petioles terete, dark brown to purple brown, 1/3 of the frond total length, 0.5–2 mm diam., glandulose-pilose, sparsely scaly at the base; laminae ovate-lanceolate, 2-pinnate-pinnatifid to 3-pinnate basally, herbaceous to chartaceous, with dense glanduliferous indument; rachises terete, straight or slightly flexuous, dark brown or purple brown, with glandular hairs; pinnae remote, petiolulate, basal pinnae basiscopically asymmetric; ultimate segments oblong or ovate-orbicular, margin lobed or crenate, with glandular, uniseriate, 2-5-celled hairs on both surfaces, veins not seen; *sori* marginal, scarcely confluent, with few sporangia; false indusia lobed, strongly curved, membranaceous; *spores* not seen.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

W.G. Herter, 3061, P (P01608957), Rio Grande do Sul, **Typus**

A. Sehnem, 12278, PACA, Rio Grande do Sul

REFERENCE

Legrand, D. & Lombardo, A. 1958. *Flora del Uruguay. I. Pteridophyta*. Montevideo: Museo Nacional de Historia Natural. 67 p.
Prado, J., Maurenza, D., Barros, F.S.M. & Borges, R.A.X. 2013. Pteridaceae. In: G. Martinelli & M.A. Moraes (orgs.). *Livro vermelho da flora do Brasil*. Andrea Jakobsson/Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Rio de Janeiro, pp. 904-914.

Cheilanthes micropteris Sw.

DESCRIPTION

Stem: scale linear; **scale** concolor; **form** decumbent. **Leaf:** blade linear; **petiole** squamose/pilose.

ADDITIONAL DESCRIPTION

Rhizomes short, decumbent, nodose, 2–3 mm diam., with linear scales *ca.* 1 cm wide, concolorous, orange-reddish, sinuose to crispate, margins entire, with an ovoid gland at the apex; *fronds* caespitose, 5–20 cm long; petioles terete, brown, *ca.* 1/4 of the total length, 0.7–1.2 mm diam., with glandulose-pilose, sparsely scaly at the base; laminae linear, pinnate or pinnate-pinnatifid, herbaceous to chartaceous, glutinous; rachises similar to the petiole; pinnae sub-remote, orbicular to ovate, lobed to pinnatifid, briefly petiolulate, both surfaces with glandular, uniseriate, 2-4-celled hairs, with an apical glandular cell, margins crenate or lobulate, slightly modified and recurved; veins bifurcate, slightly widened at the apex; *sori* marginal, with few sporangia; false indusia greenish with subcontinuous lobes and margins papillose; *spores* reticulate-cristate, 32 per sporangium.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types


High Altitude Grassland, Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

HERBARIUM MATERIAL

J. Prado, 2132, MO, DUKE, SP, RB, 383766,  (RB00639759), Rio Grande do Sul

REFERENCE

Arana, M.D., Ponce, M.M., Morrone, J. J. & Oggero, A.J. 2013. Patrones biogeográficos de los helechos de las Sierras de Córdoba (Argentina) y sus implicancias en la conservación. *Gayana Botánica* 70(2): 357-376.

Lehn, C.R., Gonzatti, F. & Arana, M.D. 2020. Samambaias e licófitas dos Cerros do Tigre e Palomas, provincia biogeográfica do Pampa, Estado do Rio Grande do Sul, Brasil. *Hoehnea* 47: e762019.

Cheilanthes obducta Mett. ex Kuhn

DESCRIPTION

Stem: scale linear; **scale** concolor/bicolor discolorous; **form** erect/trailing. **Leaf:** blade elliptic; **petiole** glabrous/pilose.

ADDITIONAL DESCRIPTION

Rhizomes suberect or short-creeping, ca. 3-4 mm diam., with linear scales, concolorous, ferruginous, or bicolorous, with dark brown, sclerotic center and light brown, somewhat sinuous, dentate margins, elongate at the apex, with an ellipsoid gland; *fronds* caespitose, 10–30(40) cm long; petioles and rachises terete, hairy to glabrescent; laminae elliptic, 2-pinnate; pinnules oblong, adaxially sparsely hairy to glabrescent, abaxially with dense squamiform, uniseriate hairs formed by a bicellular foot and 6-8 caudate cells with a cylindrical or globose apical gland, and scarce, 2-celled glandular hairs; margins of the laminae recurved, continuous, unmodified; veins 1-2-bifurcate, somewhat widened at the straight, L-shaped or T-shaped apical portion; *sori* paucisporangiate, covered by the continuous margins; *spores* tetrahedral, echinate-reticulate or cristate-reticulate, sometimes granulate surface, 32 per sporangium.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Pantanal

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso do Sul)

HERBARIUM MATERIAL

Assis, E.L.M. & Schwartsburd, P.B., 574, SI, COR, UPCB, 72000 (UPCB0008296), Mato Grosso do Sul

REFERENCE

- Assis, E.L.M. 2007. *Pteridófitas da borda oeste do Pantanal sul-matogrossense, Brasil*. Dissertação (Mestrado em Botânica). Curitiba. Setor de Ciências Biológicas: Universidade Federal do Paraná. 187 p.
- Ponce, M.M., Assis, E.L.M. & Labiak, P.H. 2008. A new species and two new records of *Cheilanthes*. *American Fern Journal* 98(4): 202-207.

Cheilanthes pantanalensis E.L.M.Assis et al.

DESCRIPTION

Stem: scale linear; **scale** concolor; **form** decumbent/trailling. **Leaf: blade** oval-lanceolate; **petiole** pilose.

ADDITIONAL DESCRIPTION

Rhizomes decumbent or short-creeping, ca. 2-4 mm diam., with linear scales, concolorous, orange or ferruginous, sinuous, filiform or bifurcate-filiform at the apex, margins entire to mildly dentate at the base; *fronds* caespitose, 4–22 cm long; petioles terete, 0.5–2.5 cm long, dark brown to atropurpleous, moderately to densely hairy, the hairs articulate, each cell with an elongate appendage, whitish; laminae ovate-lanceolate, 3-pinnate, chartaceous; rachises similar to the petioles; ultimate segments orbicular or orbicular-ovate, adaxially with scarce, filiform hairs to glabrescent, abaxially densely hairy, with multicellular, uniseriate, caudate-celled hairs, segment margins slightly modified, lobate; veins free, 1-2-bifurcate, widened at the apex; *sori* paucisporangiate, covered by the margin lobes; *spores* tetrahedral, shallowly echinate or cristate, 32 per sporangium.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Pantanal

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso do Sul)

HERBARIUM MATERIAL

Assis, E.L.M., 364, UPCB, 70000,  (UPCB0002554), SI, SP, Mato Grosso do Sul, **Typus**

REFERENCE

Assis, E.L.M. 2007. *Pteridófitas da borda oeste do Pantanal sul-matogrossense, Brasil*. Dissertação (Mestrado em Botânica).

Curitiba. Setor de Ciências Biológicas: Universidade Federal do Paraná. 187 p.

Ponce, M.M., Assis, E.L.M. & Labiak, P.H. 2008. A new species and two new records of the fern genus *Cheilanthes* (Pteridaceae) from Southwestern Brazil. *American Fern Journal* 98(4): 202-207.

Cheilanthes pohliana Mett.

DESCRIPTION

Stem: scale subulate; **scale** concolor; **form** trailing. **Leaf:** blade narrowly triangular; **petiole** pilose.

ADDITIONAL DESCRIPTION

Rhizomes creeping, branching, 1.5–3 mm diam., with subulate scales, concolorous, ferruginous to brown or bicolorous with a dark brown, sclerotic center; *fronds* approximate along the rhizome, 5–16 cm long; petioles terete, 1/2 the length of the frond, 0.4–0.8 mm diam., dark brown to atropurpureous, hairy; laminae narrowly triangular, pinnate-pinnatifid to 2-pinnate; rachises petiole-like; pinnae petiolulate, ovate-oblong, pinnate or pinnatifid, with apical pinnule ovate-lobate with obtuse apex; pinnulae articulate, ovate or ovate-auriculate, margin lobed, both foliar surfaces with simple, multicellular hairs; veins slightly widened at the apex; *sori* paucisporangiate; false indusia discrete, lobed, membranaceous, reflexed, with ciliated margin; *spores* globose, cristate (no data on the number per sporangium).

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

North (Pará, Tocantins)

Northeast (Maranhão)

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

Gardner, 3554, B (B 20 0128129), **Typus**

A.F.M. Glaziou, 15735, P (P01318720)

Windisch, P. G., 7257, SJRP,  (SJRP00022447), Mato Grosso

Gardner, 3554, P (P00586589)

A.F.M. Glaziou, 15735, B (B 20 0128130)


Ule, 385, P (P01318722)

Gardner, 3554, P (P00586590), **Typus**

Ule, 385, P (P01318721)

Gardner, 3554, P (P00586590)

Godoy, F.D., 5, SP, Goiás

A.F.M. Gardner, 3554, US, 1431412,  (US01499251), Goiás, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cheilanthes pohliana* Mett.



Figure 2: *Cheilanthes pohliana* Mett.

REFERENCE

- Ponce, M.M. & Scataglini, M.A. 2020 (in press). Phylogenetic position of South American *Cheilanthes* (Cheilantheoideae, Pteridaceae): advances in the generic circumscription and segregation of the new genus *Mineirella*. *Journal of Systematics and Evolution*.
- Weatherby, C.A. 1946. *Notholaena* in Brazil. *Journal of the Arnold Arboretum* 27: 361-370.

Cheilanthes regnelliana Mett.

DESCRIPTION

Stem: scale subulate; scale bicolor discolorous; **form** trailing. **Leaf: blade** elliptic; **petiole** squamose.

ADDITIONAL DESCRIPTION

Rhizomes long-creeping, sometimes branched, blackened, 1.5–3 mm diam., with subulate scales, bicolorous, with a dark brown center and hyaline margin; *fronds* erect, segregate along the rhizome, 5–22 cm long; petioles terete or semi terete, *ca.* 1/3-1/2 the length of the frond, 0.5–1 mm diam., dark brown to atropurpleous, lustrous, with few linear scales; laminae elliptic or almost so, bipinnate, rachis sulcate, with few simple glandular hairs; pinnules orbicular or ovate, abaxially with simple and glandular, uniseriate, multicellular hairs, adaxially glabrous, margin recurved or revolute, continuous, membranaceous, hyaline, somewhat hairy; veins widened at the apex; *sori* confluent at maturity; *spores* cristate (no data on the number per sporangium).

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

J. Prado, 1062, P, MU, SP, NY, São Paulo

C.W.H. Mosen, 2071, NY, 1801190,  (NY01801190), Minas Gerais, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Cheilanthes regnelliana* Mett.Figure 2: *Cheilanthes regnelliana* Mett.Figure 3: *Cheilanthes regnelliana* Mett.

REFERENCE

- Ponce, M.M. & Scataglini, M.A. 2020 (in press). Phylogenetic position of South American *Cheilanthes* (Cheilanthoideae, Pteridaceae): advances in the generic circumscription and segregation of the new genus *Mineirella*. *Journal of Systematics and Evolution*.
- Prado, J., Maurenza, D., Barros, F.S.M. & Borges, R.A.X. 2013. Pteridaceae. In: G. Martinelli & M.A. Moraes (orgs.). *Livro vermelho da flora do Brasil*. Andrea Jakobsson/Instituto de Pesquisas Jardim Botânico do Rio de Janeiro, Rio de Janeiro, pp. 904-914.
- Weatherby, C.A. 1946. *Notholaena* in Brazil. *Journal of the Arnold Arboretum* 27: 361-370.

Doryopteris J. Sm.

This treatment is composed of the following taxa: *Doryopteris*, *Doryopteris apparicioi*, *Doryopteris campos-portoi*, *Doryopteris collina*, *Doryopteris concolor*, *Doryopteris conformis*, *Doryopteris cyclophylla*, *Doryopteris jequitinhonhensis*, *Doryopteris juergensii*, *Doryopteris lonchophora*, *Doryopteris lorentzii*, *Doryopteris nobilis*, *Doryopteris patula*, *Doryopteris pentagona*, *Doryopteris raddiana*, *Doryopteris rediviva*, *Doryopteris rivalis*, *Doryopteris sagittifolia*, *Doryopteris stierii*, *Doryopteris trilobata*, *Doryopteris triphylla*, *Doryopteris varians*.

HOW TO CITE

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DESCRIPTION

Plantas terrícolas ou rupícolas. Caule ereto a decumbente ou curto-reptante, com escamas bicolors, não-clatradas ou sub-clatradas, lineares a lanceoladas. Frondes monomórficas, dimórficas, ou polimórficas; pecíolos com um feixe vascular na base, cilíndricos ou canaliculados, lisos ou verrucosos, glabros ou pubescentes; lâminas morfológicamente diversas, cordadas, sagitadas, palmadas, ou pedadas; nervuras totalmente ou parcialmente anastomosadas, sem vênulas inclusas, ou raramente livres; soros marginais, contínuos ou interrompidos, protegidos por pseudo-indúcio (margem da lâmina revoluta); esporos triletes.

COMMENTS

São relatados pelo menos cinco supostos híbridos dentre espécies de *Doryopteris*, na literatura: *Doryopteris* X *excisa*, *D. X* híbrida, *D. X* intermédia, *D. X* procera e *D. X* scalaris. Porém, eles vêm sendo negligenciados na literatura mais recente. Neste tratamento optou-se por tratá-los provisoriamente como sinônimos de espécies válidas. Futuros estudos combinando morfologia com técnicas laboratoriais (sequenciamento de DNA, contagem cromossômica, viabilidade de esporos, etc.) serão necessários para se desvendar a melhor identidade destes supostos híbridos.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

High Altitude Grassland, Grassland, Highland Rocky Field, Cerrado (lato sensu), Terra Firme Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Rock outcrop vegetation

Ocean Islands

Confirmed occurrences

Trindade

Geographic Distribution

Confirmed occurrences

North (Amazonas, Pará, Rondônia, Roraima, Tocantins)

Northeast (Alagoas, Bahia, Ceará, Paraíba, Pernambuco, 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 occurrences

North (Acre, Rondônia, Tocantins)

Northeast (Bahia, Paraíba, Pernambuco, Sergipe)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (São Paulo)

South (Paraná)

IDENTIFICATION KEY

1. Gemas prolíferas presentes na base das lâminas . 2
1. Gemas prolíferas ausentes . 3
2. Lâminas férteis palmadas . *D. rediviva*
2. Lâminas férteis pedadas . *D. patula*
3. Nervuras livres ou parcialmente anastomosadas . 4
3. Nervuras totalmente anastomosadas . 8
4. Nervuras parcialmente anastomosadas . *D. juergensii*
4. Nervuras livres . 5
5. Lâminas férteis cordadas . *D. cyclophylla*
5. Lâminas férteis pedadas . 6
6. Soros contínuos na costa e nos segmentos . *D. conformis*
6. Soros interrompidos na costa e nos sínus dos segmentos . 7
7. Pecíolos marrom escuros ou pretos, com escamas na base; frondes monomórficas . *D. concolor*
7. Pecíolos marrom avermelhados, glabros; frondes sub-dimórficas . *D. triphylla*
8. Pecíolos pilosos . 9
8. Pecíolos escamosos ou glabros . 10
9. Lâminas férteis palmadas . *D. trilobata*
9. Lâminas férteis pedadas . *D. pentagona*
10. Pecíolos escamosos por toda sua extensão . *D. rivalis*
10. Pecíolos glabros ou com escamas restritas à base . 11
11. Pecíolos canaliculados . *D. collina*
11. Pecíolos cilíndricos . 12
12. Hidatódios ausentes ou não aparentes . 13
12. Hidatódios visíveis na face adaxial das lâminas . 15
13. Soros interrompidos na costa . *D. lorentzii*
13. Soros contínuos na costa . 14
14. Soros contínuos nos segmentos . *D. varians*
14. Soros interrompidos nos sínus dos segmentos . *D. apparicioi*
15. Lâminas férteis palmadas, sagitadas ou cordadas . 16
15. Lâminas férteis pedadas . 18
16. Lâminas férteis palmadas . *D. lonchophora*
16. Lâminas férteis sagitadas ou cordadas . 17
17. Lâminas férteis sagitadas . *D. sagittifolia*
17. Lâminas férteis cordadas . *D. jequitinhonhensis*
18. Pecíolos marrom escuros . 19
18. Pecíolos pretos . 20
19. Plantas endêmicas da Ilha da Trindade; frondes sub-dimórficas . *D. campos-portoi*
19. Plantas continentais; frondes dimórficas . *D. nobilis*
20. Frondes sub-dimórficas; soros contínuos na costa . *D. raddiana*
20. Frondes dimórficas; soros interrompidos na costa . *D. stieri*

REFERENCE

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Doryopteris apparicioi Brade

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** sub dimorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** absent; **indumentum of the petiole** glabrous; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium:** sori on the costa continuous; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

A.P. Duarte, 3054, RB, Minas Gerais, **Typus**

Doryopteris campos-portoi Brade

DESCRIPTION

Leaf: colour of the petiole brown dark; **dimorphism** sub dimorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium:** sori on the costa continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Rock outcrop vegetation

Ocean Islands

Confirmed occurrences

Trindade

HERBARIUM MATERIAL

A. Campos Porto, 574, RB, Espírito Santo, **Typus**

Doryopteris collina (Raddi) J.Sm.

Has as synonym

basionym *Pteris collina* Raddi

DESCRIPTION

Leaf: colour of the petiole brown reddish; **dimorphism** dimorphic to polymorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** canaliculate; **bud on the base of the blade** absent; **hydathode** absent; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium:** sori on the costa continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Highland Rocky Field, Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas, Pará, Roraima, Tocantins)

Northeast (Bahia, Ceará, Paraíba, Pernambuco)

Central-west (Distrito Federal, Goiás, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

Possible occurrences

Central-west (Mato Grosso do Sul)

HERBARIUM MATERIAL

J. Prado, 1402, SP, Minas Gerais

REFERENCE

Tryon, R. M. 1942. A revision of the genus *Doryopteris*. Contributions from the Gray Herbarium of Harvard University 143: 1-80.

Doryopteris concolor (Langsd. & Fisch.) Kuhn & Decken

Has as synonym

basionym *Pteris concolor* Langsd. & Fisch.

homotype *Pellaea concolor* (Langsd. & Fisch.) Baker

DESCRIPTION

Leaf: colour of the petiole black/brown dark; **dimorphism** monomorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindrical; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** crenate to dentate; **veins** free. **Type of sporangium: sori on the costa** interrupted; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest, Pampa

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Alagoas, Bahia, Ceará, Paraíba, Pernambuco, Rio Grande do Norte, Sergipe)

Central-west (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 occurrences

North (Tocantins)

Central-west (Distrito Federal, Goiás)

HERBARIUM MATERIAL

J. Prado, 2133, SP, MO, São Paulo

Schwartsburd, P.B., 4080, VIC, Minas Gerais

Doryopteris conformis K.U.Kramer & R.M.Tryon

DESCRIPTION

Leaf: colour of the petiole brown reddish; **dimorphism** monomorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** glabrous; **margin of the blade vegetative** smooth; **veins** free. **Type of sporangium: sori on the costa** continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Geographic Distribution

Confirmed occurrences

North (Roraima)

Doryopteris cyclophylla A.R.Sm.

DESCRIPTION

Leaf: colour of the petiole brown reddish; **dimorphism** monomorphic; **form of the blade fertile** cordate; **form of the blade vegetative** cordate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** glabrous; **margin of the blade vegetative** smooth; **veins** free. **Type of sporangium: sori on the costa** not applicable; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

G.T. Prance, 29550, NY, Amazonas

Doryopteris jequitinhonhensis Salino

DESCRIPTION

Leaf: colour of the petiole brown dark; **dimorphism** dimorphic to polymorphic; **form of the blade fertile** cordate; **form of the blade vegetative** sagittate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** crenate to dentate; **veins** totally anastomosate. **Type of sporangium: sori on the costa** continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Salino, 9425, BHCB, Minas Gerais, **Typus**

Doryopteris juergensii Rosenst.

DESCRIPTION

Leaf: colour of the petiole brown dark; **dimorphism** monomorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** canaliculate; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** pilose; **margin of the blade vegetative** smooth; **veins** partly adnate anastomosate. **Type of sporangium: sori on the costa** interrupted; **sori in the segment** continuous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Juergens, 126, NY, Rio Grande do Sul

Gonzatti, F., 2434, HUCS, VIC, Rio Grande do Sul

Doryopteris lonchophora (Mett.) J.Sm.

Has as synonym

basionym *Pteris lonchophora* Mett.

homotype *Pellaea lonchophora* (Mett.) Baker

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** dimorphic to polymorphic; **form of the blade fertile** palmate; **form of the blade vegetative** sagittate/cordate; **form of the petiole** cylindrical; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** glabrous; **margin of the blade vegetative** crenate to dentate; **veins** totally anastomosate. **Type of sporangium: sori on the costa** interrupted; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types



Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

A.F.M. Glaziou, 939, P, P00507791,  (P00507791), P, P00507792,  (P00507792), Rio de Janeiro, **Typus**

Doryopteris lorentzii (Hieron.) Diels

Has as synonym

basionym *Pellaea lorentzii* Hieron.

heterotypic *Doryopteris Xintermedia* Sehnem

heterotypic *Doryopteris Xscalaris* Sehnem

DESCRIPTION

Leaf: colour of the petiole brown dark; **dimorphism** sub dimorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** absent; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium: sori on the costa** interrupted; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul, Santa Catarina)

Possible occurrences

Central-west (Mato Grosso do Sul, Mato Grosso)

Southeast (São Paulo)

South (Paraná)

HERBARIUM MATERIAL

J. Eugenio, 1948, RB, RB, 44594,  (RB00640026), Rio Grande do Sul

Doryopteris nobilis (T.Moore) J. Sm. ex C. Chr.

Has as synonym

basionym *Litobrochia nobilis* T.Moore

DESCRIPTION

Leaf: colour of the petiole brown dark; **dimorphism** dimorphic to polymorphic; **form of the blade fertile** pedate; **form of the blade vegetative** sagittate/pedate; **form of the petiole** cylindrical; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** crenate to dentate; **veins** totally anastomosate. **Type of sporangium:** sori on the costa continuous; sori in the segment continuous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

Possible occurrences

North (Tocantins)

Central-west (Mato Grosso do Sul)

HERBARIUM MATERIAL

T.B. Croat, 53766, MO, Rio de Janeiro

P.B. Schwartsburd, 3577, VIC, Espírito Santo

Doryopteris patula (Fée) Fée

Has as synonym

heterotypic *Doryopteris majestosa* Yesilyurt

DESCRIPTION

Leaf: colour of the petiole brown reddish; **dimorphism** dimorphic to polymorphic; **form of the blade fertile** pedate; **form of the blade vegetative** sagittate/pedate; **form of the petiole** canaliculate; **bud on the base of the blade** present; **hydathode** present; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** crenate to dentate; **veins** totally anastomosate. **Type of sporangium: sori on the costa** continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

Possible occurrences

North (Rondônia)

Central-west (Mato Grosso do Sul, Mato Grosso)

HERBARIUM MATERIAL

J.A. Lombardi, 6820, HRCB, São Paulo

P.B. Schwartsburd, 4010, VIC, Minas Gerais

Doryopteris pentagona Pic. Serm.

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** sub dimorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** pilose; **margin of the blade vegetative** crenate to dentate; **veins** totally anastomosate. **Type of sporangium:** sori on the costa interrupted; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa, Pantanal

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Mato Grosso do Sul)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)


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

Possible occurrences

Northeast (Paraíba, Pernambuco)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

Boldrin, A.H.L., 206, SP, UEC, 155892,  (UEC060821), São Paulo

P.B. Schwartsburd, 3762, VIC, Espírito Santo

Doryopteris raddiana (C. Presl) Fée

Has as synonym

heterotypic *Doryopteris Xprocera* Sehnem

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** sub dimorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** crenate to dentate; **veins** totally anastomosate. **Type of sporangium:** sori on the costa continuous; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

G. Raddi, s.n., FI, PI, Rio de Janeiro, **Typus**

Doryopteris rediviva Fée

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** sub dimorphic; **form of the blade fertile** palmate; **form of the blade vegetative** palmate; **form of the petiole** cylindric; **bud on the base of the blade** present; **hydathode** present; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium:** sori on the **costa** continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

Possible occurrences

Northeast (Pernambuco)

HERBARIUM MATERIAL

A.F.M. Glaziou, 5341, B, C, P, Rio de Janeiro, **Typus**

L.S. Sylvestre, 1870, RB, 45597,  (RB00639796), RB, Rio de Janeiro

Doryopteris rivalis Sehnem

Has as synonym

heterotypic *Doryopteris Xexcisa* Sehnem

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** sub dimorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** absent; **indumentum of the petiole** squamose; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium: sori on the costa** continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

E. Valduga, 09, MO

F. Gonzatti, 3772, HUUS, VIC, Rio Grande do Sul

Doryopteris sagittifolia (Raddi) J.Sm.

Has as synonym

basionym *Pteris sagittifolia* Raddi

heterotypic *Doryopteris Xhybrida* Brade & Rosenst.

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** monomorphic; **form of the blade fertile** sagittate; **form of the blade vegetative** sagittate; **form of the petiole** cylindrical; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** with scale on the base; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium: sori on the costa** not applicable; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas, Rondônia, Roraima)

Northeast (Alagoas, Bahia, Pernambuco)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

Possible occurrences

North (Acre)

Northeast (Paraíba, Sergipe)

HERBARIUM MATERIAL

J. Prado, 1108, SP, FURB, 8584,  (FURB00286), Rio de Janeiro

G. Raddi, s.n., FI, PI, Rio de Janeiro, **Typus**

Doryopteris stierii Rosenst.

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** dimorphic to polymorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** glabrous; **margin of the blade vegetative** crenate to dentate; **veins** totally anastomosate. **Type of sporangium:** sori on the costa interrupted; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

C. Juergens, 124, ICN, Rio Grande do Sul, **Typus**

Doryopteris trilobata J. Prado

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** dimorphic to polymorphic; **form of the blade fertile** palmate; **form of the blade vegetative** palmate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** pilose; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium:** sori on the costa continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types


Highland Rocky Field

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

HERBARIUM MATERIAL

R.M. Harley, 25574, SPF, SPF, 62147,  (SPF00062147), Bahia, **Typus**

Doryopteris triphylla (Lam.) Christ

Has as synonym

basionym *Adiantum triphyllum* Lam.

homotype *Cassebeera triphylla* (Lam.) Kaulf.

DESCRIPTION

Leaf: colour of the petiole brown reddish; **dimorphism** sub dimorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindrical; **bud on the base of the blade** absent; **hydathode** present; **indumentum of the petiole** glabrous; **margin of the blade vegetative** smooth; **veins** free. **Type of sporangium: sori on the costa** interrupted; **sori in the segment** interrupted.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Grassland, Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

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

HERBARIUM MATERIAL

Spannagel, C., 56, RB, 82490,  (RB00640053), NY, Santa Catarina

Doryopteris varians (Raddi) J. Sm.

Has as synonym

basionym *Pteris varians* Raddi

DESCRIPTION

Leaf: colour of the petiole black; **dimorphism** sub dimorphic; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** cylindric; **bud on the base of the blade** absent; **hydathode** absent; **indumentum of the petiole** glabrous; **margin of the blade vegetative** smooth; **veins** totally anastomosate. **Type of sporangium: sori on the costa** continuous; **sori in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Alagoas, Pernambuco)

Central-west (Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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


Possible occurrences

Northeast (Bahia, Sergipe)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul)

HERBARIUM MATERIAL

P.B. Schwartzburd, 4572, VIC, Minas Gerais

E. Schuettelpelz, 1454, SP, MO, 16511,  (FURB00289), Rio de Janeiro

Hecistopteris J.Sm.

This treatment is composed of the following taxa: *Hecistopteris*, *Hecistopteris kaieteurensis*, *Hecistopteris pumila*.

HOW TO CITE

Schuettpelz, E., Prado, J., Hirai, R.Y. 2020. *Hecistopteris* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91943>.

DESCRIPTION

Plants epiphytic. Rhizome erect. Frond arrangement distichous. Leaves entire, flabellate, or short-incised apically or furcate several times, segments recurved at apex, glabrous; venation free, veins forked. Sori linear, along the distal veins; soral paraphyses obconic. Spores non-green, yellow, trilete.

COMMENTS

Hecistopteris can be characterized by the distally furcate leaves only 0.8–4 cm long, and veins free. The plants are epiphytic on the base of trunks in dark places.

Neotropical; 3 species, 2 in Brazil.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Bahia, Paraíba, Pernambuco, Sergipe)

Central-west (Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

IDENTIFICATION KEY

Key to the species of *Hecistopteris* in Brazil

1. Laminae entire, flabellate or short-incised apically *H. pumila*

1. Laminae furcate several times and apex of the segments recurved *H. kaieteurensis*

REFERENCE

PPG I. 2016. A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54(6): 563–603.

- Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. *Fern Gazette* 18(5): 230–263.
- Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.
- Schuettpelz, E., Chen, C.W., Kessler, M., Pinson, J.B., Johnson, G., Davila, A., Cochran, A.T., Huiet, L. & Pryer, K.M. 2016. A revised generic classification of vittarioid ferns (Pteridaceae) based on molecular, micromorphological, and geographic data. *Taxon* 65(4): 708–722.

Hecistopteris kaieteurensis Kelloff & G.S.McKee

DESCRIPTION

Stem: rhizome erect. **Leaf: blade** dichotomous/divided; **segment** up to 0.2/wide (cm)/with/apex/recurved. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/glabrous. **Spore:** not chlorophylate trilete.

ADDITIONAL DESCRIPTION

Rhizomes erect, with proliferous roots elongate. Fronds very small, 0.8–2 cm long; petioles absent; laminae furcate several times, segments recurved at apex, glabrous; veins free. Sori elongate, along the distal veins, with paraphyses branched irregularly, often with an enlarged apical cell; spores yellow, trilete.

COMMENTS

Characterized by fronds small, 0.8–2 cm long, furcate and segments with recurved apex.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

Araújo, I., 100, INPA, US, Amazonas

REFERENCE

Prado, J. 2005. Flora da Reserva Ducke, Amazônia, Brasil: Pteridophyta–Pteridaceae. Rodriguésia 56(86): 85–92.

Hecistopteris pumila (Spreng.) J.Sm.

Has as synonym

basionym *Gymnogramma pumila* Spreng.

homotype *Gymnogramme pumila* Spreng.

DESCRIPTION

Stem: rhizome erect. **Leaf: blade** sub/flabelliform; **segment** up to/0.4/wide (cm)/with/apex/dichotomous. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/glabrous. **Spore:** not chlorophylate trilete.

ADDITIONAL DESCRIPTION

Rhizomes erect or ascending, with proliferous roots. Fronds very small, 1–2(–4) cm long; petioles absent or very short; laminae entire, flabellate or short-incised apically, glabrous; veins free. Sori elongate, along the distal veins, with paraphyses simple or branched, with an enlarged apical cell; spores non-green, trilete.

COMMENTS

Characterized by leaves only 1–2(–4) cm long and short-incised apically. Some specimens have narrow and almost unforked lamina. Rhizomes are erect or ascending, with leaves clustered at the tip. Forming colonies by means of proliferous roots.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)


Northeast (Bahia, Paraíba, Pernambuco, Sergipe)

Central-west (Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

J. Prado, 618, INPA, INPA, 14092,  (INPA0014092), Amazonas

REFERENCE

Prado, J. 2005. Flora da Reserva Ducke, Amazônia, Brasil: Pteridophyta–Pteridaceae. *Rodriguésia* 56(86): 85–92.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Hemionitis L.

This treatment is composed of the following taxa: *Hemionitis*, *Hemionitis palmata*, *Hemionitis rufa*, *Hemionitis tomentosa*, *Hemionitis umbrosa*.

HOW TO CITE

Hirai, R.Y., Prado, J. 2020. *Hemionitis* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91946>.

Has as synonym

heterotypic *Gymnogramma* Desv.

heterotypic *Gymnogramme* Sw.

DESCRIPTION

Rhizomes erect; rhizome scales concolorous; fronds monomorphic to dimorphic, entire to 2-pinnate, with buds or not, densely pubescent, with short or long hairs; veins free or areolate without included veinlets. Sori along all veins without indusia; spores trilete.

COMMENTS

Hemionitis comprises five species in the World (PPG I 2016). It is characterized by fronds monomorphic or dimorphic, densely pubescent, veins areolate or free, and sori along the veins.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará, Rondônia, Roraima)

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)

IDENTIFICATION KEY

Key to the Species of *Hemionitis* in Brazil

1. Fronds palmate; veins areolate *H. palmata*

1. Fronds 1-pinnate or 2-pinnate; veins free

2. Pinnae stalks abaxially with dark color stopping at bases of the pinnae/pinnules *H. rufa*
2. Pinnae stalks abaxially with dark color gradually passing into the bases of pinnae/pinnules
3. Rhizome scales serrulate; spores cristate-reticulate ..
..... *H. umbrosa*
3. Rhizome scales entire or rarely sparsely denticulate; spores cristate *H. tomentosa*

REFERENCE

- Hirai, R.Y., Cruz, R. & Prado, J. 2018. A new species of *Hemionitis* (Pteridaceae) from central Brazil. *Willdenowia* 48(3): 371–380.
- PPG I. 2016. A community–derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54(6): 563–603.

Hemionitis palmata L.

DESCRIPTION

Stem: rhizome erect/with/scale/with margin/entire. **Leaf: frond** palmate; **veins** areolate. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/without indusium/glabrous. **Spore: trilete** echinate.

ADDITIONAL DESCRIPTION

Rhizomes erect; rhizome scales concolorous, linear, margins entire to rarely sparsely denticulate; fronds entire, dimorphic, palmate with 3–5 acute lobes, margins crenulate, with buds in the larger sinuses, but usually only one developing into a new plant, the petiole of the sterile frond much shorter than the fertile one and spreading with rounder lobes, the petiole of the fertile fronds about twice as tall as the sterile ones; stalks and rachises densely pubescent, the short hairs acicular and the longer hairs multicellular; dark color of the stalk stopping abruptly at the bases of segments abaxially; laminar tissue on both sides pubescent, the hairs acicular and multicellular, similar to those hairs of the stalks and rachises; veins areolate without included veinlets. Sori along all veins; spores echinate.

COMMENTS

Hemionitis palmata is easily distinguished by its fronds palmate and areolate venation.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

North (Amazonas, Pará, Rondônia)

Northeast (Alagoas, Bahia, Ceará, Pernambuco, Sergipe)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

Pontual, I.B., s.n., PACA, RB, 3567,  (RB00640208), Alagoas

REFERENCE

Sehnm, A. 1972. Pteridáceas. In: R. Reitz (Ed.). Flora Ilustrada Catarinense, parte I. Fasc. PTER. Itajaí: Herbário Barbosa Rodrigues. 244p.

Hemionitis rufa (L.) Sw.

Has as synonym

basionym *Pteris rufa* L.

homotype *Gymnogramma rufa* (L.) Desv.

DESCRIPTION

Stem: rhizome erect/with/scale/with margin/entire. **Leaf:** frond pinnate; **veins** free. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/without indusium/glabrous. **Spore:** trilete tuberculate.

ADDITIONAL DESCRIPTION

Rhizomes erect; rhizome scales bicolorous, linear-lanceolate, light castaneous, margins entire; fronds monomorphic, 1-pinnate, with a conform terminal pinna; stalks and rachises dark densely pubescent with short, acicular hairs, multicellular hairs, longer and less abundant; dark color of the stalk stopping abruptly at the bases of segments abaxially; pinnae oblong to oblong-lanceolate, subcordate to slightly truncate at bases, sometimes cuneate, margins entire; laminar tissue on both sides pubescent, the hairs multicellular and acicular, similar to those hairs of the stalks and rachises, less pubescent adaxially, mostly on the costa; veins free. Sori along all veins; spores tuberculate.

COMMENTS

This species is recognized by the fronds 1-pinnate, veins free, and color of the stalk stopping abruptly at segment base abaxially.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará, Rondônia, Roraima)

HERBARIUM MATERIAL

Zuquim, G.P.S., 206, RB, 519251,  (RB00663783), INPA, Amazonas

REFERENCE

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Hemionitis tomentosa (Lam.) Raddi

Has as synonym

basionym *Asplenium tomentosum* Lam.

homotype *Gymnogramma tomentosa* (Lam.) Desv

DESCRIPTION

Stem: rhizome erect/with/scale/with margin/entire. **Leaf: frond** pinnate/or/2 pinnate; **veins** free. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium: annulus** vertical/without indusium/glabrous. **Spore: trilete** cristate.

ADDITIONAL DESCRIPTION

Rhizomes erect; rhizome scales bicolorous, linear-lanceolate to linear, light castaneous, margins entire; fronds monomorphic, 1- or 2-pinnate, with a terminal pinna conform or triangular; stalks and rachises densely pubescent with short, acicular hairs, longer multicellular ones, and sometimes with capitate glandular hairs; dark color of the stalk gradually passing into the bases of segments abaxially; pinnae oblong to oval-lanceolate, usually cordate to broadly cuneate at base, margins entire to lobate; laminar tissue on both sides pubescent, the hairs acicular, multicellular, similar to those hairs of the stalks and rachises, abaxially densely pubescent; veins free. Sori along all veins; spores cristate.

COMMENTS

Hemionitis tomentosa is recognized by the fronds 1- or 2-pinnate, veins free, and color of the stalk passing into the segment base abaxially.

Life Form

Herb

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), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

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

E.P. Heringer, 8175/369, RB, 302114,  (RB00640232), UB, Distrito Federal

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos. (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Hemionitis umbrosa R.Y. Hirai & J. Prado

DESCRIPTION

Stem: rhizome erect/to/suberect/with/scale/with margin/serrulate. **Leaf:** frond pinnate/or/2 pinnate; **veins** free. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/without indusium/glabrous. **Spore:** trilete cristate/reticulate.

ADDITIONAL DESCRIPTION

Rhizomes erect to slightly suberect, scaly, the scales $0.1\text{--}0.5 \times 5\text{--}9$ mm, concolorous, linear to linear-lanceolate, light castaneous, base truncate, margins serrulate, the teeth formed by one or 2-cells, apex attenuate, non-glandular or glandular (like a long glandular hair). Fronds $(2.5\text{--})8\text{--}20 \times (9\text{--})30\text{--}60$ cm, monomorphic; stipes dark reddish brown, $1/2\text{--}2/3$ the lamina length, scaly near base, the scales similar to the rhizome scales, densely pubescent throughout, the hairs non-glandular or glandular, the non-glandular hairs 2–7-celled (ca. $0.1\text{--}1.7$ mm long), the long glandular hairs, stalked, 4–7-celled, the short glandular hairs, 2-celled; laminae 1-pinnate or 2-pinnate at base, apices pinnatifid, triangular or oblong, densely pubescent on both surfaces, hairs similar to those of the stipes; rachises dark reddish brown, densely pubescent, hairs similar to those of the stipes; pinnae/pinnules ovate to lanceolate, (1–)4 or 5 pairs, $1.2\text{--}5.5 \times (2.2\text{--})6\text{--}11.5$ cm, the proximal pinnae pair long-stalked, $(0.25\text{--})0.7\text{--}1.5$ cm long, abaxially with dark color of the stalk gradually passing into the bases of pinnae/pinnules, margins entire or lobate to crenulate, apices acute or slightly rounded; pinnules (when present), basiscopic pinnules bigger than the acroscopic ones; venation free, veins furcate; sori along all veins; spores trilete, cristate-reticulate, ca. $30\ \mu\text{m}$ diam.

COMMENTS

Hemionitis umbrosa is characterized by rhizomes scales serrulate, fronds with non-glandular and glandular hairs. The non-glandular hairs are 2–7-celled. The stalked glandular hairs can be long, 4–7-celled and the short glandular hairs 2-celled, present on all parts, i.e. on the stipes, rachises, costae, veins, and laminar tissue on both surfaces. It also typical by its cristate-reticulate spores.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

HERBARIUM MATERIAL

R. Y. Hirai, 803, SP, 500000, Goiás, **Typus**

REFERENCE

Hirai, R.Y., Cruz, R. & Prado, J. 2018. A new species of *Hemionitis* (Pteridaceae) from central Brazil. *Willdenowia* 48(3): 371–380.

Jamesonia Hook. & Grev.

This treatment is composed of the following taxa: *Jamesonia*, *Jamesonia biardii*, *Jamesonia brasiliensis*, *Jamesonia cheilanthoides*, *Jamesonia flexuosa*, *Jamesonia insignis*, *Jamesonia osteniana*, *Jamesonia rufescens*, *Jamesonia ×intermedia*.

HOW TO CITE

Della, A.P., Prado, J., Hirai, R.Y. 2020. *Jamesonia* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91950>.

Has as synonym

heterotypic *Eriosorus* Fée

DESCRIPTION

Plants terrestrial or rupicolous. **Rhizomes** short-creeping, dark brown, moderately to densely covered by erect to appressed hairs and rigid bristles, the hairs dark brown, reddish-brown or golden-brown, multicellular, glandular or eglandular, the apical cell elongated with apex rounded, globose, or rarely slightly bulbous, the bristles dark brown, reddish-brown, or golden-brown, with darker-colored thickened transverse cell walls, apex long-filiform, base with 2-7 cells wide, the apical cell elongated with apex rounded, globose or rarely slightly bulbous. **Fronds** monomorphic, erect, arcuate, semi-scandent, scandent or scrambling, with indeterminate or determinate growth; **petioles** semi-cylindrical, adaxially grooved, rarely cylindrical or plane, concolorous, dark brown, sometimes shiny, glabrous to moderately covered by hairs on both surfaces, the hairs glandular or eglandular, hyaline to brown, tortuous to erect, multicellular, the apical cell elongated with apex rounded or globose; **laminae** pinnate to 3-pinnate-pinnatisect, or more divided into *J. flexuosa*, triangular, linear, or less often narrowly triangular and narrowly elliptic, membranaceous to coriaceous; **rachises** straight or flexuous, ellipsoidal, triangular, or more often semi-cylindrical, adaxially grooved, dark brown, glabrous to densely covered by hairs on both surfaces, the hairs eglandular similar to those of the petioles; **pinnae** reflexed, patent or ascending, often triangular, sometimes orbicular, ovate, deltate, lanceolate or oblong, alternate to opposite, gradually tapering towards the apex, stalked, the stalk cylindrical to semi-cylindrical, adaxially grooved, dark brown, straight or sometimes curved, adaxial and abaxial surface of pinnae glabrous to densely covered by hairs, the hairs eglandular similar to those of the petioles; **ultimate segments** bifurcate, sometimes simple, orbicular or ovate, the margins entire, crenate or crenate-denticulate, plane, sometimes recurved, whitish; occasionally with hairs, the hairs eglandular similar to those of the petioles; **veins** usually furcate, sometimes simple, reaching or not the laminae margin. **Sori** along the veins or sometimes spread along of all abaxial surface of the segments; **sporangia** with capsule usually pyriform or orbicular, stomia with 12-26 indurated cells, short-stalk, stalks 2 or 3 celled (Tryon 1970); **spores** trilete, tetrahedral, brown, with equatorial flange, 40.0-67.8 µm diam., x=29 (Tryon 1970). Gametophyte spatulate with lateral meristem (Tryon 1970).

Reference: Della, A.P. & Prado, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. Biota Neotropica. 20(2):e20200986.

COMMENTS

According Sánchez-Baracaldo (2004) and PPG I (2016), *Jamesonia* is a monophyletic and Neotropical genus of leptosporangiate ferns, composed by ca. 50 species. The species occur from southern Mexico to southern Bolivia, north, southeast and south Brazil, Uruguay, and in the islands of Tristan da Cunha and Gough. Most of these species occur in the Andean páramos and subpáramos, at 1500-5000 meters of elevation. In Brazil, there are 8 species and two hybrids, which occur in the Brazilian Atlantic Rainforest, in high altitude fields and cloud forests, at 1000-2700 meters of elevation (with the exception of *J. osteniana*, which occurs at lower elevations, 50-140 m).

Reference: Della, A.P. & Prado, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. Biota Neotropica 20(2):e20200986.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest, Pampa

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Roraima)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Rio Grande do Sul)

Possible occurrences

Southeast (Minas Gerais, São Paulo)

IDENTIFICATION KEY

Key to the species of *Jamesonia* in Brazil

1. Plants annual, not exceeding 8.0 cm tall; rhizomes erect, covered by glandular hairs, the hairs often with 2-4 celled; Rio Grande do Sul (Brazil) and Uruguay *J. osteniana*
1. Plants perennial, 8.0 cm - 4 m long; rhizomes creeping, covered by glandular or eglandular hairs and bristles, the hairs often with 10 or more celled; Brazil (North, Southeast, and South) 2
2. Laminae linear; pinnate or pinnate-pinnatisect 3
2. Laminae triangular or elongate triangular, less often narrowly triangular or narrowly elliptic; 2-pinnate-pinnatifid or more divided; if pinnate-pinnatisect never linear 4
3. Pinnae orbicular, coriaceous, 0.1-0.3 × 0.2-0.3 cm. *J. brasiliensis*
3. Pinnae ovate to triangular, chartaceous, 0.3-1.2 × 0.3-0.7 cm. *J. cheilanthoides*
4. Rachises flexuous; fronds semi scandent, scandent or scrambling, rare erect 5
4. Rachises straight; fronds erect to slightly arcuate 7
5. Ultimate segments bifurcate; margins entire *J. flexuosa*
5. Ultimate segments ovate to orbiculate, or elongate triangular to ovate; margins crenate or denticulate-crenate 6
6. Laminae chartaceous; adaxial surface of the pinnae moderately covered by hairs; spores well-formed with content. *J. insignis*
6. Laminae coriaceous; adaxial surface of the pinnae glabrous to sparsely covered by hairs; spores commonly aborted, without content. *J. ×intermedia*
7. Ultimate segments ovate, margins crenate *J. rufescens*
7. Ultimate segments bifurcate; margins entire *J. biardii*

Reference: Della, A.P. & Prado, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropi*. 20(2):e20200986.

REFERENCE

- DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2): e20200986.
- SÁNCHEZ-BARACALDO, P. 2004. Phylogenetics and biogeography of the neotropical fern genera *Jamesonia* and *Eriosorus* (Pteridaceae). *American Journal of Botany* 91: 274-284.
- TRYON, A.F. 1962. A monograph of the fern genus *Jamesonia*. *Contributions from the Gray Herbarium of Harvard University* 191: 109-197.
- TRYON, A.F. 1970. A monograph of the fern genus *Eriosorus*. *Contributions from the Gray Herbarium of Harvard University* 200: 54-174.

Jamesonia biardii (Fée) Christenh.

Has as synonym

homotype *Anogramma biardii* Fée

homotype *Eriosorus biardii* (Fée) A.F.Tryon

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type hair** glandular; **colour of the hair and of the bristle** brown dark. **Leaf:** **petiole** half-terete; **density of the hair at the petiole** glabrous/sparsely covered by hair; **type of the hair of the petiole** not glandular; **type of the frond** erect/arcuate; **form of the blade** triangular; **level of the division of the blade** 2 pinnate pinnatifid or 2 pinnate pinnatisect; **type of the rachis** straight; **density of the hair on the rachis** glabrate/sparsely covered by hair; **shape of the pinnae** triangular; **density of the hair on the side abaxial and adaxial of the pinnae** glabrate/sparsely covered by hair; **consistency of the pinnae** membranous; **shape of the last segment** bifurcate; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Rio de Janeiro)

Possible occurrences

Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

A.C. Brade, 19246, RB

REFERENCE

DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2): e20200986.

SÁNCHEZ-BARACALDO, P. 2004. Phylogenetics and biogeography of the neotropical fern genera *Jamesonia* and *Eriosorus* (Pteridaceae). *American Journal of Botany* 91: 274-284.

TRYON, A.F. 1970. A monograph of the fern genus *Eriosorus*. *Contributions from the Gray Herbarium of Harvard University* 200: 54-174.

Jamesonia brasiliensis Christ

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type hair** glandular; **colour of the hair and of the bristle** brown reddish. **Leaf:** **petiole** cylindrical/half-terete; **density of the hair at the petiole** glabrous/sparsely covered by hair; **type of the hair of the petiole** not glandular; **type of the frond** erect/arcuate; **form of the blade** linear; **level of the division of the blade** pinnate; **type of the rachis** straight; **density of the hair on the rachis** moderately covered by hair/densely covered by hair; **shape of the pinnae** orbicular; **density of the hair on the side abaxial and adaxial of the pinnae** sparsely covered by hair/moderately covered by hair/densely covered by hair; **consistency of the pinnae** coriaceous; **shape of the last segment** without last segment; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins/sometimes acrostichoid. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

J. Prado, 1122, UC, SP, Rio de Janeiro

REFERENCE

- DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2):e20200986.
- SÁNCHEZ-BARACALDO, P. 2004. Phylogenetics and biogeography of the neotropical fern genera *Jamesonia* and *Eriosorus* (Pteridaceae). *American Journal of Botany* 91: 274-284.
- TRYON, A.F. 1962. A monograph of the fern genus *Jamesonia*. *Contributions from the Gray Herbarium of Harvard University* 191: 109-197.
- TRYON, A.F. 1970. A monograph of the fern genus *Eriosorus*. *Contributions from the Gray Herbarium of Harvard University* 200: 54-174.

Jamesonia cheilanthoides (Sw.) Christenh.

Has as synonym

basionym *Grammitis cheilanthoides* Sw.

homotype *Eriosorus cheilanthoides* (Sw.) A.F.Tryon

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type hair** non glandular; **colour of the hair and of the bristle** brown reddish. **Leaf:** **petiole** cylindrical/half-terete; **density of the hair at the petiole** glabrous/sparsely covered by hair; **type of the hair of the petiole** not glandular; **type of the frond** erect/arcuate; **form of the blade** linear; **level of the division of the blade** pinnate pinnatisect; **type of the rachis** straight; **density of the hair on the rachis** moderately covered by hair/densely covered by hair; **shape of the pinnae** ovate/triangular; **density of the hair on the side abaxial and adaxial of the pinnae** sparsely covered by hair/ moderately covered by hair; **consistency of the pinnae** membranous; **shape of the last segment** bifurcate; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

L.S. Sylvestre, 234, RB, Rio de Janeiro

REFERENCE

DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2):e20200986.

SÁNCHEZ-BARACALDO, P. 2004. Phylogenetics and biogeography of the neotropical fern genera *Jamesonia* and *Eriosorus* (Pteridaceae). *American Journal of Botany* 91: 274–284.

TRYON, A.F. 1970. A monograph of the fern genus *Eriosorus*. *Contributions from the Gray Herbarium of Harvard University* 200: 54–174.

Jamesonia flexuosa (Kunth) Christenh.

Has as synonym

basionym *Grammitis flexuosa* Kunth

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type hair** non glandular; **colour of the hair and of the bristle** brown dark/brown reddish. **Leaf:** **petiole** half-terete; **density of the hair at the petiole** glabrous/sparsely covered by hair; **type of the hair of the petiole** not glandular; **type of the frond** scandent; **form of the blade** triangular; **level of the division of the blade** more divided; **type of the rachis** flexuous; **density of the hair on the rachis** glabrate/sparsely covered by hair; **shape of the pinnae** triangular/lanceolate/oblong; **density of the hair on the side abaxial and adaxial of the pinnae** glabrate/sparsely covered by hair/moderately covered by hair; **consistency of the pinnae** membranous; **shape of the last segment** bifurcate; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Roraima)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

A.F.M. Glaziou, 15739, RB, Minas Gerais

REFERENCE

DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2):e20200986.

SÁNCHEZ-BARACALDO, P. 2004. Phylogenetics and biogeography of the neotropical fern genera *Jamesonia* and *Eriosorus* (Pteridaceae). *American Journal of Botany* 91: 274–284.

TRYON, A.F. 1970. A monograph of the fern genus *Eriosorus*. *Contributions from the Gray Herbarium of Harvard University* 200: 54–174.

Jamesonia insignis (Mett.) Christenh.

Has as synonym

basionym *Gymnogramma insignis* Mett. ex Kuhn

homotype *Eriosorus insignis* (Met.) A.F.Tryon

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type hair** glandular; **colour of the hair and of the bristle** brown dark/black. **Leaf:** **petiole** half-terete; **density of the hair at the petiole** sparsely covered by hair/ moderately covered by hair; **type of the hair of the petiole** glandular/not glandular; **type of the frond** erect/semi scandent; **form of the blade** triangular; **level of the division of the blade** 2 pinnate pinnatifid or 2 pinnate pinnatisect; **type of the rachis** flexuous; **density of the hair on the rachis** sparsely covered by hair/ moderately covered by hair; **shape of the pinnae** triangular; **density of the hair on the side abaxial and adaxial of the pinnae** sparsely covered by hair/ moderately covered by hair; **consistency of the pinnae** membranous; **shape of the last segment** orbicular/ovate; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

S. Lima, s.n., RB, 30833,  (RB00640123), Rio de Janeiro

M.Leitman et al., 310, RB, Rio de Janeiro

REFERENCE

DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2):e20200986.

SÁNCHEZ-BARACALDO, P. 2004. Phylogenetics and biogeography of the neotropical fern genera *Jamesonia* and *Eriosorus* (Pteridaceae). *American Journal of Botany* 91: 274–284.

TRYON, A.F. 1970. A monograph of the fern genus *Eriosorus*. *Contributions from the Gray Herbarium of Harvard University* 200: 54–174.

Jamesonia ×intermedia A.P. Della & J. Prado

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type hair** glandular; **colour of the hair and of the bristle** brown dark. **Leaf:** **petiole** half-terete; **density of the hair at the petiole** glabrous/sparsely covered by hair/moderately covered by hair; **type of the hair of the petiole** glandular/not glandular; **type of the frond** semi scandent; **form of the blade** triangular; **level of the division of the blade** 2 pinnate pinnatifid or 2 pinnate pinnatisect; **type of the rachis** flexuous; **density of the hair on the rachis** glabrate/sparsely covered by hair; **shape of the pinnae** triangular; **density of the hair on the side abaxial and adaxial of the pinnae** glabrate/sparsely covered by hair/moderately covered by hair; **consistency of the pinnae** coriaceous; **shape of the last segment** ovate; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial or rupicolous. Rhizomes short-creeping, 2.5-3.0 mm diam., densely covered by hairs and bristles, the hairs dark brown, multicellular, glandular, 0.2-2.2 mm long, the bristles dark brown, with darker-colored thickened transverse cell walls, apex long-filiform, base with 2-5 cells wide, apical cell globose, 1.3-2.4 mm long. Fronds monomorphic, 83.0-125.0 × 13.0-19.5 cm; petioles semi-cylindrical, adaxially grooved, 60.0-92.5 cm × 0.6-1.6 mm, bicolorous on young plants and uniformly brown on older plants, glabrous to moderately covered by hairs on both surfaces, the hairs with 0.3-1.6 mm long, glandular or eglandular, hyaline to castaneous, sometimes bicolorous, erect, multicellular; laminae 2-pinnate-pinnatisect to 3-pinnate-pinnatifid, triangular, semi-scandent, gradually tapering towards the apex (long-attenuate, pinnatisect), with usually 10-12 pairs of lateral pinnae, 18.0-32.5 × 13.0-19.5 cm, coriaceous; rachises, costae and costules flexuous, semi-cylindrical, adaxially grooved, green to stramineous on young plants and uniformly brown on older plants, abaxially and adaxially glabrous to sparsely covered by hairs, mainly in the groove and on the axils of the pinnae, the hairs eglandular, similar to those of the petioles; pinnae usually ascending, triangular, the basiscopic side slightly larger, 5.0-12.5 × 3.5-8.0 cm, alternate, long-stalked, the stalk 9.0-27.0 mm long, 0.6-1.2 mm diam, semi-cylindrical, adaxially grooved, stramineous to brown, adaxial surface of the pinnae glabrous or less often sparsely covered by hairs, abaxial surface sparsely to moderately covered by hairs, mainly on the veins, the hairs eglandular, similar to those of the petioles; primary pinnules triangular, sometimes ovate, 1.2-4.5 × 1.0-3.7 cm, alternate, stalked, the stalk 4.0-1.2 mm long, 0.6-0.8 mm diam, semi-cylindrical, adaxially grooved, green, stramineous to brown; secondary pinnules or segments triangular to ovate, 0.4-1.5 × 0.4-1.0 cm; margins crenate, often recurved; veins usually furcate, with enlarged clavate tips reaching the laminae margin. Sori on the veins, forming several lines along the segments; spores mostly abortive, dark brown, proximal surface with coalescent ridges, mainly near trilete aperture, distal surface laevigate, 40.0-60.0 µm. diam.

Reference: Della, A.P., Mynssen, C.M. & Prado, J. 2020. *Jamesonia ×intermedia*: A New Hybrid Between *J. biardii* and *J. insignis* (Pteridaceae) from Brazil. American Fern Journal 110: 20–28.

COMMENTS

This hybrid shows morphology intermediate between *Jamesonia insignis* (Mett.) Christenh. and *J. biardii* (Fée) Christenh. It more closely resembles *J. insignis* than *J. biardii* in the size and shape of the pinnae, pinnules, and ultimate segments, as well as crenate margins of the laminae. On the other hand, it resembles *J. biardii* by the glabrous or rarely sparsely eglandular hairs on the adaxial surface of the laminae and glabrous to sparsely eglandular hairs on the rachises.

Jamesonia ×intermedia is semi-scandent and grows on the edge of trails, in a partially shaded location, between grasses and bromeliads, in the Pico do Alcobaça, Serra dos Órgãos, Rio de Janeiro State, at 1650-1689 m elevation. The soil of this region has a broad rocky base, and a thin layer of dark organic matter, often moist.

