

Dryopteridaceae Herter

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This treatment is composed of the following taxa: Dryopteridaceae, *Arachniodes*, *Bolbitis*, *Ctenitis*, *Cyclodium*, *Dryopteris*, *Elaphoglossum*, *Lastreopsis*, *Megalastrum*, *Mickelia*, *Olfersia*, *Parapolystichum*, *Polybotrya*, *Polystichum*, *Rumohra*, *Stigmatopteris*, *x Cyclobotrya*.

HOW TO CITE

Matos, F.B., Viveros, R.S., Prado, J., Condack, J.P.S., Bohn, A., Canestraro, B.K., Pietrobom, M.R., Hirai, R.Y., Smith, A.R., Sundue, M., Moran, R.C., Labiak, P. H., Salino, A. 2020. Dryopteridaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90950>.

DESCRIPTION

Plants terrestrial, epiphytic, epipetric, or hemiepiphytic. Stems erect to long-creeping, scaly. Leaves monomorphic or dimorphic; petioles with 3 or more vascular bundles at the base; laminae simple to 5-pinnate; rachises and costae adaxially grooved or terete, the grooves (when present) usually decurrent into those of the next lower order; veins free or (less commonly) anastomosing, the areoles with or without included veinlets. Sori round or acrostichoid; indusia present or absent; sporangial stalk 3-rowed; spores monolete, reniform, nongreen. Gametophytes cordate, epigeal, green, densely pubescent on margins and both surfaces, the hairs usually unicellular, papillate. $x=41$.

COMMENTS

Dryopteridaceae is the world's largest family of ferns, with an estimated 2115 species distributed in 26 genera (PPG I 2016). It is cosmopolitan, usually occurring in forested environments. In Brazil, it is represented by 16 genera and 191 species.

Recent phylogenetic studies have placed a monophyletic Dryopteridaceae as sister to most other eupolypod I families, with the exception of Didymochlaenaceae and Hypodematiaceae (Schuettpelz & Pryer 2007; Labiak et al. 2015; Liu et al. 2016; PPG I 2016).

Apparently, there are five main lineages within the family. The first is a group of terrestrial species with erect or short-creeping stems, monomorphic sterile and fertile leaves, and round sori (genera in Brazil: *Arachniodes*, *Ctenitis*, *Dryopteris*, and *Polystichum*). The second is the "polybotryoid clade" (terrestrial and climbing plants characterized by creeping stems and usually strongly dimorphic sterile and fertile leaves; genera in Brazil: *Cyclodium*, *Olfersia*, and *Polybotrya*). The third is *Stigmatopteris* (terrestrial plants with monomorphic sterile and fertile leaves, hydathodes, internal punctate glands in the laminae, and lack of indusia; genus in Brazil: *Stigmatopteris*). The fourth is the "lastreopsid clade" (terrestrial plants with monomorphic fertile and sterile leaves, basal pinnae usually prolonged basiscopically, colored glandular hairs on the laminae, and round sori; genera in Brazil: *Lastreopsis*, *Megalastrum*, *Parapolystichum*, and *Rumohra*). The fifth is the "bolbitidoid clade" (terrestrial, climbing, or epiphytic plants with creeping rhizomes containing an elongated ventral meristele (as seen in cross section), lack of hairs on the leaves, sterile-fertile leaf dimorph, and acrostichoid sori; genera in Brazil: *Bolbitis*, *Elaphoglossum*, and *Mickelia*).

Unfortunately, there are no unique morphological or anatomical features that could be used to characterize the family (Kessler et al. 2018). Its members, however, can be usually recognized by the combination of: scaly stems; basally attached stem scales; petioles with three or more vascular bundles in cross-section; usually continuous (from an axis to the next) adaxial grooves on the rachises and costae; free veins, or if anastomosing usually without included veinlets; abaxial, nonmarginal sori that are either round and usually indusiate or acrostichoid; monolete spores; and a base chromosome number of $x = 41$ (Smith et al. 2006).

Life Form

Herb, Liana/scandent/vine, Unknown

Substrate

Epiphytic, Hemiepiphytes, Rupicolous, Terrestrial, Unknown

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

Anthropic area, Amazonian Campinarana, High Altitude Grassland, Highland Rocky Field, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Inundated Forest (Igapó), Terra Firme Forest, Inundated Forest (Várzea), Seasonally Deciduous Forest, Seasonal Evergreen Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Coastal Forest (Restinga), Amazonian Savanna, 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, Amazonas, Pará, Rondônia)

Northeast (Ceará, Maranhão)

Central-west (Distrito Federal)

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

South (Santa Catarina)

IDENTIFICATION KEY**Key to the genera of Dryopteridaceae in Brazil**

1. Stems creeping, with an elongated ventral meristele in cross section; sterile and fertile leaves dimorphic; sori acrostichoid; laminae without hairs or rarely (in some species of *Elaphoglossum*) with capitate glandular hairs
 2. Sterile laminae entire or rarely (1 species) dichotomously divided; veins free or occasionally anastomosed; phylloodia often present.. ***Elaphoglossum***
 2. Sterile laminae 1-pinnate or rarely (1 species) entire; veins regularly anastomosed; phylloodia absent
 3. Sterile laminae with a conform apical pinna; bulblets, when present, born at the base of the medial pinnae.. ***Mickelia***
 3. Sterile laminae with pinnatifid apices; bulblets, when present, born near the apex of the leaves.. ***Bolbitis***
 1. Stems erect to decumbent, if creeping, then without an elongated ventral meristele in cross section; sterile and fertile leaves dimorphic or monomorphic; sori rounded, coenosoric or acrostichoid; laminae with or without hairs
 4. Sterile and fertile leaves strongly dimorphic; sori acrostichoid or coenosoric; indusia absent
 5. Sterile laminae with a conform apical pinna; rachises and costae adaxially not or only shallowly grooved, glabrous; veins apically connected, forming a submarginal connecting strand.. ***Olfersia***
 5. Sterile laminae with pinnatifid apices, rarely (1 species) with a conform apical pinna; rachises and costae adaxially grooved, the grooves pubescent; veins apically free, not forming a submarginal connecting strand.. ***Polybotrya***
 4. Sterile and fertile leaves monomorphic or slightly dimorphic; sori rounded (rarely coenosoric); indusia present or absent
 6. Lamina margins spinulose; pinnae and/or pinnules with a basal acroscopic lobe.. ***Polystichum***
 6. Lamina margins entire to serrate; pinnae and/or pinnules without a basal acroscopic lobe
 7. Hydathodes present; medial pinnae with pinnules (if present) arranged catadromically
 8. Laminae with internal punctate glands (best seen in transmitted light); rachises and costae generally without hairs abaxially; distal pinnules with the basal basiscopic vein springing from the costule, not the costa.. ***Stigmatopteris***
 8. Laminae without internal punctate glands; rachises and costae generally pubescent abaxially; distal pinnules with the basal basiscopic vein springing from the costa, not the costule.. ***Megalastrum***
 7. Hydathodes absent; medial pinnae with pinnules (if present) usually arranged anadromically
 9. Pinnae or pinnule margins thickened and decurrent onto the axis of the next lower order
 10. Bulblets absent on rachises.. ***Lastreopsis***
 10. Bulblets present distally on rachises.. ***Parapolystichum***
 9. Pinnae or pinnule margins not thickened nor decurrent onto the axis of the next lower order
 11. Rachises and costae flat to rounded (not grooved) on the adaxial surface; costal scales typically clathrate.. ***Ctenitis***
 11. Rachises and costae grooved on the adaxial surface; costal scales not clathrate
 12. Rachises and costal grooves glabrous within
 13. Rachises with two adaxial grooves separated by a raised medial ridge; indusia orbicular, peltate.. ***Rumohra***
 13. Rachises with a single adaxial groove; indusia orbicular or reniform, not peltate (attached at the sinus).. ***Arachniodes***

- 12.** Rachises and costal grooves pubescent within
14. Laminae 2-pinnate-pinnatifid to 4-pinnate; basal pinnae inequilateral, prolonged basiscopically.. **Arachniodes**
14. Laminae 1- to 3-pinnate at the base; basal pinnae equilateral
15. Stems creeping; indusia orbicular, peltate.. **Cyclodium**
15. Stems erect to decumbent; indusia orbicular or reniform, not peltate (attached at the sinus).. **Dryopteris**

REFERENCE

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Arachniodes Blume

This treatment is composed of the following taxa: *Arachniodes*, *Arachniodes denticulata*, *Arachniodes macrostegia*.

HOW TO CITE

Pietrobom, M.R. 2020. *Arachniodes* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90951>.

DESCRIPTION

Caule ereto, decumbente ou curto-reptante. **Frondes** monomorfas; **pecíolo** pardo-amarelado a marrom-escuro, ou ainda avermelhado; **lâmina** 2-5 pinada, cartácea a coriácea, deltóide, ápice agudo ou obtuso; **pinas** lanceoladas, oblongas, geralmente prolongadas acroscopicamente, lado basioscópico reduzido; **pínulas** anádromas, pecioluladas, com ápice aristado ou raramente não aristado; **Raque** e **costa** sem gemas prolíferas, com um sulco adaxial, pilosos ou glabros, sulcos decurrentes da ordem inferior seguinte; **venação** livre. **Soros** arredondados; **indúcio** frequentemente decíduo, orbicular-reniforme.

Life Form

Herb

Substrate

Rupicolous, 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)

Northeast (Bahia)

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

South (Paraná, Santa Catarina)

IDENTIFICATION KEY

1. Lamina 3-pinado-pinatissecta na base; últimos segmentos arredondado ou agudo no ápice; caule com poucas frondes *Arachniodes macrostegia*
1. Lamina 4-pinado-pinatissecta na base; últimos segmentos cuspidados no ápice; caule com muitas frondes agrupadas *Arachniodes denticulata*

Arachniodes denticulata (Sw.) Ching

Has as synonym

homotype *Polystichum denticulatum* (Sw.) J.Sm.

DESCRIPTION

Stem: form and margin of the scale lanceate; **type of the branch** erect. **Leaf:** base of the petiole squamose; **division of the pinna** basal tripinnate/pinnatisect; **division of the pinnae median and apical** tripinnate/pinnatisect; **margin of the segment** dentate/entire. **Sporangium:** form of the indusium orbicular; **indusium** persistent.

Life Form

Herb

Substrate

Rupicolous, 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, Rio de Janeiro, São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

G. Eiten; L.T. Eiten, 7740, UB, 103780, Rio de Janeiro

P.H. Labiak, 4599, MBML, 33958, Espírito Santo

L.A. Funez; A.E. Zermiani, 2995, FURB, 44991, (FURB08433), Santa Catarina

F. Gonzatti; D.F. Peralta; O. Britto, 4308, HUCS, 47743, São Paulo

L.P. Queiroz, 5002, HUEFS, 33202, Bahia

V.A.O. Dittrich, 1818, CESJ, 63335, Minas Gerais

J.B.S. Pereira, 259, UPCB, 67994, Paraná

Arachniodes macrostegia (Hook.) R.M.Tryon & D.S.Conant

DESCRIPTION

Stem: form and margin of the scale lanceate; **type of the branch** short/decumbent. **Leaf:** base of the petiole squamose; division of the pinna basal tripinnate/pinnatisect; division of the pinnae median and apical tripinnate; margin of the segment awned/entire. **Sporangium:** form of the indusium orbicular; indusium persistent.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Naturalized, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas)

HERBARIUM MATERIAL

R. Goldenberg, 1013, NYBG, 1241881, Acre

D.W. Stevenson, 796, NYBG,  (NY02596916), Amazonas

Bolbitis Schott

This treatment is composed of the following taxa: *Bolbitis*, *Bolbitis aliena*, *Bolbitis semipinnatifida*, *Bolbitis serratifolia*.

HOW TO CITE

Prado, J., Hirai, R.Y. 2020. *Bolbitis* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90954>.

Has as synonym

heterotypic *Chrysodium* Féé
heterotypic *Gymnopteris* Bernh.

DESCRIPTION

Plants terrestrial, saxicolous, or hemi-epiphytic; rhizomes short to long-creeping, scaly, in cross section with a wide, ventral vascular bundle and with 3 or 4 dorsal ones. Fronds dimorphous, sterile lamina pinnatifid apex, the fertile ones longer petiolate, and with narrower pinnae; laminae entire or 1-pinnate-pinnatifid or 1-pinnate-pinnatisect, glabrous or sparsely scaly, buds generally present at near the apex or absent; pinnae continuous to the rachises; rachises and costae adaxially without decurrent grooves, glabrous or sparsely scaly; veins areolate, with or without included veinlets. Sori acrostichoid; indusia absent; spores monolete.

COMMENTS

Bolbitis in Brazil is represented by three species. The genus can be recognized by the laminae dimorphic (the sterile one with narrower pinnae and pinnatifid apex); sori acrostichoid and monolete spores. It occurs most frequently in the Amazon forest.

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, Rondônia, Roraima)

Northeast (Ceará)

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 *Bolbitis* in Brazil

1. Rhizome short-creeping; pinnae 8–15 pairs in the sterile laminae
..... *B. serratifolia*

1. Rhizome long-creeping; pinnae 2–5 pairs in the sterile laminae
2. Rachises sparsely scaly; the proximal pinnae pair with an expanded proximal lobe *B. aliena*
2. Rachises glabrous; the proximal pinnae pair without an expanded proximal lobe *B. semipinnatifida*

Bolbitis aliena (Sw.) Alston

DESCRIPTION

Stem: rhizome long. **Leaf:** sterile pinnae 2/to/5; proximal pinnae lobate; rachis with/scale. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/without indusium/glabrous. **Spore:** monolete non chlorophylate.

ADDITIONAL DESCRIPTION

Plants terrestrial or rupicolous. Rhizome 0.3–0.4 cm, long-creeping, scaly, the scales 2–4(–5) x 0.5–1 mm, dark brown to blackish, entire. Fronds 1-pinnate-pinnatisec, 60–90 cm long., dimorphic; sterile laminae widest at base and pinnatifid at apex; rachises alate, sparsely scaly, lacking proliferous body; pinnae 2–5 pairs in the sterile laminae and 3–4 pairs in the fertile lamina, adnate or the proximal ones stalked; the proximal pinnae pair with an expanded proximal lobe; veins areolate, rarely included veinlets (1 free veinlet); fertile laminae with pinnae contracted, narrow and less lobed.

COMMENTS

This species can be easily recognized by the proximal pinnae pair with an expanded proximal lobe.

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)

HERBARIUM MATERIAL

W.C.Taylor, 5047, NY, Rondônia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Bolbitis aliena* (Sw.) Alston



Figure 2: *Bolbitis aliena* (Sw.) Alston

Bolbitis semipinnatifida (Fée) Alston

Has as synonym

basionym *Gymnopteris semipinnatifida* Fée

DESCRIPTION

Stem: rhizome long. **Leaf:** sterile pinnae/3/or/4; **proximal pinnae** without lobe(s); **rachis** glabrate. **Type of sporangium:** **leptosporangium** pedicellate/glabrous. **Sporangium:** annulus vertical/without indusium/glabrous. **Spore:** monolete non chlorophylate.

ADDITIONAL DESCRIPTION

Plants terrestrial or rupicolous. Rhizome 0.5–0.8 cm, long-creeping, scaly, the scales 2–4(–7) x 0.5–1(–1.5) mm, dark brown to blackish, entire. Fronds 1-pinnate-pinnatisect, 100–115 cm long., dimorphic; sterile laminae widest at base and pinnatifid at apex; rachises non alate, glabrous, lacking proliferous body; pinnae 3 or 4 pairs in the sterile laminae and 2–3 pairs in the fertile lamina, adnate or the proximal ones stalked, margins crenate-lobate; the proximal pinnae pair without an expanded proximal lobe; veins areolate, rarely included veinlets (1 free veinlet); fertile laminae with pinnae contracted, narrow and less lobed, one per plant.

COMMENTS

Sometimes material of this species is identified as *Bolbitis aliena*, but *B. semipinnatifida* differs in having the proximal pinnae pair lacking lobes at base.

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, Roraima)

HERBARIUM MATERIAL

D. Daly, 6786, NY,  (NY00868255), Acre
Zuquim, G.P.S., 240, INPA

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Bolbitis semipinnatifida* (Fée) Alston

Bolbitis serratifolia Schott

DESCRIPTION

Stem: rhizome short. **Leaf:** sterile pinnae 8 to 15; proximal pinnae without lobe(s); rachis glabrate. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/without indusium/glabrous. **Spore:** monolete non chlorophylate.

ADDITIONAL DESCRIPTION

Plants terrestrial or rupicolous, sometimes climbing. Rhizome 0.5–1.5 cm, short-creeping, scaly, the scales 1.5–5 x 1–1.5 mm, dark brown to blackish, entire. Fronds 1-pinnate, 70–110 cm long, dimorphic; sterile laminae widest at base; rachises narrowly alate, glabrous, sometimes with proliferous body; pinnae 8–15 pairs in the sterile laminae and 8–14 pairs in the fertile lamina, adnate or the proximal ones stalked, margins copiously crenate; the proximal pinnae pair without an expanded proximal lobe; veins areolate, the subcostal areoles 0–1 free veinlet; fertile laminae with pinnae narrower than the sterile ones.

COMMENTS

Bolbitis serratifolia is recognized by the rhizome short-creeping and sterile lamina with 8–15 pinnae pairs in the sterile laminae.

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, Rondônia)

Northeast (Ceará)

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

G. Gardner, 217, NY

M. Nee, 35007, INPA, 181081,  (INPA0181081)

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Bolbitis serratifolia* Schott



Figure 2: *Bolbitis serratifolia* Schott

Ctenitis (C.Chr.) C.Chr.

This treatment is composed of the following taxa: *Ctenitis*, *Ctenitis abyssi*, *Ctenitis ampla*, *Ctenitis anniesii*, *Ctenitis aspidioides*, *Ctenitis bigarellae*, *Ctenitis christensenii*, *Ctenitis deflexa*, *Ctenitis distans*, *Ctenitis eriocaulis*, *Ctenitis falciculata*, *Ctenitis fenestralis*, *Ctenitis flexuosa*, *Ctenitis glandulosa*, *Ctenitis laetevirens*, *Ctenitis microchlaena*, *Ctenitis nervata*, *Ctenitis nigrovenia*, *Ctenitis paranaensis*, *Ctenitis refulgens*, *Ctenitis submarginalis*.

HOW TO CITE

Viveros, R.S., Salino, A. 2020. *Ctenitis in Flora do Brasil 2020*. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90960>.

DESCRIPTION

Terrícola ou menos frequentemente rupícola; **caule** ereto ou ascendente, às vezes curto-reptante, escamoso, com bases de pecíolos caducos e raízes; **folhas** monomorfas, fasciculadas; **pecíolos** paleáceos, castanhos ou marrons, escurecidos e densamente escamosos na base, menos escamoso em direção ao ápice, as escamas mais claras na base, clatradas ou subclatradas; **lâminas** membranáceas, 1-pinado-pinatífidas a 4-pinnado-pinatífidas; **superfície adaxial dos principais eixos** com tricomas catenados, com escamas no pecíolo e raque e eventualmente na costa, planas ou abauladas ou buladas na base; **superfície abaxial dos principais eixos** com escamas como as da superfície adaxial, porém, geralmente mais numerosas e sempre presentes na costa; **pinas** basais anádromas e as medianas e apicais catádromas, com base truncada ou cuneada; **nervuras** livres, de ápices delgados, simples ou 1-3-furcadas nos últimos segmentos; **soros** redondos, indússios arredondado-reniformes fixos pelo enseio, conspícuos, inconspicuos ou ausentes; **esporângios** (leptosporângios) com ânulo transversal e três fileiras de células no pedicelo; **esporos** monoletes, elipsoides, superfície com dobras a tubérculos ou equinada; $x = 41$.

COMMENTS

O gênero *Ctenitis* está distribuído nas regiões tropicais e subtropicais do Velho e Novo Mundo. *Ctenitis* é caracterizado pela presença de tricomas catenados no pecíolo, raque e face adaxial da costa; pelas extremidades das nervuras delgadas, segmentos ou pínulas distais com a nervura basal basioscópica surgindo a partir da cóstula (em todas as espécies do Brasil), raramente da costa; 3-10 feixes vasculares na base do pecíolo; escamas no caule, pecíolo, raque e face abaxial da costa clatradas ou subclatradas.

Life Form

Herb

Substrate

Rupicolous, Terrestrial, Unknown

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

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

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

North (Acre, Amazonas, Pará)
 Northeast (Ceará, Maranhão)
 Southeast (São Paulo)
 South (Santa Catarina)

IDENTIFICATION KEY

- 1a.** Lâmina 2-4-pinado-pinatífida... **2**
1b. Lâmina 1-pinado-pinatífida ou 1-pinado-pinnatissecta.. **3**
- 2a.** Raque flexuosa; escamas da raque com muitas fímbrias e emaranhadas entre pré-escamas, dando à raque um aspecto lanuginoso.. *C. flexuosa*
2b. Raque não flexuosa; escamas da raque sem ou com poucas fímbrias, sem pré-escamas, raque sem aspecto lanuginoso.. *C. ampla*
- 3a.** Pinas incisas de 1/2–2/3 da distância entre o ápice do segmento e a costa; nervuras basais de segmentos adjacentes atingem a margem no enseio.. **4**
3b. Pinas incisas em mais de 2/3 (raramente ca. 1/2) da distância entre o ápice do segmento e a costa; nervuras basais de segmentos adjacentes não atingem a margem, mas direcionam-se para acima do enseio, ou atingem a margem pouco ou muito acima do enseio.. **6**
- 4a.** Ápice da lâmina conforme ou subconforme; indúcio presente.. *C. aspidioides*
4b. Ápice da lâmina confluente; indúcio ausente.. **5**
- 5a.** Face abaxial do pecíolo, raque e costa com escamas rígidas, marrom escuras ou castanhas; face abaxial da superfície laminar entre as nervuras glabra; face adaxial da costa sem escamas.. *C. nervata*
5b. Face abaxial do pecíolo, raque e costa com escamas castanho-claras ou castanhas; face abaxial da superfície laminar entre as nervuras com esparsos tricomas baciliformes; face adaxial da costa com escamas.. *C. refulgens*
- 6a.** Indúcio ausente ou pequeno e inconsípicio.. **7**
6b. Indúcio conspícuo.. **13**
- 7a.** Soros com um tufo de pré-escamas entre os esporângios.. *C. fenestralis*
7b. Soros sem tufo de pré-escamas entre os esporângios.. **8**
- 8a.** Raque e costa com escamas ovadas.. *C. abyssi*
8b. Raque e costa com escamas lineares, ou linear-lanceoladas ou lanceoladas.. **9**
- 9a.** Margem da lâmina glabra.. **10**
9b. Margem da lâmina com tricomas catenados.. **11**
- 10a.** Face abaxial da superfície laminar entre as nervuras glabra; plantas do estado de Santa Catarina.. *C. laetevirens*
10b. Face abaxial da superfície laminar entre as nervuras com esparsos tricomas baciliformes; plantas dos estados da região norte.. *C. nigrovenia*
- 11a.** Raque com escamas marrom-escuras a negras; ápices dos segmentos obtusos.. *C. paranaensis*
11b. Raque com escamas castanhas ou castanho-claras; ápices dos segmentos apiculados.. *C. submarginalis*
- 13a.** Soros inframedianos; face abaxial da cóstula com escamas como as da costa, porém menores, ao menos na base, com ou sem pré-escamas.. **14**
13b. Soros medianos ou supramedianos; face abaxial da cóstula sem escamas como as da costa, com ou sem pré-escamas.. **17**
- 14a.** Caule curto-reptante; face abaxial da raque e costa com escamas com muitas fímbrias curtas e longas ao longo de toda a margem, as da raque escuras com margem clara e as da costa uniformemente castanho-claras.. *C. deflexa*
14b. Caule ereto ou ascendente; face abaxial da raque e costa com escamas com ou sem algumas fímbrias na base e nas laterais, as da raque uniformemente castanho-claras ou uniformemente marrom-escuras a negras e as da costa de igual modo ou majoritariamente castanhas com ápice negro.. **15**
- 15a.** Face abaxial da raque com escamas castanho-claras, inteiras ou levemente denticuladas.. **16**
15b. Face abaxial da raque com escamas marrom-escuras, denteadas, cujos dentes são em forma de gancho.. *C. distans*
- 16a.** Face abaxial da raque e costa com escamas lanceoladas e margem levemente denticulada.. *C. anniesii*
16b. Face abaxial da raque e costa com escamas subuladas com margem inteira.. *C. eriocaulis*
- 17a.** Margem da lâmina glabra.. *C. nigrovenia*
17b. Margem da lâmina com tricomas catenados.. **18**
- 18a.** Face abaxial da raque e costa com escamas com muitas fímbrias curtas e longas ao longo de toda a margem, as da raque escuras com margem clara e as da costa uniformemente castanho-claras.. *C. deflexa*
18b. Face abaxial da raque e costa com escamas com ou sem algumas fímbrias na base e nas laterais, as da raque são uniformemente castanhas ou uniformemente marrom-escuras a negras.. **19**
- 19a.** Superfície laminar adaxial entre as nervuras apenas com tricomas filiformes.. *C. bigarellae*
19b. Superfície laminar adaxial entre as nervuras glabra ou com tricomas catenados, às vezes também com tricomas baciliformes e glandulares.. **20**

20a. Ápices dos segmentos apiculados.. *C. submarginalis*

20b. Ápices dos segmentos agudos, arredondados ou obtusos.. **21**

21a. Face abaxial do pecíolo, raque e costa com tricomas glandulares; superfície laminar abaxial entre as nervuras com tricomas glandulares e baciliformes; indúcio com tricomas glandulares.. *C. glandulosa*

21b. Face abaxial do pecíolo, raque e costa sem ou raramente com tricomas glandulares; superfície laminar abaxial entre as nervuras glabra ou com tricomas catenados e baciliformes, ou filiformes e baciliformes, raramente com tricomas glandulares; indúcio com tricomas baciliformes ou catenados.. **22**

22a. Face abaxial da raque com escamas castanho-escuras a negras; face abaxial da costa com escamas lanceoladas.. **23**

22b. Face abaxial da raque com escamas castanhas; face abaxial da costa com escamas linear-lanceoladas.. **24**

23a. Face abaxial da raque com escamas de 1–2 mm compr.; costa e superfície laminar entre as nervuras (abaxial e adaxial) com tricomas catenados, às vezes também com tricomas baciliformes e glandulares.. *C. falciculata*

23b. Face abaxial da raque com escamas de 3–6 mm compr.; costa e superfície laminar entre as nervuras com tricomas catenados (abaxial e adaxial), às vezes também com tricomas baciliformes (abaxial), raramente glabros (abaxial e adaxial).. *C. paranaensis*

24a. (4) 7 – 11 pares de pinas; face adaxial da superfície laminar entre as nervuras glabra; plantas do sudeste do Brasil.. *C. christensenii*

24b. 19 – 27 pares de pinas; face adaxial da superfície laminar entre as nervuras com esparsos a densos tricomas catenados.. *C. microchlaena*

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. 2018. (DOI: 10.11646/phytotaxa.385.1.1)

LELLINGER, D.B. A modern multilingual glossary for taxonomic pteridology. Series: Pteridologia 3. American Fern Society, Washington, D.C. 2002. (DOI: 10.5962/bhl.title.124209)

Ctenitis abyssi (Sehnem) Salino & P.O.Morais

Has as synonym

basionym *Dryopteris abyssi* Sehnem

DESCRIPTION

Stem: type of the stem short trailling. **Leaf:** number of the bundle on the base of the petiole 3; scale on the base of the petiole not tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown pale; form of the scale of the rachis lanceolate/ovate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present; sori supramedian; indusium absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins with trichome glandular; surface laminar adaxial between the veins with trichome glandular. **Spore:** surface unknown.