Reference: Della, A.P., Mynssen, C.M. & Prado, J. 2020. *Jamesonia ×intermedia*: A New Hybrid Between *J. biardii* and *J. insignis* (Pteridaceae) from Brazil. American Fern Journal 110: 20–28.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

A.P. Della, 69, SP, SPF, RB, NY, Rio de Janeiro, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Jamesonia* ×*intermedia* A.P. Della & J. Prado



Figure 2: *Jamesonia* ×*intermedia* A.P. Della & J. Prado

REFERENCE

- DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2):e20200986.
- Della, A.P., Mynssen, C.M. & Prado, J. 2020. *Jamesonia* × *intermedia*: A New Hybrid Between *J. biardii* and *J. insignis* (Pteridaceae) from Brazil. *American Fern Journal* 110: 20–28.

Jamesonia osteniana (Dutra) J.G.Gastony

Has as synonym

basionym *Anogramma osteniana* Dutra

DESCRIPTION

Stem: type of the rhizome short erect; **indumentum of the rhizome** hair; **type hair** glandular; **colour of the hair and of the bristle** hyaline. **Leaf:** **petiole** half-terete; **density of the hair at the petiole** sparsely covered by hair/ moderately covered by hair; **type of the hair of the petiole** glandular; **type of the frond** erect; **form of the blade** ovate/deltate; **level of the division of the blade** 1 pinnatisect or 2 pinnatisect or 1 pinnate pinnatifid; **type of the rachis** straight; **density of the hair on the rachis** sparsely covered by hair/ moderately covered by hair; **shape of the pinnae** deltate; **density of the hair on the side abaxial and adaxial of the pinnae** sparsely covered by hair/ moderately covered by hair; **consistency of the pinnae** membranous; **shape of the last segment** bifurcate; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Eugênio-Leite, J., 1851, RB, 50176,  (RB00639255), SP, Rio Grande do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Jamesonia osteniana* (Dutra) J.G.Gastony

REFERENCE

- DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2):e20200986.
- NAKAZATO, T. & GASTONY, G.J. 2003. Molecular phylogenetics of *Anogramma* species and related genera (Pteridaceae: Taenitidoideae). *American Society of Plant Taxonomists* 28: 490–502.

Jamesonia rufescens (Fée) Christenh.

Has as synonym

basionym *Gymnogramma rufescens* Fée

homotype *Eriosorus rufescens* (Fée) A.F.Tryon

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type hair** non glandular; **colour of the hair and of the bristle** brown dark/black. **Leaf:** **petiole** half-terete; **density of the hair at the petiole** moderately covered by hair/densely covered by hair; **type of the hair of the petiole** not glandular; **type of the frond** erect/arcuate; **form of the blade** triangular; **level of the division of the blade** pinnate pinnatisect; **type of the rachis** straight; **density of the hair on the rachis** moderately covered by hair/densely covered by hair; **shape of the pinnae** ovate/triangular; **density of the hair on the side abaxial and adaxial of the pinnae** moderately covered by hair/densely covered by hair; **consistency of the pinnae** membranous/coriaceous; **shape of the last segment** ovate; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

Fée, s.n., RB, 216042,  (RB00633306), Rio de Janeiro

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Jamesonia rufescens* (Fée) Christenh.



Figure 2: *Jamesonia rufescens* (Fée) Christenh.

REFERENCE

- DELLA, A.P. & PRADO, J. 2020. *Jamesonia* (Pteridaceae) in Brazil. *Biota Neotropica* 20(2):e20200986.
- SÁNCHEZ-BARACALDO, P. 2004. Phylogenetics and biogeography of the neotropical fern genera *Jamesonia* and *Eriosorus* (Pteridaceae). *American Journal of Botany* 91: 274–284.
- TRYON, A.F. 1970. A monograph of the fern genus *Eriosorus*. *Contributions from the Gray Herbarium of Harvard University* 200: 54–174.

Lytoneuron (Klotzsch) Yesilyurt

This treatment is composed of the following taxa: *Lytoneuron*, *Lytoneuron acutilobum*, *Lytoneuron bradei*, *Lytoneuron columbinum*, *Lytoneuron crenulans*, *Lytoneuron feei*, *Lytoneuron itatiaense*, *Lytoneuron lomariaceum*, *Lytoneuron microphyllum*, *Lytoneuron ornithopus*, *Lytoneuron paradoxum*, *Lytoneuron poseidonii*, *Lytoneuron quinquelobatum*, *Lytoneuron rosenstockii*, *Lytoneuron rufum*, *Lytoneuron subsimplex*, *Lytoneuron tijucanum*.

HOW TO CITE

Smith-Braga, N., Schwartzburd, P.B., Oliveira, A.G.S., Miranda, C.V., Pena, N.T.L. 2020. *Lytoneuron* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB605278>.

DESCRIPTION

Plants generally saxicolous, rarely terrestrial or epipetric. Stems erect to decumbent, rarely short-creeping; scales lanceolate with acuminate apices, with smooth or dentate margins, bicolorous, with reddish-brown to dark-brown center and hyaline margins, not clathrate. Fronds dimorphic (the fertile ones larger and more dissected than the sterile), or subdimorphic (the fertile only larger); petioles reddish-brown, dark-brown, or black, terete or subterete, commonly flattened in the distal portion, smooth or verrucose, glabrous, pilose or scaly, internally with two vascular bundles at base, jointed upwards; laminae papery to leathery, palmate, pedate, sagittate, or hastate, without proliferous buds at base; veins generally free or partially anastomosed (only in *Lytoneuron ornithopus* and *L. poseidonii*); hydattodes present and generally apparent in the adaxial side of vegetative laminae; sori marginal, borne on commissural vein, continuous or interrupted along the sinuses, protected by the recurved laminar margins (pseudo-indusia); pseudo-indusia papery or membranaceous, smooth, crenate, or wavy, greenish, brownish, or whitish; spores trilete, with rugose surfaces.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

High Altitude Grassland, Grassland, Highland Rocky Field, Cerrado (lato sensu), Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Bahia)

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 occurrences

North (Tocantins)

Northeast (Maranhão)

IDENTIFICATION KEY

1. Pecíolo preto. 2
- 1'. Pecíolos marrom avermelhado, marrom ou marrom escuro.7
2. Segmentos basais da fronde fértil com 2-5 lobos basioscópicos . 3
- 2'. Segmentos basais da fronde fértil com apenas 1(-2) lobo basioscópico. 4
3. Borda da lâmina estéril crenada; soros contínuos. *L. tijucanum*
- 3'. Borda da lâmina estéril lisa; soros interrompidos nos sinus. *L. columbinum*
4. Pseudo indúcio crenado, ondulado. *L. microphyllum*
- 4'. Pseudo indúcio não crenado. 5
5. Margem da lâmina estéril crenada. *L. subsimplex*
- 5'. Margem da lâmina estéril lisa. 6
6. Segmentos arredondados, nervuras marrons. *L. bradei*
- 6'. Segmentos atenuados, nervuras pretas. *L. quinquelobatum*
7. Pecíolos conspicuamente cobertos por escamas. *L. paradoxum*
- 7'. Pecíolos glabros, pilosos ou com escamas esparsas. 8
8. Lâmina da fronde vegetativa com a margem preta, esclerótica. 9
- 8'. Lâmina da fronde vegetativa sem a margem preta, esclerótica. 10
- 9 Pecíolos marrom avermelhados, glabros; fronde fértil com a lâmina pedada; lâmina da fronde estéril com a borda crenada. *L. lomariaceum*
- 9'. Pecíolos pretos, pilosos; fronde fértil com a lâmina palmada; lâmina da fronde estéril com a borda lisa. *L. ornithopus*
10. Frondes vegetativas com a lâmina palmada, hastada ou sagitada.12
- 10'. Fronde vegetativa com a lâmina pedada. 14
12. Frondes vegetativas com a lâmina palmada; frondes férteis com a lâmina pedada. *L. poseidonii*
- 12'. Frondes vegetativas com a lâmina hastada ou sagitada; frondes férteis com as frondes hastadas ou palmadas. 13
13. Segmentos basais da fronde fértil longos e ascendentes. *L. rosenstockii*.
- 13'. Segmentos basais da fronde fértil curtos e patentes. *L. rufum*
14. Segmentos basais da fronde fértil sem lobos acroscópicos . 15
- 14'. Segmentos basais da fronde fértil com muitos lobos acroscópicos. 16
15. Pseudo indúcio esbranquiçado. *L. feei*
- 15'. Pseudo indúcio marrom. *L. acutilobum*
16. Lobos da fronde fértil triangulares ou arredondados. *L. itatiaense*
- 16'. Lobos da fronde fértil lineares. *L. crenulans*

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Lytoneuron acutilobum (Prantl) Yesilyurt

Has as synonym

basionym *Pteris acutiloba* Prantl

homotype *Doryopteris acutiloba* (Prantl) Diels

DESCRIPTION

Leaf: colour of the petiole black/brown reddish; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** terete; **indumentum of the petiole** glabrous; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** continuous; **disposition in the segment** continuous.

ADDITIONAL DESCRIPTION

Caules ereto-decumbentes, curtos, compactos; escamas bicolores, com a margem hialina e com o centro marrom escuro, não clatradas, longo-lanceoladas com o ápice atenuado. Frondes dimórficas, as férteis estreitas que as estéreis; pecíolos marrons avermelhados ou marrons, semi cilíndricos, não achatados próximo á base; lâminas cartáceas, com nervuras visíveis sem gemas na base. Frondes estéreis com a lâmina pedada, hastada, pedatífida; hidatódios visíveis; margem da lâmina não escleróticas, não crenadas. Frondes férteis com a lâmina pedada, pedatissecta; costas e cóstulas marrom escuro e visíveis; asas costais paralelas entre si; segmentos basais primários não divididos; margens da lâmina não crenadas; soros contínuos ao longo dos sinus; pseudo-indúsios cartáceos.

COMMENTS

Lytoneuron acutilobum é caracterizada pelo pecíolo castanho ou castanho escuro; com lâminas pedadas, pouco divididas; com os segmentos longos, apresentando as nervuras pretas bem marcadas.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

A.F.M. Glaziou, 2471, RB, 30856 (00599928), RB, 30856 (00600415), **Typus**

Lytoneuron bradei (Rosenst.) Yesilyurt

DESCRIPTION

Leaf: colour of the petiole black; form of the blade fertile pedate; form of the blade vegetative pedate; form of the petiole terete; indumentum of the petiole glabrous; margin of the blade non sclerous. Type of sporangium: disposition on the costa continuous; disposition in the segment continuous.

ADDITIONAL DESCRIPTION

Caules ereto-decumbentes, curtos, compactos; escamas bicolores, com a margem hialina e o centro marrom escuro, não clatradas, longo-lanceoladas com o ápice atenuado. Frondes dimórficas, as férteis mais compridas que as estéreis; pecíolos marrom escuros, pretos, cilíndricos, glabros, não achatados próximo á base da lâmina, lâminas coriáceas, nervuras marrons visíveis e sem gemas na base. Frondes estéreis pedadas; hidatódios visíveis, margens das lâminas escleróticas, não crenadas. Frondes férteis pedadas; costas e cóstulas marrons e visíveis; margens da lâmina não crenadas, soros contínuos ao longo dos sinus; pseudo-indúsio cartáceo.

COMMENTS

Lytoneuron bradei é caracterizada pelas frondes pedadas, sem segmentos secundários ou terciários, sem segmentos basioscópicos ou acroscópicos, com as nervuras marrons, visíveis; com segmentos arredondados.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (São Paulo)

HERBARIUM MATERIAL

A.C. Brade, 5820, US, 2626408 (01269190), São Paulo, **Typus**

Lytoneuron columbinum (Hook.) Smith-Braga & Schwartsb.

This treatment is composed of the following taxa: *Lytoneuron columbinum*, *Lytoneuron columbinum* var. *caparaoense*, *Lytoneuron columbinum* var. *columbinum*.

Has as synonym

homotype *Pellaea columbina* (Hook.) Hook.

DESCRIPTION

Leaf: colour of the petiole black; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** flattened distally; **indumentum of the petiole** glabrous; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** interrupted in the sinus; **disposition in the segment** continuous.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro)

IDENTIFICATION KEY

Pecíolos escamosos na base; segmentos basais patentes, sem ou com apenas um lobo acroscópioco . L. columbinum var. caparaoense

Pecíolos glabros; segmentos basais ascendentes, com vários lobos acroscópicos .L. columbinum var. columbinum

HERBARIUM MATERIAL

G. Gardner, 5930, K (000633041), E (00414305), NY (00144446), P (00477714), Rio de Janeiro, **Typus**
P.B. Schwartsburd, 1999, VIC, Minas Gerais

Lytoneuron columbinum (Hook.) Smith- Braga & Schwartsb. var. *columbinum*

DESCRIPTION

Caules reptantes, curtos, compactos; escamas bicolores, com a margem hialina e o centro marrom escuro, não clatradas, longo-lanceoladas com o ápice atenuado. Frondes dimórficas, as férteis mais compridas que as estéreis; pecíolos marrom escuro, preto, semi cilíndricos, verrucosos, com escamas próximas á base, achatadas próximas á base da lâmina; lâminas coriáceas, sem gemas na base. Frondes estéreis com as lâminas pedadas, pedatífidas; margens da lâmina não esclerificadas, crenadas. Frondes férteis com as lâminas pedadas, pedatissectas; costas e cóstulas marrons e visíveis; asas costais estreitadas até o meio; margens da lâmina crenadas; soros interrompidos nos sinus; pseudo indúcio hialino.

COMMENTS

Lytoneuron columbinum var. *columbinum* é caracterizada pelos pecíolos pretos, opacos, achatados próximos á base da lamina, e pelos inúmeros últimos segmentos nas lâminas pedadas.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

N. S. Smith- Braga, 85, VIC, Minas Gerais, **Typus**

Lytoneuron columbinum var. *caparaoense* Brade ex. Smith-Braga & Schwartsburd

DESCRIPTION

Caules reptantes, curtos, compactos; escamas bicolores, com a margem hialina e o centro marrom escuro, não clatradas, longo-lanceoladas com o ápice atenuado. Frondes dimórficas, as férteis mais compridas que as estéreis; pecíolos marrom avermelhados na base, marrom escuros na parte distal, semi cilíndricos, verrucosos, com escamas próximas á base, achatadas próximas á base da lâmina; lâminas coriáceas, sem gemas na base. Frondes estéreis com as lâminas pedadas, pedatífidas; margens da lâmina não esclerificadas, crenadas. Frondes férteis com as lâminas pedadas, pedatissectas; costas e cóstulas marrons e visíveis; asas costais estreitadas até o meio; margens da lâmina crenadas; soros interrompidos nos sinus; pseudo indúcio hialino.

COMMENTS

É uma variedade ecológica e local de *Lytoneuron columbinum*, sendo encontrada em altitudes mais elevadas, acima de 2000 metros na Serra do Caparaó. É caracterizada pelo seu pecíolo marrom avermelhado na base e marrom escuro na parte distal. Apresenta também escamas na parte proximal do pecíolo.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais)

Lytoneuron crenulans (Fée) Yesilyurt

Has as synonym

basionym *Doryopteris crenulans* (Fée) Christ

homotype *Pellaea crenulans* Fée

DESCRIPTION

Leaf: colour of the petiole brown/brown reddish; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** flattened distally; **indumentum of the petiole** squamose on the base; **margin of the blade** non sclerous. **Type of sporangium:** **disposition on the costa** interrupted in the sinus; **disposition in the segment** interrupted in the sinus.

ADDITIONAL DESCRIPTION

COMMENTS

Lytoneuron crenulans é caracterizada pelas frondes grandes (20-55 cm), pelo pecíolo marrom avermelhado, e por apresentar segmentos bem dissecados, em muitas vezes divididos três vezes basioscopicamente, além dos soros serem interrompidos nos sinus.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Highland Rocky Field, Rock outcrop vegetation

Geographic Distribution


Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

L.S. Sylvestre, 1737, RB, 407285,  (RB00555801), Minas Gerais

P.B. Schwartsburd, 2704, VIC, Minas Gerais

Lytoneuron feei (Brade) Yesilyurt

DESCRIPTION

Leaf: colour of the petiole brown/brown reddish; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** flattened distally; **indumentum of the petiole** glabrous; **margin of the blade** non sclerous. **Type of sporangium:** **disposition on the costa** interrupted in the sinus; **disposition in the segment** continuous.

COMMENTS

Lytoneuron feei é caracterizada por apresentar o pecíolo marrom avermelhado, além do pseudo- indúcio esbranquiçado.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

F. T. Toledo Jr., 806, SPF, S, B, RB, 30870 (00599922), Rio de Janeiro, **Typus**

P.B. Schwartsburd, 2169, VIC, Rio de Janeiro

Lytoneuron itatiaense (Fée) Yesilyurt

Has as synonym

basionym *Doryopteris itatiaensis* (Fée) Christ

homotype *Pellaea itatiaensis* Fée

DESCRIPTION

Leaf: colour of the petiole brown/brown reddish; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** flattened distally; **indumentum of the petiole** glabrous; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** interrupted in the sinus; **disposition in the segment** interrupted in the sinus.

COMMENTS

Lytoneuron itatiaense é caracterizada pelo pecíolo marrom avermelhado e pelos segmentos triangulares nas frondes férteis e segmentos arredondados nas frondes estéreis.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

P.B. Schwartsburd, 2144, VIC, Rio de Janeiro

A.F.M. Glaziou, 5348, P (00507780), B (20051131), K (000633024), P (00507778), P (00507779), Rio de Janeiro, **Typus**

Lytoneuron lomariaceum (Kunze ex Klotzsch) Yesilyurt

Has as synonym

basionym *Doryopteris lomariacea* Klotzsch

DESCRIPTION

Leaf: colour of the petiole brown reddish; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** terete; **indumentum of the petiole** glabrous; **margin of the blade** sclerous black. **Type of sporangium: disposition on the costa** continuous; **disposition in the segment** continuous.

COMMENTS

Lytoneuron lomariaceum é caracterizada pelo pecíolo marrom - avermelhado, pelos segmentos das frondes vegetativas com o ápice arredondado e a margem preta esclerótica e dentada; as frondes férteis apresentam os segmentos lineares, pouco dissecados, paralelos a costa. Além disso, é comumente encontrada em locais pantanosos, diferindo da maior parte das espécies do gênero, que usualmente habitam áreas de afloramentos rochosos.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

P.B. Schwartzburd, 2707, VIC, Minas Gerais

P.B. Schwartzburd, 985, UPCB, Paraná

H.R. Schomburgk, 1197, BM (001073464), K (000633039), K (000633038), **Typus**

Lytoneuron microphyllum (Christ) Yesilyurt

Has as synonym

homotype *Doryopteris microphylla* (Fée) Christ

DESCRIPTION

Leaf: colour of the petiole black; **form of the blade fertile** pedate; **form of the blade vegetative** palmate; **form of the petiole** terete; **indumentum of the petiole** glabrous; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** interrupted in the sinus; **disposition in the segment** continuous.

COMMENTS

Lytoneuron microphyllum é caracterizada por apresentar o pecíolo preto, brilhoso; pelas lâminas de tamanho reduzido, pouco dissecadas e por apresentar o pseudo indúcio hialino acastanhado, membranáceo e com a margem ondulada.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

A.F.M. Glaziou, 3518, P (00507775), BM (001079923), K (000633032), P (00507774), P (00507776), P (01348628), Rio de Janeiro, **Typus**

R.S. Viveiros, 69, BHCB, Minas Gerais

Lytoneuron ornithopus (Mett. ex Hook. & Baker) Yesilyurt

This treatment is composed of the following taxa: *Lytoneuron ornithopus*, *Lytoneuron ornithopus* var. *ornithopus*, *Lytoneuron ornithopus* var. *pygmaeum*.

Has as synonym

homotype *Doryopteris ornithopus* (Hook. & Baker) J.Sm.

DESCRIPTION

Leaf: colour of the petiole brown; **form of the blade fertile** digitate; **form of the blade vegetative** palmate; **form of the petiole** terete; **indumentum of the petiole** pilose; **margin of the blade** sclerous black. **Type of sporangium: disposition on the costa** continuous; **disposition in the segment** continuous.

COMMENTS

Lytoneuron ornithopus é caracterizada por apresentar a venação areolada, e por não apresentar os hidatódios visíveis na lâmina estéril, sendo a única do gênero com tais características. Além disso, as margens pretas escleróticas da fronde vegetativa e os pecíolos com pelos a diferem das demais.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Highland Rocky Field, Cerrado (lato sensu), Seasonally Semideciduous Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Bahia)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná)

Possible occurrences

North (Tocantins)

Northeast (Maranhão)

IDENTIFICATION KEY

Fertile fronds to 10 cm long, pseudo-indusia with black, sclerotic margins . *L. ornithopus* var. *pygmaeum*.

Fertile fronds 20–40 cm long, pseudo-indusia without sclerotic margins . *L. ornithopus* var. *ornithopus*.

HERBARIUM MATERIAL

G. Gardner, 5298, K (000633036), Minas Gerais, **Typus**
P.B. Schwartsburd, 3526, VIC, Espírito Santo

Lytoneuron ornithopus (Mett. ex Hook. & Baker) Yesilyurt var. *ornithopus*

Has as synonym

basionym *Pteris ornithopus* Hook. & Baker

homotype *Lytoneuron ornithopus* (Mett. ex Hook. & Baker) Yesilyurt subsp. *ornithopus*

DESCRIPTION

Caules horizontais, curtos, compactos. Frondes dimórficas, as férteis mais compridas que as estéreis; pecíolos marrons, marrom-escuros, semi cilíndricos, verrucosos, com pelos, não achatados próximos a base da lâmina; lâminas coriáceas, sem gemas na base. Frondes estéreis com lâminas pedadas, hastadas, palmadas, pedatífidas; hidatódios não visíveis; margens da lâmina esclerificadas, não crenadas. Frondes férteis com lâminas palmadas, pedatissectas; soros contínuos ao longo dos sinus; pseudo-indúsios hialinos.

COMMENTS

Lytoneuron ornithopus var. *ornithopus* é a espécie mais distinta dentro do gênero, caracterizada pelo pecíolo preto, opaco, verrucoso, com pelos esparsos distribuídos ao longo de todo o pecíolo, com a margem das lâminas estéreis esclerificadas, e os soros contínuos ao longo das lâminas férteis. É a única espécie do gênero a apresentar uma venação areolada e não apresenta hidatódios visíveis nas lâminas estéreis.

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Bahia)

Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

D.C. Zappi, 2532, RB, Minas Gerais

Lytoneuron ornithopus var. *pygmaeum* (Brade) Smith-Braga & Schwartsburd

DESCRIPTION

Caules reptantes, curtos, compactos; escamas bicolores, com a margem hialina e o centro marrom escuro, não clatradas, longo-lanceoladas com o ápice atenuado. Frondes dimórficas, as férteis mais compridas que as estéreis; pecíolos preto, semi cilíndricos, verrucosos, achatados próximo a base da lâmina, com pelos distribuídos esparsamente ao longo do pecíolo; lâminas coriáceas, sem gemas na base. Frondes estéreis com as lâminas pedadas, pedatífidas, palmadas ou digitadas; margens da lâmina esclerificadas, não crenadas. Frondes férteis com as lâminas pedadas, pedatissectas, digitadas ou palmadas; costas e cóstulas verdes e visíveis; soros não interrompidos nos sinus; pseudo indúcio cartáceo e com a margem preta, esclerótica.

COMMENTS

Lytoneuron ornithopus var. *pygmaeum* pode ser encontrada em rochas de quartzo ou de ferro, e parece ser uma forma pedomórfica de *Lytoneuron ornithopus*, em que plantas com morfologia jovens são totalmente férteis. Além disso, apresenta as lâminas das frondes férteis digitadas ou palmadas, e o pseudo-indúcio apresenta a margem preta esclerótica.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Highland Rocky Field, Seasonally Semideciduous Forest

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás)

Southeast (Espírito Santo, Minas Gerais)

HERBARIUM MATERIAL

E. E. Ule, 798, R (000018286)

Lytoneuron paradoxum (Fée) Yesilyurt

Has as synonym

basionym *Cassebeera paradoxa* Fée

homotype *Doryopteris paradoxa* (Fée) Christ

DESCRIPTION

Leaf: colour of the petiole brown reddish; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** flattened distally; **indumentum of the petiole** squamose; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** interrupted in the sinus; **disposition in the segment** continuous.

COMMENTS

Lytoneuron paradoxum é bem caracterizada pelo pecíolo marrom avermelhado, conspicuamente coberto por escamas.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

G. Gardner, 5930, RB (00624923), P (00477712), NY (0014445), K (000633041), E (00414304), BM (001079917), BM (001079918), P (00477713), Rio de Janeiro, **Typus**

P.B. Schwartsburd, 2322, VIC, Rio de Janeiro

Lytoneuron poseidonii Smith-Braga & Schwartsb.

DESCRIPTION

Leaf: colour of the petiole brown; form of the blade fertile pedate; form of the blade vegetative palmate; form of the petiole flattened distally; indumentum of the petiole glabrous; margin of the blade non sclerous. **Type of sporangium:** disposition on the costa continuous; disposition in the segment continuous.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo)

HERBARIUM MATERIAL

Vervloet, R.R., 2047, MBML, Espírito Santo, **Typus**

Lytoneuron quinquelobatum (Fée) Yesilyurt

Has as synonym

basionym *Pellaea quinquelobata* Fée

homotype *Doryopteris quinquelobata* (Fée) Diels

homotype *Pellaea glaziovii* Baker

DESCRIPTION

Leaf: colour of the petiole black; **form of the blade fertile** palmate/pedate; **form of the blade vegetative** pedate/sagittate/hastate; **form of the petiole** terete; **indumentum of the petiole** glabrous; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** continuous; **disposition in the segment** continuous.

ADDITIONAL DESCRIPTION

Caules ereto-decumbentes, curtos, compactos; escamas bicolores, com a margem hialina e o centro marrom escuro, não clatradas, longo lanceoladas com o ápice atenuado. Frondes dimórficas, as férteis mais compridas que as estéreis; pecíolos pretos, cilíndricos, glabros, não achatados próximo á base da lâmina; lâminas cartáceas, com as nervuras visíveis sem gemas na base. Frondes estéreis pedadas; hidatódios visíveis; margem da lâmina não esclerótica, não crenadas. Frondes estéreis palmadas, pedadas; costas pretas e visíveis; segmentos basais não divididos; margens das lâminas não crenadas, soros contínuos ao longo do sinus; pseudo-indúcio cartáceo.

COMMENTS

Lytoneuron quinquelobatum é caracterizada pelos pecíolos pretos, opacos e pelas lâminas férteis palmadas ou pedadas, e por apresentar frondes com segmentos não divididos.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

Lytoneuron rosenstockii (Brade) Yesilyurt

Has as synonym

basionym *Doryopteris rosenstockii* Brade

DESCRIPTION

Leaf: colour of the petiole brown/brown reddish; **form of the blade fertile** palmate; **form of the blade vegetative** sagittate/hastate; **form of the petiole** terete; **indumentum of the petiole** pilose; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** continuous; **disposition in the segment** continuous.

COMMENTS

Lytoneuron rosenstockii é caracterizada por apresentar o pecíolo marrom avermelhado, pelas lâminas férteis palmadas, com os segmentos longos e ascendentes.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

P.B. Schwartzburd, 4386, Rio de Janeiro

A.C. Brade, 9257, R (000021009a), R (000021009_002), R (000021009_001), Rio de Janeiro, **Typus**

J.M.A. Braga, 1628, RB, 537524,  (RB00693645), Rio de Janeiro

Lytoneuron rufum (Brade) Yesilyurt

Has as synonym

homotype *Doryopteris rufa* Brade

DESCRIPTION

Leaf: colour of the petiole black; **form of the blade fertile** sagittate/hastate; **form of the blade vegetative** sagittate; **form of the petiole** terete; **indumentum of the petiole** pilose; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** continuous; **disposition in the segment** continuous.

COMMENTS

Lytoneuron rufum é caracterizada pelo pecíolo marrom escuro; pelas lâminas da fronde fértil hastadas ou sagitadas, com os segmentos curtos e patentes.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Grassland, Ombrophyllous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

B. Godoy, s.n., SP, 003773, Minas Gerais, **Typus**

W. Schwacke, 12308, BHC, P (01248038), RB, 36403 (00639839), Minas Gerais

Lytoneuron subsimplex (Fée) Yesilyurt

Has as synonym

basionym *Pellaea subsimplex* Fée

homotype *Doryopteris subsimplex* (Fée) Diels

heterotypic *Doryopteris magdalenensis* (Brade) Brade

heterotypic *Pteris longula* Mett. ex Kuhn

DESCRIPTION

Leaf: colour of the petiole black; **form of the blade fertile** palmate/pedate/digitate; **form of the blade vegetative** palmate; **form of the petiole** flattened distally; **indumentum of the petiole** glabrous; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** continuous; **disposition in the segment** continuous.

COMMENTS

Lytoneuron subsimplex apresenta pecíolos pretos, opacos, cilíndricos achatados na base da lâmina. As frondes são pouco divididas, as vezes simples, digitadas. A borda da lâmina das frondes estéreis é crenada, não esclerótica.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

Lytoneuron tijucanum (Brade & Rosenst.) Yesilyurt

Has as synonym

basionym *Doryopteris tijucana* Brade & Rosenst.