COMMENTS

Ctenitis abyssi é conhecida apenas pelo material tipo, proveniente do cânion Taimbé do Parque Nacional Aparados da Serra no Rio Grande do Sul. Ela se assemelha a *C. nigrovenia* pelos segmentos serreados, diferenciando-se pelo caule curto-reptante, margem da lâmina com tricosas catenadas, face abaxial da costa com escamas castanho-claras e largamente ovadas. *Ctenitis nigrovenia*, por sua vez, tem caule ereto ou ascendente, margem da lâmina glabra, face abaxial da costa com escamas marrom-escuras e linear-lanceoladas, com registros nas regiões norte e centro-oeste do Brasil, e outros países da América do Sul, América Central e México.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

A. Sehnem, 6315, PACA, 68772, Rio Grande do Sul, **Typus**

REFERENCE

SALINO, A. & MORAIS, P.O. New combinations in the Tropical American *Ctenitis* (Tectariaceae). American Fern Journal, v. 93, n. 1, p. 32–35. 2003. (DOI: 10.1640/0002-8444(2003)093[0032:NCITTA]2.0.CO;2)

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis ampla (Willd.) Ching

Has as synonym

basionym *Polypodium amplum* Willd.

heterotypic *Ctenitis sloanei* (Poepp. ex Spreng.) C.V.Morton

heterotypic *Polypodium sloanei* Poepp. ex Spreng.

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 6/7/8/9/10; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown pale/brown; form of the scale of the rachis linear; division of the blade 2 to 4 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa present; trichome glandular on the side abaxial of the costa present/absent; sori median; indusium present and conspicuous/absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome bacilliform/with trichome catenate; surface laminar adaxial between the veins glabrate/with trichome catenate. **Spore:** surface echinate.

COMMENTS

Indivíduos adultos de *C. ampla* são plantas grandes cujas frondes variam de 0,8–2,0 m de comprimento. É uma das duas espécies do gênero no Brasil, cuja lâmina é 2–4-pinado-pinnatifida. A outra espécie é *C. flexuosa*, cuja raque é flexuosa, enquanto a de *C. ampla* é retilínea ou curvada. As demais espécies são 1-pinado-pinnatifidas a 1-pinado-pinnatissectas.

No Brasil há poucos registros de *C. ampla*, os quais são do norte de Minas Gerais, Bahia e Ceará. Esta espécie ocorre também nos Estados Unidos (Flórida), México, Honduras, Nicarágua, El Salvador, Costa Rica, Panamá, Cuba, Jamaica, Hispaniola, Trinidad, Venezuela, Colômbia, Equador, Peru, Bolívia e Argentina.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Caatinga, Atlantic Rainforest

Vegetation Types

Riverine Forest and/or Gallery Forest

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Salino, 3257, BHCB, Minas Gerais

Almeida-Neto, M., 270, HUEFS, 56476, Ceará

Humboldt, F.W.H.A., s.n., B (B-W-19722-010), **Typus**

Reineck, E.M., s.n., P (P01381412), Bahia

REFERENCE

LOMBARDI, J.A.; SALINO, A.; TEMPONI, L.G. Diversidade florística de plantas vasculares no município de Januária, Minas Gerais, Brasil. Lundiana, v. 5, n. 2, p. 3–20. 2005. Disponível em <https://www2.icb.ufmg.br/lundiana/full/vol612005/1.pdf>

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis anniesii (Rosenst.) Copel.

Has as synonym

basionym *Dryopteris anniesii* Rosenst.

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 6/7; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown pale; form of the scale of the rachis lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa present; scale on the side abaxial of the costule equals the of the costa present; trichome glandular on the side abaxial of the costa present; sori inframedian/median; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome bacilliform/with trichome catenate; surface laminar adaxial between the veins glabrate. **Spore:** surface with fold to tuber.

COMMENTS

C. anniesii pode ser reconhecida pelos segmentos estreitos cujos enseios que os separam geralmente são mais largos ou tão largos quanto os próprios segmentos, soros com indúcio conspícuo e por ser densamente revestida por escamas no pecíolo, raque, costa (em ambas as faces) e cóstula (na face abaxial). Contudo, na face adaxial da costa, as escamas são mais escassas.

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

Northeast (Bahia)

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

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

HERBARIUM MATERIAL

Annies, s.n., P (P00170001)

A. Korte, 1998, FURB, 22045, (FURB00079), Santa Catarina

A.C. Brade, 20105, BHCB

Salino, A; Dittrich, VAO; Meinberg, AC; Morais, PO, 6315, BHCB, 57733, (BHCB000724), São Paulo

Jürgens, C. & Stier, A., 158, S (S-R-1699), ICN, R, 109499, UC (UC441704), NY (NY00099430), Rio Grande do Sul, **Typus**

Verdi, M.; Klettenberg, D.H. & Klemz, G., 3151, FURB, 17281, (FURB07492), FURB, 15511, , , (FURB07496), Santa Catarina

Annies L., 89, P (P00642743)

A. Salino, 6315, BHCB

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis aspidioides (C.Presl) Copel.

Has as synonym

basionym *Polypodium aspidioides* C.Presl

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 3/5; scale on the base of the petiole not tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown/brown dark to black; form of the scale of the rachis linear lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade conforming or subconform; pinnae or pinnule incised to circa of the 2 / 3 of the distance the apex of the segment between and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa absent; sori inframedian/median; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome catenate; surface laminar adaxial between the veins glabrate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis aspidioides pode ser reconhecida pelo ápice da lâmina conforme ou subconforme. Ela é a única espécie de *Ctenitis* das Américas com essas características. Além disso, ela é pouco escamosa, possui indúcio conspícuo e a incisão da pina varia de 1/2 a no máximo 2/3 da distância entre a costa e o ápice do segmento, de forma que as nervuras basais dos segmentos adjacentes atingem a margem no ensieio. Assemelha-se a *C. nervata* pela incisão da pina e escassez de escamas, diferenciando-se pelo ápice da lâmina conforme ou subconforme, presença de indúcio, escamas da face abaxial da costa castanhas a marrom-escuras, lineares ou filiformes. Enquanto *C. nervata* possui ápice da lâmina confluente, soros sem indúcio e escamas marrom-escuras, deltoides ou lanceoladas.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Maranhão)

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

South (Paraná)

HERBARIUM MATERIAL

Brade, A.C., 16680, RB, 43086, (RB00656305), Rio de Janeiro

Krieger, L., 11513, BHCB, Minas Gerais

A. Salino, 15646, UEC, 176867, (UEC002793), São Paulo

Pohl, J.B.E., s.n., PRC (405453), Rio de Janeiro, **Typus**

F. B. Matos, 1332, NYBG, 1519750, (NY01519750), Bahia

Salino, A., 2153, BHCB, 28811, Minas Gerais
P. Labiak, 4647, MBML, 1519750 (MBML034053), Espírito Santo
Salino, A., 14814, FURB, 1519750 (FURB07531), Paraná

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis bigarella Schwartsb., Labiak & Salino

Has as synonym

heterotypic *Dryopteris falciculata* var. *elongata* Rosenst.

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 3; scale on the base of the petiole not tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown; form of the scale of the rachis lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present; sori supramedian; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins with trichome filiform/with trichome catenate; surface laminar adaxial between the veins with trichome filiform. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis bigarella pode ser reconhecida pelos tricomas filiformes hialinos na superfície laminar entre as nervuras em ambas as faces, especialmente na adaxial. Além disso, há tricomas glandulares no pecíolo, raque e face abaxial da costa, o indúcio é glabro com a margem ciliada e a largura da lâmina é cerca de 1/3 de seu comprimento.

Ctenitis bigarella é frequentemente confundida com *C. christensenii*, *C. falciculata*, *C. glandulosa* e *C. paranaensis*. As escamas da raque de *C. bigarella*, *C. christensenii* e *C. glandulosa* são castanhas, mas as de *C. falciculata* e *C. paranaensis* são marrom-escuras a pretas. A superfície laminar entre as nervuras na face adaxial de *C. christensenii* é glabra; de *C. falciculata* é densamente revestida de tricomas catenados, podendo haver também esparsos tricomas baciliformes e glandulares; de *C. glandulosa* pode ser glabra ou com esparsos tricomas catenados, baciliformes e glandulares; de *C. paranaensis* pode ser glabra ou possuir esparsos tricomas catenados e baciliformes.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

South (Paraná)

HERBARIUM MATERIAL

Schwartsb., PB, 944, MBM (MBM323296), Paraná, **Typus**

Viveros, RS; Salino, A; Oliveira, CT; Giacomin, LL, 22, BHCB, 123348, (BHCB000725), Minas Gerais

A.C. Brade, 15195, RB, 123348, (RB01204255), São Paulo
Duarte, A.P., 5182, RB (RB00657612), Rio de Janeiro
Schwartsburd, P.B., 778, BHCB (BHCB000107)
Schwartsburd, P.B., 680, RB, 438390, (RB00543252), RB, 438390 (RB00561299), Paraná, **Typus**
Schwartsburd, P.B., 565, NY, 438390, (NY00990692), Paraná, **Typus**

REFERENCE

SCHWARTSBURD, P.B.; LABIAK, P.H. & SALINO, A. A new species of *Ctenitis* (Dryopteridaceae) from southern Brazil. *Brittonia*, v. 59, n. 1, p. 29–32. 2007. (DOI: 10.1663/0007-196X(2007)59[29:ANSOCD]2.0.CO;2)
VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis christensenii R.S.Viveros & Salino

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 4; scale on the base of the petiole not tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown; form of the scale of the rachis linear lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present/absent; sori median/supramedian; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome bacilliform/with trichome filiform; surface laminar adaxial between the veins glabrate. **Spore:** surface with fold to tuber.

COMMENTS

C. christensenii pode ser reconhecida pela face abaxial da costa com esparsas escamas castanhas e linear-lanceoladas, superfície laminar entre as nervuras glabra ou com esparsos tricomas baciliformes e filiformes na face abaxial e glabra na adaxial e indúcio inteiro com tricomas baciliformes. Assemelha-se a *C. bigarella*, mas esta pode ser distinguida pelos tricomas filiformes na superfície laminar entre as nervuras na face adaxial.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

HERBARIUM MATERIAL

A. Salino, 13408, BHCB (BHCB026912), Espírito Santo, **Typus**

Mynssen, C.M., 512, RB, (RB01204781), Espírito Santo, **Typus**

Sucre, D., 5462, RB, (RB01204768), Espírito Santo, **Typus**

Mynssen, C.M., 875, RB, (RB01204772), RB, (RB01204774), Rio de Janeiro

REFERENCE

VIVEROS, R.S. & SALINO, A. Two new species of *Ctenitis* (Dryopteridaceae) from South America. *Phytotaxa*, v. 239, n. 1, p. 1–16. 2015. (DOI: 10.11646/phytotaxa.239.1.1)

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis deflexa (Kaulf.) Copel.

Has as synonym

basionym *Polypodium deflexum* Kaulf.

DESCRIPTION

Stem: type of the stem short trailling. **Leaf:** number of the bundle on the base of the petiole 4; scale on the base of the petiole tangled; scale on the apex of the petiole adpressed; rachis not flexuous; colour of the scale of the rachis dark with margin pale; form of the scale of the rachis lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised of the 1 / 2 to 2 / 3 of the distance between the apex of the segment and the costa/ of the 2 / 3 to 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa present; scale on the side abaxial of the costule equals the of the costa present; trichome glandular on the side abaxial of the costa present; sori inframedian; indusium present and conspicuous/absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome bacilliform; surface laminar adaxial between the veins glabrate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis deflexa pode ser reconhecida pelo caule curto-reptante, por ser bastante escamosa, cujas escamas são ovadas ou lanceoladas com várias fímbrias ao longo da margem. As escamas da raque são marrom-escuras com bordas claras e as da face abaxial da costa e cóstula são uniformemente castanho-claras.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia)

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

South (Santa Catarina)

HERBARIUM MATERIAL

P.H. Labiak, 4897, RB, 470632, (RB00532271)

Rolf A. Engelmann, RE1740, RB, 540519, (RB00698313)

C.Mynssen, 1301, RB, 542616, (RB00701377), Rio de Janeiro, **Typus**

L.S. Sylvestre, 1299, RB, 466196, (RB00526237)

Y. E. J. Mexia, 5028, RB, 132199, (RB00656321), NY, 840478, (NY00840478), Minas Gerais

A. Salino, 6654, BHCB

Paciência, M.L.B., 2980, UEC, 163250, (UEC019594), São Paulo

A. Salino, 1993, BHCB

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis distans (Brack.) Ching

This treatment is composed of the following taxa: *Ctenitis distans*, *Ctenitis distans* var. *distans*, *Ctenitis distans* var. *isabellina*.

Has as synonym

basionym *Lastrea distans* Brack.

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 4/6; scale on the base of the petiole not tangled; scale on the apex of the petiole adpressed; rachis not flexuous; colour of the scale of the rachis brown dark to black; form of the scale of the rachis linear lanceolate/lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more than 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa present; scale on the side abaxial of the costule equals the of the costa present; trichome glandular on the side abaxial of the costa absent; sori inframedian; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome bacilliform/with trichome catenate; surface laminar adaxial between the veins glabrate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis distans pode ser reconhecida pelas escamas castanho escuras a pretas, de margem denticulada, cujos dentes são em forma de gancho. Tais escamas estão na raque e face abaxial da costa e cóstula, sendo as da cóstula com a mesma forma que as da costa. As espécies mais semelhantes a *C. distans* são *C. paranaensis* e *C. falciculata* devido à cor das escamas. Porém, elas são inteiras ou levemente denticuladas, na face abaxial da cóstula geralmente não há escamas, ou quando há elas são pré-escamas, não da mesma forma que as da costa.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Rondônia)

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

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

South (Paraná, Santa Catarina)

Possible occurrences

North (Pará)

Northeast (Maranhão)

South (Santa Catarina)

IDENTIFICATION KEY

1a. Escamas da face abaxial da costa lanceoladas, castanhas na base e pretas em direção ao ápice, clatradas.. *C. distans* var. *distans*

1b. Escamas da face abaxial da costa linear-lanceoladas, uniformemente pretas, subclatradas.. *C. distans* var. *isabellina*

HERBARIUM MATERIAL

A.C. Brade, 18072, BHCB

J.A. Lombardi, 6067, BHCB

A.F.M. Glaziou, 2372, P (P00170071)

Y. E. J. Mexia, 4750, NY, 840484,  (NY00840484), Minas Gerais

REFERENCE

VIVEROS, R.S. & SALINO, A. Two new species of *Ctenitis* (Dryopteridaceae) from South America. *Phytotaxa*, v. 239, n. 1, p. 1–16. 2015. (DOI: 10.11646/phytotaxa.239.1.1)

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis distans (Brack.) Ching var. *distans*

Has as synonym

basionym *Lastrea distans* Brack.

heterotypic *Aspidium amaurolepis* Fée

heterotypic *Aspidium ctenitis* Link

DESCRIPTION

Ctenitis distans var. *distans* pode ser reconhecida pelas escamas da face abaxial da costa lanceoladas, clatradas e castanhas na base (esta, geralmente cordada), mas escurecendo-se em direção ao ápice tornando-se pretas. Diferenciando-se assim de *C. distans* var. *isabellina*, cujas escamas da face abaxial da costa são uniformemente pretas, linear-lanceoladas e subclatradas.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous 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)

Possible occurrences

North (Pará)

Northeast (Maranhão)

HERBARIUM MATERIAL

Eugenio, J., 46, RB, 41544 (00656915), Ceará

Colli, A.T., 24, BHCB, 126331, São Paulo

Paixão, J.L., 1412, HUEFS, 128261, Bahia

Capt. Wilkes, s.n., US (US00067060), **Typus**

Pietrobom, M.R., 4846, BHCB, 73990, Alagoas

Sakagami, C.R., 337, BHCB, 93879, Paraná

Lopes, M.S., 277, RB, 375139 (00656540), Pernambuco

Salino, A., 2846, BHCB, 33160, Minas Gerais

Salino, A., 14055, BHCB, 126331, Espírito Santo

Heringer, G., 469, BHCB, 142731, Rio de Janeiro

REFERENCE

Viveros, R.S.; Rouhan, G. & Salino, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa* 385 (1): 1–83. (DOI: <http://dx.doi.org/10.11646/phytotaxa.385.1.1>)

Ctenitis distans var. *isabellina* (Fée) R.S.Viveros & Salino

Has as synonym

basionym *Aspidium isabellinum* Fée

DESCRIPTION

Ctenitis distans var. *isabellina* diferencia-se de *C. distans* var. *distans* pelas escamas da face abaxial da costa uniformemente pretas, subclatradas e linear-lanceoladas. Enquanto as escamas da face abaxial da costa de *C. distans* var. *distans* são castanhas na base e pretas ao longo do ápice, clatradas e lanceoladas.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Rondônia)

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

South (Paraná)

Possible occurrences

South (Santa Catarina)

HERBARIUM MATERIAL

A.C. Brade, 13137, RB, Rio de Janeiro

Salino, 2408, BHCB, 16605, Minas Gerais

Hatschbach, G., 39235, MBM, 48330 (MBM048330), Paraná

Salino, A., 32a, UEC, 57362, São Paulo

Glaziou, A.F.M., 2368, P (P00170017), B (B 20 0038358), BM (BM000937854), P (P00643495), Rio de Janeiro, **Typus**

A.C. Brade, 8072, RB, 56790, Espírito Santo

REFERENCE

Viveros, R.S., Rouhan, G., & Salino, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa* 385 (1): 1–83.

Ctenitis eriocalis (Fée) Alston

Has as synonym

basionym *Aspidium eriocalon* Fée

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 4/6; scale on the base of the petiole not tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown pale; form of the scale of the rachis subulate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present; sori inframedian; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins with trichome bacilliform/with trichome catenate; surface laminar adaxial between the veins with trichome bacilliform/with trichome catenate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis eriocalis pode ser reconhecida por ser densamente revestida por escamas castanho-claras e subuladas no pecíolo, raque, costa (em ambas as faces) e cóstula (na face abaxial), tricomas baciliformes e catenados nas nervuras e entre as nervuras em ambas as faces, sendo os baciliformes mais abundantes na face adaxial e pelos soros com indúcio conspicuo com tricomas baciliformes e glandulares.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia)

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

South (Paraná)

HERBARIUM MATERIAL

A. Salino, 5130, UFP, BHCB

Pietrobom-Silva, M.R., 5164, BHCB, UFP

A.C. Brade, 19896, RB, 66980,  (RB00656964)

Glaziou, A.F.M., 2369, P (P02141711), P (P01573297), P (P01573296), P (P00170025), P (P00170024), BR (BR000000698834),

BR (BR000000698767), P (P00170023), Rio de Janeiro, **Typus**

J.B.S. Pereira, 343, RB, 484043,  (RB00568086)

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis falciculata (Raddi) Ching

Has as synonym

basionym *Aspidium falciculatum* Raddi
homotype *Dryopteris falciculata* (Raddi) Kuntze

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 3; scale on the base of the petiole not tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown dark to black; form of the scale of the rachis lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa absent; sori median/supramedian; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins with trichome glandular/with trichome bacilliform/with trichome catenate; surface laminar adaxial between the veins with trichome glandular/with trichome bacilliform/with trichome catenate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis falciculata pode ser distinguida pelas escamas marrom-escuras a pretas na raque e pelos densos tricos catenados no pecíolo, raque, face abaxial da costa, cóstula, nervuras, entre as nervuras e sobre o indúcio.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Bahia, Pernambuco)

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

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

HERBARIUM MATERIAL

A. Salino, 2665, BHCB

J.M.A. Braga, 1118, RB, 545796, (RB00707726)

D. Sucre, 1667, RB, 136865, (RB00656535)

D.A. Folli, 4390, CVRD, 7968, (CVRD007968), Espírito Santo

A.C. Brade, 18471, BHCB

P. Occhini, 16, RB, 52716, (RB00656511)

Raddi, G., s.n., FI, PI, Typus

REFERENCE

- VIVEROS, R.S. & SALINO, A. Two new species of *Ctenitis* (Dryopteridaceae) from South America. *Phytotaxa*, v. 239, n. 1, p. 1–16. 2015. (DOI: 10.11646/phytotaxa.239.1.1)
- VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis fenestralis (C.Chr.) Copel.

Has as synonym

basionym *Dryopteris fenestralis* C. Chr.

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 5; scale on the base of the petiole tangled; scale on the apex of the petiole imbricate; rachis not flexuous; colour of the scale of the rachis brown pale; form of the scale of the rachis ovate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa present; scale on the side abaxial of the costule equals the of the costa present; trichome glandular on the side abaxial of the costa absent; sori inframedian; indusium absent or minute and inconspicuous; pro-scales between the sporangium present; surface laminar abaxial between the veins glabrate/ with trichome bacilliform; surface laminar adaxial between the veins glabrate. **Spore:** surface unknown.

COMMENTS

Ctenitis fenestralis pode ser reconhecida pelos soros sem indústio, com um tufo de pré-escamas entre os esporângios e por ser densamente revestida por escamas. Na face abaxial da costa e cóstula, às vezes também sobre as nervuras (em indivíduos maiores), as escamas são castanho-claras, ovadas com a base cordada, cujo enseio é profundo, a margem é levemente denticulada com algumas fímbrias que ficam emaranhadas com as várias pré-escamas da cóstula.

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

North (Rondônia)

Northeast (Rio Grande do Norte)

Southeast (Rio de Janeiro, São Paulo)

South (Santa Catarina)

Possible occurrences

Northeast (Ceará)

HERBARIUM MATERIAL

Spannagel, C., 144, BHCB

Rolf A. Engelmann, RE0604, RB, 540524, (RB00698318)

Spannagel L.C., 174, P (P00170046)

Rolf A. Engelmann, RE0636, RB, 540525, (RB00698319)

Glaziou, A.F.M., 7026, P (P01608941), P (P01608940), P (P01608939), P (P01608938), K (K000590329), BM (BM 000937858), B (B 20 0055536), B (B 20 0055535), B (B 20 0055534), Rio de Janeiro, **Typus**

A. Salino, 7285, BHCB

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis flexuosa (Fée) Copel.

Has as synonym

basionym *Aspidium flexuosum* Fée

DESCRIPTION

Stem: type of the stem unknown. **Leaf:** number of the bundle on the base of the petiole unknown; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending/imbricate; rachis flexuous; colour of the scale of the rachis brown pale; form of the scale of the rachis linear; division of the blade 2 to 4 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised of the 1 / 2 to 2 / 3 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present; sori inframedian; indusium absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome bacilliform; surface laminar adaxial between the veins glabrate/with trichome catenate. **Spore:** surface unknown.

COMMENTS

Ctenitis flexuosa é conhecida apenas pelo material tipo, supostamente do Rio de Janeiro e de outro material de Santa Catarina. Ambos são coletas antigas realizadas há mais de 100 anos. Ela é uma espécie 2-pinado-pinatífera com a raque flexuosa, densamente revestida por escamas nos eixos, as escamas são castanho-claras, lanceoladas com fímbrias na margem emaranhadas com pré-escamas, dando um aspecto lanuginoso ao pecíolo, raque, costa e cóstula, principalmente na face abaxial.

Life Form

Herb

Substrate

Unknown

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)

South (Santa Catarina)

HERBARIUM MATERIAL

H. Luederwaldt, s.n., HB, 39022, Santa Catarina

A.F.M. Glaziou, 2458, P (P01630464), P (P00170048), P (P00642721), BR (BR000000696547), P (P02141716), P (P00170047), Rio de Janeiro, **Typus**

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis glandulosa R.S.Viveros & Salino

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 4; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown; form of the scale of the rachis lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present; sori median/supramedian; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins with trichome glandular/with trichome bacilliform/with trichome catenate; surface laminar adaxial between the veins glabrate/with trichome glandular/with trichome bacilliform/with trichome catenate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis glandulosa pode ser reconhecida pelos tricomas glandulares em várias partes da planta, como no pecíolo, raque, costa (face adaxial), superfície laminar entre nervuras (face abaxial e às vezes também na adaxial) e indúcio. Além disso, na face abaxial costa há escamas castanhas, lanceoladas com base cordada. Além dos tricomas glandulares, há também tricomas baciliformes e catenados na face abaxial da costa, cóstula, nervuras e entre as nervuras. *Ctenitis glandulosa* é frequentemente confundida com *C. bigarella*, *C. christensenii*, *C. falciculata* e *C. paranaensis*. As escamas da raque de *C. glandulosa*, *C. bigarella* e *C. christensenii* são castanhas, mas as de *C. falciculata* e *C. paranaensis* são marrom-escuras a pretas. Os tipos de tricomas na face adaxial da superfície laminar entre as nervuras variam entre essas espécies. Em *C. glandulosa*, essa região pode ser glabra ou com esparsos tricomas catenados, baciliformes e glandulares. Em *C. bigarella* há tricomas filiformes. Em *C. falciculata* há muitos tricomas catenados, podendo haver também esparsos tricomas baciliformes e glandulares. Em *C. paranaensis*, pode ser glabra ou com esparsos tricomas catenados e baciliformes.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Pernambuco)

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

HERBARIUM MATERIAL

C. Mynssen, 230, RB, 375610, (RB00657651), Rio de Janeiro

A. Salino, 13626, BHCB (BHCB026911), Espírito Santo, **Typus**

REFERENCE

VIVEROS, R.S. & SALINO, A. Two new species of *Ctenitis* (Dryopteridaceae) from South America. *Phytotaxa*, v. 239, n. 1, p. 1–16. 2015. (DOI: 10.11646/phytotaxa.239.1.1)

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis laetevirens (Rosenst.) Salino & P.O.Morais

Has as synonym

basionym *Dryopteris laetevirens* Rosenst.

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 4/5; scale on the base of the petiole tangled/not tangled; scale on the apex of the petiole adpressed; rachis not flexuous; colour of the scale of the rachis brown dark to black; form of the scale of the rachis linear lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised of the 2 / 3 to 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade glabrate; scale on the side adaxial of the costa present; scale on the side abaxial of the costule equals the of the costa present/absent; trichome glandular on the side abaxial of the costa absent; sori median/supramedian; indusium absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate; surface laminar adaxial between the veins glabrate. **Spore:** surface unknown.

COMMENTS

Ctenitis laetevirens pode ser reconhecida pela margem da lâmina sem tricomas catenados e pelas escamas da face abaxial da costa marrom-escuras a pretas e linear-lanceoladas, sem qualquer tipo de tricoma na face abaxial da costa, cóstula, nervuras e entre as nervuras.

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

South (Santa Catarina)

Possible occurrences

Southeast (São Paulo)

HERBARIUM MATERIAL

Lüderwaldt, H., 1814, UC, SPF, SP, NY, BHCB

J.L. Schmitt, 561, FURB (FURB00081)

Goeden, 49, SP, NY, UC, SPF, BHCB

Lüderwaldt, H., 1380, S (S05-11180), BM (BM000937872), MO, 2456890, SP, 21850, Santa Catarina, **Typus**

REFERENCE

SALINO, A. & MORAIS, P.O. New combinations in the Tropical American *Ctenitis* (Tectariaceae). American Fern Journal, v. 93, n. 1, p. 32–35. 2003. (DOI: 10.1640/0002-8444(2003)093[0032:NCITTA]2.0.CO;2)

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis microchlaena (Fée) Stolze

Has as synonym

basionym *Aspidium microchlaena* Fée

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 4/5; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown; form of the scale of the rachis linear; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised of the 2 / 3 to 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa absent; sori median/supramedian; indusium present and conspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins with trichome bacilliform/with trichome catenate; surface laminar adaxial between the veins with trichome catenate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis microchlaena é similar a *C. submarginalis*, diferindo desta pelo ápice do segmento arredondado, nervuras basais de segmentos adjacentes que atingem a margem bem acima do enseio, indúcio sempre presente e conspícuo e face abaxial da costa e superfície laminar entre as nervuras com muitos tricomas catenados. *Ctenitis submarginalis*, por sua vez, tem o ápice do segmento levemente apiculado, as nervuras basais de segmentos adjacentes atingem a margem no enseio ou um pouco acima do enseio, às vezes bem acima do enseio, o indúcio pode ser conspícuo, inconspícuo ou estar ausente, face abaxial da costa e superfície laminar sem ou poucos tricomas catenados. A densidade dos tricomas catenados de *C. microchlaena* na face abaxial da superfície laminar entre as nervuras é semelhante à de *C. falciculata*. Contudo, *C. microchlaena* tem escamas castanhas e *C. falciculata* tem escamas marrom escuras a pretas. Além disso, *C. microchlaena* tem um registro antigo de localidade imprecisa na região amazônica do Brasil. Há mais registros desta espécie na Venezuela, Colômbia, Equador, Peru, e Bolívia, países da América Central, México e Antilhas. Enquanto, *C. falciculata* tem registros na Guiana e nas regiões nordeste, sudeste e sul do Brasil.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Geographic Distribution

Possible occurrences

North (Amazonas)

HERBARIUM MATERIAL

Oyster, H., s.n., P (P01415555)

Schaffner, 459, K (K000590290), **Typus**

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis nervata (Fée) R.S.Viveros & Salino

Has as synonym

basionym *Aspidium nervatum* Fée

heterotypic *Aspidium pedicellatum* Christ

heterotypic *Ctenitis pedicellata* (Christ) Copel.

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 5/6; scale on the base of the petiole not tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown dark to black; form of the scale of the rachis lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised of the 1 / 2 to 2 / 3 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa absent; sori inframedian/ median; indusium absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate; surface laminar adaxial between the veins glabrate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis nervata é semelhante à *C. aspidioides* pela pouca quantidade de escamas e pinas incisas cerca de 1/2–2/3 da distância entre a costa e o ápice do segmento, de forma que as nervuras basais de segmentos adjacentes atinjam a margem no enseio. Em *C. nervata*, contudo, pode haver até dois pares de nervuras basais atingindo a margem no enseio. *Ctenitis nervata* pode ser distinguida pelo ápice confluinte, soros sem indúcio e escamas marrom escuras, deltoides ou lanceoladas. Enquanto *C. aspidioides* possui ápice conforme ou subconforme, soros com indúcio, escamas da face abaxial da costa castanhas a marrom escuras, lineares ou filiformes.

Além do Brasil, há registros de *C. nervata* na Bolívia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso)

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

A. Salino, 1834, BHCB, 30206, São Paulo

R. Dias-Melo, 490, RB, 472655 (RB00545029), Mato Grosso

F.B. Matos, 1234, CEPEC, 118548, Paraná
A.F.M. Glaziou, 1764, P (P00170061), Rio de Janeiro, **Typus**
A. Salino, 1159, BHCB, 7136, Minas Gerais
L.B. Smith, 5722, R, 102931, Santa Catarina
P.H. Labiak, 5175, RB, 476442,  (RB00549429), Espírito Santo

REFERENCE

- VIVEROS, R.S. & SALINO, A. A new species and a new combination in *Ctenitis* (Dryopteridaceae) from South America. *Brittonia*, v. 69, n. 3, p. 316–322. 2017. (DOI: 10.1007/s12228-017-9469-1)
- VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis nigrovenia (Christ) Copel.

Has as synonym

basionym *Nephrodium nigrovenium* Christ

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 3; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown dark to black; form of the scale of the rachis lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa absent; sori inframedian/median/supramedian; indusium present and conspicuous/absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins with trichome bacilliform; surface laminar adaxial between the veins glabrate. **Spore:** surface echinate.

COMMENTS

Ctenitis nigrovenia pode ser reconhecida pela margem da lâmina serreada e glabra, escamas da face abaxial da costa marrom escuras a pretas, indúsio conspícuo com tricomas baciliformes ou inconspícuo restando um tufo de tricomas baciliformes. Além do Brasil, *C. nigrovenia* ocorre na Venezuela, Colômbia, Peru, Bolívia, países da América Central, México e Antilhas.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Pará)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

Windisch, P.G., 1529, SJRP

Windisch, P.G., 1529, UC (1440103), Mato Grosso

Thieme, C., s.n., US (US00067035), P (P00642702), **Typus**

L.R. Noblick, 3745, SJRP

P.L. Viana, 4336, BHCB, 135120, Pará

M.S.S. Fonseca, 110, RB, 762231 (RB01384640)

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis paranaensis (C.Chr.) Lellinger

Has as synonym

basionym *Dryopteris falciculata* var. *paranaensis* (Baker) C.Chr.

DESCRIPTION

Stem: type of the stem erect or ascending. **Leaf:** number of the bundle on the base of the petiole 4/6; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown dark to black; form of the scale of the rachis linear lanceolate/lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa present/absent; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present/absent; sori median/supramedian; indusium present and conspicuous/absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome bacilliform/with trichome catenate; surface laminar adaxial between the veins glabrate/with trichome catenate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis paranaensis pode ser reconhecida pela raque e face abaxial da costa com escamas marrom escuras a pretas, inteiras ou levemente denticuladas, face abaxial da costa e superfície laminar entre nervuras com esparsos tricomas catenados. As espécies mais semelhantes a *C. paranaensis* são *C. falciculata* e *C. distans* pela cor das escamas. *Ctenitis paranaensis* difere de *C. falciculata* pelo indúsio pequeno e inconspícuo e escamas da raque de 3 – 6 mm de comprimento, em oposição ao indúsio sempre conspicuo e escamas da raque de 1 – 2 mm de comprimento de *C. falciculata*, além disso, comparativamente, *C. falciculata* tem muito mais tricomas catenados em diversas partes. Enquanto a diferença de *C. distans* está na margem das escamas do pecíolo, raque e face abaxial da costa que são denticuladas cujos dentes se destacam pelo formato de gancho.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Paraíba)

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

Viveros, R.S., 304, BHCB, 176163, Bahia

Mynssen, C.M., 919, RB, (RB01204252), Bahia

Annies, J., s.n., US (0006701), UC (1193754), U (U0180275), S (S-R-1718), S (S06-478), S (S05-11194), RB, 36164, R, PR (PR820274), PR (PR820273), PR (PR519759), P (P00642696), P (P00642695), P (P00170045), P (P01380695), P (P01380677), MO, 1857152, K (K000880606), CAS (CAS0002327), BM (BM000555871), B (B 20 0055525), B (B 20 0055524), S (S05-1193), Paraná, **Typus**

REFERENCE

- VIVEROS, R.S. & SALINO, A. Two new species of *Ctenitis* (Dryopteridaceae) from South America. *Phytotaxa*, v. 239, n. 1, p. 1–16. 2015. (DOI: 10.11646/phytotaxa.239.1.1)
- VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis refulgens (Mett.) Vareschi

Has as synonym

basionym *Phegopteris refulgens* Mett.

DESCRIPTION

Stem: type of the stem erect or ascending/short trailling. **Leaf:** number of the bundle on the base of the petiole 4; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown pale; form of the scale of the rachis linear; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised of the 1 / 2 to 2 / 3 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa present; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present; sori inframedian/median; indusium absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins with trichome bacilliform; surface laminar adaxial between the veins glabrate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis refulgens var. *refulgens* pode ser reconhecida pela incisão das pinas de 1/2 a 2/3 da distância entre a costa e o ápice dos segmentos, ápice da lâmina confluentes, pelas escamas castanho-claras no pecíolo, raque e em ambas as faces da costa e ausência de indúcio. Quanto à incisão das pinas, assemelha-se a *C. nervata* e *C. aspidioides*, as quais são espécies bem menos escamosas, as escamas são mais escuras e não estão presentes na face adaxial da costa, apenas na abaxial. *Ctenitis nervata* também não tem indúcio e o ápice da lâmina é confluentes e *C. aspidioides* possui indúcio e ápice conforme ou subconforme.

Há duas variedades reconhecidas para esta espécie. A que ocorre no Brasil é *C. refulgens* var. *refulgens*, a qual também ocorre no Suriname, Guiana Francesa, Guiana, Venezuela, Colômbia, Equador, Peru, Bolívia, países da América Central, México e Antilhas. A outra variedade, *C. refulgens* var. *peruviana*, ocorre apenas no Peru e na Bolívia (Viveros et al. 2018).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

Northeast (Maranhão)

Central-west (Mato Grosso)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

R.S. Fernandes et al., 118, HCF (HCF000018562), Pará

Schomburgk, 1183, B (B 20 0064260), B (B 20 0064265), **Typus**

Schott, 7, US (US01105866), US (US01105867), **Typus**

Lindig, 382, B (B 20 0064261), **Typus**

Spruce, R., 2100, K, [K000954421], Amazonas
Salino, A., 15004, BHCB, 150004, Acre
A. Salino, 309a, UEC, BHCB, Mato Grosso
R. Secco, 291, US, 333822, [US01548322], NY, [NY02596690], RB, 333822, [RB00657601], Pará
N.F.O. Mota, 2351, INPA, 241672, [INPA0241672], Roraima

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis submarginalis (Langsd. & Fisch.) Ching

This treatment is composed of the following taxa: *Ctenitis submarginalis*, *Ctenitis submarginalis* var. *submarginalis*, *Ctenitis submarginalis* var. *tenuifolia*.

Has as synonym

basionym *Polypodium submarginale* Langsd. et Fisch.

DESCRIPTION

Stem: type of the stem erect or ascending/short trailling. **Leaf:** number of the bundle on the base of the petiole 5/6; scale on the base of the petiole tangled; scale on the apex of the petiole patent or ascending; rachis not flexuous; colour of the scale of the rachis brown pale/brown; form of the scale of the rachis linear/lanceolate; division of the blade pinnatifid 1 pinnate to 1 pinnate pinnatifid; apex of the blade confluent; pinnae or pinnule incised more of the 3 / 4 of the distance between the apex of the segment and the costa; margin of the blade with trichome catenate; scale on the side adaxial of the costa present; scale on the side abaxial of the costule equals the of the costa absent; trichome glandular on the side abaxial of the costa present/absent; sori median/supramedian; indusium present and conspicuous/absent or minute and inconspicuous; pro-scales between the sporangium absent; surface laminar abaxial between the veins glabrate/with trichome bacilliform/with trichome catenate; surface laminar abaxial between the veins glabrate/with trichome catenate. **Spore:** surface with fold to tuber.

COMMENTS

Ctenitis submarginalis pode ser reconhecida pelas escamas castanho-claras (no Brasil. Na região dos Andes, as escamas podem ser castanhos) no pecíolo, raque e face abaxial da costa, nervuras basais de segmentos adjacentes geralmente atingem a margem no enseio ou um pouco acima do enseio, raramente atingem a margem bem acima do enseio, e o ápice dos segmentos é levemente apiculado.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

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

North (Acre, Pará)

IDENTIFICATION KEY

1a. Escamas da face abaxial da costa lanceoladas com base cordada.. *C. submarginalis* var. *submarginalis*

1b. Escamas da face abaxial da costa filiformes com base truncada ou arredondada.. *C. submarginalis* var. *tenuifolia*

HERBARIUM MATERIAL

Windisch, P.G., 6910, UEC

H.S. Irwin, 17872, NY, 840472, (NY00840472), Goiás

G. J. Schwarz, 6154, RB, 82581, (RB00657654)

A. Salino, 495, UEC

I.Morel, 7074, RB, 82574, (RB00657826)

Y. Mexia, 4753, RB, 465882, (RB00525795)

E. Barbosa, 2214, RB, 502110, (RB00596522)

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis submarginalis (Langsd. & Fisch.) Ching var. *submarginalis*

DESCRIPTION

Ctenitis submarginalis var. *submarginalis* pode ser reconhecida pelas escamas da face abaxial da costa castanho-claras, lanceoladas com a base cordada. O indúcio pode ser conspícuo, inconspícuo ou estar ausente.

COMMENTS

Ctenitis submarginalis var. *submarginalis* é o representante de *Ctentis* mais amplamente distribuído nas Américas, com registros no Estados Unidos (Flórida), México, América Central, Antilhas e América do Sul.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia, Ceará)

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

Langsdorff, G.H., s.n., LE (LE00000007), LE (LE00000005), LE (LE00000006), Santa Catarina, **Typus**

Botelho, A, 1204, EVB (EVB001587), Paraná

Y. Mexia, 4832, US,  (US01548436), Minas Gerais

A. C. Brade, 8275, US,  (US01548437), São Paulo

B. Rambo, 49500, US,  (US01548439), US,  (US01548438), Rio Grande do Sul

A. Macedo, 2153, US,  (US01548442)

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

Ctenitis submarginalis var. *tenuifolia* (C.Presl) R.S.Viveros & Salino

Has as synonym

basionym *Lastrea tenuifolia* C.Presl

DESCRIPTION

Ctenitis submarginalis var. *tenuifolia* difere da variedade típica pelas escamas da face abaxial da costa castanho-claras, filiformes com base truncada ou arredondada. O indúcio pode ser conspícuo, inconspícuo ou estar ausente.

COMMENTS

Ctenitis submarginalis var. *tenuifolia*, diferente da variedade típica, ocorre apenas no Brasil.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

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

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

South (Paraná, Santa Catarina)

Possible occurrences

North (Acre, Pará)

HERBARIUM MATERIAL

Bueno, N.C., 87, BHCB, 50126, Mato Grosso do Sul

Mexia, Y., 5406, RB, 471418 (RB00533329), Minas Gerais

Dusén, P., 14732, F, 649694, Paraná

R.M. Harley, 15011, P (P01415597), Bahia

Lopes, M.S. & Pietrobom, M.R., 391, RB, 466197 (RB00526238), Pernambuco

Silva, M.R., 433, HB, 74872, São Paulo

Pietrobom, M., 4960, BHCB, 73980, Alagoas

Duarte, A.P., 1347, RB, 64467 (RB0657671), Ceará

H. S. Irwin, 17872, NY, (NY00840472), Goiás

Pohl, J.B.E., s.n., PRC, 454057, Rio de Janeiro, **Typus**

Salino, A., 571, BHCB, 7382, Mato Grosso

Macedo, A., 2153, RB, 78397 (RB00657816), Goiás

Salino, A.; Megale, M.; Viveros, R.S.; Arruda, A.J., 14120, BHCB, 126396, Espírito Santo

REFERENCE

VIVEROS, R.S.; ROUHAN, G. & SALINO, A. 2018. A taxonomic monograph of the fern genus *Ctenitis* (Dryopteridaceae) in South America. *Phytotaxa*, v. 385, n. 1, p. 1–83. (DOI: 10.11646/phytotaxa.385.1.1)

×*Cyclobotrya* Engels & Canestraro

This treatment is composed of the following taxa: ×*Cyclobotrya*, ×*Cyclobotrya amalgamata*, ×*Cyclobotrya telesprensis*.

HOW TO CITE

Canestraro, B.K. 2020. ×*Cyclobotrya* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB604166>.

DESCRIPTION

Plantas terrestres não escandentes. Rizomas curto-reptantes, meristelos caulinares não rodeados por bainha esclerenquimatosa; escamas lanceoladas, subclatradas ou não, castanho amareladas ou castanho escuras e com a margem denticulada a erosa. Folhas dimórficas ou hemidimórficas e eretas. Folhas estéreis 1-2 pinadas, com 7 a 10 pares de pinas, pinas com dissecção regular ou irregular, pina medial inteira ou pinatífera, margem pilosa ou glabra e nervuras anastomosadas. Folhas férteis 1-2 pinadas, dissecção regular ou irregular; soros irregulares e confluentes ou regulares, circulares e discretos; indúcio persistente, peltado, castanho e piloso ou glabrescente; esporângios normais ou malformados (maioria) escurecidos e colapsados; esporos malformados, irregulares, escurecidos e abortados.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Amazon Rainforest, Caatinga

Vegetation Types

Seasonal Evergreen Forest

Geographic Distribution

Confirmed occurrences

Northeast (Ceará)

Central-west (Mato Grosso)

IDENTIFICATION KEY

1. Pina medial da folha estéril inteira, margem da folha estéril glabra, folha fértil irregularmente dividida e soros confluentes e irregulares. Caatinga .. ×*Cyclobotrya amalgamata*
1. Pina medial da folha estéril pinatífera, margem da folha estéril pilosa, folha fértil regularmente dividida e soros circulares e regulares. Amazônia .. ×*Cyclobotrya telesprensis*

REFERENCE

Engels, M.E. & Canestraro, B.K. 2017. ×*Cyclobotrya*: A new hybrid genus between *Cyclodium* and *Polybotrya* (Dryopteridaceae) from the Brazilian Amazon. *Brittonia* 69: 307.

× Cyclobotrya amalgamata Schwartsb. & Canestraro

DESCRIPTION

Stem: scale sub clathrate. **Leaf:** leaf sterile 1 pinnate pinnatifid/2 pinnate; **leaf sterile** dimorphic; **margin leaf** glabrate; **pinna** division irregular; **pinna median** entire. **Type of sporangium:** type of sporangium confluent. **Spore:** type spore abortive.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Caatinga

Geographic Distribution

Confirmed occurrences

Northeast (Ceará)

HERBARIUM MATERIAL

P. B. Schwartsburd & J. A. P. Araújo, 2511, SP, Ceará, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *× Cyclobotrya amalgamata* Schwartsb. & Canestraro

REFERENCE

Schwartsburd, P. B., Canestraro, B. K., Moran, R. C., Prado, J., & Smith, A. R. (2018). A second *× Cyclobotrya* (Dryopteridaceae) from Brazil. *Brittonia*, 70(1), 25-30
<https://link.springer.com/article/10.1007/s12228-017-9501-5>

xCyclobotrya telesporensis Engels & Canestraro

DESCRIPTION

Stem: scale sub clathrate. **Leaf:** leaf sterile 2 pinnate; leaf sterile hemidimorphic; margin leaf pilose; pinna division regular; pinna median pinnatifid. **Type of sporangium:** type of sporangium discrete. **Spore:** type spore some perfect/abortive.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Seasonal Evergreen Forest

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso)

HERBARIUM MATERIAL

M.E. Engels & L.M.S. Aquino, 4655, MBM, RB, Mato Grosso, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *xCyclobotrya telesporensis* Engels & Canestraro



Figure 2: *xCyclobotrya telesporensis* Engels & Canestraro



Figure 3: *xCyclobotrya telesporensis* Engels & Canestraro



Figure 4: *xCyclobotrya telesporensis* Engels & Canestraro



Figure 5: *xCyclobotrya telesporensis* Engels & Canestraro



Figure 6: *xCyclobotrya telesporensis* Engels & Canestraro



Figure 7: *xCyclobotrya telesporensis* Engels & Canestraro

REFERENCE

Engels, M. E. & B. K. Canestraro. 2017. *xCyclobotrya*: a new hybrid genus between *Cyclodium* and *Polybotrya* (Dryopteridaceae) from the Brazilian Amazon. *Brittonia*: 69: 307–312.
<https://link.springer.com/article/10.1007/s12228-017-9468-2>

Cyclodium C.Presl

This treatment is composed of the following taxa: *Cyclodium*, *Cyclodium calophyllum*, *Cyclodium guianense*, *Cyclodium heterodon*, *Cyclodium inerme*, *Cyclodium meniscioides*.

HOW TO CITE

Bohn, A., Matos, F.B., Labiak, P. H. 2020. *Cyclodium* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90975>.

DESCRIPTION

Life Form

Herb

Substrate

Hemiepiphytes, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

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

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

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

Possible occurrences

South (Santa Catarina)

IDENTIFICATION KEY

1. Nervuras livres.....2
- 1'. Nervuras anastomosadas.....3
2. Frondes ca. 55-140 cm de comprimento; lâmina com 19-23 pares de pinas laterais; presença de escamas lanceoladas na costa.....*C. guianense*
- 2'. Frondes ca. 44-96 cm de comprimento; lâmina com 9-16 (-21) pares de pinas laterais; ausência de escamas lanceoladas na costa.....*C. inerme*
3. Rizoma curto-reptante; frondes dimórficas; pina apical conforme; indústio com margens ciliadas.....*C. meniscioides*
- 3'. Rizoma longo-reptante; frondes monomórficas a subdimórficas; pina apical pinatífida; indústio com margens inteiras.....4

4. Frondes ca. 104-116 cm de comprimento; lâmina 1-pinada; esporos com perfuração na perina.....*C. calophyllum*
- 4'. Frondes ca. 44-99 cm de comprimento; lâmina 1-pinada a 2-pinada; esporos sem perfuração na perina.....*C. heterodon*

REFERENCE

Smith, A.R. Revision of the Neotropical fern genus *Cyclodium*. American Fern Journal v. 76, n. 2, p. 56-98, 1986.

Cyclodium calophyllum (C.V.Morton) A.R.Sm.

Has as synonym

basionym *Dryopteris calophylla* Morton

DESCRIPTION

Stem: rhizome long trailing; **colour of the scale** concolor brown; **margin of the scale** entire. **Leaf:** size medium of the frond 104 - 116 cm; **shape of the frond** lanceolate/elliptic; **blade dimorphic** non; **blade division** 1 - pinnate; **apex of the blade** pinnatifid; **veins** anastomosate; **rachis abaxial** sulcate; **pinna base** side acroscopic truncate and side basiscopic cuneate; **pinna shape** linear/elliptic; **pinna margin** undulate/crenate; **costa** with protoscale septate/with scale linear with few cell of the width on the base; **indumentum of the blade** protoscale septate and linear. **Type of sporangium:** indusium peltate and circular; **indusium margin** entire. **Spore:** surface echinulate; **perine fold** long/continuous; **perine perforate** present.

COMMENTS

Descrição baseada em um único espécime do Mato Grosso (Prado e Salino 18 - UC). A ocorrência da espécie é predominante no Peru e Venezuela (pers. obs), além da Colômbia (Smith , 1986).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Seasonally Semideciduous Forest

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso)

HERBARIUM MATERIAL

Prado, J. & Salino, A., 50, UC

REFERENCE

Smith, A.R. 1986. Revision of the Neotropical Fern Genus *Cyclodium*. American Fern Journal 76(2): 56-98.

Cyclodium guianense (Klotzsch) van der Werff ex L.D.Gómez

Has as synonym

basionym *Aspidium guianense* Klotzsch

DESCRIPTION

Stem: rhizome short trailling; **colour of the scale** concolor brown; **margin of the scale** entire. **Leaf:** size medium of the frond 55 - 140 cm; **shape of the frond** lanceolate/elliptic; **blade dimorphic** non; **blade division** 1 - pinnate; **apex of the blade** pinnatifid; **veins** free; **rachis abaxial** sulcate; **pinna base** side acroscopic truncate and side basiscopic cuneate/with auricle at the side acroscopic; **pinna shape** linear/lanceolate; **pinna margin** undulate/crenate; **costa** with protoscale septate/with scale lanceolate/with scale linear with few cell of the width on the base; **indumentum of the blade** protoscale septate and linear/scale lanceolate. **Type of sporangium:** **indusium** peltate and circular; **indusium margin** entire/glandular. **Spore:** surface echinulate; **perine fold** long; **perine perforate** absent.

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

S.A. Mori, s.n., RB, 225985, (RB00662927)

J. Prado, 1342, HPZ:

Schwacke, 178, RB, 36205, (RB00662933)

R. Spruce, 2143, P (P00630605)

R. Spruce, 2159, K (P00630606)

REFERENCE

Smith, A.R. Revision of the Neotropical fern genus *Cyclodium*. American Fern Journal v. 76, n. 2, p. 56-98, 1986.

Cyclodium heterodon (Schrad.) T.Moore

This treatment is composed of the following taxa: *Cyclodium heterodon*, *Cyclodium heterodon* var. *heterodon*.

Has as synonym

basionym *Aspidium heterodon* Schrader

heterotypic *Aspidium abbreviatum* Schrader

heterotypic *Cyclodium heterodon* var. *abbreviatum* (C.Presl) A.R.Sm.

DESCRIPTION

Stem: rhizome long trailing; **colour of the scale** concolor brown; **margin of the scale** entire/denticulate. **Leaf:** size medium of the frond 44 - 99 cm; **shape of the frond** lanceolate/elliptic; **blade dimorphic** non; **blade division** 1 - pinnate/1 - pinnate - pinnatifid/2 - pinnate; **apex of the blade** pinnatifid; **veins** anastomosate; **rachis abaxial** sulcate; **pinna base** side acroscopic truncate and side basiscopic cuneate/with auricule at the side acroscopic; **pinna shape** linear/elliptic/lanceolate; **pinna margin** undulate/crenate/pinnatifid; **costa** with protoscale septate/with scale linear with few cell of the width on the base; **indumentum of the blade** protoscale septate and linear. **Type of sporangium:** **indusium** peltate and circular; **indusium margin** entire. **Spore:** surface echinulate; **perine fold** long; **perine perforate** absent.