DESCRIPTION

Leaf: colour of the petiole black; **form of the blade fertile** pedate; **form of the blade vegetative** pedate; **form of the petiole** terete; **indumentum of the petiole** glabrous; **margin of the blade** non sclerous. **Type of sporangium: disposition on the costa** continuous; **disposition in the segment** interrupted in the sinus.

COMMENTS

Lytoneuron tijucanum é caracterizada pelo pecíolo preto, glabro, achatado na base da lâmina; com frondes férteis muito divididas, com muitos últimos segmentos. As lâminas das frondes estéreis apresentam a margem crenada, não esclerótica.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

A.C. Brade, 8598, B (200051505)

Myriopteris Fée

This treatment is composed of the following taxa: *Myriopteris*, *Myriopteris myriophylla*.

HOW TO CITE

Dittrich, V.A.O., Gasper, A.L. 2020. *Myriopteris* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB606384>.

DESCRIPTION

Plants terrestrial or epipetric. Rhizomes erect to long-creeping, ascending or horizontal, scaly. Rhizome scales lanceolate to acicular, concolorous or bicolorous. Petioles castaneous to black, scaly and/or pubescent, rarely almost glabrous. Rachises terete or flattened or grooved adaxially, with indument similar to that of the petioles. Blades 2-4-pinnate (rarely pinnate-pinnatifid), lanceolate to ovate-deltate, occasionally linear or pentagonal; adaxial surfaces glabrous or pubescent; abaxial surfaces scaly and/or pubescent or rarely glabrous. Ultimate segments round to oblong-ovate, minute to >1 cm long, the veins obscure and not ending in prominent hydathodes. Segment margins usually recurved, with a poorly differentiated false indusium. Sori usually partly to completely covered by the recurved segment margins, the sporangia clustered at vein tips. Sporangia 64-spored (in sexual species) or 32-spored (in apomicts).

COMMENTS

The most significant characteristics to distinguish *Myriopteris* from *Cheilanthes* s.s are the spore number (32 small or 16 large spores in *Cheilanthes* s.s., 64 small or 32 large spores in *Myriopteris*), the spore ornamentation (mostly cristate or rugulose in *Myriopteris* vs. echinate, granulose, or verrucate in *Cheilanthes* s.s.) and a lack of clear hydathodes in *Myriopteris*.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

South (Santa Catarina)

REFERENCE

Grusz, A. L. & Windham, M. D. 2013. Toward a monophyletic *Cheilanthes*: The resurrection and recircumscription of *Myriopteris* (Pteridaceae). *PhytoKeys* (32): 49–64.

Dittrich, V. A.O. & Gasper, A. L. de. 2019. Recognition of the genus *Myriopteris* (Pteridaceae, Polypodiopsida) in Brazil. *Darwiniana, nueva serie* 7(1): 137-140.

Myriopteris myriophylla (Desv.) Sm.

Has as synonym

basionym *Cheilanthes myriophylla* Desv.

heterotypic *Cheilanthes paleacea* M.Martens & Galeotti

DESCRIPTION

Plants terrestrial or epipetric. Rhizomes short-creeping, 1.8-3.8 mm thick, scales linear-lanceolate, bicolorous, with a black to dark brown central stripe, margins entire, the apex attenuate, sinuous, with a gland. Fronds 24-28 cm long, stipes ca. 1-2#3 the frond length, tan, terete, covered with appressed pale hairs, laminae 4-pinnate, 9-18 × 7-9 cm, narrowly lanceolate to triangular, apex pinnatifid, base truncate, ultimate segments beadlike, 0.8-1.4 × 0.5-0.8 cm, adaxial surface glabrous or with white, simple hairs, abaxial surface densely covered by white to reddish brown triangular-lanceolate scales on the rachis, costae, and costules, flexuous hairs present on the abaxial side of the segments, margins strongly recurved, modified into wide false indusia. Sori marginal, sporangia clustered at the vein apices, without paraphyses, covered by false indusia. Spores tetrahedral-globose, surface rugulate.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest


Geographic Distribution



Confirmed occurrences

Southeast (Minas Gerais)

South (Santa Catarina)

HERBARIUM MATERIAL

R. Wells-Windisch, 262, HUCCS, 50949,  (HUCCS005082), Minas Gerais

A.R. Reitz, 3340, RB (RB00640181), CESJ, US,  (US01495288), RB, 82373,  (RB00639426), Santa Catarina

REFERENCE

Dittrich, V.A.O. & Gasper, A.L. de. 2019. Recognition of the genus *Myriopteris* (Pteridaceae, Polypodiopsida) in Brazil. *Darwiniana, nueva serie* 7(1): 137-140.

Ormopteris J.Sm. ex J.Sm.

This treatment is composed of the following taxa: *Ormopteris*, *Ormopteris crenata*, *Ormopteris cymbiformis*, *Ormopteris gleichenioides*, *Ormopteris pinnata*, *Ormopteris riedelii*.

HOW TO CITE

Prado, J., Hirai, R. Y. 2020. *Ormopteris* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB602893>.

DESCRIPTION

Rhizomes short-creeping, scaly, the scales concolorous or bicolorous. Fronds 1–3-pinnate; pinnae or pinnules oblong to lanceolate, cymbiform (boat-shaped), round to oblong, or lobate, overlapping or not the rachis of the pinna, sclerotic (dark brown to black) only at base or pinnae lobes interrupted or not by a small sinus, the sinus sclerotic. Sori marginal; indusia formed by revolute margins; spores trilete.

COMMENTS

Although *Ormopteris* J. Sm. ex J. Sm. is an old generic name, described by Smith in 1875, it has not been in widespread use for some time. These ferns have instead been most frequently treated as *Pellaea* section *Ormopteris* (J. Sm. ex J. Sm.) R. M. Tryon & A. F. Tryon. Recent analyses of molecular and morphological characters have recovered the group as monophyletic but strongly supported as sister to *Doryopteris* J. Sm., and not to other sections of *Pellaea* Link.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro)

IDENTIFICATION KEY

Key to the Species of *Ormopteris* in Brazil

1. Pinnules cymbiform (boat-shaped), not overlapping the rachis *O. cymbiformis*
1. Pinnules either round-oblong and revolute, overlapping the rachis of the pinna, or pinnules oblong to lanceolate, not revolute, and not overlapping the rachis of the pinna
2. Pinnules rounded to oblong, revolute, overlapping the rachis of the pinnae *O. gleichenioides*
2. Pinnules oblong to lanceolate, not revolute, not overlapping the rachis of the pinna
3. Pinnae or pinnules entire *O. riedelii*
3. Pinnae or pinnules lobate

4. Pinnae lobes interrupted by a small sinus, the sinus sclerotic *O. crenata*
4. Pinnae lobes entire *O. pinnata*

REFERENCE

- Prado, J. 1993. New *Pellaea* from Brazil. American Fern Journal 83(4): 129–130.
Prado, J., Hirai, R.Y. & Schuettpeiz, E. 2017. Taxonomic and nomenclatural notes concerning *Ormopteris* and *Pellaea* (Pteridaceae) in Brazil. Brittonia 69(3): 313–315.

Ormopteris crenata (R.M.Tryon)

T.Barbará

Has as synonym

basionym *Pellaea crenata* R.M.Tryon

DESCRIPTION

Stem: scale bicolor; **rhizome** short/creeping. **Leaf: frond** 1/pinnate; **lobe(s) of the pinna** interrupted by sinus; **pinna or pinnule** lanceolate/not/overlapped to rachis/lobate; **sinus** sclerotic. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** not/chlorophylate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes ca. 0.5 cm diam., scaly, the scales linear-lanceolate, reddish-brown, with central portion dark brown. Fronds 18.5–32.5 cm long; petioles sulcate adaxially, glabrous, 13.5–22.5 cm long; laminae coriaceous, 1-pinnate, glabrous; rachises sulcate adaxially; pinnae lanceolate, varying from sessile to stalked, crenate, pinnae lobes interrupted by a small sinus, the sinus sclerotic (dark brown to black); sterile pinnules with margins plane; fertile pinnules entire, margins revolute, thin and modified as indusia, covering almost the entire margin of the pinnules.

COMMENTS

Ormopteris crenata is easily distinguished by the pinnules crenate, with a sclerotic sinuses. It is endemic to the Espinhaço range of Minas Gerais and Bahia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

E. Schuettpelz, 1382, SP, Minas Gerais

REFERENCE

Prado, J., Hirai, R.Y. & Schuettpelz, E. 2017. Taxonomic and nomenclatural notes concerning *Ormopteris* and *Pellaea* (Pteridaceae) in Brazil. *Brittonia* 69(3): 313–315.

Ormopteris cymbiformis (J.Prado)

T.Barbará

Has as synonym

basionym *Pellaea cymbiformis* J.Prado

DESCRIPTION

Stem: scale concolor; **rhizome** short/creeping. **Leaf:** frond 2/3/pinnate; **lobe(s) of the pinna** entire; **pinna or pinnule** cymbiform/revolute/not/overlapped to rachis/entire; **sinus** absent. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete not/chlorophylate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes ca. 0.9 cm diam., scaly, the scales long-lanceolate, reddish-brown, concolorous. Fronds 5.5–17 cm long; petioles sulcate adaxially, glabrous, 2–9.5 cm long; laminae coriaceous, 2- or 3-pinnate, glabrous; rachises sulcate adaxially; pinnules cymbiform (boat-shaped), stalked, entire, sclerotic (dark brown to black) only at base of the lamina; sterile pinnules with margins plane or slightly revolute (when dry); fertile pinnules entire, margins revolute, thin and modified as indusia, covering almost the entire margin of the pinnules.

COMMENTS

This species is distinguished by the segments cymbiform (boat-shaped). It occurs only in Minas Gerais State in the region of Diamantina.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

E. Schuettpelez, 1384, SP, Minas Gerais

REFERENCE

Prado, J. 1993. New *Pellaea* from Brazil. American Fern Journal 83(4): 129–130.

Ormopteris gleichenioides (Gardner) J.Sm

Has as synonym

homotype *Pellaea gleichenioides* (Gardner) Christ

Cassebeera gleichenioies Gardner

DESCRIPTION

Stem: scale concolor; **rhizome** short/creeping. **Leaf:** frond 2/3/pinnate; **lobe(s) of the pinna** absent; **pinna or pinnule** rounded/to/oblong/revolute/overlapped to rachis/entire; **sinus** absent. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete not/chlorophylate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes ca. 1.0 cm diam., scaly, the scales linear-lanceolate, reddish-brown, concolorous. Fronds 10–25 cm long; petioles sulcate adaxially, glabrous, 10–20 cm long; laminae coriaceous, 2- or 3-pinnate, glabrous; rachises sulcate adaxially; pinnules round to oblong, revolute, sessile, entire, overlapping the rachis of the pinnae, pinnae lobes entire, sclerotic (dark brown to black) only at base; sterile pinnules with margins revolute; fertile pinnules entire, margins revolute, thin and modified as indusia, covering almost the entire margin of the pinnules.

COMMENTS

Pellaea gleichenioides is remarkable by having pinnules revolute covering partially the rachis. It is another endemic species of the Espinhaço range (Minas Gerais).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

E. Schuettpelz, 1374, SP, Minas Gerais

REFERENCE

Prado, J. 1992. Flora da Serra do Cipó, Minas Gerais: Cheilanthoideae (Pteridaceae). Boletim de Botânica da Universidade de São Paulo 13: 141–159.

Prado, J., Hirai, R.Y. & Schuettpelz, E. 2017. Taxonomic and nomenclatural notes concerning *Ormopteris* and *Pellaea* (Pteridaceae) in Brazil. Brittonia 69(3): 313–315.

Ormopteris pinnata (Kaulf.) Lellinger

Has as synonym

homotype *Pellaea pinnata* (Kaulf.) Prantl

Cassebeera pinnata Kaulf.

DESCRIPTION

Stem: scale concolor; **rhizome** short/creeping. **Leaf: frond** 1/or/2/pinnate; **lobe(s) of the pinna** entire; **pinna or pinnule** lanceolate/not/overlapped to rachis/lobate; **sinus** sclerotic. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: annulus** vertical/with/indusium/glabrous. **Spore: trilete** not/chlorophylate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes ca. 1.0 cm diam., scaly, the scales linear-lanceolate, reddish-brown, concolorous. Fronds 1.4–41 cm long; petioles sulcate adaxially, glabrous, 0.7–27.5 cm long; laminae coriaceous, 1- or 2-pinnate, glabrous; rachises sulcate adaxially; pinnules lanceolate, varying from sessile to stalked, crenate, pinnae lobes entire, sclerotic (dark brown to black) only at base; sterile pinnules with margins plane; fertile pinnules entire, margins revolute, thin and modified as indusia, covering almost the entire margin of the pinnules.

COMMENTS

This species can be recognized by the pinnae lobate. It has a wide distribution in South America: Venezuela, Bolivia, and Brazil: Mato Grosso, Goiás, Bahia, and Minas Gerais.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

E. Schuettpelz, 1377, SP, Minas Gerais

REFERENCE

Prado, J. 1992. Flora da Serra do Cipó, Minas Gerais: Cheilanthoideae (Pteridaceae). Boletim de Botânica da Universidade de São Paulo 13: 141–159.

Prado, J., Hirai, R.Y. & Schuettpelz, E. 2017. Taxonomic and nomenclatural notes concerning *Ormopteris* and *Pellaea* (Pteridaceae) in Brazil. Brittonia 69(3): 313–315.

Ormopteris riedelii (Baker) T.Barbará

Has as synonym

basionym *Pellaea riedelii* Baker

DESCRIPTION

Stem: scale bicolor; **rhizome** short/creeping. **Leaf: frond** 1/or/2/pinnate; **lobe(s) of the pinna** absent; **pinna or pinnule** entire; **sinus** absent. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** trilete not/chlorophylate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes ca. 0.7 cm diam., scaly, the scales linear-lanceolate, light to dark brown. Fronds 6–57 cm long; petioles sulcate adaxially, glabrous, 3–35 cm long; laminae coriaceous, 1- or 2-pinnate, sometimes the proximal pinnae pair irregularly 1-pinnate, with pinnules also irregularly formed (small or forming only lobes), glabrous; rachises sulcate adaxially; pinnules oblong to lanceolate, varying from sessile to stalked, entire, sclerotic (dark brown to black) only at base; sterile pinnules with margins plane; fertile pinnules entire, margins revolute, thin and modified as indusia, covering almost the entire margin of the pinnules.

COMMENTS

Ormopteris riedelii can be easily recognized by its entire pinnules. It grows in wet and fertile soils, among grasses in the Espinhaço Range.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

L. Riedel, 7, K, Minas Gerais, **Typus**

REFERENCE

Prado, J. 1992. Flora da Serra do Cipó, Minas Gerais: Cheilanthoideae (Pteridaceae). Boletim de Botânica da Universidade de São Paulo 13: 141–159.

Prado, J., Hirai, R.Y. & Schuettpelz, E. 2017. Taxonomic and nomenclatural notes concerning *Ormopteris* and *Pellaea* (Pteridaceae) in Brazil. Brittonia 69(3): 313–315.

Pellaea Link

This treatment is composed of the following taxa: *Pellaea*, *Pellaea ovata*, *Pellaea viridis*.

HOW TO CITE

Hirai, R.Y., Prado, J. 2020. *Pellaea* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91954>.

Has as synonym

heterotypic *Cassebeera* Kaulf.

DESCRIPTION

Plants terrestrial or rupicolous. Rhizome short to long-creeping, scaly, the scales usually bicolorous. Fronds monomorphic or nearly so, subcoriaceous to coriaceous, erect to scandent, 1–4-pinnate, imparipinnate; petiole with a single vascular bundle; petioles and rachises light brown or dark brown to blackish, flexuous or not, glabrous or pubescent, terete or slightly sulcate, winged or not; pinnules stalked, glabrous or pubescent; laminar tissue glabrous; veins free, visible or obscure. Sori intramarginal on the veins tips; indusium formed by recurved margin of the lamina. Spores trilete, rugate to cristate.

COMMENTS

Pellaea is represented in Brazil by two species.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Highland Rocky Field, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Rio de Janeiro, São Paulo)

South (Santa Catarina)

IDENTIFICATION KEY

Key to the Species of *Pellaea* in Brazil

1. Fronds scandent; rachises light brown, flexuous, without wings, bearing hairs; veins obscure *P. ovata*
1. Fronds erect; rachises dark brown to blackish, not flexuous, with two narrow wings, bearing hairs and filiform scales; veins visible on both laminar surfaces *P. viridis*

REFERENCE

- Biral, L. & Prado, J. 2012. First record of *Pellaea ovata* (Pteridaceae) from Brazil. *American Fern Journal* 102(1): 83–85.
- Prado, J. 1992. Flora da Serra do Cipó, Minas Gerais: Cheilanthes (Pteridaceae). *Boletim de Botânica da Universidade de São Paulo* 13: 141–159.
- Prado, J. 1993. New *Pellaea* from Brazil. *American Fern Journal* 83(4): 129–130.
- Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). *Flora do Distrito Federal, Brasil*, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.
- Prado, J., Hirai, R.Y. & Schuettpelz, E. 2017. Taxonomic and nomenclatural notes concerning *Ormopteris* and *Pellaea* (Pteridaceae) in Brazil. *Brittonia* 69(3): 313–315.
- Prado, J., Schuettpelz, E., Hirai, R.Y. & Smith, A.R. 2013. *Pellaea flavescens*, a Brazilian endemic, is a synonym of Old World *Pellaea viridis*. *American Fern Journal* 103(1): 21–26.

Pellaea ovata (Desv.) Weath.

Has as synonym

basionym *Pteris ovata* Desv.

DESCRIPTION

Stem: rhizome long/creeping. **Leaf: frond** scandent; **rachis** flexuous; **wing** absent; **veins** obscure. **Spore:** trilete rugate/to/cristate.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizome long-creeping and dichotomously branched; scaly, scales bicolorous, central portion blackish, margins light brown, erose, tip hair-like. Fronds 50–70 cm long, scandent; petioles and rachises light brown, rachises flexuous, bearing hairs, these hairs reddish, 0.1–0.3 mm long, terete, without wings; lamina deltate, light green, 2- or 3-pinnate at the base, subcoriaceous, glabrous on both surfaces; pinnules elliptic to ovate, stalked, articulate, glabrous; veins obscure.

COMMENTS

Pellaea ovata is easily recognized by fronds scandent, rachises flexuous, without wings, bearing hairs, and veins obscure. Its distribution in Brazil is restricted in São Paulo state (Botucatu).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (São Paulo)

HERBARIUM MATERIAL

Prado et al., 2143, RB, 578302,  (RB00788157), MO, HRCB, SP, São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Pellaea ovata* (Desv.) Weath.



Figure 2: *Pellaea ovata* (Desv.) Weath.

REFERENCE

Biral, L. & Prado, J. 2012. First record of *Pellaea ovata* (Pteridaceae) from Brazil. *American Fern Journal* 102(1): 83–85.

Pellaea viridis (Forssk.) Prantl

Has as synonym

heterotypic *Pellaea flavescens* Fée

DESCRIPTION

Stem: rhizome short/creeping. **Leaf: frond** erect; **rachis** not/flexuous; **wing** present; **veins** not/obscure. **Spore: trilete** rugate/to-cristate.

ADDITIONAL DESCRIPTION

Plants terrestrial or rupicolous. Rhizome short-creeping; scaly, scales bicolorous, central portion blackish, margins light brown, erose, tip hair-like. Fronds 30–55 cm long, erect; petioles and rachises dark brown to blackish, rachises not flexuous, bearing hairs and filiform scales, the hairs reddish, 0.1–0.3 mm long, slightly sulcate adaxially, with two narrow wings; lamina deltate, light green, 2- or 3-pinnate at the base, subcoriaceous, glabrous on both surfaces; pinnules ovate to lanceolate, stalked, articulate, glabrous; veins visible on both laminar surfaces.

COMMENTS

This species until recently identified as *Pellaea flavescens* Fée, but Prado *et al.* (2013) demonstrated that it is *P. viridis*. This species occurs in Brazil and Africa, Madagascar, the Comoros, and the Mascarenes.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Naturalized, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Highland Rocky Field, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Rio de Janeiro, São Paulo)

South (Santa Catarina)

HERBARIUM MATERIAL

J. Prado, 2036, UEC, 155604,  (UEC055640), SP, São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Pellaea viridis* (Forssk.) Prantl



Figure 2: *Pellaea viridis* (Forssk.) Prantl

REFERENCE

- Prado, J., Hirai, R.Y. & Schuettpelz, E. 2017. Taxonomic and nomenclatural notes concerning *Ormopteris* and *Pellaea* (Pteridaceae) in Brazil. *Brittonia* 69(3): 313–315.
- Prado, J., Schuettpelz, E., Hirai, R.Y. & Smith, A.R. 2013. *Pellaea flavescens*, a Brazilian endemic, is a synonym of Old World *Pellaea viridis*. *American Fern Journal* 103(1): 21–26.

Pityrogramma Link

This treatment is composed of the following taxa: *Pityrogramma*, *Pityrogramma calomelanos*, *Pityrogramma chaerophylla*, *Pityrogramma ebenea*, *Pityrogramma trifoliata*.

HOW TO CITE

Prado, J., Hirai, R. Y. 2020. *Pityrogramma* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91962>.

Has as synonym

heterotypic *Trismeria* Feé

DESCRIPTION

Plants terrestrial. Rhizomes erect to decumbent, scaly. Fronds monomorphic, fasciculate or spaced, erect; petiole continuous to the rhizome, glabrous; laminae 1–5-pinnate-pinnatifid to pinnatisect, chartaceous to coriaceous, glabrous or pubescent; pinnae/pinnules with yellow or whitish farina abaxially; veins free. Sori abaxially; sporangia along the veins, paraphyses absent; indusium absent; spores trilete.

COMMENTS

Pityrogramma is represented in Brazil by four species. The genus is easily recognized by the presence of yellow or whitish farina on lamina abaxially. The species grow in open places, in wet soils, and exposed directly to the sun.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

Amazonian Campinarana, Highland Rocky Field, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonally Deciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Coastal Forest (Restinga), Amazonian Savanna

Ocean Islands

Confirmed occurrences

Trindade

Geographic Distribution

Confirmed occurrences

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)

IDENTIFICATION KEY

Key to the Species of *Pityrogramma* in Brazil

1. Laminae 1 or 2-pinnate; pinnae/pinnules entire *P. trifoliata*
 1. Laminae 1–3-pinnate-pinnatifid to pinnatisect; pinnae/pinnules pinnatifid to pinnatisect
 2. Laminae subcoriaceous to coriaceous *P. ebenea*
 2. Laminae membranaceous or chartaceous
 3. Laminae chartaceous; petioles dark brown to black
 *P. calomelonas*
 3. Laminae membraceous; petioles pale to light brown
 *P. chaerophylla*

REFERENCE

- Prado, J. 2004. Criptógamos do Parque Estadual das Fontes do Ipiranga, São Paulo, SP. Pteridophyta: 17. Pteridaceae. Hoehnea 31(1): 39–49.
 Prado, J. 2005. Flora da Reserva Ducke, Amazônia, Brasil. Pteridophyta-Pteridaceae. Rodriguésia 56(86): 85–92.
 Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.
 Prado, J. & Smith, A.R. 2011. (2003) Proposal to conserve the name *Acrostichum ebeneum* with a conserved type. Taxon 60(2): 593–594.

Pityrogramma calomelanos (L.) Link

This treatment is composed of the following taxa: *Pityrogramma calomelanos*, *Pityrogramma calomelanos* var. *aureoflava*, *Pityrogramma calomelanos* var. *calomelanos*.

Has as synonym

basionym *Gymnogramma calomelanos* L.

homotype *Gymnogramme calomelanos* L.

heterotypic *Gymnogramme chaerophylla* Desv.

DESCRIPTION

Leaf: consistency of the blade chartaceous; **blade** 1 to 3 pinnate pinnatifid to pinnate pinnatisect; **petiole** brown dark to black; **pinna or pinnule** pinnatifid/pinnatisect. **Sporangium: indusium** absent. **Spore: type** trilete.

ADDITIONAL DESCRIPTION

Rhizomes erect, ca. 5 mm diam. Scaly, the scales entire, linear-lanceolate, dark brown. Fronds fasciculate, 20–100 cm long.; petioles dark brown to black; laminae 1- or 2-pinnate-pinnatifid (rarely 3-pinnate-pinnatifid), lanceolate to ovate-lanceolate, chartaceous, glabrous, with whitish or yellow farina abaxially; rachises sulcate adaxially; pinnae 1- or 2-pinnate, alternate, petiolulate, base equilateral; pinnules lanceolate to elliptic, base cuneate; terminal pinnule pinnatifid. Sori abaxially; sporangia along the veins, protected by whitish or yellow farina.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

Amazonian Campinarana, Highland Rocky Field, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonally Deciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Coastal Forest (Restinga), Amazonian Savanna

Ocean Islands

Confirmed occurrences

Trindade

Geographic Distribution

Confirmed occurrences

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)

IDENTIFICATION KEY

Key to the Varieties of *Pityrogramma calomelanos* in Brazil

1. Laminae with whitish farina abaxially *P. calomelanos* var. *calomelanos*

1. Laminae with yellow farina abaxially *P. calomelanos* var. *aureoflava*

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Pityrogramma calomelanos (L.) Link var. *calomelanos*

DESCRIPTION

Rhizomes erect, ca. 5 mm diam. Scaly, the scales entire, linear-lanceolate, dark brown. Fronds fasciculate, 20–100 cm long; petioles dark brown to black; laminae 1- or 2-pinnate-pinnatifid (rarely 3-pinnate-pinnatifid), lanceolate to ovate-lanceolate, chartaceous, glabrous, with whitish farina abaxially; rachises sulcate adaxially; pinnae 1- or 2-pinnate, alternate, petiolulate, base equilateral; pinnules lanceolate to elliptic, base cuneate; terminal pinnule pinnatifid. Sori abaxially; sporangia along the veins, protected by whitish farina.

COMMENTS

Pityrogramma calomelanos var. *calomelanos* can be recognized by the laminae with whitish farina abaxially.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Terra Firme Forest, Ombrophylloous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia)

Northeast (Alagoas, Bahia, Ceará, 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)

HERBARIUM MATERIAL

E.P. Heringer, 5608, IBGE, NY, Distrito Federal

Pityrogramma calomelanos var. *aureoflava* (Hook.) Weath. ex Bailey

Has as synonym

basionym *Gymnogramma calomelanos* var. *aureoflava* Hook.

DESCRIPTION

Rhizomes erect, ca. 5 mm diam. Scaly, the scales entire, linear-lanceolate, dark brown. Fronds fasciculate, 20–100 cm long.; petioles dark brown to black; laminae 1- or 2-pinnate-pinnatifid (rarely 3-pinnate-pinnatifid), lanceolate to ovate-lanceolate, chartaceous, glabrous, with yellow farina abaxially; rachises sulcate adaxially; pinnae 1- or 2-pinnate, alternate, petiolulate, base equilateral; pinnules lanceolate to elliptic, base cuneate; terminal pinnule pinnatifid. Sori abaxially; sporangia along the veins, protected by yellow farina.

COMMENTS

Pityrogramma calomelanos var. *aureoflava* can be recognized by the laminae with yellow farina abaxially.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)

Ocean Islands

Confirmed occurrences

Trindade

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

Southeast (Espírito Santo, Minas Gerais, São Paulo)

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

REFERENCE

Tryon, R.M. 1962. Taxonomic fern notes II. *Pityrogramma* (including *Trismeria*) and *Anogramma*. Contributions from the Gray Herbarium of Harvard University 189: 52–76.

Pityrogramma chaerophylla (Desv.) Domin

Has as synonym

basionym *Gymnogramma chaerophylla* Desv.

homotype *Anogramma chaerophylla* (Desv.) Link

DESCRIPTION

Leaf: consistency of the blade membranous; **blade** 1 to 3 pinnate pinnatifid to pinnate pinnatisect; **petiole** yellow to brown pale; **pinna or pinnule** pinnatifid/pinnatisect. **Sporangium: indusium** absent. **Spore: type** trilete.

ADDITIONAL DESCRIPTION

Rhizomes erect, ca. 2–3 mm diam. Scaly, the scales entire, linear-lanceolate, brown. Fronds fasciculate, 5–35 cm long.; petioles pale to light brown; laminae 2- or 3-pinnate-pinnatifid to pinnatisect, lanceolate to ovate-lanceolate, membranaceous, glabrous, with whitish farina abaxially; rachises sulcate adaxially; pinnae 1- or 2-pinnate, alternate, petiolulate, base equilateral; pinnules deltate to rhombic, base cuneate; terminal pinnule pinnatisect. Sori abaxially; sporangia along the veins, protected by whitish farina.