Life Form

Herb

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia, Pernambuco)

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

HERBARIUM MATERIAL

A.M. Carvalho, 3415, RB, 296750, (RB00363663)

A. Salino, 10948, RB, 482983, (RB00564905)

Rodrigues Jr, C.E., 1348, RB, 515562, , (RB00655459)

A. Salino, 4535, CVRD, 6210, (CVRD006210), Espírito Santo

REFERENCE

Smith, A.R. Revision of the Neotropical fern genus *Cyclodium*. American Fern Journal v. 76, n. 2, p. 56-98, 1986.

Cyclodium heterodon (Schrad.) T.Moore var. *heterodon*

Has as synonym

basionym *Aspidium heterodon* Schrad.

DESCRIPTION

Caule: rizoma(s) longo(s) reptante(s); **cor das escama(s)** concolor(es) marrom; **margem(ns) das escama(s)** inteira/denticulada. **Folha:** tamanho médio da fronde(s) 43 - 99 cm; **formato da fronde(s)** lanceolada(s)/elíptica(s); **lâmina(s) dimórfica(s)** não; **lâmina(s) divisão** 1 - pinada(s)/1 - pinada(s) - pinatífida(s)/2 - pinada; **ápice(s) da lâmina(s)** pinatífida(s); **nervura(s)** anastomosada(s); **raque abaxial** sulcada(s); **pina base** lado(s) acroscópico truncado(s) e lado(s) basiscópico cuneado(s); **pina formato** linear(es)/lanceolada(s)/elíptica(s); **pina margem(ns)** ondulada(s)/crenada(s)/pinatífida(s); **costa(s)** com protoescama(s) septada(s)/com escama(s) linear(es) com poucas célula(s) de largura na(s) base; **indumento da lâmina(s)** protoescama(s) septada(s) e linear(es). **Tipo de esporângio:** indúcio peltado(s) e circular(es); **indúcio margem(ns)** inteiro. **Esporo:** superfície(s) equinulado(s); **perina dobra(s)** longa(s)/contínua(s); **perina perfurada(s)** ausente(s).

COMMENTS

De acordo com o levantamento taxonômico realizado, é possível considerar que as duas variedades de *C. heterodon*, na realidade se refere à mesma espécie. Portanto, considera-se que *Cyclodium heterodon* var. *abbreviatum* é um sinônimo de *Cyclodium heterodon*.

Life Form

Herb

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia, Pernambuco)

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

HERBARIUM MATERIAL

A. Salino, 9372, BHCB

REFERENCE

Smith, A.R. Revision of the Neotropical fern genus *Cyclodium*. American Fern Journal v. 76, n. 2, p. 56-98, 1986.

Cyclodium inerme (Fée) A.R.Sm.

Has as synonym

basionym *Polystichum inerme* Fée

DESCRIPTION

Stem: rhizome short trailling; **colour of the scale** concolor brown; **margin of the scale** entire/fimbriate. **Leaf:** size medium of the frond 44 - 96 cm; **shape of the frond** lanceolate/elliptic; **blade dimorphic** non; **blade division** 1 - pinnate/1 - pinnate - pinnatifid; **apex of the blade** pinnatifid; **veins** free; **rachis abaxial** sulcate; **pinna base** side acroscopic truncate and side basiscopic cuneate/with auricle at the side acroscopic; **pinna shape** linear/elliptic/lanceolate; **pinna margin** undulate/crenate/pinnatifid; **costa** with protoscale septate; **indumentum of the blade** protoscale septate and linear. **Type of sporangium:** **indusium** peltate and circular; **indusium margin** ciliate. **Spore:** surface echinulate; **perine fold** long; **perine perforate** absent.

Life Form

Herb

Substrate

Hemiepiphytes, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará, Roraima)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

Carvalho, F.A., 204, HAMAB

L.A. Pereira, 627, HAMAB

R.S. Fernandes, 299, RB, 519212, (RB00663711)

Carvalho, F.A. de, 224, INPA, 216004, (INPA0216004), Amazonas

REFERENCE

Smith, A.R. Revision of the Neotropical fern genus *Cyclodium*. American Fern Journal v. 76, n. 2, p. 56-98, 1986.

Cyclodium meniscioides (Willd.) C.Presl

This treatment is composed of the following taxa: *Cyclodium meniscioides*, *Cyclodium meniscioides* var. *meniscioides*.

Has as synonym

basionym *Aspidium meniscioides* Willd.

DESCRIPTION

Stem: rhizome short trailling; **colour of the scale** concolor brown; **margin of the scale** denticulate/fimbriate. **Leaf:** size medium of the frond 65 - 122 cm; **shape of the frond** lanceolate/elliptic; **blade dimorphic** yes; **blade division** 1 - pinnate; **apex of the blade** conforming; **veins** anastomosate; **rachis abaxial** sulcate; **pinna base** side acroscopic truncate and side basiscopic cuneate; **pinna shape** elliptic/lanceolate; **pinna margin** undulate/crenate; **costa** with protoscale septate/with scale linear with few cell of the width on the base; **indumentum of the blade** protoscale septate and linear. **Type of sporangium:** **indusium** peltate and circular; **indusium margin** ciliate. **Spore:** surface echinulate; **perine fold** long; **perine perforate** present.

Life Form

Herb

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

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

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

Southeast (Espírito Santo, Minas Gerais, São Paulo)

Possible occurrences

South (Santa Catarina)

HERBARIUM MATERIAL

J. Prado, 579, INPA, 178002,  (INPA0178002), Amazonas

Paciencia, M.B, 2384, RB, 469812,  (RB00531286)

J.L. Macedo, 1454, RB, 66411,  (RB00658026)

Sothers, C.A., 544, INPA, 181860,  (INPA0181860), Amazonas

I. Francisca, s.n., RB, 545870,  (RB00707818)

W.W. Thomas, s.n., RB, 477904,  (RB00554792)

REFERENCE

Smith, A.R. Revision of the Neotropical fern genus *Cyclodium*. American Fern Journal v. 76, n. 2, p. 56-98, 1986.

Cyclodium meniscioides (Willd.) C.Presl

var. *meniscioides*

DESCRIPTION

Caule: rizoma(s) curto(s) reptante(s); **cor das escama(s)** concolor(es) marrom; **margem(ns) das escama(s)** denticulada(s)/fimbriada(s). **Folha:** tamanho médio da fronde(s) 65 - 122 cm; **formato da fronde(s)** lanceolada(s)/elíptica(s); **lâmina(s) dimórfica(s)** sim; **lâmina(s) divisão 1** - pinada(s); **ápice(s) da lâmina(s)** conforme; **nervura(s)** anastomosada(s); **raque abaxial** sulcada(s); **pina base** lado(s) acroscópico truncado(s) e lado(s) basiscópico cuneado(s); **pina formato** elíptica(s)/lanceolada(s); **pina margem(ns)** ondulada(s)/crenada(s); **costa(s)** com protoescama(s) septada(s)/com escama(s) linear(es) com poucas célula(s) de largura na(s) base; **indumento da lâmina(s)** protoescama(s) septada(s) e linear(es). **Tipo de esporângio:** indúcio peltado(s) e circular(es); **indúcio margem(ns)** ciliado(s). **Esporo:** superfície(s) equinulado(s); **perina dobra(s)** longa(s); **perina perfurada(s)** presente(s).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Amapá, Pará)

Northeast (Bahia, Ceará, Piauí)

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

Southeast (Espírito Santo, Minas Gerais, São Paulo)

HERBARIUM MATERIAL

A. Salino, 8304, BHCB

REFERENCE

Smith, A.R. Revision of the Neotropical fern genus *Cyclodium*. American Fern Journal v. 76, n. 2, p. 56-98, 1986.

Dryopteris Adans.

This treatment is composed of the following taxa: *Dryopteris*, *Dryopteris huberi*, *Dryopteris patula*, *Dryopteris wallichiana*.

HOW TO CITE

Prado, J., Hirai, R.Y., Smith, A.R. 2020. *Dryopteris* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90977>.

DESCRIPTION

Plants terrestrial, rupicolous rarely epiphytic. Rhizomes erect ascending, or sometimes short-creeping, scaly. Fronds erect or arching, generally clumped, usually monomorphic, not articulate; stipes in cross section with numerous vascular bundles arranged in a U-shape, the two adaxial bundles the largest, stipe scales at bases and often distally; lamina thin to coriaceous, pinnate-pinnatifid to 3-pinnate-pinnatifid or 1-pinnate-pinnatisect, deltate to ovate or lanceolate, glabrous or glandular; rachises grooved adaxially; veins free. Sori abaxial, round; indusia round or round-reniform, glabrous or glandular, paraphyses absent; spores monolet, rugose, tuberculate or with broad folds.

COMMENTS

Dryopteris in Brazil is represented by three species, one of them recently recognized (*D. huberi* (Christ) C. Chr.).

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

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

Northeast (Bahia, Piauí)

Central-west (Goiás, 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 Brazilian species of *Dryopteris*

1. Fronds 1-pinnate-pinnatisect; rachis of laminae eglandular, conspicuously scaly *D. wallichiana*
1. Fronds 2-pinnate-pinnatifid (3-pinnate at base); rachises of laminae sparsely to moderately glandular, very sparsely scaly
2. Pinna-rachises (costae) adaxially with perpendicular greenish wings;

- spores rugose-tuberculate, with broad folds and fine superficial ridges .
..... ***D. huberi***
2. Pinna-rachises (costae) adaxially lacking perpendicular wings; spores
rugose, with long broad folds ***D. patula***

REFERENCE

Prado, J., Hirai, R.Y. Hirai & Smith, A.R. 2014. *Dryopteris huberi* (Dryopteridaceae), an overlooked species, and a key for the species of Dryopteris in Brazil. *Brittonia* 66(4): 340–346.

Dryopteris huberi (Christ) C.Chr.

DESCRIPTION

Stem: rhizome suberect/with/scale/margin/denticulate. **Leaf:** frond bipinnate/tripinnate/pinnatifid/rachis/adaxial/winged. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous/or/glandular. **Spore:** monolete surface/tuberculate/rugose.

ADDITIONAL DESCRIPTION

Rupicolous, rarely epiphytic. Rhizomes suberect, scaly, the scales lanceolate, concolorous, light brown, 8–10 x 0.8–1.2 mm, margins denticulate, apices slightly twisted. Fronds 14–33 cm long; stipes 4–5 cm x 1.5–2 mm, ca. 1/3 (or less) the frond length, stramineous, scaly at base, the scales similar to those of rhizomes, but with sparse glands on the margins, the glands whitish to yellowish, stipitate, ca. 0.1 mm; costae grooved adaxially, the grooves continuous with rachis groove; laminae chartaceous, elliptic, 2- or 3-pinnate-pinnatifid proximally, 2-pinnate-pinnatifid distally, 10–30 x 5–14 cm, pinnae alternate, 11–17 pairs, stalked, the stalk to ca. 2 mm long; proximal pinna pair deltate, 1.5–4 x 1.5–3.5 cm, ± equilateral to slightly inequilateral, usually shorter than the second pinna pair, sometimes about equaling the second pinna pair, basiscopic basal pinnule 0.5–2 cm long, acrosopic basal pinnule 0.5–1.3 cm long, rachises grooved adaxially, rarely scaly, the scales scattered, light brown, lanceolate, slightly twisted, to 0.5 x 0.1 mm, glandular, the glands similar to those of stipes, < 0.1 mm; pinna rachises adaxially with perpendicular wings, the wings greenish; distal pinna pairs subequilateral or inequilateral and more developed acroskopically, pinnules of basiscopic side shorter and more oblique; segments linear, margins lobed to denticulate, apices obtuse; indument abaxially sparsely to moderately glandular, the glands on costae, veins, and sometimes laminar tissue, similar to those of the petioles, adaxially with glands in costal grooves, veins, and on laminar tissue. Sori medial to submarginal, indusia reniform, light brown, 0.5–0.6 mm diam., flat, glabrous or glandular; spores ellipsoid, rugose-tuberculate, with broad folds and fine superficial ridges.

COMMENTS

Dryopteris huberi can be distinguished in having perpendicular wings on the pinna rachises adaxially. In general, the proximal pinna pair are shorter than the next distal pinna pair. The rhizomes are suberect and the ultimate segments are widely spaced (with broad sinuses). Although *D. huberi* appears to overlap in distribution with *D. patula* in central Brazil (Goiás, Mato Grosso, Pará), we have not found intermediates between these two species, nor have they yet been found growing together.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Pará)

Central-west (Goiás, Mato Grosso)

HERBARIUM MATERIAL

J. Huber, 4514, P (P00246618), Pará, **Typus**
J. Prado, 2233, SP, Mato Grosso

REFERENCE

Prado, J., Hirai, R.Y & Smith, A.R. 2014. *Dryopteris huberi* (Dryopteridaceae), an overlooked species, and a key for the species of *Dryopteris* in Brazil. *Brittonia* 66(4): 340–346.

Dryopteris patula (Sw.) Underw.

Has as synonym

basionym *Aspidium patulum* Sw.

DESCRIPTION

Stem: rhizome erect/with/scale/margin/denticulate. **Leaf:** frond bipinnate/tripinnate/pinnatifid/rachis/adaxial/not/winged. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous/or/glandular. **Spore:** monolete surface/rugose.

ADDITIONAL DESCRIPTION

Terrestrial, rarely epiphytic. Rhizomes erect, scaly, the scales lanceolate, concolorous, light to dark brown, 15–25 x 1–2.5 mm, margins denticulate, apices slightly twisted. Fronds 19–70 cm long; stipes 5–35 cm x 2–5 mm, ca. 1/3 (or less) the frond length, stramineous to tan, scaly at base, the scales similar to those of rhizomes but with glands on the margins, the glands whitish to yellowish, stipitate, ca. 0.1 mm; costae grooved adaxially, the grooves continuous with rachis groove; laminae chartaceous, deltate-lanceolate, 2- or 3-pinnate-pinnatifid proximally, 2-pinnate-pinnatifid distally, 21–60 x 6–26 cm, pinnae subopposite to alternate, 14–20 pairs, stalked or sessile, the stalks to ca. 4 mm long; proximal pinna pair ovate to deltate, 3–13 x 1.5–6 cm, ± equilateral to slightly inequilateral, usually equaling the second pinna pair or sometimes shorter than the second pinna pair, basiscopic basal pinnule 1–3 cm long, acroscopic basal pinnule 1.2–3 cm long, rachises grooved adaxially, sparsely scaly, the scales scattered, tan, linear, slightly twisted, to 5 x 0.2–0.4 mm, glandular, the glands similar to those of stipes, < 0.1 mm; pinna rachises adaxially lacking perpendicular wings; distal pinna pairs subequilateral or inequilateral and more developed acroscopically, pinnules of basiscopic side shorter and more oblique; segments ovate-lanceolate, margins lobed to denticulate, apices obtuse; indument abaxially sparsely to moderately glandular, the glands on costae, veins, and sometimes laminar tissue, similar to those of the petioles, adaxially with glands in costal grooves and sometimes on laminar tissue. Sori medial to submarginal, indusia reniform to round-reniform, brown to tan, 0.8–1.2 mm diam., flat, glabrous or glandular; spores ellipsoid, monolete, rugose, with long broad folds.

COMMENTS

Dryopteris patula morphologically resembles *D. huberi* but differs by pinna-rachises (costae) adaxially lacking perpendicular wings, spores rugose, with long broad folds. *Dryopteris patula* further differs by erect rhizomes, segments with narrower sinuses, and proximal pinnae that tend to equal in size the next distal pair.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

Northeast (Bahia, Piauí)

Central-west (Goiás, Mato Grosso)
Southeast (Minas Gerais, Rio de Janeiro, São Paulo)
South (Rio Grande do Sul)

HERBARIUM MATERIAL

A.C. Brade, 15366, RB, Goiás
T. Plowman, 8675, NY, Pará
J. Prado & R.Y. Hirai, 2227, SP

REFERENCE

Garcia, P.A. & Salino, A. 2008. Dryopteridaceae (Polypodiopsida) no estado de Minas Gerais, Brasil. *Lundiana* 9(1): 3–27.
Prado, J., Hirai, R.Y & Smith, A.R. 2014. *Dryopteris huberi* (Dryopteridaceae), an overlooked species, and a key for the species of *Dryopteris* in Brazil. *Brittonia* 66(4): 340–346.

Dryopteris wallichiana (Spreng.) Hyl.

This treatment is composed of the following taxa: *Dryopteris wallichiana*, .

Has as synonym

basionym *Aspidium wallichianum* Spreng.

Dryopteris wallichiana (Spreng.) Hyl. subsp. *wallichiana*

DESCRIPTION

Stem: rhizome erect/with/scale/margin/entire/or/ciliate. **Leaf:** frond pinnate/bipinnate/pinnatisect/rachis/adaxial/not/winged.

Type of sporangium: leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** monolete surface/rugose.

ADDITIONAL DESCRIPTION

Terrestrial. Rhizomes erect, scaly, the scales linear-lanceolate, concolorous, red-brown or dark brown, 12–25 x 0.3–3 mm, margins entire, irregularly ciliate at base, apices filiform. Fronds 38–115 cm long; stipes 10–33 x 3–6 mm, 1/4(–1/3) the frond length, stramineous, grooved adaxially, scaly at base and distally, the scales similar to those of rhizomes, eglandular; laminae thick-herbaceous to subcoriaceous, oblong-lanceolate, 1-pinnate-pinnatisect, rarely 2-pinnate proximally, 40–90 x 15–40 cm, pinnae subopposite to alternate, 30–45 pairs, stalked or sessile, the stalks to ca. 2 mm long; proximal pinna pairs linear-lanceolate, 4.5–11 x 1.5–2.5 cm, equilateral, usually shorter than the second pinna pair, without enlarged basiscopic or acroscopic pinnules, rachises grooved adaxially, densely scaly, the scales similar to those of petioles, eglandular; segments oblong, margins entire to denticulate, apices rounded to truncate; indument abaxially scaly on costae, costules, and veins, the scales linear to lanceolate, brownish, ciliate, the laminar tissue glabrous, adaxially scaly on costae, the scales similar but filiform abaxially the laminar tissue glabrous. Sori medial, indusia reniform, brown, 0.8–1.0 mm diam., flat, glabrous; spores ellipsoidal, monolete, rugose, with long broad folds.

COMMENTS

Dryopteris wallichiana is easily recognized by its 1-pinnate-pinnatisect laminae and by its dense, spreading brown scales covering the rachis of the lamina. In southern Brazil this species occurs at high elevations, usually above 1700 m.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous 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

M. Verdi, 3860, FURB (FURB00084)
L.S. Sylvestre, 1759, RB, 407307, (RB00555808)
A.C. Brade, 14503, RB, 30504, (RB00658108)
A.C. Brade, s.n., RB, 455544, (RB00607123)
A. Salino, 12016, UEC, 161277, (UEC069059), Santa Catarina

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Dryopteris wallichiana* (Spreng.) Hyl.



Figure 2: *Dryopteris wallichiana* (Spreng.) Hyl.

REFERENCE

Prado, J., Hirai, R.Y & Smith, A.R. 2014. *Dryopteris huberi* (Dryopteridaceae), an overlooked species, and a key for the species of *Dryopteris* in Brazil. *Brittonia* 66(4): 340–346.

Elaphoglossum Schott ex J.Sm.

This treatment is composed of the following taxa: *Elaphoglossum*, *Elaphoglossum acrocarpum*, *Elaphoglossum actinotrichum*, *Elaphoglossum acutum*, *Elaphoglossum alpestre*, *Elaphoglossum amazonicum*, *Elaphoglossum amorimii*, *Elaphoglossum angustum*, *Elaphoglossum antioquianum*, *Elaphoglossum apparicioi*, *Elaphoglossum badinii*, *Elaphoglossum bahiense*, *Elaphoglossum beaurepairei*, *Elaphoglossum beckeri*, *Elaphoglossum boragineum*, *Elaphoglossum brachyneuron*, *Elaphoglossum bradeanum*, *Elaphoglossum brevipetiolatum*, *Elaphoglossum burchellii*, *Elaphoglossum chrysolepis*, *Elaphoglossum coimbra-buenoi*, *Elaphoglossum commissurale*, *Elaphoglossum decoratum*, *Elaphoglossum didymoglossoides*, *Elaphoglossum discolor*, *Elaphoglossum dutrae*, *Elaphoglossum edwallii*, *Elaphoglossum eximum*, *Elaphoglossum foldatsii*, *Elaphoglossum gardnerianum*, *Elaphoglossum gayanum*, *Elaphoglossum glabellum*, *Elaphoglossum glaziovii*, *Elaphoglossum heringeri*, *Elaphoglossum herminieri*, *Elaphoglossum hieracioides*, *Elaphoglossum horridulum*, *Elaphoglossum huacsaro*, *Elaphoglossum hybridum*, *Elaphoglossum iguapense*, *Elaphoglossum itatiayense*, *Elaphoglossum lagesianum*, *Elaphoglossum laminarioides*, *Elaphoglossum langsdorffii*, *Elaphoglossum liaisianum*, *Elaphoglossum lindenii*, *Elaphoglossum lineare*, *Elaphoglossum lingua*, *Elaphoglossum lisboae*, *Elaphoglossum luridum*, *Elaphoglossum macahense*, *Elaphoglossum macrophyllum*, *Elaphoglossum meridense*, *Elaphoglossum miersii*, *Elaphoglossum minutum*, *Elaphoglossum mollissimum*, *Elaphoglossum muscosum*, *Elaphoglossum nanuzae*, *Elaphoglossum nigrescens*, *Elaphoglossum obovatum*, *Elaphoglossum organense*, *Elaphoglossum ovalifolium*, *Elaphoglossum pachydermum*, *Elaphoglossum papyraceum*, *Elaphoglossum paulistanum*, *Elaphoglossum peltatum*, *Elaphoglossum perelegans*, *Elaphoglossum piloselloides*, *Elaphoglossum plulosum*, *Elaphoglossum polyblepharum*, *Elaphoglossum praetermissum*, *Elaphoglossum prestonii*, *Elaphoglossum pteropus*, *Elaphoglossum raywaense*, *Elaphoglossum rigidum*, *Elaphoglossum riparium*, *Elaphoglossum scalpellum*, *Elaphoglossum schwackeanum*, *Elaphoglossum scolopendrifolium*, *Elaphoglossum sporadolepis*, *Elaphoglossum squamipes*, *Elaphoglossum strictum*, *Elaphoglossum styriacum*, *Elaphoglossum tantalinum*, *Elaphoglossum tectum*, *Elaphoglossum tenuiculum*, *Elaphoglossum ulei*, *Elaphoglossum vagans*, *Elaphoglossum viscidum*, *Elaphoglossum wurdackii*.

HOW TO CITE

Matos, F.B. 2020. *Elaphoglossum* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91002>.

DESCRIPTION

Stems slender to stout (1-15 mm diam.), dorsiventral, short- to long-creeping, rarely erect, usually branching; *stem scales* yellowish to castaneous or black, basally attached or peltate, entire to dentate or ciliate; *leaves* 2-200 cm long, erect, arching or pendent; *petioles* nearly absent to about 1/2 of sterile leaf length, glabrous or scaly, sometimes with minute glandular hairs, bases often darker (phyllodia) with abscission at their distal demarcation rather than at the stem; *laminae* entire, rarely divided, linear to ovate or oblanceolate, rarely flabellate, apices obtuse to acuminate or caudate, bases cuneate or rounded to cordate, sometimes gradually decurrent or decurrent from an abruptly contracted lamina; *costae* grooved adaxially, often with the same indument as the petiole abaxially; veins usually free, rarely anastomosing or forming a marginal commissural vein, simple to 2-forked, ending near the laminar margins and lacking hydathodes or stopping well short of the margins at conspicuous hydathodes; *lamina scales* frequently differing from those of the stems or petioles, abundant to absent, often greatly reduced to branched microscales; *fertile leaves* longer or shorter than the sterile leaves, but generally with narrower blades and proportionally longer petioles; *fertile laminae* completely covered abaxially with sporangia (acrostichoid sori), sometimes with a sterile cartilagenous margin; *indusia* absent; *paraphyses* present in some species; *spores* monolete.

COMMENTS

Elaphoglossum is the world's second largest fern genus, with about 600 species. It is pantropical, but ca. 80% of the species occur in the Neotropics. In Brazil, there are 89 species. The taxonomy of the genus is based largely on stem habit, leaf shape, and characteristics of the scales. Therefore, sterile collections do make acceptable specimens. The most similar genus is *Oleandra*, which differs by peltate (vs. usually basally attached) stem scales, long-parallel veins perpendicular to the costa (vs. ascending), and round sori (vs. acrostichoid). The simple-leaved species of Polypodiaceae (e.g., *Campyloneurum*, *Microgramma*, *Pleopeltis*) differ by reticulate veins and round sori.

Life Form

Herb, Unknown

Substrate

Epiphytic, Rupicolous, Terrestrial, Unknown

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

Amazonian Campinarana, High Altitude Grassland, Highland Rocky Field, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Inundated Forest (Igapó), Terra Firme Forest, Inundated Forest (Várzea), Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Coastal Forest (Restinga), Amazonian Savanna, Rock outcrop vegetation

Ocean IslandsConfirmed occurrences

Trindade

Geographic DistributionConfirmed occurrences

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

Northeast (Alagoas, Bahia, Ceará, Maranhão, 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

Southeast (Rio de Janeiro)

IDENTIFICATION KEY**Key to the sections of *Elaphoglossum* in Brazil**

1. Leaves with inrolled, hairlike (subulate) scales, these sometimes inrolled only at the base (flat scales may be present on the blade surfaces); hydathodes present or absent
 2. Hydathodes absent on leaves of adult plants.. **sect. *Polytrichia***
 2. Hydathodes present on leaves of adult plants.. **sect. *Setosa***
 1. Leaves glabrous, or if scaly, the scales variable, not hairlike; hydathodes absent (but vein endings may be somewhat thickened)
 3. Scales (sometimes stellate and hairlike) or glandular dots present on blades and/or petioles; if scales sparse, then the laminae thin-textured; stem scales entire to long-ciliate.. **sect. *Lepidoglossa***
 3. Scales lacking on laminae and petioles except often for some minute blackish microscales on the laminae or a few scales on the petioles and costae (caution: stomata may be dark and resemble glandular dots); if scales present, then the laminae thick-textured; stem scales entire, subentire, or with marginal irregular processes
 4. Stems 0.1–0.2 cm thick, long-creeping; peg-like aerophores present, 1–3 mm long, just behind each petiole; phylloodia absent; sterile leaves 2–19.5 cm long.. **sect. *Squamipedia***
 4. Stems 0.1–1.5 cm thick, compact to long-creeping; peg-like aerophores absent; phylloodia present or absent; sterile leaves 3.5–200 cm long.. **sect. *Elaphoglossum***

Key to the species of *Elaphoglossum* section *Lepidoglossa* in Brazil

1. Abaxial laminar surfaces with resinous dots or stellate scales, lacking non-stellate scales
 2. Abaxial laminar surfaces with resinous dots, lacking stellate scales
 3. Petioles 1/30–1/5 the sterile lamina length; laminae decurrent all the way to phylloodia; veins 1.5–2 mm apart; scales present on laminar margins, 0.3–1 mm long, dissected.... ***E. nigrescens***
 3. Petioles 1/4–2/3 the sterile lamina length; laminae tapering but ending well above phylloodia; veins ca. 1 mm apart; scales present or absent on laminar margins, when present 0.1–0.3 mm long, entire or nearly so
 4. Stem scales dark brown, twisted, spreading; laminar apices acute to acuminate; adaxial laminar surfaces lacking scales (only resinous dots present).... ***E. burchellii***
 4. Stem scales black, rigid, flat; laminar apices rounded to broadly acute; adaxial laminar surfaces sparsely scaly with thin, pale, appressed scales.... ***E. huacsaro***

- 2.** Abaxial laminar surfaces with stellate scales, resinous dots present or absent
- 5.** Petiolar and costal scales peltate, round, dark-centered with whitish, fimbriate margins; adaxial laminar surfaces with peltate, whitish, appressed scales.... *E. tectum*
- 5.** Petiolar and costal scales basally attached, ovate to lanceolate, not conspicuously bicolorous; adaxially laminar surfaces with stellate hairlike scales or small, long-ciliate scales
- 6.** All laminar and petiolar scales stellate; sterile laminae to 0.3–0.5 cm wide.... *E. tenuiculum*
- 6.** Adaxial laminar scales with scale body, some petiolar scales lanceolate and toothed, abaxial surface with stellate scales or only resinous dots; sterile laminae 0.7–2.5 cm wide
- 7.** Sterile laminae 0.7–1.7 cm broad; western Amazonia.. *E. tantalinum*
- 7.** Sterile laminae 1.5–2.5 cm broad; cerrado (central and southeastern Brazil)
- 8.** Sterile leaf laminae coriaceous, drying dark brown.. *E. actinotrichum*
- 8.** Sterile leaf laminae chartaceous, drying dull olive
- 9.** Stem scales to 3 mm long, ciliate; fertile leaves longer than the sterile ones.. *E. heringeri*
- 9.** Stem scales to 4.5 mm long, entire or nearly so; fertile leaves shorter than the sterile ones.... *E. schwackeanum*
- 1.** Abaxial laminar surfaces with linear to lanceolate scales, with or without resinous dots and stellate scales
- 10.** Sterile laminae apically rounded, rarely acute
- 11.** Abaxial laminar scales abundant, overlapping
- 12.** Stem scales reddish black, entire or nearly so; sterile laminae 0.5–1.8 cm wide; intersporangial scales present.. *E. liaisianum*
- 12.** Stem scales orange to brown, conspicuously ciliate; sterile laminae 2.5–3.5 cm wide; intersporangial scales absent.... *E. plumosum*
- Sterile laminae narrowly elliptic to oblanceolate, often spathulate; plants not rheophytic
- 11.** Abaxial laminar scales sparse to dense, not overlapping
- 13.** Laminar scales concentrated on the lamina margins.. *E. obovatum*
- 13.** Laminar scales ± evenly distributed
- 14.** Larger abaxial costal scales linear-lanceolate, entire; plants rheophytic.. *E. lagesianum*
- 14.** Larger abaxial costal scales lanceolate, conspicuously ciliate; plants not rheophytic
- 15.** Sterile laminae linear to narrowly oblong or elliptic, more than 6 times longer than wide; intersporangial scales absent
- 16.** Petiolar scales concolorous, light brown to orange, elongated-lanceolate, evenly ciliated throughout the margin.... *E. angustum*
- 16.** Petiolar scales bicolorous, partly brown, partly black, deltate-lanceolate, more ciliated at the base.... *E. viscidum*
- 15.** Sterile laminae ovate to elliptic or oblanceolate, 4–6 times longer than wide; intersporangial scales present
- 17.** Larger petiolar scales ciliate, the teeth well differentiated from the body, often as long or longer than the width of the scale.... *E. gardnerianum*
- 17.** Larger petiolar scales erose, the teeth shorter than the width of the scale.... *E. muscosum*
- 10.** Sterile laminae apically acute, acuminate, cuspidate, or caudate
- 18.** Abaxial laminar scales dense, obscuring the laminar surfaces
- 19.** Stem scales entire or nearly so; petiolar scales appressed, bicolorous, with blackish center and hyaline margins; laminar apices usually cuspidate to caudate.. *E. edwallii*
- 19.** Stem scales ciliate; petiolar scales spreading, concolorous, light orange to dull brown; laminar apices acute to acuminate
- 20.** Stem scales reddish brown to black; sterile leaves distinctly petiolate, 1/3–1/2 of the leaf length; laminar apices never viviparous.... *E. langsdorffii*
- 20.** Stem scales orange; sterile leaves nearly sessile, 1/10–1/4 of the leaf length; laminar apices occasionally viviparous.... *E. plumosum*
- 18.** Abaxial laminar scales sparse to moderately dense, laminar surfaces visible
- 21.** Laminar scales denser along the margins, where they form a row of orangish scales.. *E. perelegans*
- 21.** Laminar scales ± evenly distributed on the laminar tissue
- 22.** Sterile laminae apically long-caudate.... *E. laminarioides*
- 22.** Sterile laminae apically acute to acuminate
- 23.** Abaxial laminar surfaces with linear to lanceolate scales, stellate scales, and resinous dots.... *E. dutrae*
- 23.** Abaxial laminar surfaces with linear to lanceolate ciliate scales, lacking stellate scales and resinous dots
- 24.** Larger petiolar scales entirely orange or (rarely) bicolorous with dark areas restricted to the apices and/or cilia; adaxial laminar scales usually linear, ciliate or stellate; sterile laminae often with more than 2 cm wide.... *E. chrysolepis*
- 24.** Larger petiolar scales bicolorous with extensive dark areas along the margins and apices, or entirely black; adaxial laminar scales usually lanceolate and ciliate; sterile laminae often with less than 2 cm wide
- 25.** Abaxial laminar scales dense, evenly distributed; mountains of northern Brazil *E. meridense*
- 25.** Abaxial laminar scales sparse to moderately dense, concentrated along the veins; mountains of eastern Brazil.... *E. strictum*
- Key to the species of *Elaphoglossum* section *Polytrichia* in Brazil**
- 1.** Scales on the lamina margins patent and subulate (i.e., inrolled lengthwise)
 - 2.** Sterile laminae oblanceolate; laminae bases long-decurrent; petioles short, 1/8–1/30 of sterile leaf length

- 3.** Stem scales concolorous and strongly flexuous throughout; sterile laminae apices acuminate to abruptly cuspidate.. *E. amazonicum*
- 3.** Stem scales bicolorous and slightly sinuous with flexuous apices; sterile laminae apices acuminate to long-caudate.. *E. raywaense*
- 2.** Sterile laminae of various shapes but never oblanceolate; laminae bases cuneate to truncate; petioles long, 1/2–1/4 of sterile leaf length
- 4.** Stem scales yellowish to brown or orange; simple glandular hairs absent on leaves
- 5.** Larger stem scales ca. 0.4 mm broad at the base; subulate scales present on costa, margin, and abaxial surface of the lamina (Amazon).. *E. polyblepharum*
- 5.** Larger stem scales 1–2.5 mm broad at the base; subulate scales limited to costa and margin of the lamina (eastern Brazil).. *E. scolopendrifolium*
- 4.** Stem scales castaneous; simple glandular hairs present on leaves, especially at the base of the lamina and upper portion of the petiole
- 6.** Lamina apices acute to acuminate; costa of the sterile laminae prominent all the way to the apex.. *E. hybridum*
- 6.** Lamina apices round; costa of the sterile laminae prominent up to 2/3 of the lamina.. *E. ulei*
- 1.** Scales on the lamina margins appressed and planar, usually overlapping to form a continuous band along the lamina margins
- 7.** Petioles nearly absent to 1.5 cm long; costa scales planar.. *E. brevipetiolatum*
- 7.** Petioles more than 2 cm long; costa scales subulate (at least basally inrolled).
- 8.** Petiole scales elliptic, obtuse at apex; lamina margin scales orbiculate to cordiform.. *E. decoratum*
- 8.** Petiole scales linear to lanceolate, acuminate to attenuate at apex; lamina margin scales ovate to lanceolate
- 9.** Sterile laminae bases truncate to strongly cordate; stem scales linear to linear-lanceolate, margins entire to subentire.. *E. scolopendrifolium*
- 9.** Sterile laminae bases decurrent, cuneate or round, rarely truncate; stem scales linear-lanceolate to lanceolate, margins subentire to erose
- 10.** Petiole and costa scales stramineous to medium brown.. *E. glaziovii*
- 10.** Petiole and costa scales dark brown to black
- 11.** Lamina margin scales brown to castaneous; plants epipetric or terrestrial, rarely epiphytic.. *E. prestonii*
- 11.** Lamina margin scales stramineous to light yellowish-brown; plants epiphytic.. *E. amorimii*

Key to the species of *Elaphoglossum* section *Setosa* in Brazil

- 1.** Stems long-creeping; petioles distant, 0.5–2.5 cm apart.. *E. alpestre*
- 1.** Stems short-creeping; petioles approximate to one another, less than 0.5 cm apart
- 2.** Sterile leaves proliferous at apex.. *E. didymoglossoides*
- 2.** Sterile leaves not proliferous
- 3.** Leaves 1–12 cm long; apices of sterile leaves rounded to acute
- 4.** Sterile laminae linear-elliptic; plants rheophytic.. *E. horridulum*
- 4.** Sterile laminae narrowly elliptic to oblanceolate, often spathulate; plants not rheophytic
- 5.** Petioles and laminae copiously covered with minute glandular hairs, 0.1–0.2 mm long.. *E. apparicioi*
- 5.** Petioles and laminae without minute glandular hairs
- 6.** Fertile laminae narrowly oblong, much longer than broad, often revolute, bases cuneate.. *E. hieracioides*
- 6.** Fertile laminae ovate to nearly round, often conduplicate, bases rounded to cordate (rarely broadly cuneate).. *E. piloselloides*
- 3.** Leaves 13–66 cm long; or if as small as 6 cm long, apices of sterile leaves cuspidate, acuminate, or gradually attenuate (rarely acute, in *E. boragineum*)
- 7.** Sterile leaves nearly estipitate, 0.5–1.5(–4) cm long; fertile laminae linear-oblanceolate, bases long-decurrent; sporangia often limited to distal half of fertile lamina; petioles of fertile leaves to 1/4 of total leaf length.. *E. brachyneuron*
- 7.** Sterile leaves with distinct petioles, (1.5)–3–24 cm long; fertile laminae lanceolate, ovate, or elliptic, bases cuneate to cordate; sporangia covering nearly all laminar surface; petioles of fertile leaves to 1/2 to 3/4 of total leaf length
- 8.** Sterile laminae ovate to lanceolate or broadly elliptic to oblanceolate, 2–4 times longer than wide
- 9.** Sterile laminar bases cuneate to attenuate; white patches usually present on sterile laminar surfaces; instersporangial scales present.. *E. boragineum*
- 9.** Sterile laminar bases rounded to cordate; white patches absent on sterile laminar surfaces; instersporangial scales absent.. *E. lindenii*
- 8.** Sterile laminae linear to narrowly elliptic (rarely oblanceolate in *E. mollissimum*), more than 4 times longer than wide
- 10.** Sterile laminae to 0.4–1.4 cm broad; plants rheophytic
- 11.** Sterile leaves 7–16(–20) cm long; petiole scales planar or slightly inrolled at base; lamina scales evenly distributed on costae, margins, and surfaces; scales of the lamina surface nearly as long as the ones on costae and margins.. *E. acutum*
- 11.** Sterile leaves 13–42 cm long; petiole scales strongly inrolled along their length; lamina scales mostly limited to costae and margins; scales of the lamina surface inconspicuous, much smaller than those of costae and margins.. *E. lineare*
- 10.** Sterile laminae 1.5–3.8 cm broad (rarely 1.2 cm in *E. beaurepairei* and *E. eximium*); plants not rheophytic

12. Petiole scales ovate to lanceolate, planar, mostly appressed.. *E. organense*
12. Petiole and stem scales linear-lanceolate, subulate, spreading
13. Sterile laminae coriaceous, very brittle when dried; petioles and laminae densely covered with minute glandular hairs, 0.1–0.2 mm long; Trinidad Island.. *E. beckeri*
13. Sterile laminae papyraceous to chartaceous, not brittle; petioles and laminae without minute glandular hairs; South America
14. Lamina scales conspicuous, evenly distributed on surfaces, costae, and margins; fertile laminar bases narrowly cuneate
15. Sterile leaves chartaceous; fertile leaves longer than the sterile ones; intersporangial scales absent.. *E. acrocarpum*
15. Sterile leaves papyraceous; fertile leaves shorter than the sterile ones; intersporangial scales present.. *E. mollissimum*
14. Lamina scales very sparse, inconspicuous on laminar surfaces, more abundant on costae; fertile laminar bases truncate to subcordate, less commonly cuneate.
16. Petiole scales weakly inrolled along their length, reflexed; marginal lamina scales typically absent on adult plants.. *E. beaurepairei*
16. Petiole scales strongly inrolled along their length, patent; marginal lamina scales typically present on adult plants, especially between crenulations.. *E. eximium*

Key to the species of *Elaphoglossum* section *Squamipedia* in Brazil

1. Sterile laminae flabellate, dichotomously divided.. *E. peltatum*
 1. Sterile laminae of various shapes, not flabellate, entire
 2. Sterile laminae 6 to 10 times longer than wide, narrowly elliptic to oblong, usually widest at or above the middle; intersporangial scales absent; central Brazil.. *E. minutum*
 2. Sterile laminae 1.5 to 2.5(–4) times longer than wide, ovate to lanceolate or elliptic, usually widest below the middle; intersporangial scales present; southeastern Brazil.. *E. squamipes*
- Key to the species of *Elaphoglossum* section *Elaphoglossum* in Brazil**
1. Sterile leaves nearly sessile; petioles <1/4 the sterile lamina length
 2. Stems 0.1–0.4 cm thick
 3. Sterile laminae broadly elliptic; laminar bases decurrent from abruptly contracted blade.... *E. pteropus*
 3. Sterile laminae linear to narrowly elliptic or oblanceolate; laminar bases gradually attenuate, decurrent or narrowly cuneate
 4. Sterile laminae 0.4–1(–1.4) cm wide, coriaceous.... *E. glabellum*
 4. Sterile laminae 1.5–5 cm wide, papyraceous to chartaceous
 5. Veins free at their tips; resinous dots present on abaxial laminar surfaces; scales present on the margin of the laminae, 0.3–1 mm long, dissected.... *E. nigrescens* (sect. *Lepidoglossa*)
 5. Veins expanded laterally and often united at their tips; resinous dots absent on abaxial laminar surfaces; scales absent on the margins of the laminae.... *E. rigidum*
 2. Stems 0.5–1.5 cm thick
 6. Sterile leaves pendent, 50–200 cm long; sterile laminae linear to narrowly elliptic; stem scales 1.5–3 cm long, bright orange; fertile leaves much shorter than the sterile.... *E. herminieri*
 6. Sterile leaves erect, 15–50 cm long; sterile laminae elliptic to oblanceolate; stem scales 0.3–0.6 cm long, dull orange to brown; fertile leaves nearly as long or longer than the sterile
 7. Abaxial laminar surfaces with conspicuous black scales, at least toward the base.... *E. luridum*
 7. Abaxial laminar surfaces lacking conspicuous black scales
 8. Sterile laminae dull, the bases rounded to truncate; petioles of fertile leaves less than half as long as the fertile laminae.... *E. foldatsii*
 8. Sterile laminae lustrous, the bases cuneate-decurrent; petioles of fertile leaves longer than the fertile laminae.... *E. styriacum*
 1. Sterile leaves distinctly petiolate; petioles >1/4 the sterile lamina length
 9. Stems long-creeping; sterile leaves distant, usually more than 1 cm apart
 10. Sterile laminae apically acuminate
 11. Stem scales often concentrated at apices, soon becoming deciduous; abaxial laminar surfaces lustrous; mountains of northern Brazil.... *E. antioquianum*
 11. Stem scales evenly distributed on stems; abaxial laminar surfaces dull; mountains of eastern Brazil, from Bahia to Rio Grande do Sul.... *E. vagans*
 10. Sterile laminae apically rounded to acute
 12. Stems densely covered with orange-brown scales; sterile laminae thick-coriaceous, the margins involute.... *E. scalpellum*
 12. Stems sparsely to moderately covered with dark-brown to black scales; sterile laminae chartaceous to thin-coriaceous, the margins planar or nearly so
 13. Stem scales sparse, shiny black; sterile laminae coriaceous; petioles and abaxial costae glabrous or nearly so.... *E. lingua*
 13. Stem scales moderately dense, dull brown; sterile laminae chartaceous; petioles and abaxial costae with numerous dark brown scales.... *E. ovalifolium*
 9. Stems compact to moderately creeping; sterile leaves approximate to moderately distant, less than 1 cm apart
 14. Stems 0.1–0.4 cm thick
 15. Sterile laminae apically rounded to acute; plants rheophytic

- 16.** Petioles of sterile leaves 1.5-9 cm long; sterile laminae 1.5-2 cm wide, elliptic to oblanceolate.... *E. bahiense*
- 16.** Petioles of sterile leaves 0.5-3.5 cm long; sterile laminae 1-1.5 cm wide, oblanceolate to obovate.... *E. lisboae*
- 15.** Sterile laminae apically acute to acuminate; plants not rheophytic
- 17.** Sterile laminae lanceolate to elliptic
- 18.** Abaxial costae and laminar surfaces with dissected, ± linear scales; fertile leaves longer than the sterile ones.... *E. discolor*
- 18.** Abaxial costae and laminar surfaces glabrous; fertile leaves much shorter than the sterile ones.... *E. paulistanum*
- 17.** Sterile laminae linear-elliptic
- 19.** Stem scales tan, with varying degrees of black streaking; abaxial costae with ovate scales.... *E. gayanum*
- 19.** Stem scales dark brown to black, usually with very narrow pale edges; abaxial costae glabrous.... *E. glabellum*
- 14.** Stems 0.4-1.5 cm thick
- 20.** Sterile laminae apically rounded to acute
- 21.** Adaxial laminar surfaces dark bluish green; plants from Pico da Neblina, occurring above 1700 m in elevation.. *E. wurdackii*
- 21.** Adaxial laminar surfaces not bluish green, usually drying black, brown or olive green; plants from central Brazil, occurring below 1000 m in elevation
- 22.** Sterile laminae chartaceous.... *E. coimbra-buenoi*
- 22.** Sterile laminae thick-coriaceous.... *E. scalpellum*
- 19.** Sterile laminae apically acuminate, rarely acute
- 23.** Veins irregularly anastomosed, especially on the marginal portion of the laminae.... *E. macrophyllum*
- 23.** Veins free or with the tips laterally expanded and united
- 24.** Veins with tips laterally expanded and often united into a commisural strand (not to be confused with the catilagenous margins of some species)
- 25.** Phylloodia present and conspicuous; petiolar scales lanceolate to linear-lanceolate, the apices attenuate, the cells elongate, the margins with long irregular processes.... *E. commisurale*
- 25.** Phylloodia absent or inconspicuous; petiolar scales ovate to lanceolate, the apices obtuse to acute, the cells nearly isodiametric, the margins entire to sparsely denticulate-glandular
- 26.** Stem scales crispat; petioles 1-2(2.5) mm wide, without microscales; larger petiolar scales not inrolled.... *E. miersii* (sect. *Polytrichia*)
- 26.** Stem scales not crispat; petioles 2.3-3.8 mm wide, with abundant microscales; larger petiolar scales inrolled at base.... *E. papyraceum* (sect. *Polytrichia*)
- 24.** Veins free
- 27.** Sterile laminae coriaceous, with dark brown to black dissected scales on the proximal portion of abaxial costae
- 28.** Abaxial laminar surfaces with a dense scurf of minute, arachnoid brown to black microscales.... *E. badinii*
- 28.** Abaxial laminar surfaces glabrous or nearly so
- 29.** Sterile laminae oblong to narrowly elliptic.... *E. pachydermum*
- 29.** Sterile laminae lanceolate or broadly elliptic to oblanceolate
- 30.** Petioles of sterile leaves 1/10-1/3 the sterile leaf length, always shorter than sterile laminae.... *E. luridum*
- 30.** Petioles of sterile leaves with more than 1/2 of the sterile leaf length, often longer than sterile laminae
- 31.** Petiolar scales ovate, apices blunt; sterile laminae thick-coriaceous, drying brown to dark olive green.... *E. nanuzae*
- 31.** Petiolar scales lanceolate, apices acuminate; sterile laminae thin-coriaceous, drying dull green.... *E. riparium*
- 27.** Sterile laminae chartaceous, with orange to brown, non-dissected scales on the proximal portion of abaxial costae
- 32.** Sterile lamina bases abruptly contracted and then narrowly decurrent *E. macahense*
- 32.** Sterile lamina bases cuneate
- 33.** Stems 1-4 mm diam. (not including scales)
- 34.** Stem scales orange, rarely dull brown; abaxial laminar surfaces with ovate to lanceolate orange scales.... *E. praetermissum*
- 34.** Stem scales brown; abaxial laminar surfaces glabrous or with sparse, branched microscales
- 35.** Plants from the mountains of southeastern Brazil.... *E. itatiayense*
- 35.** Plants from the mountains of northern Brazil.... *E. sporadolepis*
- 33.** Stems 5-10 mm diam. (not including scales)
- 36.** Stem scales blackish-brown, with entire margins; sterile leaves up to 100 cm long.... *E. bradeanum*
- 36.** Stem scales brown, with ciliate margins; sterile leaves up to 50 cm long.... *E. iguapense*

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Elaphoglossum acrocarpum (Mart.) T.Moore

Has as synonym

basionym *Acrostichum acrocarpum* Mart.
heterotypic *Elaphoglossum damazioi* Christ

DESCRIPTION

Stem: habit short creeping/erect; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** not conspicuous; **position** approximate; **division** simple; **blade shape** narrowly elliptic; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** scattered; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, 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, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

A.C. Brade, 19159, UPCB, 63998 (UPCB0019233), RB, 63998, (RB00687320), NY, (NY01015628), Espírito Santo
L.B. Damazio, s.n., RB, 36730, (RB00642826), RB, 105257, (RB00687316), RB, 36730, (RB00642863), RB, 36730, (RB00642864), RB, 36730, (RB00642865), Minas Gerais, **Typus**
E.H.G. Ule, 4976, B, Rio de Janeiro
F.B. Matos, 765, CEPEC, 105292, Bahia
G. Pabst, 9088, HB, M, São Paulo

Elaphoglossum actinotrichum (Mart.) T.Moore

Has as synonym

basionym *Acrostichum actinotrichum* Mart.

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor/bicolor; **scale margin** entire/ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered/dense; **laminar margin scale shape** stellate; **costal scale shape** lanceolate/stellate; **fertile leaf** longer than sterile/shorter than sterile.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Distrito Federal, Goiás)

Southeast (Minas Gerais, Rio de Janeiro)

South (Paraná)

HERBARIUM MATERIAL

G. Hatschbach, 68285, MBM (MBM229076), Paraná

H.S. Irwin, 24608, US, 103740, (US01566029), Goiás

A. Macedo, 2764, US, 103740, (US01566028), Minas Gerais

R.M. King, 8730, US, (US01566026), UB, 103740, (UB0033536), Bahia

Elaphoglossum acutum Brade

Has as synonym

homotype *Acrostichum acutum* Féé
homotype *Elaphoglossum fluminense* Brade

DESCRIPTION

Stem: habit short creeping/long creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate/distant; **division** simple; **blade shape** narrowly elliptic; **blade base** narrowly cuneate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** scattered; **laminar margin scale shape** lanceolate/subulate; **costal scale shape** lanceolate/subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

South (Paraná)

HERBARIUM MATERIAL

A.F.M. Glaziou, 5373, P (P00602733), P (P00249808), P (P00249807), K, B,  (B200069724), Rio de Janeiro, **Typus**
C. Mynssen, 1191, NY, 488042,  (NY01039327), RB, 488042,  (RB00579017), Minas Gerais
F.B. Matos, 2511, RB, 488042,  (RB01336007), UPCB, 488042 (UPCB0034358), Paraná
A. Salino, 14141, BHCB, 126417,  (BHCB039854), Espírito Santo
A. Salino, 7820, BHCB, 65073,  (BHCB039855), São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum acutum* Brade



Figure 2: *Elaphoglossum acutum* Brade



Figure 3: *Elaphoglossum acutum* Brade



Figure 4: *Elaphoglossum acutum* Brade



Figure 5: *Elaphoglossum acutum* Brade



Figure 6: *Elaphoglossum acutum* Brade



Figure 7: *Elaphoglossum acutum* Brade

Elaphoglossum alpestre (Gardner) T. Moore

Has as synonym

basionym *Acrostichum alpestre* (Gardner) T. Moore

heterotypic *Acrostichum hirtipes* Féé

heterotypic *Acrostichum pulchellum* Baker

heterotypic *Elaphoglossum hirtipes* (Féé) Brade

DESCRIPTION

Stem: habit long creeping; **scale colour** brown/red; **scale type** concolor; **scale margin** denticulate. **Leaf:** **phylopodium** present; **position** distant; **division** simple; **blade shape** narrowly elliptic; **blade base** cuneate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** scattered; **laminar margin scale shape** lanceolate/linear/subulate; **costal scale shape** lanceolate/linear; **fertile leaf** longer than sterile/same size.