COMMENTS

Pityrogramma chaerophylla was treated for a long time in the genus *Anogramma*, but the molecular data (Nakazato & Gastony, 2003) showed that this species belongs to *Pityrogramma*. The character to recognize this species is the lamina finely divided (2- or 3-pinnate pinnatifid to pinnatisect) plus the whitish farina on the lamina abaxially. This species has delicate fronds (lamina membranaceous).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

A.C. Brade, 12569, RB

REFERENCE

Nakazato, T. & Gastony, G.J. 2003. Molecular phylogenetics of *Anogramma* species and related genera (Pteridaceae: Taenitidoideae). *Systematic Botany* 28(3): 490–502.

Pityrogramma ebenea (L.) Proctor

Has as synonym

basionym *Acrostichum ebeneum* L.

heterotypic *Acrostichum tartareum* Cav.

heterotypic *Pityrogramma tartarea* (Cav.) Maxon

DESCRIPTION

Leaf: consistency of the blade subcoriaceous to coriaceous; **blade** 1 to 3 pinnate pinnatifid to pinnate pinnatisect; **petiole** brown reddish to brown dark; **pinna or pinnule** pinnatifid/pinnatisect. **Sporangium: indusium** absent. **Spore: type** trilete.

ADDITIONAL DESCRIPTION

Rhizomes erect to decumbent, ca. 3 mm diam. Scaly, the scales entire, linear-lanceolate, dark brown. Fronds spaced, 50–80 cm long.; petioles reddish brown to dark brown; laminae 1- or 2-pinnate-pinnatifid, deltate, subcoriaceous to coriaceous, glabrous, with whitish farina abaxially; rachises sulcate adaxially; pinnae 1-pinnate-pinnatifid, alternate, petiolulate, base strongly inaequilateral; pinnules lanceolate to elliptic, base inaequilateral or lobate; terminal pinnule long-lanceolate. Sori abaxially; sporangia along the veins, protected by whitish farina.

COMMENTS

This species can be recognized by the lamina subcoriaceous to coriaceous, base of the pinnae strongly inaequilateral, and terminal pinnule long-lanceolate. It occurs in the open places in the fields in central Brazil among grasses.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu)


Geographic Distribution

Confirmed occurrences

Central-west (Distrito Federal)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

B.A.S. Pereira, 535, US, IBGE, RB, 45857,  (RB00640390)

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Prado, J. & Smith, A.R. 2011. (2003) Proposal to conserve the name *Acrostichum ebeneum* with a conserved type. Taxon 60(2): 593–594.

Pityrogramma trifoliata (L.) R.M.Tryon

Has as synonym

basionym *Acrostichum trifoliatum* L.

homotype *Gymnogramma trifoliata* (L.) Desv.

homotype *Trismeria trifoliata* (L.) Diels

DESCRIPTION

Leaf: consistency of the blade chartaceous; **blade** 1 pinnate/or/2 pinnate; **petiole** brown dark to black; **pinna or pinnule** entire or 1 pinnate. **Sporangium: indusium** absent. **Spore: type** trilete.

ADDITIONAL DESCRIPTION

Rhizomes erect, ca. 5 mm diam. Scaly, the scales entire, linear-lanceolate, dark brown. Fronds spaced, 50–80 cm long.; petioles dark brown to black; laminae 1- or 2-pinnate, narrow-lanceolate, chartaceous, glabrous, with yellow or whitish farina abaxially; rachises sulcate adaxially; pinnae entire or 1-pinnate, with three pinnules only, alternate, petiolulate, base equilateral; pinnules narrow-lanceolate to linear, base cuneate; terminal pinnule similar to the others. Sori abaxially; sporangia along the veins, protected by yellow or whitish farina.

COMMENTS

Pityrogramma trifoliata is easily to be distinguished by the lamina with pinnae entire to 1-pinnate, when pinnate with only three pinnules. The lamina is covered abaxially with yellow or whitish farina.

Life Form

Herb

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)

Geographic Distribution

Confirmed occurrences

North (Acre)

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

J.M. Pires, 9912, UB

REFERENCE

Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.

Polytaenium Desv.

This treatment is composed of the following taxa: *Polytaenium*, *Polytaenium cajenense*, *Polytaenium citrifolium*, *Polytaenium feei*, *Polytaenium guayanense*, *Polytaenium lineatum*.

HOW TO CITE

Schuettpelz, E., Prado, J., Hirai, R.Y. 2020. *Polytaenium* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91970>.

Has as synonym

heterotypic *Anetium* (Kunze) Splitg.

heterotypic *Antrophyum* Kaulf.

DESCRIPTION

Plants epiphytic or rupicolous. Rhizome dorsiventral, long to short-creeping; leaf arrangement distichous. Leaves simple; costate; venation pluriseriolate areolate. Sori linear, along areolate veins and, in one species, sporangia also scattered between veins; soral paraphyses absent. Spores trilete.

COMMENTS

Characterized by dorsiventral rhizomes with clathrate scales; simple and entire leaves; areolate venation, linear sori, along reticulate veins and, in one species, sporangia also distributed between veins, paraphyses absent, and spores trilete. About ten species in tropical America.

Polytaenium includes *Anetium* Splitg., a genus until recently considered distinct (Schuettpelz *et al.* 2016).

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Alagoas, Bahia, Maranhão, Pernambuco)

Central-west (Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

IDENTIFICATION KEY

Key to the species of *Polytaenium* in Brazil

1. Rhizomes long-creeping; sori on and between veins *P. citrifolium*

1. Rhizomes short-creeping; sori only on the veins
2. Laminae oblanceolate to oblong; areoles oblique to the costa
3. Sporangia in grooves; laminae dark greenish or blackish when dry, usually oblanceolate
..... *P. cajenense*
3. Sporangia superficial; laminae yellowish-green when dry, usually oblong
..... *P. guayanense*
2. Laminae linear to linear-elliptic; areoles parallel to subparallel to the costa
4. Sori long, continuous, deeply immersed in the laminar tissue, and parallel to the costa
..... *P. lineatum*
4. Sori short, discontinuous, superficial or slightly immersed in the laminar tissue, and
subparallel to the costa *P. feei*

REFERENCE

- PPG I. 2016. A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54(6): 563–603.
- Schuettpelz, E., Chen, C.W., Kessler, M., Pinson, J.B., Johnson, G., Davila, A., Cochran, A.T., Huiet, L. & Pryer, K.M. 2016. A revised generic classification of vittarioid ferns (Pteridaceae) based on molecular, micromorphological, and geographic data. *Taxon* 65(4): 708–722.

Polytaenium cajenense (Desv.) Benedict

Has as synonym

basionym *Hemionitis cajenensis* Desv.

DESCRIPTION

Leaf: petiole greenish/to/brownish/winged; **blade** oblanceolate. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** soral line oblique/to/costa/deep/in/groove. **Spore:** not chlorophylate trilete.

ADDITIONAL DESCRIPTION

Plants epiphytic, sometimes rupicolous. Rhizome short-creeping, scaly, the scales linear-lanceolate, brown. Stipe brown to green abaxially, when dry light brown to dark, conspicuously winged. Laminae 10–35 cm long, 1–4 cm wide, oblanceolate, gradually narrowed only towards the base, dark greenish or blackish when dry, margins flat; venation areolate, 3–6 series of areolas, oblique between the costa and lamina margins. Sori linear along the veins, discontinuous, immersed in the laminar tissue.

COMMENTS

Polytaenium cajenense can be distinguished by oblanceolate and when dry dark greenish or blackish laminae, gradually narrowed towards the base.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Alagoas, Bahia, Pernambuco)

Central-west (Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

C. Ferreira, 11688, RB, 46628,  (RB00710764), NY, Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Polytaenium citrifolium (L.) Schuettp.

Has as synonym

basionym *Acrostichum citrifolium* L.

homotype *Anetium citrifolium* (L.) Splitg.

homotype *Antrophyum citrifolium* (L.) Fée

DESCRIPTION

Leaf: petiole absent or very short; **blade** elliptic. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** **soral line** on the veins and scattered on the laminar tissue. **Spore:** not chlorophylate trilete.

ADDITIONAL DESCRIPTION

Plants epiphytic, usually pendant, rarely rupicolous. Rhizome long-creeping, scaly, the scales lanceolate, light brown. Laminae 10–100 cm long, (usually 10–25 cm), 4.0–5.5 cm wide, elliptic, papyraceous, fleshy when alive, margins flat or slightly revolute or undulate; veins areolate, indistinct to obscure, many series of areolas between the costa and the lamina margins, ending in free veins near the margin. Sori isolated or in small clusters scattered on the veins and on the laminar tissue, superficial.

COMMENTS

Polytaenium citrifolium can be distinguished in having long-creeping rhizomes and sori along and between veins.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia)


Northeast (Alagoas, Bahia, Pernambuco)

Central-west (Mato Grosso)

Southeast (Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

G.T. Prance, 7426, NY, INPA, 24225,  (INPA0024225), MG, Acre

REFERENCE

Schuettpelz, E., Chen, C.W., Kessler, M., Pinson, J.B., Johnson, G., Davila, A., Cochran, A.T., Huiet, L. & Pryer, K.M. 2016. A revised generic classification of vittarioid ferns (Pteridaceae) based on molecular, micromorphological, and geographic data. *Taxon* 65(4): 708–722.

Polytaenium feei (W.Schaffn. ex Fée) Maxon

Has as synonym

basionym *Antrophyum feei* W.Schaffn. ex Fée

DESCRIPTION

Leaf: petiole absent or very short; **blade** linear/to/linear - elliptic. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** soral line short/shallowly/in/groove. **Spore:** not chlorophylate trilete.

ADDITIONAL DESCRIPTION

Plants epiphytic, sometimes rupicolous. Rhizomes short-creeping, lanceolate, brown, iridescent. Fronds sessile; laminae 15–40 cm long, 0.8–2 cm wide, linear to linear-elliptical, gradually narrowed to the apex and base, membranaceous, margins flat or slightly revolute; veins areolate, 3 or 4(5) series of areolas between the costa and the margins of the laminae, subparallel to the coast. Sori short, linear, on the veins, discontinuous, superficial or slightly immersed in the laminar tissue.

COMMENTS

Polytaenium feei can be recognized by the fronds with 15–40 cm in length, short, linear, and superficial or slightly immersed sori, and 3–5 series of areoles subparallel between the costa and lamina margins.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Pernambuco)

Southeast (São Paulo)

South (Santa Catarina)

HERBARIUM MATERIAL

Válio, I.M., 102, SP, SPF

REFERENCE

Nonato, F.R. & Windisch, P.G. 2004. Vittariaceae (Pteridophyta) do Sudeste do Brasil. *Revista Brasileira de Botânica* 27(1): 149–161.

Polytaenium guayanense (Hieron.) Alston

Has as synonym

basionym *Antrophyum guayanense* Hieron.

DESCRIPTION

Leaf: petiole yellowish/narrowly/winged; **blade** oblong/elliptic. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** soral line oblique/to/costa/shallowly/in/groove. **Spore:** not chlorophylate trilete.

ADDITIONAL DESCRIPTION

Plants epiphytic. Rhizome short-creeping, scaly, the scales narrow lanceolate, brown. Stipe yellowish, short winged. Laminae 5–26 cm long, 1.0–3.5 cm wide, oblong (or less frequent elliptic) gradually narrowed only towards the base, yellowish-green when dry, margins flat or slightly revolute; venation areolate, 5 or 6 series of areolas, oblique between the costa and lamina margins. Sori linear along the veins, discontinuous, superficial or slightly immersed in the laminar tissue.

COMMENTS

Polytaenium guayanense can be distinguished by its oblong (or less frequent elliptic) and when dry yellowish-green laminae, gradually narrowed towards the base.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Maranhão)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

J. Prado, 1248, SP, HPZ, RB, 440045,  (RB00710838), Acre

REFERENCE

Prado, J. & Moran, R.C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230–263.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Polytaenium lineatum (Sw.) J.Sm.

Has as synonym

basionym *Hemionitis lineata* Sw.

homotype *Antrophyum lineatum* (Sw.) Kaulf.

DESCRIPTION

Leaf: petiole greenish/to/brownish/winged; **blade** linear/to/linear - elliptic. **Type of sporangium: leptosporangium** pedicellate/glabrous. **Sporangium: soral line** parallel/to/costa/long/deep/in/groove. **Spore: not chlorophylate** trilete.

ADDITIONAL DESCRIPTION

Plants epiphytic, sometimes rupicolous. Rhizomes scaly, the scales lanceolate, brown. Stipes brown to light green abaxially, when darker dry, strongly winged. Laminae 10–40 cm long, 0.4–3.0 cm wide, linear to linear-elliptical, narrowed gradually at both ends, coriaceous, margins flat or slightly revolute and repand; veins areolate, 2–4 series of areoles between the costa and the frond margins, parallel to the costa. Sori linear along veins, continuous, 1–4 lines between the costa and the frond margins, deeply immersed in the laminar tissue, into grooves often with thin wings at margins.

COMMENTS

Polytaenium lineatum can be distinguished by linear to linear-elliptical fronds, gradually narrowing to the apex and base, veins areolate, 2–4 series of areoles parallel to the costa, and linear sori along the veins into grooves.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

P.H. Labiak, 4477, RB (RB00533212), Rio de Janeiro

REFERENCE

Nonato, F.R. & Windisch, P.G. 2004. Vittariaceae (Pteridophyta) do Sudeste do Brasil. *Revista Brasileira de Botânica* 27(1): 149–161.

Pteris L.

This treatment is composed of the following taxa: *Pteris*, *Pteris altissima*, *Pteris angustata*, *Pteris baurita*, *Pteris brasiliensis*, *Pteris congesta*, *Pteris cretica*, *Pteris decurrens*, *Pteris deflexa*, *Pteris denticulata*, *Pteris grandifolia*, *Pteris haenkeana*, *Pteris lechleri*, *Pteris leptophylla*, *Pteris limae*, *Pteris multifida*, *Pteris pearcei*, *Pteris podophylla*, *Pteris propinqua*, *Pteris pungens*, *Pteris quadriaurita*, *Pteris schwackeana*, *Pteris splendens*, *Pteris tripartita*, *Pteris vittata*.

HOW TO CITE

Prado, J., Hirai, R.Y. 2020. *Pteris* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91978>.

Has as synonym

heterotypic *Litobrochia* C.Presl
heterotypic *Parkeria* Hook.

DESCRIPTION

Plants terrestrial or rupicolous. Rhizomes short-creeping to erect, scaly. Fronds monomorphic to subdimorphic (the fertile frond with segments narrower than the sterile frond), erect to pendent; petiole continuous with the rhizome, glabrous to pubescent; laminae 1–5-pinnate-pinnatifid or pinnatisect; pinnae entire to 4-pinnate-pinnatifid to pinnatisect, continuous to the rachis or articulate; rachis sulcate adaxially; venation free or areolate, areoles without included veins. Sori marginal, with paraphyses; indusium (pseudoindusium) formed by the revolute margin of the lamina, without veins, glabrous; sporangia formed on the abaxial lamina surface on a collecting vein; spores trilete.

COMMENTS

Pteris is represented in Brazil by 24 species. Most of them occur in forest along the east coast of the country. The Atlantic Rainforest is vegetation with the majority of the species (17 species).

The genus is recognized by the sori formed on the margin of the lamina with paraphyses. The indusium is formed by the revolute margins of the lamina. All species in Brazil has lamina at least one time pinnate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

Anthropic area, Amazonian Campinarana, Terra Firme Forest, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)
Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, 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)

IDENTIFICATION KEY

Key to the Species of *Pteris* in Brazil

1. Venation free
2. Median pinnae entire
3. Laminae 2-pinnate-pinnatifid *P. multifida*
3. Laminae 1-pinnate
4. Proximal pinnae roundish or auriculate or sometimes vestigial, entire ...
..... *P. vittata*
4. Proximal pinnae linear-lanceolate, furcate or 2-pinnate *P. cretica*
2. Median pinnae pinnatifid
5. Proximal pinnae furcate or rarely 1-pinnate-pinnatifid
6. Veins arising from the costae and costules; petioles distantly muricate or spinulose *P. pungens*
6. Veins arising from the costules or near its base; petioles smooth
..... *P. quadriaurita*
5. Proximal pinnae 1- or 2-pinnate-pinnatifid
7. Segment margins serrulate to dentate *P. deflexa*
7. Segment margins denticulate-ciliate *P. congesta*
1. Venation partially areolate or areolate
8. Venation partially areolate (all areoles joined to the costa and/or costule base, with veins free between those areoles and the pinna margin)
9. Proximal pinnae furcate; one single large and elongate areole along the costa between two adjacent costules and free veins arising from the costule
..... *P. biaurita*
9. Proximal pinnae 1-pinnate-pinnatifid or 2-pinnate-pinnatifid; two or more areoles along the costa between two adjacent costules (areoles joined the costule)
10. Proximal pinnae 1-pinnate-pinnatifid; awns lacking *P. leptophylla*
10. Proximal pinnae 2-pinnate-pinnatifid; awns present *P. tripartita*
8. Venation almost completely areolate (areoles joined to the costa and costule, and to each other, with veins free only near the pinna margin)
11. Laminae 1-pinnate or 2-pinnate, pinnae and pinnules entire
12. Laminae rarely 2-pinnate (most specimens 1-pinnate with entire pinnae); proximal pinna 1-pinnate *P. haenkeana*
12. Laminae 1-pinnate; proximal pinna entire or furcate
13. Areoles elongate, perpendicular to the costae, with shorter areoles near the pinna margins *P. grandifolia*
13. Areoles approximately isodiametric and oblique to the costae
14. Petioles conspicuously hairy of dark brown to reddish scales, surface scabrous; pinnae oblong to linear *P. schwackeana*
14. Petioles glabrous or with sparse whitish hairs, surface rugose; pinnae narrowly lanceolate to oblong *P. splendens*
11. Laminae 1- or 2-pinnate-pinnatifid or 4- or 5-pinnate pinnatifid; pinnae and pinnules deeply pinnatifid to pinnatisect, or pinnatifid only on the basiscopic side
15. Laminae 4- or 5-pinnate-pinnatifid; petioles with reddish brown hairs
..... *P. podophylla*
15. Laminae 1- or 2-pinnate-pinnatifid; petioles with scales and hairs, or only sparse, whitish hairs, or glabrous
16. Costules awned at the base on the adaxial surface
17. One single areole between two adjacent costules *P. propinqua*
17. Two or three areoles between two adjacent costules ... *P. altissima*
16. Costules lacking awns
18. Pinnae mostly and regularly deeply pinnatifid
19. More than two areoles joined to the costa between two adjacent costules
20. Petioles conspicuously hairy, with dark brown scales and

- whitish hairs; three or four areoles joined to the costa between two adjacent costules *P. limae*
20. Petioles glabrous; more than four areoles joined to the costa between two adjacent costules *P. angustata*
19. Two areoles joined to the costa between two adjacent costules
21. Laminae conspicuously sericeous *P. lechleri*
21. Laminae with sparse, whitish hairs or usually glabrous ...
..... *P. decurrens*
18. Pinnae mostly entire or irregularly pinnatifid
22. Rachises narrowly alate, the wings bearing a thickened margin
..... *P. denticulata*
22. Rachises non-alate.
23. Pinnae linear to narrowly lanceolate; pinnae with irregular segments at the basisopic side *P. pearcei*
23. Pinnae long-lanceolate to deltate; pinnae with regular segments at the basisopic side *P. brasiliensis*

REFERENCE

- Prado, J. 1993. New name and new status in Brazilian *Pteris* L. (Pteridaceae). American Fern Journal 83(4): 131–134.
- Prado, J. 1995. Two lectotypifications and one synonymy in Brazilian *Pteris* L. (Pteridaceae). Hoehnea 22(1/2): 39–40.
- Prado, J. 1996. A survey of types in *Pteris* L. Bradea 8(3): 11–20.
- Prado, J. 2004. Criptógamos do Parque Estadual das Fontes do Ipiranga, São Paulo, SP. Pteridophyta: 17. Pteridaceae. Hoehnea 31(1): 39–49.
- Prado, J. 2005. Flora da Reserva Ducke, Amazônia, Brasil. Pteridophyta-Pteridaceae. Rodriguésia 56(86): 85–92.
- Prado, J. 2005. Pteridaceae. Pp. 184–215. In: T.B. Cavalcanti & A.E. Ramos (Org.). Flora do Distrito Federal, Brasil, v. IV. 1^a ed. Brasília: Embrapa Recursos Genéticos e Biotecnologia.
- Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.
- Zhang, L., Rothfels, C.J., Ebihara, A., Schuettpelz, E., Le Péchon, T., Kamau, P., He, H., Zhou, X.-M., Prado, J., Field, A., Yatskievych, G., Gao, X.-F. & Zhang, L.-B. 2015. A global plastid phylogeny of the brake fern genus (Pteridaceae) and related genera in the Pteridoideae. Cladistics 31(4): 406–423.

Pteris altissima Poir.

Has as synonym

heterotypic *Pteris macroptera* Link

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** 2/3; **pinnae basal** 1 to 2 pinnate pinnatifid; **pinnae median** pinnatifid; **rachis** winged; **venation** areolate. **Sporangium: indusium** present/false. **Spore: type** trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 4 cm thick, short, horizontal to ascendent, woody, densely clothed at apex with small, shiny, dark brown, lanceolate scales c. 0.3 cm long, central portion with a sclerotic stripe, margins thin, hyaline, with hairs. Fronds 70 cm to 2 (rarely 3) m x c. 45 cm, monomorphic to subdimorphic (fertile segments narrower than sterile segments), erect; petioles 30–100 x 0.3–0.4 cm, 3–4-sulcate on the adaxial surface, light brown at base and yellowish in the median and distal portions, with scales on the base, glabrescent, hairs whitish; laminae chartaceous to subcoriaceous, deltate, 2-pinnate-pinnatifid at base, 1-pinnate-pinnatifid in the distal portion, 40 cm to 1.8 m x c. 45 cm, with 3–12 pairs of pinnae, these opposite to subopposite, long-elliptic to lanceolate, acute, sessile or petiolulate, bases cuneate or asymmetric; costae sulcate on the adaxial surface and prominent on the abaxial surface, glabrescent, hairs whitish, sparse; proximal pinnae 20–25 x 10–30 cm, 1-pinnate-pinnatifid, rachises 25 cm to 1.4 m x 0.2–0.3 cm, 3- or 4-sulcate on the adaxial surface, partially winged around the region of the pinnae contact, glabrescent, hairs whitish, sparse; middle pinnae 15–30 x 5–9 cm, pinnatifid, diverging from the rachises at an acute angle, distal pinnae 11–20 x 3–7 cm, pinnatifid, towards frond apex; apical pinna 15–30 x 6–18 cm, deeply pinnatifid; segments subopposite to alternate, deltate, elongate or long-lanceolate or falcate, margins entire, smooth, dentate at apex of the segments; costules awned at base on the adaxial surface and prominent on the abaxial surface, terminal segment larger than the rest, apices tapering, sometimes caudate; sinuses between the segments roundish to biangulate; venation areolate, 2 or 3 elongate areoles joined to the costa between two adjacent costules, free veins near the margins of the segments. Sori interrupted in the sinuses and absent at apex of the segments; indusia greenish or brownish, margin entire.

COMMENTS

It is easily distinguished from related species by fronds that are 2-pinnate-pinnatifid at base and 1-pinnate-pinnatifid in the distal portion, by areolate veins joined to the costa (2 or 3 large areoles between two adjacent costules) and costule, and by having awns at the base of costules on the adaxial surface.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Rondônia, Roraima)

Northeast (Alagoas, Pernambuco)

Central-west (Goiás)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

A.C. Brade, 21366, K, US, RB, 46739,  (RB00640574)

G.T. Prance, 10503, K, US, Amazonas

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris angustata (Fée) C.V.Morton

Has as synonym

basionym *Litobrochia angustata* Fée

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** 4/or/more than/5; **pinnae basal** 1 to 2 pinnate pinnatifid; **pinnae median** pinnatifid; **rachis** winged; **venation** areolate. **Sporangium: indusium** present/false. **Spore: type** trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 1.0–1.5 cm thick, decumbent, short, woody, clothed at apex with lanceolate, shiny, dark brown, scales 0.3–1.0 cm long, margins thin, hyaline. Fronds 40 cm to 1.2 m x 30–50 cm, monomorphic to subdimorphic (fertile pinnae narrower than sterile pinnae), erect; petioles 15–90 x 0.4–0.8 cm, 2- or 3-sulcate on the adaxial surface, dark brown at base, yellowish in the median and distal portions, with scales at base, glabrous, surface smooth; laminae chartaceous, deltate, tripartite, 1-pinnate-pinnatifid or (sometimes 2-pinnate-pinnatifid), 30–70 x 30–50 cm, with 2 or 3 pairs of pinnae, these deltate, opposite to subopposite, deeply pinnatifid, sessile or short-petiolulate, bases decurrent on the rachises, apices acute, margins entire to dentate, glabrous; costae sulcate on the adaxial surface and prominent on the abaxial surface; pair of proximal pinnae 20–30 x 15–30 cm, sometimes pinnatisect at the basiscopic side; rachises 10–35 x 0.1–0.3 cm, 1-sulcate on the adaxial surface, winged at apex; middle pinnae 14–28 x 2–19 cm, diverging from the rachises at an acute angle, distal pinnae 12–25 x 1.5–16.0 cm towards frond apex, bases decurrent on the rachises; apical pinna 21–33 x 15–20 cm, deeply pinnatifid, base long-decurrent on the rachises; segments alternate, elongate, linear to lanceolate, spaced and towards pinna apex; costules prominent on the abaxial surface, apices tapering, or roundish, or obtuse to acute; sinuses between the segments broad, roundish or biangulate; venation areolate, 4 or 5 large areoles joined to the costa and costule, reducing in size towards the margins, free veins arising from the areoles and with tip clavate near the margins. Sari interrupted in the sinuses and absent at apex of the segments; indusia yellowish, margin entire.

COMMENTS

Pteris angustata is easily recognized by its tripartite, 1-pinnate-pinnatifid (sometimes 2-pinnate-pinnatifid) fronds, wide sinus between the segments, and areolate venation with several areoles (4–8 or more) between two adjacent costules. These two last features distinguish it from *P. altissima* Poir. a related species that occurs in the same habitat.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

I. Mexia, 4244, P, BM, US, FURB, 18486,  (FURB00298), Minas Gerais
A.C. Brade, 8244, US, BM, P

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris biaurita L.

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** 1; **pinnae basal** furcate; **pinnae median** pinnatifid; **rachis** not/winged; **venation** partly adnate areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 4 cm thick, decumbent or erect, short and compact, densely clothed at apex with small, lanceolate scales 0.1–3.0 cm long, with dark brown central portion, shiny, margins hyaline, with short hairs. Fronds 40 cm to 1.8 m x 30–60 cm, monomorphic, erect; petioles 15–90 x 0.2–0.3 cm, 3-sulcate on the adaxial surface, light brown at base and yellowish in the median and distal portions, with scales on the base, glabrous, surface smooth; laminae chartaceous, deltate, 1-pinnate-pinnatifid (rarely 2-pinnate-pinnatifid), 25 cm to 1.4 m x 30–60 cm, with 6–15 pairs of pinnae, these opposite to subopposite, oblong-lanceolate to lanceolate, sessile or short-petiolulate, bases asymmetric; costae sulcate on the adaxial surface and prominent on the abaxial surface; pair of proximal pinnae furcate, pinnatifid, basiscopic portion of the fork 8–16 cm x c. 2 cm, acroscopic portion of the fork 10–20 x 2–3 cm; rachises 15 cm to 1.2 m x 0.2 cm, 1-sulcate on the adaxial surface, glabrous; middle pinnae 10–27 x 2.0–6.5 cm, pinnatifid, diverging from the rachises at an acute angle; distal pinnae, 5–13 x 1.5–2.5 cm towards frond apex; apical pinna 10–18 x 2–5 cm, deeply pinnatifid; segments alternate, narrow oblong to slightly falcate, apices acute to obtuse, margins entire, smooth, costules awned at the base on the adaxial surface, prominent on the abaxial surface; apical segment larger than the rest, tapering, sinuses between the segments acute or roundish; venation partially areolate, one single and elongate areole joined to the costae between two adjacent costules, free veins arising from the areoles, simple or furcate, nearly reaching margins of the segments. Sori interrupted in the sinuses and absent at apex of the segments; indusia pale, margin entire.