Life Form

Herb

Substrate

Rupicolous, 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, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

G. Gardner, 5924, CGE, K (K000590638), BM, OXF, Rio de Janeiro, **Typus**

F.B. Matos, 1151, UPCB (UPCB0004013), Paraná

P.G. Windisch, 2931, SJRP (SJRP00015384), NY,  (NY02311281), São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum alpestre* (Gardner) T. Moore



Figure 2: *Elaphoglossum alpestre* (Gardner) T. Moore



Figure 3: *Elaphoglossum alpestre* (Gardner) T. Moore



Figure 4: *Elaphoglossum alpestre* (Gardner) T. Moore



Figure 5: *Elaphoglossum alpestre* (Gardner) T. Moore



Figure 6: *Elaphoglossum alpestre* (Gardner) T. Moore



Figure 7: *Elaphoglossum alpestre* (Gardner) T. Moore

Elaphoglossum amazonicum Atehortúa ex Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** yellowish; **scale type** concolor; **scale margin** flexuous. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblanceolate; **blade base** long decurrent; **blade apex** acuminate/cuspidate; **apical bud** absent; **glandular hair** present; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Riverine Forest and/or Gallery Forest

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso)

HERBARIUM MATERIAL

G. Hatschbach, 36206, UC, NY,  (NY00875277), MBM, Mato Grosso

Elaphoglossum amorimii F.B. Matos & Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** subentire/erose. **Leaf:** phylopodium present; **position** approximate; **division** simple; **blade shape** oblong-elliptic; **blade base** narrowly cuneate/truncate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** lanceolate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

COMMENTS

Differs from *E. glaziovii* (Fée) Brade by the darker color of scales on petioles and costae (dark brown to black vs. stramineous to medium brown). From *E. prestonii* (Baker) J. Sm., which also has dark scales on petioles and costae, it differs by the lighter color of scales on the lamina margin (stramineous to light yellowish-brown vs. brown to castaneous). Additionally, *E. amorimii* is exclusively epiphytic and has leaves that dry a yellow-green color, whereas *E. prestonii* is usually epipetric or terrestrial and its leaves dry a darker green.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Espírito Santo)

HERBARIUM MATERIAL

P.H. Labiak, 5178, RB,  (RB00549432), Espírito Santo

F.B. Matos, 620, UPCB, 52941,  (UPCB0024172), CEPEC, Bahia, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum amorimii* F.B. Matos & Mickel

Elaphoglossum angustum (Fée) Christ

Has as synonym

basionym *Acrostichum angustum* Fée
heterotypic *Acrostichum galvini* Glaz. ex Baker

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** bicolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** linear/narrowly elliptic; **blade base** attenuate/narrowly cuneate; **blade apex** rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** dense; **laminar margin scale shape** deltate/lanceolate; **costal scale shape** lanceolate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

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.C. Brade, 16667, NY, 1184796, (NY01184796), RB, 43104, (RB00707173), Rio de Janeiro

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum angustum* (Fée) Christ



Figure 2: *Elaphoglossum angustum* (Fée) Christ



Figure 3: *Elaphoglossum angustum* (Fée) Christ



Figure 4: *Elaphoglossum angustum* (Fée) Christ



Figure 5: *Elaphoglossum angustum* (Fée) Christ

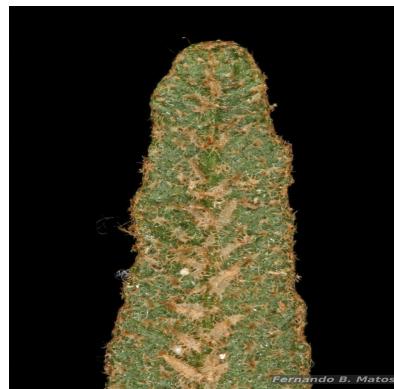


Figure 6: *Elaphoglossum angustum* (Fée) Christ

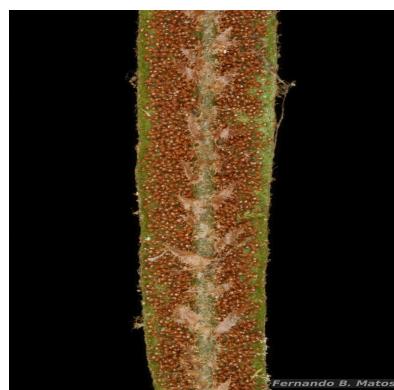


Figure 7: *Elaphoglossum angustum* (Fée) Christ

Elaphoglossum antioquianum Hieron.

DESCRIPTION

Stem: habit long creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** subentire. **Leaf:** phylopodium present; **position** distant; **division** simple; **blade shape** lanceolate; **blade base** broad cuneate/decurrent from abruptly contracted blade; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Roraima)

HERBARIUM MATERIAL

P.L. Viana, 3444, BHCB, 115856,  (BHCB049349), Roraima

R.C. Forzza, 7202, RB, 571390,  (RB00770101), Amazonas

Elaphoglossum apparicioi Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** present/not conspicuous; **position** approximate; **division** simple; **blade shape** oblong-elliptic; **blade base** broad cuneate/rounded; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** present; **veins** free; **hydathode** present; **blade scale density** scattered; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

A.P. Duarte, 3067, RB, 71895, (RB00702929), RB, 71895, (RB00635716), RB, 71895, (RB00288043), HB, Minas Gerais

A. Salino, 12578, BHCB, 111456, (BHCB037475), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum apparicioi* Brade



Figure 2: *Elaphoglossum apparicioi* Brade

Elaphoglossum badinii Novelino

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** lanceolate; **blade base** broad cuneate/truncate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered/dense; **laminar margin scale shape** glabrous; **costal scale shape** stellate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

R.F. Novelino, 795, CESJ, 27488, (CESJ027488), UB, Minas Gerais, **Typus**

M.A.L. Rocha, 93, RB, 495777, (RB00586795), Goiás

Elaphoglossum bahiense Rosenst.

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** subentire/with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** elliptic/ob lanceolate; **blade base** narrowly cuneate/decurrent/long decurrent; **blade apex** rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

HERBARIUM MATERIAL

P. Luetzelburg, 43a, M (M0137042), Bahia, **Typus**

Elaphoglossum beaurepairei (Fée) Brade

Has as synonym

basionym *Acrostichum beaurepairei* Fée

homotype *Elaphoglossum aubertii* var. *beaurepairei* (Fée) Luetzelb.

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/reddish; **scale type** concolor/bicolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** not conspicuous; **position** approximate; **division** simple; **blade shape** linear/elliptic; **blade base** broad cuneate/truncate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** sparsely; **laminar margin scale shape** glabrous; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso)

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

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

HERBARIUM MATERIAL

P. Fiaschi, 3002, SPF, Mato Grosso

V.A.O. Dittrich, 1823, FURB (FURB04628), Minas Gerais

E.D. Lozano, 2615, MBM (MBM405373), Paraná

F.B. Matos, 2537, UPCB (UPCB0032943), Rio de Janeiro

F. Gonzatti, 3112, HUCS, 46312, (HUCS001106), Rio Grande do Sul

A.F.M. Glaziou, 5383, B, (B200069899), K (K000857899), P, (P00249838), P, (P00249839), Rio de Janeiro, **Typus**

A.L. Gasper, 3086, FURB, 46312 (FURB07919), Santa Catarina

J.E. Leite, 3471, US, 2420981, (US03339828), São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum beaurepairei* (Fée) Brade



Figure 2: *Elaphoglossum beaurepairei* (Fée) Brade



Figure 3: *Elaphoglossum beaurepairei* (Fée) Brade



Figure 4: *Elaphoglossum beaurepairei* (Fée) Brade



Figure 5: *Elaphoglossum beaurepairei* (Fée) Brade



Figure 6: *Elaphoglossum beaurepairei* (Fée) Brade



Figure 7: *Elaphoglossum beaurepairei* (Fée) Brade

Elaphoglossum beckeri Brade

DESCRIPTION

Stem: habit erect; scale colour orange/red; scale type concolor; scale margin denticulate. **Leaf:** phylopodium present/not conspicuous; position approximate; division simple; blade shape narrowly elliptic/lanceolate/oblong; blade base cuneate; blade apex acute/rounded; apical bud absent; glandular hair present; veins free; hydathode present; blade scale density dense; laminar margin scale shape subulate; costal scale shape subulate; fertile leaf shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Ocean Islands

Confirmed occurrences

Trindade

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo)

HERBARIUM MATERIAL

J. Becker, 810, HB, 44006, NY, 02608393, (NY02608393), R, 180519, (R000180519), R, 180519a, (R000180519a), R, 180519b, (R000180519b), R, 180519c, (R000180519c), R, 180519d, (R000180519d), Espírito Santo, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum beckeri* Brade



Figure 2: *Elaphoglossum beckeri* Brade



Figure 3: *Elaphoglossum beckeri* Brade

Elaphoglossum boragineum (Sodiro) Christ

Has as synonym

basionym *Acrostichum boragineum* Sodiro

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown/black; **scale type** concolor/bicolor; **scale margin** entire. **Leaf:** **phylopodium** not conspicuous; **position** approximate; **division** simple; **blade shape** broad elliptic/ob lanceolate; **blade base** cuneate; **blade apex** acuminate/cuspidate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** scattered; **laminar margin scale shape** subulate; **costal scale shape** basally subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

F.A. Carvalho, 327, INPA, 216048, Amazonas

F.A. Carvalho, 293, INPA, 216048, Amazonas

Elaphoglossum brachyneuron (Fée) J.Sm.

Has as synonym

basionym *Acrostichum brachyneuron* Fée

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/reddish; **scale type** concolor; **scale margin** entire. **Leaf:** phylopodium not conspicuous; **position** approximate; **division** simple; **blade shape** linear/elliptic; **blade base** long decurrent; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** sparsely; **laminar margin scale shape** deltate; **costal scale shape** deltate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Roraima)

HERBARIUM MATERIAL

E.H. Ule, 8510, US (US1067628), K, BM, B, (B200069964), B, (B200069963), Roraima
G. Gardner, 5928, FI (FI004525), **Typus**

Elaphoglossum bradeanum Melo & Salino

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/black; **scale type** concolor; **scale margin** entire/subentire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** broad elliptic/oblong; **blade base** cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** ovate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

A. Salino, 9248, NY, 720586, (NY00875276), BHCB, 85329, (BHCB005119), Minas Gerais, **Typus**

A. Salino, 9520, NY, 720586, (NY00720586), BHCB, 87227, (BHCB5255), Minas Gerais

A. Salino, 10063, BHCB, 99374, (BHCB5257), Minas Gerais, **Typus**

REFERENCE

Melo, L.C.N. & Salino, A. 2011. New Species of *Elaphoglossum* Schott ex J.Sm. (Dryopteridaceae) from Brazil. American Fern Journal. 101(4):261-264.

Elaphoglossum brevipetiolatum F. B. Matos & Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** erose. **Leaf:** **phylopodium** not conspicuous; **position** approximate; **division** simple; **blade shape** oblanceolate; **blade base** decurrent; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** ovate; **costal scale shape** lanceolate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo)

HERBARIUM MATERIAL

R.R. Vervloet, 1112, RB, 17941, (RB01049704), MBML, 17941, (MBML017941), Espírito Santo, **Typus**

L. Kollmann, 4981, MBML, 15663, (MBML015663), Espírito Santo

R.A. Krause, 65, MBML, 19205, (MBML019205), Espírito Santo

R.A. Krause, 105, MBML, 19258, (MBML019258), Espírito Santo

C.A. Royer, 72, UPCB, 19258 (UPCB0004051), Espírito Santo

R.R. Vervloet, 108, MBML, 16743, (MBML016743), Espírito Santo, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum brevipetiolatum* F. B. Matos & Mickel



Figure 2: *Elaphoglossum brevipetiolatum* F. B. Matos & Mickel



Figure 3: *Elaphoglossum brevipetiolatum* F. B. Matos & Mickel

Elaphoglossum burchellii (Baker) C.Chr.

This treatment is composed of the following taxa: *Elaphoglossum burchellii*, .

Has as synonym

basionym *Acrostichum burchellii* Baker
 heterotypic *Acrostichum praelongum* Féé
 heterotypic *Elaphoglossum balansae* C.Chr.
 heterotypic *Elaphoglossum burchellii* var. *crenulato-dentatum* Rosenst.
 heterotypic *Elaphoglossum burchellii* var. *major* Rosenst.
 heterotypic *Elaphoglossum dusenii* Christ
 heterotypic *Elaphoglossum praelongum* (Féé) C.Chr.

DESCRIPTION

Stem: habit short creeping/long creeping; **scale colour** brown; **scale type** concolor; **scale margin** entire. **Leaf:** phylopodium present; **position** approximate; **division** simple; **blade shape** narrowly elliptic; **blade base** cuneate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** lanceolate; **costal scale shape** glabrous; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

HERBARIUM MATERIAL

P.H. Labiak, 4282, UPCB, 3701745 (UPCB0004000), NY, 3701745, (NY01017128), São Paulo
 P.C. Porto, 2113, RB, 31975, (RB00707012), RB, 455570, (RB00607129), NY, 440094, (NY00810675), Rio de Janeiro
 A. Sehnem, 5818, RB, 256832, (RB00687392), Rio Grande do Sul
 W.J. Burchell, 5155, K, (K000590645), São Paulo, **Typus**
 F.B. Matos, 2022, US, 3701745, (US01912610), UPCB, 256832 (UPCB0037218), RB, 256832, (RB01370201), Santa Catarina
 H.S. Irwin, 15629, US, 2722915, (US01566183), UB, 135550, (UB0033731), NYBG, 810673, (NY00810673), IAN, 130127, (IAN130127), F, C0647387F, (C0647387F), Distrito Federal
 P.H. Labiak, 4928, UPCB, 473788 (UPCB0004010), RB, 473788, (RB00544181), MBML, 37730, (MBML037730), Espírito Santo
 W.R. Anderson, 7523, UB, 135551, (UB0033593), NYBG, 1009951, (NY01009951), Goiás
 R.C. Forzza, 6408, RB, 526654, (RB00674134), NY, 135551, (NY02422820), Minas Gerais

P.H. Labiak, 3098, RB, 440094, (RB00687362), MBM, 526654 (MBM323424), Paraná
R.C. Forzza, 1219, NYBG, 1009950, (NY01009950), Bahia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum burchellii* (Baker) C.Chr.



Figure 2: *Elaphoglossum burchellii* (Baker) C.Chr.



Figure 3: *Elaphoglossum burchellii* (Baker) C.Chr.



Figure 4: *Elaphoglossum burchellii* (Baker) C.Chr.



Figure 5: *Elaphoglossum burchellii* (Baker) C.Chr.



Figure 6: *Elaphoglossum burchellii* (Baker) C.Chr.



Figure 7: *Elaphoglossum burchellii* (Baker) C.Chr.

Elaphoglossum chrysolepis (Fée) Alston

Has as synonym

basionym *Acrostichum chrysolepis* Fée

DESCRIPTION

Stem: habit short creeping; **scale colour** yellowish/brown; **scale type** concolor/bicolor; **scale margin** ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** attenuate/narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** dense; **laminar margin scale shape** deltate/lanceolate/linear/stellate; **costal scale shape** deltate/lanceolate/linear/stellate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

A.F.M. Glaziou, 2435, S (S05-9336), P (P00249853), P (P00249852), K, (K000590642), BR (BR0000006965068), BR (BR0000006964733), B, (B200070084), Rio de Janeiro, **Typus**

Schmalz, s.n., US, 333543, (US01566233), Santa Catarina

A. Salino, 14025, BHCB, 126301, (BHCB048618), Espírito Santo

F.B. Matos, 1190, MBM, 333543, (MBM333543), Paraná

A. Salino, 1891, BHCB, 30261, (BHCB048612), São Paulo

Elaphoglossum coimbra-buenoi Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** entire/with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** ovate/broad elliptic/oblong; **blade base** cuneate/decurrent; **blade apex** acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Riverine Forest and/or Gallery Forest

Geographic Distribution

Confirmed occurrences

Central-west (Goiás)

HERBARIUM MATERIAL

A.C. Brade, 15378, RB,  (RB00564633), RB,  (RB00564632), Goiás, **Typus**

Elaphoglossum commissurale Melo & Salino

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** entire/ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** lanceolate/oblong; **blade base** cuneate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** forming marginal vein; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** deltate/lanceolate; **fertile leaf** longer than sterile.

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 (Minas Gerais)

HERBARIUM MATERIAL

A. Salino, 9496, NY, 720583,  (NY00720583), BHCB, 87203,  (BHCB005120), **Typus**

Elaphoglossum decoratum (Kunze)

T.Moore

Has as synonym

basionym *Acrostichum decoratum* Kunze

DESCRIPTION

Stem: habit short creeping; **scale colour** orange; **scale type** concolor; **scale margin** subentire. **Leaf:** phyllopedium present; **position** approximate; **division** simple; **blade shape** broad elliptic; **blade base** broad cuneate; **blade apex** acute/cuspidate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** rounded; **costal scale shape** basally subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Roraima)

Northeast (Bahia)

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

South (Paraná)

HERBARIUM MATERIAL

C.A.W. Schwacke, 14150, RB, 36795, (RB00680414), NYBG, 810666, (NY00810666), São Paulo

P. Fiaschi, 1788, NY, (NY00822307), Bahia

A.C. Brade, 19421, RB, 64000, (RB00680419), NY, 01186205, (NY01186205), Espírito Santo

A. Maublanc, 618, F, C0661651F, (C0661651F), Minas Gerais

P.H. Labiak, 5505, UPCB, 80787, (UPCB0004066), Paraná

M.S. Lima, 282, RB, 80787, (RB01075043), Rio de Janeiro

L.A. Pessoni, 348, UFP, 40556, (UFP040556), Roraima

Elaphoglossum didymoglossoides C.Chr.

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** ovate/lanceolate; **blade base** broad cuneate/rounded; **blade apex** retuse/rounded; **apical bud** present; **glandular hair** present; **veins** free; **hydathode** present; **blade scale density** sparsely; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

South (Paraná)

HERBARIUM MATERIAL

A.F.M. Glaziou, 12279, P, (P00249681), M, K (K000590646), C, BM (BM000937998), B, (B200072204), P, (P00249680), Rio de Janeiro, **Typus**

P.H. Labiak, 3504, UPCB (UPCB0004068), UNIP (UNIP07007), Paraná

Elaphoglossum discolor (Kuhn) C.Chr.

Has as synonym

basionym *Acrostichum discolor* Kuhn
homotype *Elaphoglossum sancti-gabrielis* Christ
heterotypic *Elaphoglossum juruense* A.Samp.

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/reddish; **scale type** concolor; **scale margin** subentire. **Leaf:** phylopodium present; **position** approximate; **division** simple; **blade shape** elliptic; **blade base** cuneate/decurrent; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** lanceolate/linear; **costal scale shape** linear lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Amazonian Campinarana

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará)

Northeast (Ceará)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

P.B. Schwartsburg, 2476, VIC, Ceará

D. Daly, 10607, NY, 6818, (NY00674457), Acre

R. Spruce, 2309 ET 2245, E, (E00429057), E, (E00429058), RB, 6818, (RB00543282), Amazonas, **Typus**

J. Prado, 609, INPA, 178032, (INPA0178032), MBM, 229324, (MBM229324), NY, 2597034, (NY02597034), RB, 333825, (RB00687404), US, 3377686, (US01566399), Amazonas

P.G. Windisch, 8825, RB, 490022, (RB00576551), Mato Grosso

G.T. Prance, P24909, NY, 490022, (NY02597028), Pará

Elaphoglossum dutrae Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** narrowly cuneate; **blade apex** acuminate/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** dense; **laminar margin scale shape** lanceolate/ovate/rounded; **costal scale shape** lanceolate/ovate/rounded; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

J. Dutra, 222, BM, ICN, 014222, , ,  (ICN00002592), PACA, 68773,  (PACA068773), R, Rio Grande do Sul, **Typus**

Elaphoglossum edwallii Rosenst.

Has as synonym

heterotypic *Elaphoglossum reitzii* Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblong-elliptic; **blade base** cuneate; **blade apex** apiculate/caudate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** imbricate/dense; **laminar margin scale shape** lanceolate/ovate; **costal scale shape** lanceolate/ovate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from 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

A.P. Fontana, 994, MBML, 24076, (MBML024076), Espírito Santo

A. Salino, 5476, BHCB, 51943, (BHCB048636), Minas Gerais

G. Hatschbach, 21350, K, MBM, 421350 (MBM011130), NY, 421350, (NY00886030), PACA, 79049, (PACA079049), RB, 421350, (RB00707099), UC, Paraná

A.C. Brade, 15523, BM, NY, 32832, (NY00810671), NY, 32832, (NY01184787), RB, 32832, (RB00707097), Rio de Janeiro

F.B. Matos, 2023, RB, 32832, (RB01371692), UPCB, 32832 (UPCB0037106), US, 3701744, (US01912611), Santa Catarina

A. Loefgren, CGG4693, SP, 7845, (SP003780), NY, 7845, (NY00149614), NY, 7845, (NY00149615), São Paulo, **Typus**
F. Tamandaré, 6441, SP, 391, (SP003779), Rio de Janeiro, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum edwallii* Rosenst.



Figure 2: *Elaphoglossum edwallii* Rosenst.



Figure 3: *Elaphoglossum edwallii* Rosenst.



Figure 4: *Elaphoglossum edwallii* Rosenst.



Figure 5: *Elaphoglossum edwallii* Rosenst.



Figure 6: *Elaphoglossum edwallii* Rosenst.



Figure 7: *Elaphoglossum edwallii* Rosenst.

Elaphoglossum eximium (Mett.) Christ

Has as synonym

basionym *Acrostichum eximium* Mett.

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/reddish; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** not conspicuous; **position** approximate; **division** simple; **blade shape** linear/elliptic; **blade base** attenuate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** scattered; **laminar margin scale shape** linear lanceolate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Roraima)

HERBARIUM MATERIAL

G.H.H. Tate, 491, NY,  (NY01402857), Roraima

Elaphoglossum foldatsii Vareschi

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblanceolate; **blade base** rounded/truncate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate/linear; **fertile leaf** longer than sterile/shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará)

HERBARIUM MATERIAL

G.T. Prance, 29557, NY,  (NY02597047), Amazonas

G.A. Black, 50-9689, IAN,  (IAN055837), Amapá

M.R. Pietrobom, 5807, MG, HBRA, Pará

Elaphoglossum gardnerianum (Kunze ex Féé) T. Moore

Has as synonym

basionym *Acrostichum gardnerianum* Kunze ex Féé

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** elliptic/oblanceolate; **blade base** cuneate; **blade apex** rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** dense; **laminar margin** **scale shape** lanceolate; **costal scale shape** lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

South (Paraná)

HERBARIUM MATERIAL

G. Gardner, 93, P (P00249740), BM (BM00890236), BM (BM00890238), FI (FI004524), CGE, K (K000501540), P (P00249739), P (P00249741), W (W0004334), Rio de Janeiro, **Typus**

F.S. Souza, 1426, BHCB, 148332, (BHCB048767), Espírito Santo

L. Damazio, 1803, RB, 36721, (RB00687525), UPCB, 148332 (UPCB0029596), Minas Gerais

G. Hatschbach, 13579, MBM, 21333, (MBM021333), Paraná

A.C. Brade, 9726, R, 21211, (R010055465), R, 21211, (R010055464), NY, 809690, (NY00809690), Rio de Janeiro

C.A.W. Schwake, 14178, RB, 36719, (RB00687523), São Paulo

F.B. Matos, 1569, UPCB (UPCB0004092), Bahia

Elaphoglossum gayanum (Fée) T.Moore

Has as synonym

basionym *Acrostichum gayanum* Fée

heterotypic *Acrostichum obliquatum* Fée

heterotypic *Acrostichum sellowianum* Klotzsch ex Kuhn

heterotypic *Elaphoglossum obliquatum* (Fée) Christ

heterotypic *Elaphoglossum sellowianum* (Klotzsch ex Kuhn) T. Moore

DESCRIPTION

Stem: habit short creeping/long creeping; **scale colour** orange/brown/black; **scale type** bicolor; **scale margin** entire/with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** linear/narrowly elliptic; **blade base** attenuate/narrowly cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** ovate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

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)

HERBARIUM MATERIAL

V.C. Souza, 23428, CESJ, 67902, (CESJ067902), Espírito Santo

J.M. Silva, 7442, MBM, 359706, (MBM359706), ALCB, 97223, (ALCB001671), Minas Gerais

G. Hatschbach, 18570, NY, 886072, (NY00886072), MBM, 5387, (MBM005387), Paraná

P.H. Labiak, 4445, UPCB, 61208, (UPCB0004101), NY, 1017157, (NY01017157), MBM, 339488, (MBM339488), Rio de Janeiro

F. Gonzatti, 3133, UPCB, 93879, (UPCB0042956), HUCS, 46313, (HUCS001126), Rio Grande do Sul

F.B. Matos, 2024, UPCB, 92492, (UPCB0037108), Santa Catarina

A.C. Brade, 5359, NY, 886071, (NY00886071), São Paulo

V.A.O. Dittrich, 1650, CESJ, 66498, (CESJ066498), Bahia

Elaphoglossum glabellum J.Sm.

Has as synonym

heterotypic *Acrostichum rigidum* Fée

DESCRIPTION

Stem: habit short creeping/long creeping; **scale colour** brown/black; **scale type** bicolor; **scale margin** entire/subentire. **Leaf:** **phylopodium** present; **position** approximate/distant; **division** simple; **blade shape** linear/narrowly elliptic; **blade base** narrowly cuneate/decurrent; **blade apex** acuminate/attenuate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Amazonian Campinarana, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

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

Northeast (Bahia, Pernambuco)

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

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

F.B. Matos, 1061, NY, 103748, (NY00886092), UPCB, 103748 (UPCB0004113), Bahia

N. Yensen, 14741, US, 103748, (US01566577), Goiás

F.B. Matos, 1109, MBM (MBM333541), UPCB (UPCB0004114), Paraná

F.B. Matos, 2199, NY, 02691539, (NY02691539), UPCB, 81905, (UPCB0004105), Rio de Janeiro

M.H. Nee, 34849, INPA, 180920, (INPA0180920), NY, 2597064, (NY02597064), US, 3135983, (US01566578), Rondônia

G.T. Prance, 13521, INPA, 28670, (INPA0028670), NY, 2597054, (NY02597054), Roraima

P.H. Labiak, 261, UPCB, 25877, (UPCB0004112), Santa Catarina

G. Edwall, 21170, NY, 809689, (NY00809689), São Paulo

J. Prado, 1297, SP, Acre

G.T. Prance, 11335, INPA, 29735, (INPA0029735), NY, 29735, (NY02597068), UPCB, 29735 (UPCB0037006), Amazonas

W.A. Egler, 46550, IAN, 29735 (IAN113362), NY, 29735, (NY02597062), UB, 103748, (UB0033655), US, 103748, (US01566571), Amapá

L.O. Williams, 6570, US, (US01566573), Minas Gerais

N.T. Silva, 2071, NY, (NY02597063), Pará

M.S. Lopes, 535, HUEFS (HUEFS084171), MBM, 292339, (MBM292339), Pernambuco

H.H. Smith, 5, R, 237361, (R010056240), R, 237361, (R010056313), Mato Grosso

FIELD IMAGES / ILLUSTRATIONS

Figure 1: *Elaphoglossum glabellum* J.Sm.Figure 2: *Elaphoglossum glabellum* J.Sm.Figure 3: *Elaphoglossum glabellum* J.Sm.



Figure 4: *Elaphoglossum glabellum* J.Sm.



Figure 5: *Elaphoglossum glabellum* J.Sm.



Figure 6: *Elaphoglossum glabellum* J.Sm.



Figure 7: *Elaphoglossum glabellum* J.Sm.

Elaphoglossum glaziovii (Fée) Brade

Has as synonym

basionym *Acrostichum glaziovii* Fée

DESCRIPTION

Stem: habit short creeping; **scale colour** yellowish/brown; **scale type** concolor; **scale margin** subentire/erose. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** cuneate/rounded/decurrent; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** lanceolate/ovate; **costal scale shape** subulate; **fertile leaf** shorter than sterile/same size.

ADDITIONAL DESCRIPTION

For a more complete and detailed description, see Matos & Mickel (2014).

COMMENTS

Elaphoglossum glaziovii is the most common species of *E.* sect. *Polytrichia* in Brazil, comprising about 50% of all collections examined by Matos & Mickel (2014). *Elaphoglossum glaziovii* belongs to a well-defined clade of about seven South American species within sect. *Polytrichia* (Matos et al., in prep.). The species in this clade are distinct by having two kinds of scales on their sterile leaves: 1) a nearly continuous band of planar, usually appressed, ovate to lanceolate scales along the laminar margins; 2) patent, subulate scales on petioles and costae. The group is taxonomically difficult and includes other Brazilian endemics, such as *E. amorimii*, *E. brevipetiolatum*, *E. prestonii*, and *E. scolopendrifolium*. See dichotomous key.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous 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.N. Rose, 20370, NY, 3693160, (NY01015668), US, 3693160, (US01566592), Rio de Janeiro

C. Jürgens, 75, NY, 3693160, (NY01015667), Rio Grande do Sul

F.B. Matos, 1979, US, 3701757, (US01912585), Santa Catarina

M. Wacket, 7851, NY, 3701757, (NY01015664), São Paulo

A.F.M. Glaziou, 2059, P, P00249745, (P00249745), Rio de Janeiro, **Typus**

L.P. Queiroz, 2999, HUEFS (HUEFS012793), Bahia

A. Salino, 4865, P, P00846402, (P00846402), Espírito Santo
R.F. Novelino, 798, CESJ, 58361, (CESJ058361), NY, 01402653, (NY01402653), US, 3693160, (US01921587), Minas Gerais
F.B. Matos, 1972, NY, 3693160, (NY02064186), UPCB, 3693160 (UPCB0024148), Paraná

FIELD IMAGES / ILLUSTRATIONS

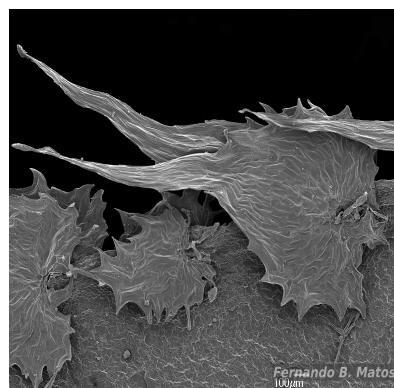


Figure 1: *Elaphoglossum glaziovii* (Fée) Brade



Figure 2: *Elaphoglossum glaziovii* (Fée) Brade



Figure 3: *Elaphoglossum glaziovii* (Fée) BradeFigure 4: *Elaphoglossum glaziovii* (Fée) BradeFigure 5: *Elaphoglossum glaziovii* (Fée) BradeFigure 6: *Elaphoglossum glaziovii* (Fée) Brade

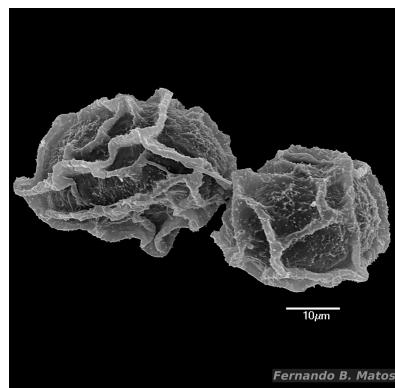


Figure 7: *Elaphoglossum glaziovii* (Fée) Brade

Elaphoglossum heringeri Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** lanceolate; **blade base** attenuate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** sparsely/dense; **laminar margin scale shape** stellate; **costal scale shape** stellate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic

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)

HERBARIUM MATERIAL

E.P. Heringer, 7998, HEPH,  (HEPH00014785), Distrito Federal, **Typus**

Elaphoglossum herminieri (Bory & Fée) T.Moore

Has as synonym

basionym *Acrostichum herminieri* Bory & Fée

DESCRIPTION

Stem: habit short creeping; **scale colour** orange; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** linear/narrowly elliptic; **blade base** narrowly cuneate/decurrent; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amapá)

Northeast (Bahia, Pernambuco)

Southeast (São Paulo)

South (Paraná)

HERBARIUM MATERIAL

M.S. Lopes, 650, MBM, 292333, (MBM292333), Pernambuco

J.S. Blanchet, 2521, P, (P00245079), Bahia, **Typus**

J.J. Granville, 12428, US, 3297919, (US00719246), Amapá

P.H. Labiak, 5536, UPCB, 80739, (UPCB0004125), Paraná

A.C. Brade, 6282, NY, 809681, (NY00809681), São Paulo

Elaphoglossum hieracioides Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** oblanceolate; **blade base** cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** sparsely; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** longer than sterile.

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

Central-west (Goiás, Mato Grosso)

Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

W.R. Anderson, 7517, NY, 891466,  (NY00891466), MO, MBM, Goiás

C.W.H. Mosén, 2251, P, Minas Gerais

M.R. Pietrobom, 2999, SJRP, MBM, IPA, Mato Grosso

G. Edwall, 21187, SPF, SP, BM, NY, 886035,  (NY00886035), São Paulo

Elaphoglossum horridulum (Kaulf.) J.Sm.

Has as synonym

basionym *Acrostichum horridulum* Kaulf.
 heterotypic *Acrostichum raddianum* Hook. & Grev.
 heterotypic *Acrostichum spathulinum* Raddi
 heterotypic *Acrostichum tenellum* Desv.

DESCRIPTION

Stem: habit short creeping/erect; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** linear/elliptic; **blade base** narrowly cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** present; **veins** free; **hydathode** present; **blade scale density** sparsely; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** longer than sterile/shorter than sterile.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Central-west (Goiás, Mato Grosso do Sul, Mato Grosso)
 Southeast (Minas Gerais, Rio de Janeiro, São Paulo)
 South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

G. Hatschbach, 18608, MBM (MBM006438), K, NY, 1015636, (NY01015636), PACA, 79239, (PACA079239), S, UC, UPCB, Paraná, **Typus**
 M.R. Pietrobom, 74, SJRP, 79239, (SJRP00021425), MO, Goiás
 P. Clausen, 74, P, P01467022, (P01467022), Minas Gerais
 S.M.B. Silva, 22, UPCB, 61176, (UPCB0004133), Mato Grosso do Sul
 M. Pietrobom, 2999, Mato Grosso
 J.N. Rose, 20343, NY, 1015640, (NY01015640), Rio de Janeiro
 A. Viereck, 29, P, Santa Catarina
 A.C. Brade, 8416, GH, HB, MBM, 32021, (MBM032021), NY, 1015638, (NY01015638), RB, UC, São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum horridulum* (Kaulf.) J.Sm.

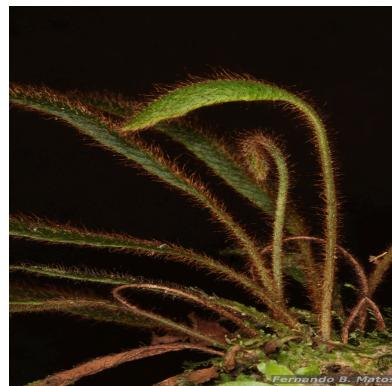


Figure 2: *Elaphoglossum horridulum* (Kaulf.) J.Sm.



Figure 3: *Elaphoglossum horridulum* (Kaulf.) J.Sm.

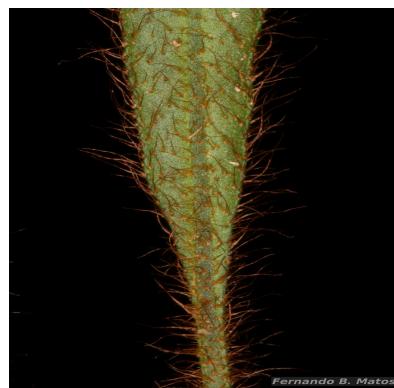


Figure 4: *Elaphoglossum horridulum* (Kaulf.) J.Sm.



Figure 5: *Elaphoglossum horridulum* (Kaulf.) J.Sm.



Figure 6: *Elaphoglossum horridulum* (Kaulf.) J.Sm.



Figure 7: *Elaphoglossum horridulum* (Kaulf.) J.Sm.

Elaphoglossum huacsaro (Ruiz) Christ

Has as synonym

basionym *Acrostichum huacsaro* Ruiz
heterotypic *Elaphoglossum ernestii* Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** black; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** linear; **blade base** narrowly cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** lanceolate; **costal scale shape** lanceolate/ovate; **fertile leaf** longer than sterile.

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 (Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

A. Salino, 2946, UEC, 87743, (UEC076229), BHCB, 33306, (BHCB000870), São Paulo
E.H.G. Ule, 265, US, (US00901852), US, (US00901851), R, (R000000682), HB, Minas Gerais
A.C. Brade, 9759, R, (R000021262), Rio de Janeiro
J. Prado, 1099, NY, (NY00809685), Rio de Janeiro

Elaphoglossum hybridum (Bory) Brack.

Has as synonym

basionym *Acrostichum hybridum* Bory

heterotypic *Acrostichum hybridum* var. *minor* Baker

heterotypic *Acrostichum lindbergii* Mett. ex Kuhn

heterotypic *Elaphoglossum lindbergii* (Mett. ex Kuhn) Rosenst.

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** ovate/narrowly elliptic/oblong; **blade base** cuneate/rounded/truncate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** present; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophylous 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, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

W.R. Anderson, 7522, UB, NY, 01402648, (NY01402648), MO, HB, Goiás

B. Stannard, H52136, CEPEC, HUEFS, K, MBM, NY, 809736, (NY00809736), SP, SPF, Bahia

A. Regnell, 1438, US, 833818, (US01566763), Minas Gerais

P.K.H. Dusen, 10620, S, B, Paraná

F.B. Matos, 2215, VT, US, 3701754, (US01912582), UPCB, 81888, (UPCB0004135), UC, SP, RB, R, P, NY, 02695894, (NY02695894), MO, MBM, K, GH, BHCB, 187998, (BHCB187998), B, Rio de Janeiro

A. Sehnem, 4216, RB, PACA, GH, FLOR, 8193, (FLOR0008193), Rio Grande do Sul

F.B. Matos, 2021, UPCB, 92472, (UPCB0037223), NY, 02696005, (NY02696005), Santa Catarina

A.C. Brade, 7606, US, 1498879, (US01566761), SP, S, NY, 1015631, (NY01015631), HB

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum hybridum* (Bory) Brack.



Figure 2: *Elaphoglossum hybridum* (Bory) Brack.



Figure 3: *Elaphoglossum hybridum* (Bory) Brack.



Figure 4: *Elaphoglossum hybridum* (Bory) Brack.



Figure 5: *Elaphoglossum hybridum* (Bory) Brack.



Figure 6: *Elaphoglossum hybridum* (Bory) Brack.

Figure 7: *Elaphoglossum hybridum* (Bory) Brack.

Elaphoglossum iguapense Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** broad elliptic; **blade base** cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate; **fertile leaf** same size.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest, Coastal Forest (Restinga)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Pernambuco)

Southeast (Espírito Santo, Minas Gerais, São Paulo)

Possible occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

M.S. Lopes, 558, HUEFS, 36783 (HUEFS084169), RB, 375883, (RB00687513), Pernambuco

A.C. Brade, 8389, RB, (RB00288049), RB, (RB00635721), São Paulo, **Typus**

F.B. Matos, 1378, UPCB, 68705, (UPCB0004148), Bahia

G. Martinelli, 8057, RB, 209173, (RB00707181), Espírito Santo

C.A.W. Schwacke, 14694, RB, 36783, (RB00687516), Minas Gerais

Elaphoglossum itatiayense Rosenst.

DESCRIPTION

Stem: habit short creeping/long creeping; **scale colour** brown; **scale type** concolor; **scale margin** entire/with irregular process.
Leaf: **phylopodium** present; **position** approximate/distant; **division** simple; **blade shape** elliptic; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

HERBARIUM MATERIAL

F. Tamandaré, 6449, HB, 40035, NY, 149640, (NY00149640), S (S-R-1865), SP, 1239, (SP003781), UC (UC443414), Rio de Janeiro, **Typus**

A.C. Brade, 21116, RB, 73806, (RB00687541), NY, 809675, (NY00809675), São Paulo

A.C. Brade, 17121, RB, 45852, (RB00687518), Minas Gerais

Elaphoglossum lagesianum Rosenst.

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** denticulate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** narrowly cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** sparsely/dense; **laminar margin scale shape** linear lanceolate; **costal scale shape** linear lanceolate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

F. Gonzatti, 3771, HUCS, 46310, (HUCS001528), UPCB, 93877, (UPCB0042972), Rio Grande do Sul

F.B. Matos, 2012, UPCB, 92495, (UPCB0037109), US, 3701746, (US01912609), Santa Catarina

C. Spannagel, s.n., NY, 3701746, (NY00149642), NY, 3701746, (NY00809670), NY, 3701746, (NY00809671), Santa Catarina, **Typus**

Elaphoglossum laminariooides (Fée) T.Moore

Has as synonym

basionym *Acrostichum laminariooides* Fée

DESCRIPTION

Stem: habit short creeping; **scale colour** black; **scale type** concolor; **scale margin** ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** attenuate/narrowly cuneate; **blade apex** acuminate/attenuate/caudate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** dense; **laminar margin scale shape** lanceolate/linear; **costal scale shape** lanceolate/linear; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest, Inundated Forest (Várzea)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará)

HERBARIUM MATERIAL

G.T. Prance, 11330a, UPCB, 92677, (UPCB0036959), Amazonas

P.F. von Luetzelburg, 20263, R, 18229, Amapá

S. Maciel, 241, IAN, 92677 (IAN184753), Pará

Elaphoglossum langsdorffii (Hook. & Grev.) T.Moore

Has as synonym

basionym *Acrostichum langsdorffii* Hook. & Grev.

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** cuneate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** imbricate/dense; **laminar margin scale shape** lanceolate/ovate; **costal scale shape** lanceolate/ovate; **fertile leaf** longer than sterile/same size.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Rio Grande do Norte)

Central-west (Distrito Federal)

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

South (Paraná)

HERBARIUM MATERIAL

F. Tamandaré, H-81, RB, 1877, (RB00687546), São Paulo

G.H. Langsdorff, s.n., K, (K000229687), Minas Gerais, **Typus**

P.T. Sano, 52347, MBM, NY, 809704, (NY00809704), SPF, UPCB, 92690, (UPCB0037008), Bahia

E.P. Heringer, 7997, UB, 135537, (UB0033752), US, 2549384, (US01566796), Distrito Federal

P.H. Labiak, 4113, MBML, 31568, (MBML031568), NY, 1015616, (NY01015616), UPCB, 57509, (UPCB0004170), Espírito Santo

A. Saint-Hilaire, 4113, P, P01403413, (P01403413), Minas Gerais

P.B. Schwartsburg, 630, MBM, 323427, (MBM323427), Paraná

A.C. Brade, 16361, NY, 1184791, (NY01184791), RB, 43110, (RB00707063), Rio de Janeiro

D. Andrade-Lima, 72-7183, IPA, 29368, Rio Grande do Norte

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum langsdorffii* (Hook. & Grev.) T.Moore



Figure 2: *Elaphoglossum langsdorffii* (Hook. & Grev.) T.Moore



Figure 3: *Elaphoglossum langsdorffii* (Hook. & Grev.) T.Moore



Figure 4: *Elaphoglossum langsdorffii* (Hook. & Grev.) T.Moore



Figure 5: *Elaphoglossum langsdorffii* (Hook. & Grev.) T.Moore



Figure 6: *Elaphoglossum langsdorffii* (Hook. & Grev.) T.Moore



Figure 7: *Elaphoglossum langsdorffii* (Hook. & Grev.) T.Moore

Elaphoglossum liaisianum (Glaz. ex Féé) Brade

Has as synonym

basionym *Acrostichum liaisianum* Glaz. ex Féé

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor/bicolor; **scale margin** subentire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** attenuate/narrowly cuneate; **blade apex** rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** imbricate/dense; **laminar margin scale shape** lanceolate/ovate; **costal scale shape** lanceolate/ovate; **fertile leaf** shorter than sterile/same size.

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 (Rio de Janeiro)

HERBARIUM MATERIAL

A.C. Brade, 15521, NY, 809657, (NY00809657), NY, 1184786, (NY01184786), P, 1184786 (P01413009), RB, 32830, (RB00687562), US, 32830, (US01566832), Rio de Janeiro

A.F.M. Glaziou, 5371, P, S, B, Rio de Janeiro, **Typus**

Elaphoglossum lindenii (Bory ex Féé) T.Moore

Has as synonym

basionym *Acrostichum lindenii* Bory ex Féé

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish; **scale type** concolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** ovate/lanceolate; **blade base** rounded/subcordate; **blade apex** acuminate/cuspidate; **apical bud** absent; **glandular hair** present; **veins** free; **hydathode** present; **blade scale density** scattered/dense; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

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

E.H.G. Ule, 249, NY, 01402858, (NY01402858), P, R, Rio de Janeiro

A.C. Brade, 15517, UPCB, 88216, (UPCB0019239), RB, P, P01467614, (P01467614), NY, 01402859, (NY01402859), HB, GH, CESJ, 3135, (CESJ003135), Rio de Janeiro

P.K.H. Dusén, 574, P, S, Rio de Janeiro

Elaphoglossum lineare (Fée) T.Moore

Has as synonym

basionym *Acrostichum lineare* Fée
heterotypic *Acrostichum gracile* Fée
heterotypic *Elaphoglossum gracile* (Fée) C.Chr.

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown/red; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** linear/oblanceolate; **blade base** attenuate/narrowly cuneate; **blade apex** acuminate/attenuate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** glabrescent; **laminar margin scale shape** lanceolate/subulate; **costal scale shape** lanceolate/subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

G. Gardner, 98, P (P00249791), NY, 149658, (NY00149658), K (K000898851), G, FI (FI004528), BM, Rio de Janeiro, **Typus**
P.B. Schwartsburg, 3088, VIC, Minas Gerais
F.B. Matos, 2508, UPCB, 92369, (UPCB0034356), RB, 51949, (RB01363069), MBML, 51949, (MBML051949),
HUEFS, 234009, (HUEFS0234009), Paraná
F.B. Matos, 2525, UPCB, 92358, (UPCB0034371), RB, 92369, (RB01359408), Rio de Janeiro
C. Spannagel, 187, US, 2294240, (US03339976), S, HBR, Santa Catarina
A. Salino, 7484, NY, 01402852, (NY01402852), BHCB, 62816, (BHCB049273), São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum lineare* (Fée) T.Moore



Figure 2: *Elaphoglossum lineare* (Fée) T.Moore



Figure 3: *Elaphoglossum lineare* (Fée) T.Moore



Figure 4: *Elaphoglossum lineare* (Fée) T.Moore



Figure 5: *Elaphoglossum lineare* (Fée) T.Moore



Figure 6: *Elaphoglossum lineare* (Fée) T.Moore



Figure 7: *Elaphoglossum lineare* (Fée) T.Moore

Elaphoglossum lingua (C.Presl) Brack.

Has as synonym

basionym *Olfersia lingua* C.Presl
 heterotypic *Acrostichum producens* Féé
 heterotypic *Acrostichum spissum* Féé
 heterotypic *Elaphoglossum producens* (Féé) Brade

DESCRIPTION

Stem: habit long creeping; **scale colour** black; **scale type** concolor/bicolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** distant; **division** simple; **blade shape** ovate/elliptic/lanceolate/oblong; **blade base** cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** longer than sterile/same size.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Coastal Forest (Restinga)

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia, Pernambuco, Sergipe)
 Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
 South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

M. Wacket, 294, US, 600207, (US01566892), São Paulo
 F.B. Matos, 1060, UPCB, 54638, (UPCB0004194), NY, 02064143, (NY02064143), Bahia
 G. Raddi, s.n., PI, Rio de Janeiro, **Typus**
 J.A. Lombardi, 9836, UPCB, 86674, (UPCB0028515), Espírito Santo
 L. Damazio, s.n., RB, 36748, (RB00687626), Minas Gerais
 M.S. Lopes, 626, RB, 375673, (RB00687553), MBM, 292331, (MBM292331), HUEFS, 84230, (HUEFS0084230),
 Pernambuco
 G. Hatschbach, 44556, MBM, 73797, (MBM073797), Paraná
 A.R. Reitz, 5546, US, 2543299, (US01566888), Santa Catarina
 A.C. Brade, 15528, RB, 32837, (RB00707006), NY, 886047, (NY00886047), Rio de Janeiro
 M.A. Kieling-Rubio, 781, UPCB, 90167, (UPCB0029126), RB, 566281, (RB00755177), Rio Grande do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum lingua* (C.Presl) Brack.



Figure 2: *Elaphoglossum lingua* (C.Presl) Brack.



Figure 3: *Elaphoglossum lingua* (C.Presl) Brack.



Figure 4: *Elaphoglossum lingua* (C.Presl) Brack.



Figure 5: *Elaphoglossum lingua* (C.Presl) Brack.



Figure 6: *Elaphoglossum lingua* (C.Presl) Brack.



Figure 7: *Elaphoglossum lingua* (C.Presl) Brack.

Elaphoglossum lisboae Rosenst.

Has as synonym

heterotypic *Elaphoglossum pleurothallioides* Novelino

DESCRIPTION

Stem: habit short creeping/long creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblanceolate/obovate; **blade base** narrowly cuneate/long decurrent; **blade apex** rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás)

Southeast (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

K.R.B. Leite, 429, HUEFS, 76441,  (HUEFS0076441), Bahia

P. von Luetzelburg, 18932, S, M, HB, Goiás

A. Salino, 1573, NY, 809664,  (NY00809664), BHCB, 29567,  (BHC000108), Minas Gerais

P. von Luetzelburg, 473, NY, 809662,  (NY00809662), Rio de Janeiro

Elaphoglossum luridum (Fée) Christ

Has as synonym

basionym *Acrostichum luridum* Fée

heterotypic *Elaphoglossum schomburgkii* (Fée) T.Moore

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** broad elliptic/ob lanceolate; **blade base** cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** linear lanceolate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Riverine Forest and/or Gallery Forest, Inundated Forest (Várzea), Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Coastal Forest (Restinga)

Geographic Distribution

Confirmed occurrences

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

Northeast (Bahia, Maranhão)

Central-west (Mato Grosso)

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

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

HERBARIUM MATERIAL

L.B. Smith, 6134, US, 2137356, (US01566949), Santa Catarina

J. Prado, 1198, SP, UFACPZ, Acre

F.A. Carvalho, UAT21, INPA, 226319, (INPA0226319), Amazonas

T.S. Macedo, 222, HUEFS, 158258, (HUEFS0158258), Bahia

A. Salino, 14494, NY, 720459, (NY00720459), Espírito Santo

A. Salino, 9371, NY, 720580, (NY00720580), Minas Gerais

M.R. Pietrobom, 8768, RB, 7321, (RB01385009), IAN, 7321 (IAN192231), HBRA, 7321, (HBRA0007499), Pará

F.B. Matos, 100, UPCB, 57310, (UPCB0004231), Paraná

F.B. Matos, 2042, RB, 604336, (RB00872642), NY, 1801238, (NY01801238), Rio de Janeiro

G.T. Prance, 10113, US, 2885394, (US00719239), INPA, 27246, (INPA0027246), Roraima

A.C. Brade, 6907, US, 1498876, (US01566956), São Paulo

W.R. Silva Junior, 60, SLU, 5633, (SLUI005633), Maranhão

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum luridum* (Fée) Christ



Figure 2: *Elaphoglossum luridum* (Fée) Christ



Figure 3: *Elaphoglossum luridum* (Fée) Christ



Figure 4: *Elaphoglossum luridum* (Fée) Christ



Figure 5: *Elaphoglossum luridum* (Fée) Christ



Figure 6: *Elaphoglossum luridum* (Fée) Christ



Figure 7: *Elaphoglossum luridum* (Fée) Christ

Elaphoglossum macahense (Fée) Rosenst.

Has as synonym

basionym *Acrostichum macahense* Fée

heterotypic *Elaphoglossum subarborescens* Rosenst.

DESCRIPTION

Stem: habit short creeping/long creeping; **scale colour** brown; **scale type** concolor; **scale margin** subentire/with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblanceolate/oblong; **blade base** attenuate/cuneate/decurrent from abruptly contracted blade; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate; **fertile leaf** shorter than sterile/same size.

COMMENTS

Differs from *E. pachydermum* (Fée) T. Moore by chartaceous sterile laminae (vs. coriaceous), light brown to orange costal scales (vs. at least the larger scales black), and decurrent laminar bases from an abruptly contracted lamina (bases attenuate to narrowly cuneate).

The name *E. subarborescens* Rosenst., which has been widely applied to Brazilian specimens, is a synonym.

Life Form

Herb

Substrate

Epiphytic, 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

A.C. Brade, 19153, RB, 64002, (RB00687576), Espírito Santo

F.B. Matos, 1137, UPCB, 68681, (UPCB0004241), Paraná

A. Salino, 5477, NY, 875316, (NY00875316), Minas Gerais

P.H. Labiak, 244, UPCB, 25807, (UPCB0004247), MBM, 187661, (MBM187661), Santa Catarina

J. Dutra, 354, R, 30039, Rio Grande do Sul

F.B. Matos, 2049, NY, 1801243, (NY01801243), Rio de Janeiro

A.C. Brade, 5840, US, 1498873, (US01567694), NY, 809723, (NY00809723), São Paulo

A.F.M. Glaziou, 4367, P (P00249872), P (P00249873), B (B200072157), Rio de Janeiro, **Typus**

A.F.M. Glaziou, 4368, P (P00249868), P (P00249869), P (P00249870), P (P00249871), B (B200072158), Rio de Janeiro, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum macahense* (Fée) Rosenst.