COMMENTS

Pteris biaurita is characterized by having 1-pinnate-pinnatifid fronds, a pair of furcate proximal pinnae, and by partially areolate venation, with one large areole joined to the costa between two adjacent costules.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará, Rondônia)


Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco)

Central-west (Goiás, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Santa Catarina)

HERBARIUM MATERIAL

Eugênio, J., 22, US, IPA, RB, 41568,  (RB00640591), Ceará
Pickel, B.J., 2336, US, IPA

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris brasiliensis Raddi

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** more than/5; **pinnae basal** furcate/1 to 2 pinnate pinnatifid; **pinnae median** entire/pinnatifid; **rachis** not/winged; **venation** partly adnate areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 2 cm thick, decumbent to erect, short and compact, clothed at apex with small, light brown to blackish scales 0.1–0.3 cm long, margins with hairs. Fronds 28.0–86.5 x 24–56 cm monomorphic to subdimorphic (fertile pinnae narrower than sterile pinnae): erect to scandent; petioles 21.5–78.0 x 0.2–0.4 cm, deeply 1-sulcate on the adaxial surface, light brown to dark brown, with scales on the base, glabrous, surface smooth; laminae coriaceous (rarely chartaceous), deltate, 1-pinnate-pinnatifid or sometimes 2-pinnate-pinnatifid, 21.5–39.5 x 24–56 cm, with 2–12 pairs of pinnae, these entire, pinnate or pinnatifid, opposite, subopposite or alternate, long-lanceolate to deltate, sessile or shortly petiolulate, bases asymmetric or shortly angustate, apices acute to tapering, margins denticulate; costae sulcate on the adaxial surface and prominent on the abaxial surface; pair of proximal pinnae furcate or pinnatifid or 1-pinnate, pinnules with the same form as the pinnae; rachises 6.5–31.5 x 0.1–0.2 cm, deeply 1-sulcate on the adaxial surface, glabrous; middle pinnae 12.5–21.0 x 1–7 cm, entire or pinnatifid generally at basiscopic side, diverging from the rachises at an acute angle; distal pinnae 6–13 x 0.9–2.5 cm towards frond apex, sometimes falcate, apical pinna 6–18 x 1–3 cm, bases acute or frequently confluent with the distal pinnae; segments alternate, deltate, apices acute to tapering, with denticulate margins; costule prominent on the abaxial surface; sinuses between the segments roundish or acute; venation areolate joined to the costa and costule, with large areoles reducing in size toward margins of the laminae, free veins arising from the areoles and with tip clavate. Sori interrupted in the sinuses and absent at base and apex of the pinnae and/or segments; indusia pale, margin entire.

COMMENTS

Pteris brasiliensis is closely related to *P. denticulata* Sw. and *P. pearcei* Baker in the similarity of its 1-pinnate-pinnatifid (or sometimes 2-pinnate-pinnatifid) frond architecture, its pinnae forms varying from entire to pinnatifid (usually on basiscopic side), and the denticulate margins of its segments. It differs from *P. denticulata* in that the latter always has a winged rachis and chartaceous lamina, and from *P. pearcei* in that the latter usually has linear-lanceolate pinnae.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

J. Prado, 2112, UEC, NY, SP, RB, 31627,  (RB00641377), São Paulo

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris congesta J.Prado

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** without areole; **pinae basal** 1 to 2 pinnate pinnatifid; **pinae median** pinnatifid; **rachis** winged; **venation** free. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 0.5–1.0 cm thick, short, creeping to erect, densely clothed at apex with short, light brown to dark brown, lanceolate scales, 0.5–1.0 mm long, margins with hairs, apices tapering. Fronds 15–35 x 7–20 cm, monomorphic to subdimorphic (fertile segments narrower than sterile segments), erect; petioles 10–30 x c. 0.1 cm, 1-sulcate on the adaxial surface, dark brown at base and yellowish at median and distal portions, with scales at base, larger than the lamina, glabrous, surface smooth; laminae chartaceous, deltate, 2-pinnate-pinnatifid (sometimes 3-pinnate-pinnatifid at base), 8–20 x 7–20 cm, with 5–7 pairs of pinnae (crowded), these pinnate to pinnatifid, opposite to subopposite, petiolulate to sessile, petiolules winged, long-lanceolate, bases decurrent, apices tapering, margins denticulate-ciliate, costae sulcate on the adaxial surface and prominent on the abaxial surface; proximal pinnae 5–13 x 3–10 cm, 1- or 2-pinnate-pinnatifid, pinnules deeply pinnatifid, sometimes pinnatisect; rachises 4–10 x 0.1–0.2 cm, 1-sulcate on the adaxial surface, winged, glabrous; middle pinnae 4–8 x 1–3 cm, pinnatifid, diverging from the rachises at an acute angle, distal pinnae 3–5 x 0.7–1.2 cm, pinnatifid, towards frond apex; apical pinna 4–10 x 1.5–3 cm, deeply pinnatifid; segments linear, alternate, costules prominent on the abaxial surface and awned at the base on the adaxial surface, apices denticulate-ciliate, sinuses between the segments acute to biangulate; venation free, veins simple or sometimes furcate, projecting like cilia at margins of pinnae and/or segments. Sori interrupted in the sinuses and absent at apex of the segments; indusia pale, margin entire.

COMMENTS

This species has 3-pinnate-pinnatifid fronds (crowded) with short segments, pinna margins and/or segments conspicuously denticulate-ciliate, free venation, with free veins projecting as cilia at the segment margins, and a winged rachises.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

Southeast (Espírito Santo, Rio de Janeiro)

HERBARIUM MATERIAL

Occhioni, P., 3384, CESJ, RB

L.B. Smith, 1353, RB, CESJ

R. Marquete, 2977, RB, 353413,  (RB00640671)

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris cretica L.

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate; **number of the areole between 2 costule adjacent** without areole; **pinnae basal** entire/furcate; **pinnae median** entire; **rachis** not/winged; **venation** free. **Sporangium: indusium** present/false. **Spore: type** trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 1 cm thick, short-creeping, densely clothed at apex with short, lanceolate, dark brown scales 0.1–0.3 cm long, margins entire and smooth. Fronds 17–84 x 9–22 cm, subdimorphic (fertile pinnae narrower than sterile pinnae), erect; petioles larger than the lamina, 22–60 x 0.1–0.2 cm, 1-sulcate on the adaxial surface, glabrous, yellowish to light brown, with scales at base, surface smooth; laminae subcoriaceous, oval or lanceolate, 1-pinnate-impairipinnate (rarely 2-pinnate), sometimes the sterile fronds with only 3 pinnae, 10–30 x 9–22 cm, with 1–6 pairs of pinnae, these entire, linear lanceolate or bifurcate, or furcate, opposite to subopposite, sessile or short-petiolulate, bases inequilateral, apices acute to obtuse, margins serrulate to serrate at apex, costae sulcate on the adaxial surface and prominent on the abaxial surface, proximal pinnae 7–20 x 1–3 cm, entire, furcate or bifurcate, rachises 2–17 x c. 0.1 cm, 1-sulcate on the adaxial surface, glabrescent, with short, brown hairs on the abaxial surface; middle pinnae 7–15 x 0.8–1.8 cm, entire, diverging from rachises at an acute angle, distal pinnae 6–11 x 0.5–1.5 cm towards frond apex; apical pinna 9–20 x 0.7–2.0 cm, larger than the rest; venation free, veins simple or furcate, reaching margins of the pinna, clearly visible on the abaxial surface. Sori absent at base and apex of the pinnae; indusia whitish, entire.

COMMENTS

Pteris cretica is a most distinct plant in having 1-pinnate fronds, subcoriaceous lamina, proximal pinnae varying from entire to 2-furcate; free venation, simple or furcate veins, and serrate to serrulate pinna margins. Middle pinnae vary from sessile to short-petiolulate and proximal pinnae from entire to 2-furcate. The indument is variably deciduous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Naturalized, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types


Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

Bory, s.n., RB, 117705,  (RB00635465)

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris decurrens C.Presl

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent 2;** **pinae basal** furcate; **pinae median** pinnatifid; **rachis** winged; **venation** partly adnate areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 1 cm thick, erect, compact and short, woody, densely clothed at apex with lanceolate scales 0.1–0.6 cm long, base lobate, central portion with shiny, dark brown, stripe, margins thin, hyaline, with long or short hairs. Fronds 60 cm to 2 m x 20–80 cm, monomorphic, erect; petioles 25–80 x 0.2–0.3 cm, deeply 2- or 3-sulcate on the adaxial surface, dark brown to light brown, sometimes yellowish, with scales on the base, glabrous or sparsely pubescent, hairs whitish, short, surface smooth; laminae chartaceous, sparsely pubescent, hairs on the rachises, costae and costules usually glabrous, tripedate, deltate, 1-pinnate-pinnatifid (rarely 2-pinnate-pinnatifid), 30–80 x 20–70 cm, with 3–6 pairs of pinnae, these opposite to subopposite, oblong-lanceolate to elliptic, sessile or petiolulate (proximal pinnae), bases of the basicopic side decurrent on the rachises, costae sulcate on the adaxial surface and prominent on the abaxial surface; pair of the proximal pinnae furcate, pinnatifid, basicopic portion of the fork 12–20 x 2.0–4.5 cm, slightly towards frond base, acroscopic portion of the fork 15–30 x 3–8 cm; rachises 15–60 x 0.1–0.2 cm, 1-sulcate on the adaxial; middle pinnae 15–30 x 3–7 cm diverging from the rachises at an acute angle; distal pinnae 10–20 x 2.0–4.5 cm towards frond apex, bases copiously decurrent on the rachises; apical pinna 10–25 x 3–7 cm, deeply pinnatifid, base long-decurrent on the pair of distal pinnae; proximal segments of the shorter pinnae shorter than the median segments, acute or obtuse, alternate, linear to lanceolate, slightly falcate, margins entire in the basal and median regions, dentate at the apex of the segments; apical segment lobate or pinnatifid, costules prominent on the abaxial surface, sinuses between the segments roundish, sometimes biangulate; venation partially areolate, one large and elongate areole and another small areole joined to the costa, between two adjacent costules, areolate along of the costules and with free veins arising from the areoles near margins of the segments, apex of the veins slightly clavate, in the fertile fronds the apex of the veins joined by a commissural vein. Sori interrupted in the sinuses and absent at apex of the segments; indusia pale, margin entire.

COMMENTS

Pteris decurrens is recognized by the base of the distal and apical pinnae being conspicuously decurrent on the rachis, 1-pinnate-pinnatifid fronds (proximal pinna furcate), and its areolate venation, with a large and elongate areole and another small areole between two adjacent costules. Morphological variations can be found on the base and size of the proximal pinnae, which have or have not a short, winged petiolule. The terminal segment of the middle pinnae also varies in form and size, from short (obtuse or roundish and margin entire), elongate (long-acute and margin shortly dentate), to caudate, with apex falcate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

HERBARIUM MATERIAL

J. Prado, 376, 163620,  (UEC019040), SP, Rio de Janeiro
A.C. Brade, 8405, HB

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris deflexa Link

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** without areole; **pinnae basal** 1 to 2 pinnate pinnatifid; **pinnae median** pinnatifid; **rachis** not/winged; **venation** free. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 1–8 cm thick, short and compact, creeping to erect, woody, densely clothed at apex with lanceolate scales 0.2–0.5 cm long, central portion with sclerotic, dark brown stripe, margins hyaline, with hairs. Fronds 5 cm to 2.5 m x 12–60 cm, monomorphic to subdimorphic (fertile pinnae narrower than sterile pinnae), erect; petioles 18–52 x 0.1–1.5 cm, 1-sulcate on the adaxial surface, light brown to dark brown at base, yellowish at median and distal portions, with scales at base, glabrous, surface smooth; laminae chartaceous to subcoriaceous, pedate, tripartite, deltate, 1- or 2-pinnate-pinnatifid at base, 1-pinnate-pinnatifid at distal portion, 21 cm to 1 m x 12–60 cm, with 6–12 pairs of pinnae, these opposite, subopposite to alternate, long-lanceolate or long-elliptic, sessile or petiolulate, bases asymmetric, cuneate; petiolules 1-sulcate on the adaxial surface and shortly winged, costae 1-sulcate on the adaxial surface and prominent on the abaxial surface, deflexed, glabrous or with spreading whitish hairs; proximal pinnae 11–64 x 5.5–25 cm, 1- or 2-pinnate-pinnatifid; rachises 40–60 x 0.1–1.0 cm, 1-sulcate on the adaxial surface; middle pinnae 7–18 x 1.7–2.5 cm, pinnatifid, diverging from rachises at an acute angle; distal pinnae 4–8 x 1.0–1.5 cm towards frond apex; apical pinna 9–15 x 2–3 cm, deeply pinnatifid; segments alternate, falcate or deltate, or lanceolate, towards frond apex, pinnae or pinnules with margins entire, smooth or dentate, or serrulate at apex of the segments, apices acute, sometimes apiculate, costules awned at the base on the adaxial surface and prominent on the abaxial face, apical segment tapering, sinuses between the segments acute or roundish or sometimes biangulate; venation free, veins simple or furcate, reaching margins of the segments, clavate at tip. Sori interrupted in the sinuses and absent at apex of the segments; indusia pale, with entire margin.

COMMENTS

Pteris deflexa can be recognized by having fronds that are tripartite, pedate, 1- or 2-pinnate-pinnatifid at the base and 1-pinnate-pinnatifid in the distal portion (fronds 3-pinnate-pinnatifid); costae sinuous in the distal portion of the pinnae, visible on the abaxial surface; awned costules at the base on the adaxial surface; fertile segments usually falcate or deltate, or lanceolate; free venation, with simple or furcate veins and apex clavate. The segment forms can vary from falcate or deltate to lanceolate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences


Northeast (Bahia)

Central-west (Mato Grosso do Sul, Mato Grosso)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

A.C. Brade, 21364, RB, 402809,  (RB00640904), HB, Rio de Janeiro

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris denticulata Sw.

This treatment is composed of the following taxa: *Pteris denticulata*, *Pteris denticulata* var. *denticulata*, *Pteris denticulata* var. *tristicula*.

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** more than/5; **pinnae basal** furcate/pinnatifid; **pinnae median** entire/pinnatifid; **rachis** winged; **venation** partly adnate areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial or rupicolous. Rhizomes 0.5–1.0 cm thick, short and compact, decumbent to erect, clothed at apex with small, shiny, dark brown, scales 0.5 mm to 0.4 cm long, margins with short hairs. Fronds 15–90 x 9.5–25.0 cm, subdimorphic (fertile pinnae narrower than sterile pinnae), erect; petioles 10–45 x 0.1–0.2 cm, 1-sulcate on the adaxial surface, dark brown at base, yellowish in the median and distal portions, with scales on the base, glabrous, surface smooth; laminae chartaceous (rarely subcoriaceous), deltate, 1-pinnate-pinnatifid (very rarely 2-pinnate-pinnatifid), 8–30 x 8–25 cm, with 4–6 pairs of pinnae, these entire, furcate or pinnatifid, opposite to subopposite, long-lanceolate to deltate, sessile or short-petiolulate, bases asymmetric, apices tapering, margins denticulate; costae sulcate on the adaxial surface and prominent on the abaxial surface; proximal pinnae 6–20 x 2.5–10.0 cm, furcate or pinnatifid, basicopic side shorter than the acroscopic side; rachises 5–15 x 0.1–0.4 cm, 1-sulcate on the adaxial surface, winged, the wings bearing a thickened margin; middle pinnae 8.5–14.5 x 3–6 cm, entire and lanceolate or pinnatifid, diverging from the rachises at an acute angle; distal pinnae 7–12 x 1.2–20.0 cm, entire or pinnatifid, bases decurrent on the rachises; apical pinna 9.5–20.0 x 1.5–17.0 cm, entire or pinnatifid, lanceolate; segments alternate, slightly falcate, towards pinna apex, apices acute; costules prominent on the abaxial surface; sinuses between the segments roundish or sometimes acute; venation areolate joined to the costa and costule, with large areoles reducing toward margins of the lamina, free veins arising from the areoles near the margins, simple or furcate, with tip clavate. Sori interrupted in the sinuses and absent at apex of the pinnae and/or segments; indusia pale, margin entire.

COMMENTS

Pteris denticulata displays considerable morphological variation in the size, form, and architecture of the blades.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

Amazonian Campinarana, Terra Firme Forest, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Alagoas, Bahia, Ceará, Maranhão, Paraíba, Pernambuco)

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)

IDENTIFICATION KEY

Key to the Variety of *P. denticulata* in Brazil

1. Proximal pinnae furcate to pinnatifid on the basiscopic side; median and distal pinnae entire, lanceolate ... *P. denticulata* var. *denticulata*
1. Proximal, median, and distal pinnae pinnatifid on the basiscopic side *P. denticulata* var. *tristicula*

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris denticulata Sw. var. *denticulata*

DESCRIPTION

Proximal pinnae furcate to pinnatifid on the basiscopic side; median and distal pinnae entire, lanceolate.

COMMENTS

This species can be recognized by its winged rachis, proximal pinnae vary from furcate to pinnatifid, usually on basiscopic side, and by its denticulate pinnae and segment margins. However, its median pinnae show considerable morphological variation (from entire and lanceolate to sometimes pinnatifid on basiscopic side). Though this variation is common in the var. *denticulata*, there are no problems in distinguishing it from var. *tristicula*, which has conspicuous, pinnatifid pinnae.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest, Pampa

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Bahia, Ceará, Maranhão, Pernambuco)

Central-west (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

Windisch, P.G., 271, UPCB, SPF, São Paulo

Kameyama, C., 15, UPCB, SPF

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris denticulata var. *tristicula* (Raddi)

J.Prado

Has as synonym

basionym *Pteris tristicula* Raddi

DESCRIPTION

Proximal, median, and distal pinnae pinnatifid on the basiscopic side.

COMMENTS

Variety *tristicula* is characterized by having a winged rachis, denticulate pinnae margins, and proximal, median, and distal pinnae pinnatifid, usually on the basiscopic side; the last feature distinguishes it from var. *denticulata*.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Unknown

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

South (Santa Catarina)

HERBARIUM MATERIAL

E.P. Heringer, 5645, IPA

D. Andrade-Lima, 68-5259, IPA

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris grandifolia L.

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate; **number of the areole between 2 costule adjacent** without costule; **pinnae basal** entire; **pinnae median** entire; **rachis** not/winged; **venation** areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 3 cm thick, creeping, clothed at apex with filiform, yellowish to light brown scales c. 0.4 cm long. Fronds 1–4 m x 30–80 cm, monomorphic, erect; petioles 80 cm to 1.5 m x c. 1 cm, stout, deeply 1-sulcate on the adaxial surface, light brown, with scales on the base, glabrous, surface smooth; laminae chartaceous to subcoriaceous, 1-pinnate-imparipinnate, 1–3 m x 30–80 cm, with 10–20 pairs of pinnae, these entire, opposite to subopposite, long-lanceolate or oblong-linear, sessile or short petiolulate, bases asymmetric, cuneate, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins entire, smooth, sometimes shortly dentate at apex of the pinnae, apices tapering, glabrous; proximal pinnae 15–35 x 15–6 cm, entire (or very rarely furcate); rachises 50 cm to 1.2 m x 0.8 cm, 1-sulcate on the adaxial surface; middle pinnae 10–30 x 1–3 cm, diverging from the rachises at an acute angle, distal pinnae 5–10 x 1–2 cm; apical pinna 10–18 x 1–3 cm with shortly decurrent base; venation areolate, areoles clearly visible on the abaxial surface of the lamina, areoles elongate, large, perpendicular to the costa, reducing in size toward margin of the pinna, free veins arising from the areoles near margins of the pinnae. Sori absent at base and apex of the pinnae; indusia pale, margin subentire to erose.

COMMENTS

Pteris grandifolia is easily identified by having 1-pinnate-imparipinnate fronds; entire pinnae and areolate venation, with large and elongate areoles oblique to the costa and reducing in size towards the pinnae margins.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre)

HERBARIUM MATERIAL

P.J.M. Maas, 13239, K, INPA, NY, RB, 216770,  (RB00640517), US, Acre

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris haenkeana C.Presl

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate; **number of the areole between 2 costule adjacent** without costule; **pinnae basal** 1 pinnate; **pinnae median** entire; **rachis** not/winged; **venation** areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 2 cm thick, long-decumbent, clothed at apex with small, lanceolate scales c. 0.2 cm long, with central portion sclerotic, shiny, and dark brown. Fronds 1–2 m long x 80 cm to 1.2 m, monomorphic, erect; petioles 60 cm to 1 m x 0.4–1.0 cm, 1-sulcate on the adaxial surface, yellowish or light brown, with scales on the base, glabrous or with minute hairs abaxially, surface smooth; laminae chartaceous to subcoriaceous, lanceolate, rarely 2-pinnate-imparipinnate (most specimens 1-pinnate-imparipinnate, with entire pinnae; rarely 3-pinnate-imparipinnate), 80 cm to 1 m x 60 cm to 1.2 m, with 8–16 pairs of pinnae, these entire, opposite to subopposite, sometimes alternate, sessile to petiolulate, long-lanceolate or oblong-lanceolate, bases cuneate, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins serrate, apices acute; proximal pinnae 40–60 x 10–20 cm, 1-pinnate-imparipinnate (sometimes 2-pinnate-imparipinnate), pinnules entire, alternate; rachises 20–50 x 0.2 cm, 1-sulcate on the adaxial surface; middle pinnae 13–20 x 2–4 cm, diverging from the rachises at an acute angle; distal pinnae 8–15 x 2.0–3.5 cm; apical pinna 15–25 x 2–4 cm; venation areolate, clearly visible on the abaxial surface, many series of areoles between the costa and margins of the pinna, free veins arising from the areoles near the margins of the pinnae, vein apex clavate in the sterile frond. Sori absent at base and apex of the pinnae and pinnules; indusia pale, margin entire.

COMMENTS

Pteris haenkeana is characterized by having usually 2-pinnate imparipinnate fronds, entire pinnae (long-lanceolate or oblong-lanceolate), areolate venation, with several series of areoles (approximately isodiametric) between the costa and pinnae margins, and pinnae margins copiously serrate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre)

HERBARIUM MATERIAL

C. Ferreira, 11426, NY, Acre

REFERENCE

Prado, J. & Moran, R. C. 2009. Checklist of ferns and lycophytes of Acre State, Brazil. Fern Gazette 18(5): 230-263.

- Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. *Boletim do Instituto de Botânica* 13: 103–199.
- Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): e20170369.

Pteris lechleri Mett.

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent 2;** **pinnae basal** furcate/pinnatifid; **pinnae median** pinnatifid; **rachis** winged; **venation** partly adnate areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 0.5–1.0 cm thick, decumbent to erect, short and compact, woody, clothed at apex with lanceolate scales 0.3–1.0 cm long, central portion with dark brown, shiny, sclerotic stripe, margins hyaline, thin, with hairs. Fronds 25 cm to 2 m x 10–60 cm, monomorphic to subdimorphic (fertile pinnae narrower than sterile pinnae), erect; petioles 20–70 x 0.2–0.5 cm, 2- or 3-sulcate on the adaxial surface, pinnae light brown to dark brown (sometimes reddish at base), with scales at base, clothed with a prominent sericeous indument, hairs whitish, this indument occurring on all parts of the frond; laminae chartaceous, deltate, 1-pinnate-pinnatifid, 15–90 x 10–60 cm, with 3–6 pairs of pinnae, these opposite to subopposite, oblong-lanceolate to elliptic, sessile to petiolulate (proximal pinnae), bases of the basiscopic side shortly decurrent on the rachises, costae sulcate on the adaxial surface and prominent on the abaxial surface, pair of proximal pinnae furcate, pinnatifid, basiscopic portion of the fork 9–20 x 2.5–7.0 cm, towards frond base, acroscopic portion of the fork 10–30 x 4–8 cm; rachises 7–70 x 0.1–0.4 cm, 2-sulcate on the adaxial surface; middle pinnae 8–23 x 3–8 cm, diverging from the rachises at an acute angle; distal pinnae 6–9 x 1.5–3.0 cm towards frond apex; apical pinna 9–15 x 4–6 cm, deeply pinnatifid; proximal segments shorter than the median segments, alternate, linear to lanceolate, slightly falcate, apices acute or obtuse-roundish, margins entire, slightly dentate at apex; apical segment lobate to pinnatifid, costules prominent on the abaxial surface, sinuses between the segments acute, roundish, or biangulate; venation partially areolate, one large and elongate areole, another small areole joined to the costa, between two adjacent costules, the areolate joined to the costule and with free veins arising from the areoles near the margins of the segments, apex of the veins slightly clavate. Sori interrupted in the sinuses and absent at apex of the segments; indusia pale or whitish, margin entire.

COMMENTS

Pteris lechleri can be distinguished by its 2-pinnate-pinnatifid fronds with furcate proximal pinnae; areolate venation with one large and elongate areole and another small areole between two adjacent costules; the base of its pinnae (distal and apical pinnae) decurrent on the rachis and the conspicuous sericeous indument covering all parts of the frond. This last feature separates it from *P. decurrens* C. Presl, which is the closest species.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)


Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

A.C. Brade, 9318, R, RB, 487790,  (RB00581859), Rio de Janeiro
L.B. Smith, 9790, R

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris leptophylla Sw.

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** 3/4; **pinae basal** 1 to 2 pinnate pinnatifid; **pinae median** pinnatifid; **rachis** winged; **venation** partly adnate areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Pernambuco)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Santa Catarina)

HERBARIUM MATERIAL

E.P. Heringer, 1508, RB, 57402,  (RB00640941), IPA, Minas Gerais

D. Andrade-Lima, 68-5413, IPA

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris limae Brade

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** 3/4; **pinae basal** furcate; **pinae median** pinnatifid; **rachis** not/winged; **venation** areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 1.5 cm thick, horizontal, short, clothed at apex with lanceolate, light brown scales 0.3–0.4 long, margins with hairs. Fronds 80 cm to 1.3 m x 40–50 cm, monomorphic, erect to scandent; petioles 60–90 x 0.3–0.5 cm, 1-sulcate on the adaxial surface, light brown to yellowish, glabrescent, indument composed of whitish hairs and dark brown scales (lanceolate, with margins ciliate), occurring on the rachises, costae and costules surface verrucose; laminae chartaceous to subcoriaceous, 1-pinnate-pinnatifid, oval to deltate, 50–60 x 40–50 cm, with 4–6 pairs of pinnae, these pinnatifid, subopposite, long-lanceolate, sessile to short-petiolulate (in proximal pinnae), bases cuneate, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins shortly dentate, apex tapering; pair of proximal pinnae furcate, basiscopic portion of the fork 10–15 x 2–3 cm towards frond base, acroscopic portion of the fork 20–25 x 3–4 cm; rachises 10–20 x c. 0.2 cm, 1-sulcate on the adaxial surface, middle pinnae 15–20 x 2.0–3.5 cm, diverging from the rachises at an acute angle; distal pinnae 8–10 x 2.0–2.5 cm towards frond the apex, bases shortly decurrent on the rachises; apical pinna 20–25 x 3–4 cm, deeply pinnatifid; segments acute, alternate, briefly falcate, costules prominent on the abaxial surface, sinuses between the segments acute to biangulate; venation areolate, 3 or 4 areoles joined to the costa between two adjacent costules, areolate joined to the costule and free veins arising from the areoles near the margins of the segments, with apex short and thick. Sori interrupted in the sinuses and absent at the apex of the segments; indusia pale, margin entire.

COMMENTS

It is characterized by its 1-pinnate-pinnatifid fronds, pair of furcate proximal pinnae, conspicuous indument of hairs and scales on the petioles, rachises, costae and costules, as well as by its pattern of areolate venation, with 3 or 4 areoles joined to the costa, between two adjacent costules.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)


Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Rio de Janeiro)

HERBARIUM MATERIAL

Lima, J., 36, RB, 429718,  (RB00640996), P, BM, R, Espírito Santo, **Typus**

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. *Boletim do Instituto de Botânica* 13: 103–199.

Pteris multifida Poir.

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** without areole; **pinnae basal** 1 to 2 pinnate pinnatifid; **pinnae median** pinnatifid; **rachis** winged; **venation** free. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial or rupicolous. Rhizomes c. 0.2 cm thick, erect, short, densely clothed at apex with dark brown scales 0.1–0.7 cm long, margins entire and smooth. Fronds 8–40 x 8–12 cm, subdimorphic (fertile pinnae narrower than sterile pinnae), erect; petioles 5–15 x c. 0.1 cm, 1-sulcate on the adaxial surface, with scales at base, yellowish, glabrous, surface smooth; laminae chartaceous, oval, pedate, 2-pinnate-pinnatifid at base, 7–20 x 4–10 cm, with 1–3 pairs of pinnae, these linear, opposite, sessile, bases cuneate or decurrent, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins entire or serrate, apices tapering, proximal pinnae 3–6 x 0.3–0.5 cm, pinnate-pinnatifid, rachises 8–10 x c. 0.1 cm, 1-sulcate on the adaxial surface, winged, glabrate or with whitish hairs; middle pinnae 5–8 x 0.3–0.5 cm, bases shortly decurrent on the rachis; terminal segment 3–6 x 0.2–0.4 cm towards frond apex, costules prominent on the abaxial surface, bases decurrent on the rachis, sinuses between the segments acute; venation free, veins simple or furcate, reaching margins of the segment. Sori interrupted in the sinuses and absent at the apex of the segments; indusia whitish, entire.

COMMENTS

Pteris multifida is characterized by having fronds 2-pinnate-pinnatifid at the base, pinnae and segments linear, with base decurrent on the rachis and by its pattern of free venation with free simple or furcate veins.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Naturalized, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

North (Amazonas)

Northeast (Bahia)

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

J. Badini, 60, RB, 30340,  (RB00641014)

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris pearcei Baker

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** 3/4/or/5; **pinnae basal** entire/furcate/pinnatifid; **pinnae median** pinnatifid; **rachis** not/winged; **venation** areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 1 cm thick, erect, short, clothed at apex with lanceolate scales c. 0.5 cm long. Fronds 75 cm to 1.7 m x 40–60 cm, monomorphic, erect to scandent; petioles c. 40 x 0.2–0.4 cm, 1-sulcate on the adaxial surface, with scales on the base, pubescent, hairs whitish; laminae chartaceous to subcoriaceous, deltate, 1-pinnate-pinnatifid, 30–90 x 40–60 cm, with 4–6 pairs of pinnae, these linear to narrow-lanceolate, sometimes with irregular lobes on the basiscopic side, opposite to subopposite, short-petiolulate or sessile, bases cuneate to asymmetric, costule prominent on the abaxial surface, pubescent, hairs whitish spreading, margins entire to dentate, apices tapering; proximal pinnae 20–40 x 1.5–4.0 cm, entire or bifurcate to pinnatifid; middle pinnae 10–15 x 1–3 cm, pinnatifid, distal pinnae 8–10 x 1–2 cm, entire or pinnatifid; apical pinna c. 8 x c. 4 cm, pinnatifid; segments irregular, sometimes shortly falcate, costules prominent on the abaxial surface; sinuses between the segments acute to roundish; venation areolate, 3–5 series of areoles between the costa and margin of the pinna, 2 or 3 series of areoles between the costules and margins of the segments, areoles prominent on the abaxial surface of the pinnae, free veins arising from the areoles near margins of the pinnae, apices clavate. Sori interrupted in the sinuses and absent at apex of the segments; indusia pale, margin entire.

COMMENTS

It is characterized by having 1-pinnate-pinnatifid fronds, linear to narrow lanceolate pinnae which are pinnatifid on the basiscopic portion, and areolate venation with 3–5 series of areoles between the costa and pinna margins and 2 or 3 series of areoles between the costule and segment margins.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Roraima)

HERBARIUM MATERIAL

G.T. Prance, 10115, US, NY, K, INPA, INPA, 27248,  (INPA0027248), Acre

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris podophylla Sw.

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 4 or 5 pinnate pinnatifid; **number of the areole between 2 costule adjacent** 1/2; **pinnae basal** 3 or 4 pinnate pinnatifid; **pinnae median** pinnatifid; **rachis** not/winged; **venation** areolate.

Sporangium: indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 2–5 cm thick, erect, short, woody, clothed at apex with oblong-lanceolate, dark brown to reddish scales 0.5–1.2 cm long, central portion with a sclerotic stripe, margins thin, hyaline, ciliate, erose. Fronds 80 cm to 4 m x 50 cm to 2 m, monomorphic, erect; petioles 50 cm to 2.3 m x 1.0–2.5 cm, stout, 1–3-sulcate on the adaxial surface, yellowish to light brown, with scales on the base, glabrescent on the adaxial surface; laminae chartaceous to subcoriaceous, tripartite, 4- or 5-pinnate-pinnatifid, 80 cm to 2.5 m x 50 cm to 2 m, with 12–20 pairs of pinnae, these opposite to subopposite, oblong-lanceolate to long-lanceolate, short-petiolate, bases asymmetric, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins entire to serrate (at apex) glabrescent on the abaxial surface, hairs reddish brown, articulate; proximal pinnae 40 cm to 1.25 m x 20–50 cm, 3- or 4-pinnate-pinnatifid, larger than the rest, petiolulate, rachises 1-sulcate on the adaxial surface; middle pinnae 15–60 x 2–4 cm, diverging from the rachises at an acute angle; distal pinnae 10–25 x 1.5–2.5 cm towards frond apex; apical pinna 20–40 x 2–4 cm, deeply pinnatifid; segments alternate, falcate, towards frond pinna or pinnule, apices acute; costules awned at base on the adaxial surface and prominent on the abaxial surface, margins entire, smooth, dentate at apex of the segments; sinuses between the segments narrow, acute; venation completely areolate, one large areole between two adjacent costules, several areoles joined to the costule, some free veins arising from the areoles near the margins of the segments. Sori interrupted in the sinuses and absent at apex of the segments; indusia pale brownish, margin entire.

COMMENTS

Pteris podophylla has fronds, which are 4- or 5-pinnate-pinnatifid at base; conspicuously falcate segments, with serrate margins at the apex and dark brown to reddish hairs on the abaxial surface of the pinnae. The indusium is caducous, varying from specimen to specimen (usually more evident on young fronds).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

D. Andrade-Lima, 68-5413, OUPR

Damazio, L.B., 108, FURB (FURB00311), OUPR, Santa Catarina

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris propinqua J.Agardh

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** 1; **pinnae basal** 1 to 2 pinnate pinnatifid; **pinnae median** pinnatifid; **rachis** not/winged; **venation** partly adnate areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 0.5–0.8 cm thick, decumbent to ascendent, short, clothed at apex with lanceolate scales 0.1–0.8 cm long, central portion with a dark brown stripe, margins thin, hyaline, ciliate. Fronds 50 cm to 2 m 30–80 cm, subdimorphic (fertile segments narrower than sterile segments), erect; petioles 20–60 x 0.3–0.8 cm, 2- or 3-sulcate on the adaxial surface, dark brown at base, yellowish in the median and distal portions, glabrous or sparsely pubescent, hairs whitish, surface smooth; laminae chartaceous to subcoriaceous (rarely), oblong, tripedate, 2-pinnate-pinnatifid at base, 30–60 x 30–80 cm, with 4–12 pairs of pinnae, these opposite to subopposite or alternate, oblong-lanceolate to lanceolate, sessile or petiolulate, bases cuneate, decurrent on the petiolules, costae sulcate on the adaxial surface and prominent on the abaxial surface; proximal pinnae 15–40 x 18–40 cm, 1-pinnate-pinnatifid; rachises 20–55 x 0.1–0.2 cm, 2- or 3-sulcate on the adaxial surface, glabrous; middle pinnae 10–25 x 3.0–4.5 cm, slightly towards frond apex; distal pinnae 8–14 x 1.5–2.8 cm, shortly falcate; apical pinna 12–25 x 2.5–4.0 cm, deeply pinnatifid, bases shortly decurrent on the rachises; segments deltate to falcate, proximal segments shorter than the median segments, margins entire, smooth or dentate in the distal region of the segments, apices acute, costules prominent on the abaxial surface and awned at the base on the adaxial surface; sinuses between the segments roundish or acute (rarely); venation partially areolate, one large areole joined to the costa between two adjacent costules, several areoles joined to the costule, free veins arising from the areoles and with apex clavate near the margins of the segments. Sori interrupted at the sinuses and absent at apex of the segments; indusia pale, margin entire.

COMMENTS

Pteris propinqua is characterized by its tripartite fronds, which are 2-pinnate-pinnatifid at the base, its pinnae vary from sessile to petiolate, oblong-lanceolate to lanceolate, and with their base decurrent on the petiolule; its costule awned at the base on the adaxial surface; its areolate venation, with one large areole between two adjacent costules, several areoles joined to the costule and all free veins above the areoles near the margin of the pinna.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará, Rondônia)

Northeast (Alagoas, Bahia, Pernambuco)

Central-west (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

Smith, J.P.G., 129, K, US, NY, INPA, S, INPA, 22999,  (INPA0022999), Mato Grosso
G.T. Prance, 6240, US, K, S, INPA, NY

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris pungens Willd.

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** without areole; **pinae basal** furcate/1 to 2 pinnate pinnatifid; **pinae median** pinnatifid; **rachis** not/winged; **venation** free. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 1 cm thick, erect, short, densely clothed at apex with linear-lanceolate, dark brown to reddish scales 0.2–0.4 cm long, central portion of the scales with a dark sclerotic stripe, margins thin and pale. Fronds 50 cm–1.5 m x 15–40 cm, monomorphic, erect; petioles 20–90 x 0.2–0.8 cm, 1- or 2-sulcate on the adaxial surface, reddish brown or sometimes yellowish distally, with scales on the base, surface with spreading spines; laminae chartaceous, deltate, 1-pinnate-pinnatifid (rarely 2-pinnate-pinnatifid at base), 30–50 x 15–40 cm, with 2–4 pairs of pinnae, these pinnatifid, long-lanceolate to lanceolate, opposite to subopposite or sometimes alternate, sessile or shortly petiolulate, bases asymmetric, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins entire to lobate-dentate, apices tapering, sometimes caudate, proximal pinnae 8–20 x 3–6 cm, 1-pinnate-pinnatifid or furcate, rachises 10–25 x 0.1–0.3 cm, 1-sulcate on the adaxial surface, with spreading spines; middle pinnae 7–15 x 2–5 cm, distal pinnae 5–10 x 2–3 cm; apical pinna 10–25 x 3–6 cm, deeply pinnatifid; segments alternate, shortly falcate towards pinna apex; proximal segments shorter than the middle segments, apical segment elongate, costules awned at base on the adaxial surface and prominent on the abaxial surface, sinuses between the segments acute or sometimes roundish; venation free, veins simple or furcate, diverging from the costae and costules. Sori interrupted in the sinuses and absent at the apex of the segments; indusia pale brown, with entire margin.

COMMENTS

Pteris pungens is characterized by having 1-pinnate-pinnatifid fronds, a pair of furcate proximal pinnae (rarely 1-pinnate-pinnatifid), petioles with spreading spines, free venation, with simple or furcate veins diverging from costae and costules, long apical segments, and costules awned on the adaxial surface.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Bahia, Pernambuco)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

P.J.M. Maas, 13011, INPA, INPA, 31375,  (INPA0031375), NY, Acre

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris quadriaurita Retz.

Has as synonym

heterotypic *Pteris plumula* Desv.

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** without areole; **pinnae basal** furcate; **pinnae median** pinnatifid; **rachis** not/winged; **venation** free. **Sporangium:** **indusium** present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 0.5–2 cm thick, erect, woody, densely clothed at apex with lanceolate scales 0.1–0.5 cm long, central portion of the scales with a dark sclerotic and shiny stripe, margins thin and pale. Fronds 30 cm to 1.5 m x 20–70 cm, monomorphic, erect; petioles 15–70 x 0.1–0.8 cm, 2-sulcate on the adaxial surface, light brown or yellowish, base curved and with scales, glabrous distally, surface smooth; laminae chartaceous, deltate, 1-pinnate-pinnatifid, 18–90 x 20–70 cm, with 3–16 pairs of pinnae, these pinnatifid, long-lanceolate to oblong-lanceolate, opposite to subopposite, sometimes alternate, sessile to short-petiolulate, bases truncate or shortly asymmetric, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins entire, smooth, apices acute to tapering, proximal pinnae furcate, basiscopic portion of the fork 6–20 x 1.5–4.0 cm, acroscopic portion of the fork 20–35 x 2.5–6.0 cm; rachises 7.5–60 x 0.1–0.4 cm, 1-sulcate on the adaxial surface, glabrous; middle pinnae 9–25 x 2.5–5.0 cm, diverging from rachises at an acute angle; distal pinnae 8–15 x 1–3 cm towards frond apex, shortly falcate, apical pinna 10–30 x 2.5–5.0 cm, deeply pinnatifid, sometimes pinnatisect; segments alternate, slightly falcate, apex obtuse or sometimes acute (rarely); terminal segment elongate, sometimes caudate, costules awned at the base on the adaxial surface and prominent on the abaxial surface, with spreading hairs, whitish, sinuses between the segments narrow and acute; venation free, veins simple or furcate, diverging from the costules or from the confluence between the costules and costae. Sori interrupted in the sinuses and absent at apex of the segments; indusia yellowish, margin entire.

COMMENTS

Pteris quadriaurita is characterized by having 1-pinnate-pinnatifid fronds, a proximal pair of furcate pinnae, free venation with all free veins diverging from the costules and also by the awned costules on the adaxial surface. Some morphological variation can be observed in the shape and size of pinnae (straight or shortly falcate) and the apical segment (short- to long-acute).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Ceará)

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)

HERBARIUM MATERIAL

Ranal, M., 485, HUFU,  (HUFU00054356), Minas Gerais

Pteris schwackeana Christ

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate; **number of the areole between 2 costule adjacent** without costule; **pinae basal** entire/furcate; **pinae median** entire; **rachis** not/winged; **venation** areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 1–3 cm thick, erect, woody, densely clothed at apex with dark brown to reddish, lanceolate scales 0.3–0.9 cm long, margins with hairs. Fronds 1.2–2.5 x 30–60 cm, monomorphic, erect; petioles 60 cm to 1.6 m x 0.8–1.5 cm, stout, deeply 1- or 2-sulcate on the adaxial surface, dark brown at base and yellowish in the median and distal portions, with reddish brown scales spreading from the base to the rachis, surface scabrous; laminae chartaceous to papyraceous, 1-pinnate-imparipinnate, 90 cm to 1.2 m x 30–60 cm, with 8–20 pairs of pinnae, these entire, oblong to linear, opposite or subopposite, sometimes alternate (rarely), sessile or short-petiolulate, bases cuneate or asymmetric, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins entire or sometimes dentate in the distal portion of the pinna; proximal pinnae 15–30 x 3–4 cm, entire or sometimes furcate; rachises 40–60 x 0.3–0.6 cm, 1-sulcate on the adaxial surface, surface scabrous; middle pinnae 15–25 x 2–3 cm, diverging from the rachises at an acute angle; distal pinnae 10–20 x 2.0–2.5 cm towards frond apex, sometimes shortly falcate; apical pinna 18–30 x 2.5–3.0 cm; venation areolate, visible on the abaxial surface, large areoles joined to the costa, oblique, approximately isodiametric, free veins arising from the areoles near the margins of the pinnae. Sori absent at base and apex of the pinnae; indusia pale, margin entire.

COMMENTS

It is characterized by 1-pinnate-imparipinnate fronds with entire, oblong to linear pinnae (pair of proximal pinnae rarely furcate), areolate venation with large areoles near the costa, reduced in size toward pinna margins and all veins free above the areoles and indument of dark brown to reddish scales on the petiole and part of the rachis, scabrous surfaces of the petiole and rachis.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences


Northeast (Bahia, Pernambuco)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

A.C. Brade, 19953, UFP, SPF

J. Prado, 375a, SPF, UFP

Christiane Santos, s.n., RB, 36539,  (RB00641017), Minas Gerais

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. *Boletim do Instituto de Botânica* 13: 103–199.

Pteris splendens Kaulf.

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate; **number of the areole between 2 costule adjacent** without costule; **pinnae basal** entire/furcate; **pinnae median** entire; **rachis** not/winged; **venation** areolate. **Sporangium:** indusium present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes 1–4 cm thick, erect or decumbent, short, woody, densely clothed at apex with dark brown, shiny, long-lanceolate scales 0.2–1.0 cm long, with dark central portion, sclerotic, thin, margins hyaline with hairs. Fronds 40 cm to 2.5 m x 15–60 cm, monomorphic to subdimorphic (fertile pinnae narrower than sterile pinnae), erect; petioles stout, 10 cm to 1.2 m x 0.2–0.4 cm, deeply 1-sulcate on the adaxial surface, dark brown to reddish at base and light brown in the median and distal portions, with scales on the base, clothed with whitish to light brown hairs, surface rugose and slightly scabrous in the basal region; laminae subcoriaceous, 1-pinnate-impairipinnate, oblong-lanceolate, 30 cm to 1.3 m x 15–60 cm, with 2–12 pairs of pinnae, these entire, narrowly lanceolate to oblong, opposite or subopposite, petiolulate, short-petiolulate or sessile, bases cuneate or asymmetric, costae sulcate on the adaxial surface and prominent on the abaxial surface, margins entire to dentate; proximal pinnae 10–30 x 1–4 cm, entire or furcate; rachises 10–60 x 0.1–0.4 cm, 1-sulcate on the adaxial surface, shortly winged in the distal region; middle pinnae 9–28 x 1–4 cm, diverging from the rachises at an acute angle; distal pinnae 6.5–20 x 0.9–3.5 cm towards frond apex, base shortly decurrent on the rachises; apical pinna 10–30 x 1.5–4.0 cm, entire; venation areolate, visible and prominent on the abaxial surface of the pinnae, large areoles joined to the costa, oblique, approximately isodiametric, free veins arising from the areoles near the margins of the pinnae, in the sterile frond the apex of the veins clavate. Sori absent at base and at apex of the pinnae; indusia pale, margin entire.

COMMENTS

Pteris splendens is characterized by its 1-pinnate-impairipinnate fronds (proximal pinna sometimes furcate), entire, narrowly lanceolate to oblong pinnae; subcoriaceous laminae; areolate venation, visible and prominent on the abaxial surface of the pinnae, with large areoles joined to the costae, reducing in size towards the pinnae margins and completely free veins above the areoles.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará, Pernambuco)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

Eugênio, J., 1354, RB, SPF, UEC, 163622,  (UEC019037), Ceará

A.C. Brade, 14944, SPF, RB

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pteris tripartita Sw.

DESCRIPTION

Leaf: base of the costule adaxial with/appendix; **blade** 1 or 2 pinnate pinnatifid to pinnatisect; **number of the areole between 2 costule adjacent** 2; **pinnae basal** furcate/1 to 2 pinnate pinnatifid; **pinnae median** pinnatifid; **rachis** not/winged; **venation** partly adnate areolate. **Sporangium: indusium** present/false. **Spore: type** trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes c. 4 cm thick, erect, short and compact, densely clothed at apex with small, lanceolate scales 0.1–1.5 cm long, with dark brown central portion, shiny, margins hyaline, with short hairs. Fronds 50 cm to 1.0 m x 30–60 cm, monomorphic, erect; petioles 27–46 x 0.2–0.5 cm, 2-sulcate on the adaxial surface, light brown at base and yellowish in the median and distal portions, with scales on the base, glabrous, surface smooth; laminae chartaceous, deltate, tripartite, 2-pinnate-pinnatifid (rarely 3-pinnate-pinnatifid), 15 cm to 1.0 m x 30–60 cm, with 7–9 pairs of pinnae, these opposite to subopposite, oblong-lanceolate to lanceolate, sessile or short-petiolulate, bases asymmetric; costae sulcate on the adaxial surface and prominent on the abaxial surface; pair of proximal pinnae furcate, 1- or 2-pinnate-pinnatifid, basisopic elongate 9–12 cm x c. 2.5 cm; rachises 20 cm to 1.0 m x 0.2 cm, 1-sulcate on the adaxial surface, glabrous; middle pinnae 8–14 x 2.0–3. cm, pinnatifid, diverging from the rachises at an acute angle; distal pinnae, 3.5–8.0 x 1.0–2.5 cm towards frond apex; apical pinna 6.0–12 x 1.5–2.5 cm, deeply pinnatifid; segments alternate, narrow oblong to slightly falcate, apices acute, margins entire to denticulate, smooth, costules awned at the base on the adaxial surface, prominent on the abaxial surface; apical segment larger than the rest, tapering, sinuses between the segments acute or roundish; venation partially areolate, two elongate areoles joined to the costae between two adjacent costules, free veins arising from the areoles, simple or furcate, nearly reaching margins of the segments. Sori interrupted in the sinuses and absent at apex of the segments; indusia pale, margin entire.

COMMENTS

Pteris tripartita is characterized by having lamina tripartite, 1- or 2-pinnate-pinnatifid fronds, a pair of proximal pinnae 2-pinnate-pinnatifid, and by partially areolate venation, with two large areoles joined to the costa between two adjacent costules.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Naturalized, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará)

Northeast (Alagoas, Maranhão, Paraíba, Pernambuco)

Southeast (Espírito Santo, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

Zuquim, G.P.S., 171, INPA, Amazonas

REFERENCE

Zuquim, G., Costa, F.R.C., Prado, J. & Tuomisto, H. 2008. Guia de samambaias e licófitas da Rebio Uatumã, Amazônia Central. Manaus: Áttema Designe Editorial. 320 p.

Pteris vittata L.

DESCRIPTION

Leaf: base of the costule adaxial without/appendix; **blade** 1 or 2 pinnate; **number of the areole between 2 costule adjacent** without areole; **pinnae basal** entire; **pinnae median** entire; **rachis** not/winged; **venation** free. **Sporangium:** **indusium** present/false. **Spore:** type trilete.

ADDITIONAL DESCRIPTION

Plants terrestrial or rupicolous. Rhizomes 0.5–2.0 cm thick, short and compact, creeping, densely clothed at apex with lanceolate scales 0.1–0.5 cm long, margins entire. Fronds 7–80 x 2–30 cm, monomorphic, erect, sometimes pendulous; petioles 1–13 x 0.1–0.2 cm, 1-sulcate on the adaxial surface, light brown, with scales at base, these spreading along the petiole; laminae chartaceous, oval-elliptic, 1-pinnate-imparipinnate, 6.5–50 x 2–30 cm, with 12–36 pairs of pinnae, these entire, linear, opposite or subopposite, sometimes alternate, not articulate to the rachis, short-petiolate, bases truncate, costae sulcate on the adaxial surface and prominent on the abaxial surface, with scales light brown, spreading along abaxial surface, margins entire to serrate, apex tapering, proximal pinnae 0.5–1.0 x 0.3–0.8 cm, roundish or auriculate, sometimes reduced to mere auricles, rachises 3.5–40 x 0.1–0.2 cm, 1-sulcate on the adaxial surface, with few to numerous scales, middle pinnae 1.5–13.0 x 0.3–1.0 cm, diverging from rachis at an acute or sometimes right angle, distal pinnae 1.3–11.0 x 1.3–12.0 cm towards frond apex; apical pinna 4–21 x 0.5–1.0 cm, larger than the rest; venation free, veins simple or furcate, clavate at the tip. Sori absent at base and apex of the pinnae; indusia whitish, entire.

COMMENTS

Pteris vittata is characterized by having 1-pinnate-imparipinnate fronds, pinnae linear, not articulate to the rachis and with truncate base, and free venation with simple or furcate veins. The pinnae display wide variation in size, angle of divergence from the rachis (acute or right angle), and shape (straight to shortly falcate).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Naturalized, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Anthropic area, Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará, Tocantins)

Northeast (Alagoas, Bahia, Maranhão, Paraíba, 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

E.P. Heringer, 10274, RB, 58317,  (RB00641187), IPA, Distrito Federal
Pickel, B.J., 4003, IPA

REFERENCE

Prado, J. & Windisch, P.G. 2000. The genus *Pteris* L. (Pteridaceae) in Brazil. Boletim do Instituto de Botânica 13: 103–199.

Pterozonium Fée

This treatment is composed of the following taxa: *Pterozonium*, *Pterozonium maguirei*, *Pterozonium paraphysatum*, *Pterozonium reniforme*, *Pterozonium scopulinum*, *Pterozonium terrestre*.

HOW TO CITE

Prado, J., Schuettpelez, E., Hirai, R.Y. 2020. *Pterozonium* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB92007>.

Has as synonym

heterotypic *Syngamma* J. Sm.

DESCRIPTION

Plants terrestrial or rupicolous. Rhizomes short-creeping or ascending, with scales, bristly, or hairs. Fronds monomorphic; laminae simple, entire to 1-pinnate, coriaceous, glabrous or nearly so, entire fronds or pinnae ovate, flabellate, lanceolate, reniform, or oblong; veins free, simple, pinnate or flabellate, sometimes ending in conspicuous hydathodes. Sori linear, along the veins, exindusiate, with glands, the glands yellowish to orange; spores trilete, tetrahedral-globose.

COMMENTS

Pterozonium is a Neotropical genus, monophyletic, and endemic to the Guiana Shield. In Brazil, it is represented by five species.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

IDENTIFICATION KEY

Key to the species of *Pterozonium* in Brazil

- 1. Laminae pinnate *P. maguirei*
- 1. Laminae entire
- 2. Rhizomes with bristles; laminae reniform; midrib absent *P. reniforme*
- 2. Rhizomes with scales; laminae ovate, lanceolate to narrowly oblong, or oblong; midrib present
- 3. Laminae oblong *P. terrestre*
- 3. Laminae ovate, lanceolate to narrowly oblong

4. Rhizomes short-creeping; sori mostly distributed near the margin of the laminae
..... *P. paraphysatum*
4. Rhizomes ascending; sori mostly distributed near the median portion of the laminae
..... *P. scopulinum*

REFERENCE

- Lellinger, D.B. 1967. The botany of the Guyana Highland. Part VII. *Pterozonium* (Filicales: Polypodiaceae). *Memoirs of the New York Botanical Garden* 17: 2–23.
- Smith, A.R. 1995. Pteridophytes. Pp. 1–334. In: P.E. Berry, B.K. Holst & K. Yatskievych (Eds.). *Flora of the Venezuelan Guayana: Pteridophytes, Spermatophytes Acanthaceae–Araceae. v. 2*. St. Louis and Portland: Missouri Botanical Garden and Timber Press.
- Cochran, A.T., Prado, J. & Schuettpelez, E. 2014. *Tryonia*, a new taenitoid fern genus segregated from *Jamesonia* and *Eriosorus* (Pteridaceae). *PhytoKeys* 35: 23–43.
- PPG I. 2016. A community–derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54(6): 563–603.

Pterozonium maguirei Lellinger

DESCRIPTION

Stem: rhizome short/creeping/with/scale. **Leaf: frond** pinnate. **Type of sporangium: type of sporangium** leptosporangiate/pedicellate/glabrous. **Sporangium: annulus** vertical/without/indusium. **Spore: trilete** tetrahedral/globose.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes short-creeping, with scales, the scales lanceolate. Fronds erect; stipes stout, ca. 1 mm diam.; laminae pinnate; pinnae ascending, stipitate, flabellate, coriaceous, margins plane to slightly revolute, entire, base cordate to cuneate, apex round; veins flabellate, inconspicuous on the abaxial side of the lamina, midrib absent, hydathodes present. Sori mostly distributed at distal portion of the pinnae.

COMMENTS

Pterozonium maguirei is the unique species with pinnate laminae of the genus that occurs in Brazil. This character, distinguishes it from the others.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types


Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

C. Farney, 842, RB, 236558,  (RB00641094), RB, INPA, SJRP, MO, Amazonas

REFERENCE

Lellinger, D.B. 1967. The botany of the Guyana Highland. Part VII. *Pterozonium* (Filicales: Polypodiaceae). *Memoirs of the New York Botanical Garden* 17: 2–23.

Smith, A.R. 1995. Pteridophytes. Pp. 1–334. In: P.E. Berry, B.K. Holst & K. Yatskievych (Eds.). *Flora of the Venezuelan Guayana: Pteridophytes, Spermatophytes Acanthaceae–Araceae*. v. 2. St. Louis and Portland: Missouri Botanical Garden and Timber Press.

Pterozonium paraphysatum (A.C.Sm.) Lellinger

Has as synonym

basionym *Syngramma paraphysata* A. C. Sm.

DESCRIPTION

Stem: rhizome short/creeping/with/scale. **Leaf: frond** entire/ovate/to/lanceolate/midrib/present. **Type of sporangium: type of sporangium** leptosporangiate/pedicellate/glabrous. **Sporangium: annulus** vertical/without/indusium. **Spore: trilete** tetrahedral/globose.

ADDITIONAL DESCRIPTION

Plants mostly rupicolous, sometimes terrestrial. Rhizomes short-creeping, with scales, the scales lanceolate. Fronds erect; stipes delicate, ca. 1 mm diam.; laminae entire, ovate to lanceolate, coriaceous, margins plane, entire, base slightly cordate to truncate; veins pinnate, conspicuous on the abaxial side of the lamina, midrib present, hydathodes present. Sori mostly distributed near the margin of the laminae.

COMMENTS

Pterozonium paraphysatum is distinguished by its short-creeping rhizomes and sori mostly distributed near the margin of the laminae.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

F.A.Carvalho et al., 390, BHCB, Amazonas

REFERENCE

Lellinger, D.B. 1967. The botany of the Guyana Highland. Part VII. *Pterozonium* (Filicales: Polypodiaceae). *Memoirs of the New York Botanical Garden* 17: 2–23.

Smith, A.R. 1995. Pteridophytes. Pp. 1–334. In: P.E. Berry, B.K. Holst & K. Yatskievych (Eds.). Flora of the Venezuelan Guayana: Pteridophytes, Spermatophytes Acanthaceae–Araceae. v. 2. St. Louis and Portland: Missouri Botanical Garden and Timber Press.

Pterozonium reniforme (Mart.) Fée

Has as synonym

basionym *Gymnogramma reniformis* Mart.

DESCRIPTION

Stem: rhizome ascending/with/bristle. **Leaf: frond** entire/reniform/midrib/absent. **Type of sporangium: type of sporangium** leptosporangiate/pedicellate/glabrous. **Sporangium: annulus** vertical/without/indusium. **Spore: trilete** tetrahedral/globose.

ADDITIONAL DESCRIPTION

Plants rupicolous. Rhizomes ascending, with bristles like hairs. Fronds erect; stipes stout, ca. 1 mm diam.; laminae entire, reniform, coriaceous, margins slightly revolute, entire to slightly crenulate, base conspicuously cordate; veins flabellate, inconspicuous on the abaxial side of the lamina, midrib absent, hydathodes absent or inconspicuous. Sori on the distal portion of the laminae.

COMMENTS

This rupicolous species is easily recognized by the entire, reniform, and coriaceous laminae.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

N. T. da Silva, 60828, NY,  (NY02554309), Amazonas

REFERENCE

Lellinger, D.B. 1967. The botany of the Guyana Highland. Part VII. *Pterozonium* (Filicales: Polypodiaceae). *Memoirs of the New York Botanical Garden* 17: 2–23.

Smith, A.R. 1995. Pteridophytes. Pp. 1–334. In: P.E. Berry, B.K. Holst & K. Yatskievych (Eds.). *Flora of the Venezuelan Guayana: Pteridophytes, Spermatophytes Acanthaceae–Araceae*. v. 2. St. Louis and Portland: Missouri Botanical Garden and Timber Press.

Pterozonium scopulinum Lellinger

DESCRIPTION

Stem: rhizome ascending/with/scale. **Leaf: frond** entire/narrowly/oblong/to/lanceolate/midrib/present. **Type of sporangium:** type of sporangium leptosporangiate/pedicellate/glabrous. **Sporangium: annulus** vertical/without/indusium. **Spore: trilete** tetrahedral/globose.

ADDITIONAL DESCRIPTION

Plants rupicolous. Rhizomes ascending, with scales, the scales lanceolate. Fronds erect; stipes stout, ca. 1 mm diam.; laminae entire, lanceolate or narrowly oblong, coriaceous, margins plane, entire to crenate, base slightly cordate; veins pinnate, conspicuous on the abaxial side of the lamina, midrib present, hydathodes present. Sori mostly distributed near the median portion of the laminae.

COMMENTS

This species is distinguished by the lanceolate or narrowly oblong laminae and sori occupying the median portion of the lamina.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

G.T. Prance, 29147, MO, Amazonas

REFERENCE

Lellinger, D.B. 1967. The botany of the Guyana Highland. Part VII. *Pterozonium* (Filicales: Polypodiaceae). *Memoirs of the New York Botanical Garden* 17: 2–23.

Smith, A.R. 1995. Pteridophytes. Pp. 1–334. In: P.E. Berry, B.K. Holst & K. Yatskievych (Eds.). *Flora of the Venezuelan Guayana: Pteridophytes, Spermatophytes Acanthaceae–Araceae*. v. 2. St. Louis and Portland: Missouri Botanical Garden and Timber Press.

Pterozonium terrestre Lellinger

DESCRIPTION

Stem: rhizome ascending/with/scale. **Leaf: frond** entire/oblong/midrib/present. **Type of sporangium: type of sporangium** leptosporangiate/pedicellate. **Sporangium: annulus** vertical/without/indusium. **Spore: trilete** tetrahedral/globose.

ADDITIONAL DESCRIPTION

Plants terrestrial. Rhizomes ascending, with scales, the scales lanceolate. Fronds erect; stipes stout, ca. 1 mm diam.; laminae entire, oblong, coriaceous, margins plane to somewhat revolute, entire, base cordate; veins pinnate, conspicuous on the abaxial side of the lamina, midrib present, hydathodes present. Sori mostly distributed near the median and margin of the laminae.

COMMENTS

Pterozonium terrestre grows always as a terrestrial plant. It can be distinguished by the entire and oblong laminae, hydathodes visible adaxially and veins conspicuous visible abaxially on the laminae.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types


Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

Carvalho, FA de, 390, INPA, 219408,  (INPA0219408), Amazonas

REFERENCE

- Lellinger, D.B. 1967. The botany of the Guyana Highland. Part VII. *Pterozonium* (Filicales: Polypodiaceae). *Memoirs of the New York Botanical Garden* 17: 2–23.
- Smith, A.R. 1995. Pteridophytes. Pp. 1–334. In: P.E. Berry, B.K. Holst & K. Yatskievych (Eds.). *Flora of the Venezuelan Guayana: Pteridophytes, Spermatophytes Acanthaceae–Araceae*. v. 2. St. Louis and Portland: Missouri Botanical Garden and Timber Press.

Radiovittaria (Benedict) E.H.Crane

This treatment is composed of the following taxa: *Radiovittaria*, *Radiovittaria gardneriana*, *Radiovittaria stipitata*.

HOW TO CITE

Schuettpelz, E., Prado, J., Hirai, R.Y. 2020. *Radiovittaria* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB92010>.

DESCRIPTION

Plants epiphytic or rupicolous. Rhizome radial. Leaf arrangement polystichous. Leaves simple; costate; venation biseriate areolate. Sori linear, restricted to submarginal commissures; soral paraphyses with obconic apical cells (funnel shape). Spores monolete.

COMMENTS

Radiovittaria is a Neotropical genus with about 10 species.

Vittaria is morphologically very similar to *Radiovittaria* but can be distinguished by apical cells of soral paraphyses obconic.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amapá, Pará)

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

IDENTIFICATION KEY

Key to the species of *Radiovittaria* in Brazil

1. Rhizome scales lanceolate, 3–8 cells wide at base; stipe flattened, winged throughout *R. gardneriana*
1. Rhizome scales linear, 1–3 cells wide at base; stipe terete, flat only at base, not winged *R. stipitata*

REFERENCE

Nonato, F.R. & Windisch, P.G. 2004. Vittariaceae (Pteridophyta) do Sudeste do Brasil. *Revista Brasileira de Botânica* 27(1): 149–161.

PPG I. 2016. A community-derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54(6): 563–603.

Schuettpelz, E., Chen, C.W., Kessler, M., Pinson, J.B., Johnson, G., Davila, A., Cochran, A.T., Huiet, L. & Pryer, K.M. 2016. A revised generic classification of vittarioid ferns (Pteridaceae) based on molecular, micromorphological, and geographic data. *Taxon* 65(4): 708–722.

Radiovittaria gardneriana (Fée) E.H.Crane

Has as synonym

basionym *Vittaria gardneriana* Fée

DESCRIPTION

Stem: rhizome scale almost/plurisseriate. **Leaf:** stipe flattened. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** soral line in/deep/groove. **Spore:** not chlorophylate monolete.

ADDITIONAL DESCRIPTION

Plants epiphytic, sometimes rupicolous. Rhizomes with scales, the scales lanceolate, brown to atropurpureous, 3–8 cells wide at base. Stipe entirely flat, winged. Laminae linear-elliptical or slightly wider in the median portion, papyraceous, margins flat. Sori linear, continuous to discontinuous, in grooves shallow at lamina margins; paraphyses reddish with apical cell in funnel shape.

COMMENTS

Radiovittaria gardneriana can be easily recognized by the lanceolate rhizome scales with 3–8 cells wide and stipe flat and winged throughout.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)


Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Santa Catarina)

HERBARIUM MATERIAL

A.C. Brade, 12240, RB, RB, 537547,  (RB00693856), Rio de Janeiro

REFERENCE

Nonato, F.R. & Windisch, P.G. 2004. Vittariaceae (Pteridophyta) do Sudeste do Brasil. *Revista Brasileira de Botânica* 27(1): 149–161.

Radiovittaria stipitata (Kunze) E.H.Crane

Has as synonym

basionym *Vittaria stipitata* Kunze

DESCRIPTION

Stem: rhizome scale almost/uniseriate. **Leaf:** stipe terete. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** soral line shallowly/in/groove. **Spore:** not chlorophylate monolete.

ADDITIONAL DESCRIPTION

Plants epiphytic. Rhizomes with scales, the scales linear, dark brown to atropurpureous, 1–3 cells wide at base. Stipe terete, flat at base, not winged. Laminae linear, thin, papyraceous, margins flat. Sori linear, continuous, in deep grooves at lamina margins; paraphyses reddish with apical cell in funnel shape.

COMMENTS

Radiovittaria stipitata can be easily recognized by the linear rhizome scales with 1–3 cells wide and stipe terete and not winged.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amapá, Pará)

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

P.H. Labiak, 63, UEC, 163745,  (UEC028382), SP, UPCB, Paraná

REFERENCE

Labiak, P.H. & Prado, J. 1998. Pteridófitas epífitas da Reserva Volta Velha, Itapoá, Santa Catarina, Brasil. Boletim do Instituto de Botânica 11: 1–80.

Nonato, F.R. & Windisch, P.G. 2004. Vittariaceae (Pteridophyta) do Sudeste do Brasil. Revista Brasileira de Botânica 27(1): 149–161.

Trachypteris André ex Christ

This treatment is composed of the following taxa: *Trachypteris*, *Trachypteris gilliana*.

HOW TO CITE

Prado, J., Hirai, R.Y. 2020. *Trachypteris* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB92013>.

DESCRIPTION

Plants terrestrial or rupicolous. Stem short-creeping to erect, scaly. Fronds monomorphic to dimorphic (i.e., the sterile ones forming a rosette, entire, sessile; the fertile ones erect, stipitate palmate, trilobate to pinnate), both sparsely scaly on the upper surface and densely scaly abaxially; veins areolate, lacking veinlets inside. Sori acrostichoid, without indusia; spores trilete.

COMMENTS

Trachypteris is characterized in having monomorphic or dimorphic fronds; laminae densely covered with scales abaxially, and sparsely scaly adaxially; veins areolate lacking included veinlets in the areoles; sori acrostichoid and exindusiate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Caatinga

Vegetation Types

Caatinga (stricto sensu)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Minas Gerais)

REFERENCE

- Prado, J. 2015. Pteridaceae in Lista de Espécies da Flora do Brasil. Jardim Botânico do Rio de Janeiro. Disponível em: <<http://floradobrasil.jbrj.gov.br/jabot/floradobrasil/FB92014>>.
- PRADO, J. et al. 2015. Diversity of ferns and lycophytes in Brazil. *Rodriguésia*, v.66, n.4, p.1073-1083 (DOI: 10.1590/2175-7860201566410).
- Ramos Giacosa, J.P., Giudice, G.E. & Morbelli, M.A. 2008. Resurrection of the fern name *Trachypteris gilliana* (Baker) Svenson Pteridaceae. *American Fern Journal* 98(3): 164–169.

Trachypteris gilliana (Baker) Svenson

Has as synonym

basionym *Acrostichum gillianum* Baker

DESCRIPTION

Plants terrestrial or rupicolous. Stem short-creeping to erect, with scales. Fronds dimorphic, the sterile ones forming a rosette, entire, sessile, oblanceolate, obtuse, 4–8 cm long and 1.5–2 cm wide, slightly scaly on the upper surface, densely scaly abaxially, the scales tan, ovate to ovate-lanceolate, margins ciliate; veins areolate, lacking veinlets inside; fertile fronds, erect; stipe 12–25 cm long; laminae palmate, trilobate. Sori acrostichoid, without indusia; spores trilete, triangular to globose.

COMMENTS

Only one species of *Trachypteris* occurs in the Caatinga vegetation of Minas Gerais and Bahia in Brazil. This species can be easily recognized in having the dimorphic fronds (vegetative fronds in a rosette and the fertile frond conspicuously erect, palmate, trilobate. Additionally, the sori are acrostichoid. There is a fragment of the type wrongly labeled as “Glaziou 13341, Rio de Janeiro” at NY. The type was collected in Minas Gerais State.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Caatinga

Vegetation Types

Caatinga (stricto sensu)


Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Sehnem, 16831, HVASF, 83,  (HVASF000083), RB

R.M. Harley, 16187, RB, Bahia

REFERENCE

Ramos Giacosa, J.P., Giudice, G.E. & Morbelli, M.A. 2008. Resurrection of the fern name *Trachypteris gilliana* (Baker) Svenson Pteridaceae. American Fern Journal 98(3): 164–169.

Tryonia Schuettp., J.Prado & A.T.Cochran

This treatment is composed of the following taxa: *Tryonia*, *Tryonia areniticola*, *Tryonia myriophylla*, *Tryonia schwackeana*, *Tryonia sellowiana*.

HOW TO CITE

Della, A.P., Prado, J., Hirai, R.Y. 2020. *Tryonia* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB130512>.

DESCRIPTION

Plants rupicolous or terrestrial. Rhizomes short-creeping, sometimes erect at apex, dark brown, moderate to densely covered by erect or appressed hairs and rigid bristles, the hairs dark brown, reddish-brown or goldish-brown, multicellular, glandular, the apical cell globose, the bristles dark brown, reddish-brown or goldish-brown, with darker-colored thickened transverse cell walls, apex long filiform, base with 2-3 cell of wide, apical cell globose. Fronds monomorphic, erect, arcuate or decumbent, with determinate or indeterminate growth; petioles semi-cylindrical, adaxially grooved, sometimes plane, bicolorous, proximally castaneous, distally stramineous, occasionally shiny, glabrous to densely covered by hairs on both surfaces, the hairs, glandular or eglandular, hyaline, sometimes brown, tortuous to erect, multicellular, the apical cell elongated with apex rounded or globose; laminae pinnate-pinnatifid to 2-pinnate-pinnatisect, triangular, trullate, elongate-triangular, narrowly elliptic or linear, membranaceous or coriaceous; rachises straight to slightly flexuous, semi-cylindrical, adaxially grooved, stramineous, sparsely to densely covered by hairs on both surfaces, the hairs glandular or eglandular similar to those of the petioles; pinnae reflexed, patent to ascending, triangular, narrowly triangular, ovate or linear, alternate to subopposite, gradually tapering towards the apex (pinnatisect), stalked, the stalk semi-cylindrical, adaxially grooved, stramineous, straight, adaxial surface of pinnae sparsely to densely covered by hairs, abaxial surface sparsely to densely covered by hairs, mainly on the veins, the hairs glandular or eglandular similar to those of the petioles; ultimate segments bifurcate, occasionally simple, the margin entire, plane or strong enrolled, whitish; veins usually furcate, sometimes simple, reaching or not the laminae margin. Sori on the veins, sometimes spread along of all abaxial surface of the segments; sporangia with capsule usually pyriform or orbicular, stomia with 2-4 indurated cells, short-stalked, stalks 1-2-celled (Tryon 1970; Cochran et al. 2014); spores trilete, tetrahedral, brown, with equatorial flange, 48.2-72.0 µm diam., x=29 (Tryon 1970; Cochran et al. 2014). Gametophyte spatulate with a lateral meristem (Tryon 1970).

Reference: Della, A.P. & Prado, J. 2020. *Tryonia* (Pteridaceae) in Brazil. *Brazilian Journal of Botany* 43(2): 341–354.

COMMENTS

According to Cochran et al. (2014) and PPG I (2016), *Tryonia* is a monophyletic and Neotropical genus of leptosporangiate ferns, formed by four species. The species occur mainly in the Brazilian Atlantic Rainforest and in forests and on rock outcrops along the Espinhaço Range, in high altitude fields, on the edge of trails, and ravines on the roadside, often between 800 and 2400 m of elevation. Lower altitudes (100-200 m) are recorded for plants collected in Santa Catarina and Rio Grande do Sul states.

Reference: Della, A.P. & Prado, J. 2020. *Tryonia* (Pteridaceae) in Brazil. *Brazilian Journal of Botany* 43(2): 341–354.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

High Altitude Grassland, Cerrado (lato sensu), Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

Possible occurrences

Northeast (Paraíba)

IDENTIFICATION KEY

Key to the species of *Tryonia* in Brazil

1. Laminae pinnate-pinnatifid or 2-pinnate-pinnatisect, triangular, trullate or elongate-triangular, rare elliptic; ultimate segments mostly with emarginated apices.

2. Plants rupicolous; petioles glabrous or sparsely covered by eglandular hairs; pinnae adaxially glabrous to moderately covered by eglandular hairs, glandular hairs less frequent ***T. arenicola***

2. Plants terrestrial; petioles moderate to densely covered by glandular hairs; pinnae adaxially moderately to densely covered by glandular hairs, eglandular hairs less frequent..... ***T. myriophylla***

1. Laminae pinnate-pinnatisect; narrowly elliptic to linear, rare narrowly triangular; ultimate segments usually with acute apices.

3. Pinnae linear to narrowly triangular, coriaceous; petioles glabrous to moderately covered by hairs; laminae adaxially glabrous to sparsely covered by hairs; sori protected by the curved margin of the laminae. ***T. sellowiana***

3. Pinnae ovate to triangular, membranaceous; petioles moderate to densely covered by hairs; laminae adaxially moderately to densely covered by hairs; sori not protected by the curved margin of the laminae. ***T. schwackeana***

Reference: Della, A.P. & Prado, J. 2020. *Tryonia* (Pteridaceae) in Brazil. Brazilian Journal of Botany 43(2): 341–354.

REFERENCE

Cochran, A.T., Prado, J. & Schuettpelez, E. 2014. *Tryonia*, a new taenitoid fern genus segregated from *Jamesonia* and *Eriosorus* (Pteridaceae). PhytoKeys 35: 23–43.

Della, A.P. & Prado, J. 2020. *Tryonia* (Pteridaceae) in Brazil. Brazilian Journal of Botany 43(2): 341–354.

Tryonia arenitcola (Schwartzb.&Labiak) Schuettp.,J.Prado &A.T.Cochran

Has as synonym

basionym *Eriosorus arenitcola* Schwartzb. & Labiak

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type of the hair** glandular; **colour of the hair and bristle** brown reddish. **Leaf:** **petiole** cylindrical/semi cylindrical; **density of the hair at the petiole** glabrous/sparsely covered by hair; **type of the hair at the petiole** non glandular; **type of the frond** recumbent; **form of the blade** triangular; **level of the division of the blade** 2 pinnate; **density of the hair on the rachis** glabrate/sparsely covered by hair; **form of the pinnae** triangular/ovate; **density of the hair on the side adaxial and abaxial of the pinnae** sparsely covered by hair; **consistency of the pinnae** membranous; **last segment** plane; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (São Paulo)

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

Possible occurrences

Northeast (Paraíba)

HERBARIUM MATERIAL

P.H. Labiak, 182, SP, Paraná

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Tryonia arenicola* (Schwartzb.&Labiak) Schuettp.,J.Prado &A.T.Cochran

REFERENCE

- Cochran, A.T., Prado, J. & Schuettpelz, E. 2014. *Tryonia*, a new taenitidoid fern genus segregated from *Jamesonia* and *Eriosorus* (Pteridaceae). *PhytoKeys* 35: 23–43.
- Della, A.P. & Prado, J. 2020. *Tryonia* (Pteridaceae) in Brazil. *Brazilian Journal of Botany* 43(2): 341–354.
- Schwartzburd, P.B. & Labiak, P.H. 2008. *Eriosorus arenicola* (Pteridaceae), a new species from Brazil. *American Fern Journal* 98(3): 160–163.

Tryonia myriophylla (Sw.) Schuettp., J.Prado & A.T.Cochran

Has as synonym

basionym *Gymnogramma myriophylla* Sw.

homotype *Eriosorus myriophyllus* (Sw.) Copel.

heterotypic *Hypolepis repens* var. *selloana* Baker

heterotypic *Hypolepis sellowiana* Schlecht.

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type of the hair** glandular; **colour of the hair and bristle** brown dark/brown reddish. **Leaf:** **petiole** semi cylindrical; **density of the hair at the petiole** sparsely covered by hair/ moderately covered by hair/densely covered by hair; **type of the hair at the petiole** glandular/non glandular; **type of the frond** erect/arcuate; **form of the blade** triangular/trullate; **level of the division of the blade** 2 pinnate pinnatisect; **density of the hair on the rachis** sparsely covered by hair/ moderately covered by hair/densely covered by hair; **form of the pinnae** triangular/ovate; **density of the hair on the side adaxial and abaxial of the pinnae** sparsely covered by hair/ moderately covered by hair/ densely covered by hair; **consistency of the pinnae** membranous; **last segment** plane; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

J. Prado, 999, RB, 416491,  (RB00551220), SP, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Tryonia myriophylla* (Sw.) Schuettp., J.Prado & A.T.Cochran

REFERENCE

- Cochran, A.T., Prado, J. & Schuettpelz, E. 2014. *Tryonia*, a new taenitoid fern genus segregated from *Jamesonia* and *Eriosorus* (Pteridaceae). *PhytoKeys* 35: 23–43.
- Della, A.P. & Prado, J. 2020. *Tryonia* (Pteridaceae) in Brazil. *Brazilian Journal of Botany* 43(2): 341–354.

Tryonia schwackeana (Christ) Schuettp., J.Prado & A.T. Cochran

Has as synonym

basionym *Gymnogramma schwackeana* Christ

homotype *Eriosorus schwackeanus* (Christ) Copel.

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type of the hair** glandular; **colour of the hair and bristle** brown reddish/brown golden. **Leaf:** **petiole** semi cylindric; **density of the hair at the petiole** moderately covered by hair/densely covered by hair; **type of the hair at the petiole** glandular; **type of the frond** erect/arcuate; **form of the blade** angustate elliptic/lanceolate; **level of the division of the blade** pinnate pinnatifid; **density of the hair on the rachis** moderately covered by hair/densely covered by hair; **form of the pinnae** triangular/ovate; **density of the hair on the side adaxial and abaxial of the pinnae** moderately covered by hair/densely covered by hair; **consistency of the pinnae** membranous; **last segment** plane; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** **position of the sporangium** on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

C.A.W. Schwacke, s.n., SP, 21572, Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Tryonia schwackeana* (Christ) Schuettp., J.Prado & A.T. Cochran

REFERENCE

- Cochran, A.T., Prado, J. & Schuettpelz, E. 2014. *Tryonia*, a new taenitidoid fern genus segregated from *Jamesonia* and *Eriosorus* (Pteridaceae). *PhytoKeys* 35: 23–43.
- Della, A.P. & Prado, J. 2020. *Tryonia* (Pteridaceae) in Brazil. *Brazilian Journal of Botany* 43(2): 341–354.

Tryonia sellowiana (Kuhn) Schuettp., J.Prado & A.T. Cochran

Has as synonym

basionym *Gymnogramma sellowiana* Mett. ex Kuhn

homotype *Eriosorus sellowianus* (Kuhn) Copel.

DESCRIPTION

Stem: type of the rhizome long trailing; **indumentum of the rhizome** hair/bristle; **type of the hair** glandular; **colour of the hair and bristle** brown dark. **Leaf:** **petiole** semi cylindric; **density of the hair at the petiole** moderately covered by hair; **type of the hair at the petiole** glandular; **type of the frond** erect; **form of the blade** angustate elliptic/linear/lanceolate; **level of the division of the blade** pinnate pinnatifid; **density of the hair on the rachis** moderately covered by hair/densely covered by hair; **form of the pinnae** triangular/linear; **density of the hair on the side adaxial and abaxial of the pinnae** glabrate/sparsely covered by hair/ moderately covered by hair; **consistency of the pinnae** coriaceous; **last segment** strongly rolled; **type of the venation** furcate. **Type of sporangium:** type of the sporangium leptosporangium. **Sporangium:** position of the sporangium on the veins. **Spore:** type of the spore trilete.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

High Altitude Grassland, Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

J. Prado, 10983, SP (CFSC), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Tryonia sellowiana* (Kuhn) Schuettp., J.Prado & A.T. Cochran

REFERENCE

- Cochran, A.T., Prado, J. & Schuettpelz, E. 2014. *Tryonia*, a new taenitidoid fern genus segregated from *Jamesonia* and *Eriosorus* (Pteridaceae). *PhytoKeys* 35: 23–43.
- Della, A.P. & Prado, J. 2020. *Tryonia* (Pteridaceae) in Brazil. *Brazilian Journal of Botany* 43(2): 341–354.

Vittaria Sm.

This treatment is composed of the following taxa: *Vittaria*, *Vittaria graminifolia*, *Vittaria lineata*, *Vittaria scabrida*.

HOW TO CITE

Schuettpelz, E., Prado, J., Hirai, R.Y. 2020. *Vittaria* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB92016>.

DESCRIPTION

Plants epiphytic or rupicolous. Rhizome dorsiventral; leaf arrangement distichous. Laminae simple, linear; costate; venation biseriate areolate. Sori linear, restricted to submarginal commissures; soral paraphyses with slender apical cells. Spores monolete or trilete.

COMMENTS

Vittaria differs from the other genus of vittarioid ferns by a combination of characters, such as: Laminae simples, venation areolate (two rows of areoles), and by the soral paraphyses with slender apical cells.

Vittaria has seven species. Most species occur in tropical America, but one in tropical Africa and the Indian Ocean and one restricted to temperate North America.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Bahia, Ceará, Maranhão, Pernambuco)

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)

IDENTIFICATION KEY

Key to the species of *Vittaria* in Brazil

1. Rhizome scales linear; spores monolete, reniform *V. lineata*
1. Rhizome scales lanceolate to deltate-lanceolate; spores trilete, tetrahedral-globose
2. Laminae 5–50 cm long, linear, papyraceous; paraphyses reddish brown to dark reddish brown with apical cell slender *V. graminifolia*
2. Laminae 6–12 cm long, linear, chartaceous; paraphyses brown to light brown with apical cell flat (cucullate) *V. scabrida*

REFERENCE

- PPG I. 2016. A community–derived classification for extant lycophytes and ferns. *Journal of Systematics and Evolution* 54(6): 563–603.
- Schuettpelz, E., Chen, C.W., Kessler, M., Pinson, J.B., Johnson, G., Davila, A., Cochran, A.T., Huiet, L. & Pryer, K.M. 2016. A revised generic classification of vittarioid ferns (Pteridaceae) based on molecular, micromorphological, and geographic data. *Taxon* 65(4): 708–722.

Vittaria graminifolia Kaulf.

DESCRIPTION

Stem: rhizome scale lanceolate/apex/acute. **Leaf:** blade linear. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** paraphyses apical cell/narrowed. **Spore:** not chlorophylate trilete.

ADDITIONAL DESCRIPTION

Plants epiphytic, sometimes rupicolous. Rhizomes with scales, the scales lanceolate, gray-brown to orangish, apex acute. Stipe slightly flat, not winged. Laminae 5–50 cm long, linear, papyraceous, margins flat to revolute. Sori linear, continuous into grooves at lamina margins; paraphyses reddish brown to dark reddish brown with apical cell slender; spores usually trilete, tetrahedral-globose.

COMMENTS

This species can be recognized in having laminae 5–50 cm long, linear and papyraceous and by reddish brown to dark reddish brown paraphyses, with apical cell slender.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará, Roraima)

Northeast (Bahia, Pernambuco)

Central-west (Distrito Federal, Goiás, Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

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

HERBARIUM MATERIAL

Nonato, F.R., 608, R, Rio de Janeiro

REFERENCE

Nonato, F.R. & Windisch, P.G. 2004. Vittariaceae (Pteridophyta) do Sudeste do Brasil. *Revista Brasileira de Botânica* 27(1): 149–161.

Vittaria lineata (L.) Sm.

Has as synonym

basionym *Pteris lineata* L.

DESCRIPTION

Stem: rhizome scale linear/apex/filiform. **Leaf: blade** linear. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** paraphyses apical cell/narrowed. **Spore:** not chlorophylate monolete.

ADDITIONAL DESCRIPTION

Plants epiphytic. Rhizomes with scales, the scales linear, blackish to brown or sometimes orangish, apex filiform. Stipe slightly flat, not winged. Laminae 8–120 cm long, linear, papyraceous to subcoriaceous, margins flat to revolute. Sori linear, submarginal, continuous into grooves; paraphyses brown to slightly reddish brown with apical cell slender; spores monolete, reniform.

COMMENTS

Vittaria lineata is easily distinct from the other two species of *Vittaria* in Brazil by the linear rhizome scales and monolete, reniform spores.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima)

Northeast (Bahia, Ceará, Maranhão, Pernambuco)

Central-west (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

Windisch, P.G., 2501, RB, 64029,  (RB00710886), HB, Minas Gerais

REFERENCE

Nonato, F.R. & Windisch, P.G. 2004. Vittariaceae (Pteridophyta) do Sudeste do Brasil. *Revista Brasileira de Botânica* 27(1): 149–161.

Vittaria scabrida Klotzsch ex Fée

DESCRIPTION

Stem: rhizome scale lanceolate/apex/filiform. **Leaf: blade** linear. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** paraphyses apical cell/cucullate. **Spore:** not chlorophylate trilete.

ADDITIONAL DESCRIPTION

Plants epiphytic. Rhizomes with scales, the scales deltate-lanceolate, dark brown, apex filiform. Stipe flat, winged. Laminae 6–12 cm long, linear, chartaceous, margins flat to revolute. Sori linear, submarginal, continuous into grooves; paraphyses brown to light brown with apical cell flat (cucullate); spores trilete, tetrahedral-globose.

COMMENTS

This species can be recognized by the laminae 6–12 cm long, linear, chartaceous, margins flat to revolute and by brown to light brown paraphyses, with apical cell flat (cucullate).

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution


Confirmed occurrences

Northeast (Bahia)

Southeast (Rio de Janeiro)

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

HERBARIUM MATERIAL

P.H. Labiak, 268, UPCB, SP, RB, 73141,  (RB00710933), Paraná

REFERENCE

Labiak, P.H. & Prado, J. 1998. Pteridófitas epífitas da Reserva Volta Velha, Itapoá, Santa Catarina, Brasil. Boletim do Instituto de Botânica 11: 1–80.