Figure 2: *Elaphoglossum macahense* (Fée) Rosenst.



Figure 3: *Elaphoglossum macahense* (Fée) Rosenst.



Figure 4: *Elaphoglossum macahense* (Fée) Rosenst.



Figure 5: *Elaphoglossum macahense* (Fée) Rosenst.



Figure 6: *Elaphoglossum macahense* (Fée) Rosenst.



Figure 7: *Elaphoglossum macahense* (Fée) Rosenst.

Elaphoglossum macrophyllum (Mett. ex Kuhn) Christ

This treatment is composed of the following taxa: *Elaphoglossum macrophyllum*, .

Has as synonym

basionym *Acrostichum macrophyllum* Mett. ex Kuhn
 heterotypic *Acrostichum hymenodiastrum* Féé
 heterotypic *Elaphoglossum hymenodiastrum* (Féé) Brade
 heterotypic *Elaphoglossum macrophyllum* var. *schmalzii* (Rosenst.) Alston
 heterotypic *Elaphoglossum schmalzii* Rosenst.

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** broad elliptic/lanceolate; **blade base** cuneate/decurrent from abruptly contracted blade; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** anastomosing; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará)
 Central-west (Distrito Federal)
 Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
 South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

J.G. Jardim, 1098, NY,  (NY00886070), Bahia
 C.A. Meireles, s.n., EAC, 30155,  (EAC0030155), Ceará
 B.A.S. Pereira, 1416, NY, 875313,  (NY00875313), Distrito Federal
 R.R. Vervloet, 1925, MBML, 20869,  (MBML020869), Espírito Santo
 G. Hatschbach, 50236, MBM, 104884,  (MBM104884), US, 3077596,  (US01566983), Minas Gerais
 P.B. Schwartzburg, 668, UPCB, 54360,  (UPCB0004252), Paraná
 P. Campos Porto, 2135, RB, 455622,  (RB00607127), Rio de Janeiro
 C.A.M. Lindman, A.569, US, 532441,  (US01566985), Rio Grande do Sul
 C. Spannagel, 444, US, 2294265,  (US01567617), Santa Catarina
 F. Sellow, s.n., B,  (B200071212), **Typus**

S.A. Nicolau, 2888, MBML, 22143, (MBML022143), U, U.1021411, (NL-U1021411), São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum macrophyllum* (Mett. ex Kuhn) Christ



Figure 2: *Elaphoglossum macrophyllum* (Mett. ex Kuhn) Christ



Figure 3: *Elaphoglossum macrophyllum* (Mett. ex Kuhn) Christ



Figure 4: *Elaphoglossum macrophyllum* (Mett. ex Kuhn) Christ



Figure 5: *Elaphoglossum macrophyllum* (Mett. ex Kuhn) Christ



Figure 6: *Elaphoglossum macrophyllum* (Mett. ex Kuhn) Christ



Figure 7: *Elaphoglossum macrophyllum* (Mett. ex Kuhn) Christ

Elaphoglossum meridense (Klotzsch) T.Moore

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/reddish/black; **scale type** concolor; **scale margin** ciliate. **Leaf:** **phylopodium** not conspicuous; **position** approximate; **division** simple; **blade shape** narrowly elliptic; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** dense; **laminar margin scale shape** lanceolate; **costal scale shape** lanceolate; **fertile leaf** shorter than sterile/same size.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Roraima)

HERBARIUM MATERIAL

G.H.H. Tate, 450, NY,  (NY02597082), Roraima

Elaphoglossum miersii (Baker) C.Chr.

Has as synonym

basionym *Acrostichum miersii* Baker

DESCRIPTION

Stem: habit short creeping/erect; **scale colour** orange/brown; **scale type** concolor; **scale margin** crispate. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** narrowly lanceolate; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** forming marginal vein; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

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)

HERBARIUM MATERIAL

F.B. Matos, 2533, RB (RB01359401), UPCB (UPCB0034344), NY, Rio de Janeiro

A. Salino, 6142, BHCB, 57539, (BHCB048674), São Paulo

J. Miers, s.n., K (K000727490), Rio de Janeiro, **Typus**

F.S. Souza, 1428, BHCB, 148334, (BHCB048678), Espírito Santo

C.A.W. Schwacke, 14583, BHCB, 1423, (BHCB048673), RB (RB00707143), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum miersii* (Baker) C.Chr.Figure 2: *Elaphoglossum miersii* (Baker) C.Chr.Figure 3: *Elaphoglossum miersii* (Baker) C.Chr.Figure 4: *Elaphoglossum miersii* (Baker) C.Chr.



Figure 5: *Elaphoglossum miersii* (Baker) C.Chr.



Figure 6: *Elaphoglossum miersii* (Baker) C.Chr.



Figure 7: *Elaphoglossum miersii* (Baker) C.Chr.

Elaphoglossum minutum (Pohl ex Féé) T.Moore

Has as synonym

basionym *Acrostichum minutum* Pohl ex Féé

DESCRIPTION

Stem: habit long creeping; **scale colour** orange; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** absent; **position** distant; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** cuneate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** glabrous; **costal scale shape** ovate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

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.B.E. Pohl, 1432, W, Goiás, **Typus**

A.C. Brade, 15379, RB, MO, NY, 1462672,  (NY01462672), Goiás

REFERENCE

Matos FB & Mickel JT (2019). The Brazilian species of *Elaphoglossum* section *Squamipedia* (Dryopteridaceae). *Brittonia* 71: 225–234.

Elaphoglossum mollissimum (Fée) Hieron.

Has as synonym

basionym *Acrostichum mollissimum* Fée

homotype *Elaphoglossum villosum* var. *mollissimum* Luetzelb.

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/reddish; **scale type** concolor; **scale margin** denticulate. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** narrowly elliptic/ob lanceolate; **blade base** narrowly cuneate; **blade apex** acuminate/caudate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** scattered; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

HERBARIUM MATERIAL

F.B. Matos, 1001, UPCB, 68696, (UPCB0004354), Bahia

A.C. Brade, 19962, UPCB, 88207, (UPCB0019201), Espírito Santo

S. Lima, 14350, RB, 32106, (RB00340936), Rio de Janeiro

A.F.M. Glaziou, 2432, NY, P (P00249877), P (P00249878), P (P00249879), BR, K, Rio de Janeiro, **Typus**

A.F.M. Glaziou, 949, BR (BR0000006971847), BR (BR0000006972493), NY, P (P00249880), Rio de Janeiro, **Typus**

A.C. Brade, 8282, NY, 1015656, (NY01015656), US, 1498902, (US03340021), São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum mollissimum* (Fée) Hieron.



Figure 2: *Elaphoglossum mollissimum* (Fée) Hieron.



Figure 3: *Elaphoglossum mollissimum* (Fée) Hieron.



Figure 4: *Elaphoglossum mollissimum* (Fée) Hieron.



Figure 5: *Elaphoglossum mollissimum* (Fée) Hieron.



Figure 6: *Elaphoglossum mollissimum* (Fée) Hieron.



Figure 7: *Elaphoglossum mollissimum* (Fée) Hieron.

Elaphoglossum muscosum (Sw.) T.Moore

Has as synonym

basionym *Acrostichum muscosum* Sw.

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/reddish; **scale type** concolor; **scale margin** entire/subentire. **Leaf:** phylopodium present; **position** approximate; **division** simple; **blade shape** ovate/ob lanceolate; **blade base** broad cuneate/rounded; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** imbricate; **laminar margin scale shape** lanceolate; **costal scale shape** lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, 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

A.C. Brade, 16466, RB, 43100,  (RB00864029), Rio de Janeiro

Elaphoglossum nanuzae Novelino

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** phylopodium present; **position** approximate; **division** simple; **blade shape** elliptic/lanceolate; **blade base** broad cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Riverine Forest and/or Gallery Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

R.F. Novelino, 789, BHCB, CESJ, 28831,       (CESJ028831), UB, Minas Gerais, **Typus**

Elaphoglossum nigrescens (Hook.) T.Moore ex Diels

Has as synonym

basionym *Acrostichum nigrescens* Hook.
 heterotypic *Acrostichum flaccidum* var. *pallidum* Mett. ex Baker
 heterotypic *Acrostichum pallidum* Mett. ex Baker
 heterotypic *Elaphoglossum pallidum* (Mett. ex Baker) Hieron.
 heterotypic *Elaphoglossum wacketii* Rosenst.

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/ob lanceolate; **blade base** long decurrent; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** lanceolate/ovate; **costal scale shape** glabrous; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Inundated Forest (Várzea), Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas)
 Northeast (Bahia, Ceará)
 Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
 South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

- R. Spruce, 2187, RB, 6817, (RB00687625), US, 6817, (US01567197), Amazonas
- F.B. Matos, 1024, UPCB, 69027, (UPCB0004282), Bahia
- M. Almeida-Neto, 377, SJRP, 69027, (SJRP00015427), Ceará
- R.R. Vervloet, 1176, MBML, 17592, (MBML017592), RB, 429723, (RB00687607), Espírito Santo
- A. Salino, 9453, BHCB, 87160, (BHCB048825), NY, 720581, (NY00720581), NY, 720585, (NY00720585), Minas Gerais
- G. Hatschbach, 20369, MBM, 9148, (MBM009148), PACA, 79209, (PACA079209), Paraná
- A.C. Brade, 17347, RB, 46647, (RB00687591), Rio de Janeiro
- P.H. Labiak, 297, MBM, 187660, (MBM187660), UPCB, 25805, (UPCB0004279), Santa Catarina
- A. Salino, 10335, BHCB, 91743, (BHCB048851), NY, 720596, (NY00720596), São Paulo

Elaphoglossum obovatum Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** orange; **scale type** concolor; **scale margin** entire/with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** elliptic/obovate; **blade base** cuneate; **blade apex** rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** linear/stellate; **costal scale shape** linear; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá, Pará, Rondônia)

HERBARIUM MATERIAL

L.A. Pereira, 405, BHCB, 74554, (BHCB000891), Amapá

J. Prado, 662, INPA, 178086, (INPA0178086), NY, 02597083, (NY02597083), Amazonas

M.R. Pietrobom, 7845, HBRA, 12115, (HBRA0009334), MBM, 422148, (MBM422148), RB, 422148, (RB01372415), Pará

M.H. Nee, 34848, INPA, 180919, (INPA0180919), NY, 02597084, (NY02597084), Rondônia

REFERENCE

Prado, J. 2005. Flora da Reserva Ducke, Amazonas, Brasil: Pteridophyta - Lomariopsidaceae. Rodriguésia 56(86): 59-66.

Elaphoglossum organense Brade

Has as synonym

homotype *Acrostichum pulchellum* var. *sebastianopolitanum* Baker

homotype *Acrostichum stramineum* Féé

DESCRIPTION

Stem: habit short creeping/long creeping; **scale colour** brown/reddish; **scale type** concolor; **scale margin** entire/subentire. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** oblong; **blade base** cuneate/truncate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** sparsely; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate/subulate; **fertile leaf** shorter than sterile/same size.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from 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)

HERBARIUM MATERIAL

A.C. Brade, 21119, UPCB, 88214, (UPCB0019244), RB, 73807, (RB00706741), NY, 1015657, (NY01015657), São Paulo

A.F.M. Glaziou, 3322, RB (RB00543165), P (P00250025), BR (BR0000006964436), Rio de Janeiro, **Typus**

A.C. Brade, 19857, RB, 66975, (RB00687609), UPCB, 88213, (UPCB0019243), Espírito Santo

A. Salino, 10465, NY, 720601, (NY00720601), Minas Gerais

F.B. Matos, 2544, RB, 720601, (RB01348470), UPCB, 92385, (UPCB0034374), Rio de Janeiro

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum organense* Brade



Figure 2: *Elaphoglossum organense* Brade



Figure 3: *Elaphoglossum organense* Brade



Figure 4: *Elaphoglossum organense* Brade



Figure 5: *Elaphoglossum organense* Brade



Figure 6: *Elaphoglossum organense* Brade



Figure 7: *Elaphoglossum organense* Brade

Elaphoglossum ovalifolium (Fée) Christ

Has as synonym

basionym *Acrostichum ovalifolium* Fée

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** ovate/elliptic; **blade base** cuneate/decurrent; **blade apex** acute; **apical bud** absent; **glandular hair** absent; **veins** forming marginal vein; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic

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.F.M. Glaziou, 3156, P (P00249904), P (P00249903), P (P00249902), BR (BR0000006963866), B,  (B200071401), Rio de Janeiro, **Typus**

Elaphoglossum pachydermum (Fée) T.Moore

Has as synonym

basionym *Acrostichum pachydermum* Fée

heterotypic *Acrostichum blanchetii* Mett. ex Kuhn

heterotypic *Acrostichum latifolium* var. *blanchetii* (Mett. ex Kuhn) Baker

heterotypic *Elaphoglossum blanchetii* (Mett. ex Kuhn) C. Chr.

heterotypic *Elaphoglossum gertii* Sehnem

heterotypic *Elaphoglossum hatschbachii* Sehnem

heterotypic *Elaphoglossum tamandarei* Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/reddish/black; **scale type** concolor/bicolor; **scale margin** with irregular process.
Leaf: **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** attenuate/narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate/ovate/stellate; **fertile leaf** shorter than sterile.

ADDITIONAL DESCRIPTION

For a more complete and detailed description, see Lavalle & Rodríguez (2009).

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

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

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

HERBARIUM MATERIAL

M. Vauthier, s.n., P (P00249908), Minas Gerais, **Typus**

T.S. Macedo, 80, HUEFS (HUEFS148502), Bahia

R.F. Santos, 57, UB, 114363, (UB0033773), Distrito Federal

M.A.L. Rocha, 139, UB, 106465, (UB0033583), Goiás

F.B. Matos, 2229, NY, (NY02681319), RB, (RB01369649), UPCB (UPCB0004297), Minas Gerais

A. Salino, 395, NY, 2597132, (NY02597132), Mato Grosso
C.A.W. Schwacke, 2552, RB, 36780, (RB00707080), Paraná
J.A. Rohr, 1147, US, 36780, (US01567313), Santa Catarina
A. Salino, 1766, NY, 886079, (NY00886079), São Paulo
A.R. Reitz, 109, RB, 50233, (RB00707002), Rio Grande do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum pachydermum* (Fée) T.Moore



Figure 2: *Elaphoglossum pachydermum* (Fée) T.Moore



Figure 3: *Elaphoglossum pachydermum* (Fée) T.MooreFigure 4: *Elaphoglossum pachydermum* (Fée) T.MooreFigure 5: *Elaphoglossum pachydermum* (Fée) T.MooreFigure 6: *Elaphoglossum pachydermum* (Fée) T.Moore



Figure 7: *Elaphoglossum pachydermum* (Fée) T.Moore

Elaphoglossum papyraceum (Fée) F.B.Matos & R.C.Moran

Has as synonym

basionym *Acrostichum papyraceum* Fée

heterotypic *Acrostichum macrorhizum* Baker

heterotypic *Elaphoglossum macrorhizum* (Baker) C.Chr.

DESCRIPTION

Stem: habit short creeping/erect; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** absent; **position** approximate; **division** simple; **blade shape** linear/lanceolate; **blade base** narrowly cuneate; **blade apex** acuminate/attenuate; **apical bud** absent; **glandular hair** absent; **veins** forming marginal vein; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** ovate; **costal scale shape** ovate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

A. Salino, 13844, BHCB, 124398, (BHCB000874), Espírito Santo

A. Salino, 9812, BHCB, 90272, (BHCB048696), Minas Gerais

P.K.H. Dusén, s.n., BM, Paraná

A.F.M. Glaziou, 2434, BR (BR0000006970956), P (P00249909), P (P00249910), Rio de Janeiro, **Typus**

A.L. Gasper, 599, FURB, 6560, , (FURB07904), Santa Catarina

A. Salino, 7410, BHCB, 62079, (BHCB048671), São Paulo

Elaphoglossum paulistanum Rosenst.

Has as synonym

heterotypic *Elaphoglossum wettsteinii* Christ

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** lanceolate; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

South (Paraná)

HERBARIUM MATERIAL

F.B. Matos, 1020, UPCB, 68699, (UPCB0004307), Bahia

F.B. Matos, 938, UPCB, 68692, (UPCB0004308), Minas Gerais

F.B. Matos, 1256, UPCB, 71690, (UPCB0004412), Paraná

A.C. Brade, 12081, R, 86276, Rio de Janeiro

M. Wacket, s.n., P, (P00249703), BM, São Paulo, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum paulistanum* Rosenst.



Figure 2: *Elaphoglossum paulistanum* Rosenst.



Figure 3: *Elaphoglossum paulistanum* Rosenst.



Figure 4: *Elaphoglossum paulistanum* Rosenst.



Figure 5: *Elaphoglossum paulistanum* Rosenst.



Figure 6: *Elaphoglossum paulistanum* Rosenst.



Figure 7: *Elaphoglossum paulistanum* Rosenst.

Elaphoglossum peltatum (Sw.) Urb.

Has as synonym

basionym *Osmunda peltata* Sw.

homotype *Acrostichum peltatum* (Sw.) Sw.

DESCRIPTION

Stem: habit long creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** absent; **position** distant; **division** divided; **blade shape** flabellate; **blade base** cuneate; **blade apex** rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** glabrous; **costal scale shape** ovate/rounded/hastate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Roraima)

Northeast (Bahia)

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

HERBARIUM MATERIAL

W.A. Rodrigues, 9856, INPA, 71515,  (INPA0071515), Amazonas

F.B. Matos, 1584, NY, 1039702,  (NY01039702), UPCB, 68707,  (UPCB0004316), Bahia

A.C. Brade, 19261, RB, Espírito Santo

H.L.M. Barreto, 8851, BHCB, 74412,  (BHC048670), CESJ, GH, RB, Minas Gerais

P. Campos Porto, 2645, R, Rio de Janeiro

E.H.G. Ule, 8507, K, Roraima

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum peltatum* (Sw.) Urb.

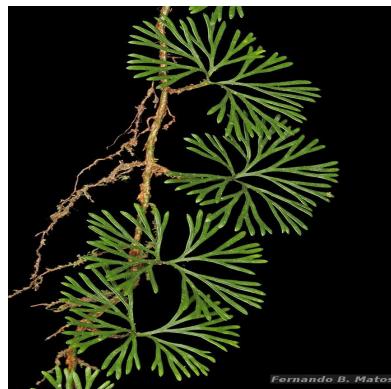


Figure 2: *Elaphoglossum peltatum* (Sw.) Urb.



Figure 3: *Elaphoglossum peltatum* (Sw.) Urb.



Figure 4: *Elaphoglossum peltatum* (Sw.) Urb.

REFERENCE

Matos FB & Mickel JT (2019). The Brazilian species of *Elaphoglossum* section *Squamipedia* (Dryopteridaceae). *Brittonia* 71: 225–234.

Elaphoglossum perelegans (Fée) T.Moore

Has as synonym

basionym *Acrostichum perelegans* Fée

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblong-elliptic; **blade base** cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** deltate/lanceolate; **costal scale shape** lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

A. Macedo, 2109, US, 2084890, (US01567474), Goiás

M. Ranal, 419, HUFU, 1500, (HUFU00054972), Minas Gerais

F. Firetti, 35, SJRP, 1500, (SJRP00021401), Mato Grosso do Sul

M.E. Engels, 5380, RB, 1500, (RB01381865), Mato Grosso

M.R. Pietrobom, 12, SJRP, 1500, (SJRP00021399), São Paulo

Elaphoglossum piloselloides (C. Presl) T. Moore

Has as synonym

basionym *Acrostichum piloselloides* C. Presl

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/reddish; **scale type** concolor; **scale margin** entire. **Leaf:** phylopodium absent; **position** approximate; **division** simple; **blade shape** elliptic/spathulate; **blade base** cuneate; **blade apex** rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** present; **blade scale density** scattered; **laminar margin scale shape** lanceolate/basally subulate; **costal scale shape** lanceolate/basally subulate; **fertile leaf** longer than sterile/same size.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

North (Amapá, Tocantins)

Central-west (Goiás, Mato Grosso do Sul)

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

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

HERBARIUM MATERIAL

J.J. Granville, 12410, B, Amapá

A.C. Brade, 15380, RB, 31048,  (RB00687628), Goiás

A. Macedo, 3214, S, NY, 891471,  (NY00891471), MO, Minas Gerais

A. Sehnem, 6328, PACA, 79065,  (PACA079065), HB, Rio Grande do Sul

F.B. Matos, 2523, UPCB, 92383,  (UPCB0034369), Santa Catarina

P. Campos Porto, 3017, UPCB, 88201,  (UPCB0019200), RB, 32210,  (RB00687623), São Paulo

P.H. Labiak, 6000, UPCB, 87500,  (UPCB0031883), Tocantins

Elaphoglossum plumosum (Fée) T.Moore

Has as synonym

basionym *Acrostichum plumosum* Fée
heterotypic *Elaphoglossum intermedium* Brack.

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/ob lanceolate; **blade base** cuneate; **blade apex** acuminate/acute/rounded; **apical bud** absent/present; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** imbricate; **laminar margin scale shape** lanceolate; **costal scale shape** lanceolate; **fertile leaf** longer than sterile/shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Inundated Forest (Várzea), Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Roraima)
Northeast (Bahia)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

O. Handro, 701, US, 2422224, (US01567479), São Paulo
J. Prado, 1390, SP, UFACPZ, Acre
G.T. Prance, 9644, INPA, 25955, (INPA0025955), Roraima
A.F.M. Glaziou, 3555, RB, 391333, (RB00661523), Rio de Janeiro
F.B. Matos, 368, NY, 1015897, (NY01015897), UPCB, 52974, (UPCB0004321), Bahia
R. Spruce, 2397, RB, 6813, (RB00687654), Amazonas
R.R. Vervloet, 888, MBML, 17826, (MBML017826), Espírito Santo
A. Salino, 10969, BHCB, 98653, (BHCB048863), NY, 720607, (NY00720607), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum plumosum* (Fée) T.Moore



Figure 2: *Elaphoglossum plumosum* (Fée) T.Moore



Figure 3: *Elaphoglossum plumosum* (Fée) T.Moore

Elaphoglossum polyblepharum Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** orange; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** not conspicuous; **position** approximate; **division** simple; **blade shape** narrowly elliptic; **blade base** cuneate; **blade apex** caudate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Inundated Forest (Igapó)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

G.T. Prance, 16153, US, 3475442, (US01567483), NY, 01402631, (NY01402631), NY, 01402630, (NY01402630), INPA, F, C0661644F, (C0661644F)

Elaphoglossum praetermissum Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** subentire/denticulate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** elliptic/oblong; **blade base** broad cuneate/decurrent; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** linear lanceolate; **costal scale shape** linear lanceolate; **fertile leaf** shorter than sterile/same size.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest, Amazonian Savanna

Geographic Distribution

Confirmed occurrences

North (Pará, Rondônia)

HERBARIUM MATERIAL

G.T. Prance, P24909, NY (NY02597028), Pará

W.R. Anderson, 12273, NY (NY03824923), US, 2864692,  (US03340046), Rondônia

Elaphoglossum prestonii (Baker) J. Sm.

Has as synonym

basionym *Acrostichum prestonii* Baker
heterotypic *Acrostichum insigne* Féé
heterotypic *Elaphoglossum insigne* (Féé) Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** denticulate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblong; **blade base** broad cuneate/truncate; **blade apex** acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** lanceolate/ovate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from 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)

HERBARIUM MATERIAL

P.H. Labiak, 4968, MBML, 37741, (MBML037741), RB, 37741, (RB00544225), UPCB, 68840, (UPCB0024135), Espírito Santo

J. Vidal, 1732, R, Minas Gerais

A.C. Brade, 8486, RB, 168619, (RB00716000), NY, 01402638, (NY01402638), São Paulo

A.F.M. Glaziou, 5367, B, K, P, S, US, (US01567510), Rio de Janeiro, **Typus**

Elaphoglossum pteropus C.Chr.

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** broad elliptic; **blade base** decurrent from abruptly contracted blade; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** longer than sterile/shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest), Coastal Forest (Restinga)

Geographic Distribution

Confirmed occurrences

North (Amapá)

Northeast (Bahia)

HERBARIUM MATERIAL

H.S. Irwin, 47405, NY, 02597109,  (NY02597109), Amapá

J.M. Pires, 50317, NY, 02597110,  (NY02597110), Amapá

R.P. Belém, 2194, UB, 103753,  (UB0033613), Bahia

Elaphoglossum raywaense (Jenman) Alston

Has as synonym

basionym *Acrostichum raywaense* Jenman

heterotypic *Acrostichum apodum* var. *sprucei* Baker

DESCRIPTION

Stem: habit short creeping; **scale colour** yellowish/reddish; **scale type** bicolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblanceolate; **blade base** long decurrent; **blade apex** acuminate/caudate; **apical bud** absent; **glandular hair** present; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Inundated Forest (Várzea)

Geographic Distribution

Confirmed occurrences

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

HERBARIUM MATERIAL

G. Zuquim, 66, INPA, 219554,  (INPA0219554), Amazonas

C.A.W. Schwacke, 193, RB, 219554,  (RB01075030), Pará

G.T. Prance, 10113, NY, 01402639,  (NY01402639), Roraima

D. Daly, 8948, NY, 403053,  (NY00403053), Acre

L.A. Pereira, 1271, HAMAB, Amapá

Elaphoglossum rigidum (Aubl.) Urb.

Has as synonym

basionym *Polypodium rigidum* Aubl.

heterotypic *Acrostichum flaccidum* Féé

heterotypic *Elaphoglossum flaccidum* (Féé) T.Moore

heterotypic *Elaphoglossum mourae* Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/black; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Amazonian Campinarana, Ombrophylous Forest (Tropical Rain Forest), Coastal Forest (Restinga)

Geographic Distribution

Confirmed occurrences

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

Northeast (Bahia)

Central-west (Mato Grosso)

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

South (Paraná)

HERBARIUM MATERIAL

A. Salino, 6618, NY, 2597141, (NY02597141), São Paulo

G. Pereira-Silva, 186, NY, 2597044, (NY02597044), Acre

D.W. Stevenson, 720, INPA, 166855, (INPA0166855), NY, 2597042, (NY02597042), Amazonas

L.A. Pereira, 1170, RB, 427483, (RB00687406), Amapá

F.B. Matos, 1351, MBM, 334850, (MBM334850), UPCB, 68704, (UPCB0004090), Bahia

A. Salino, 14522, NY, 720464, (NY00720464), Espírito Santo

M.E. Engels, 5846, MBM, 424693, (MBM424693), RB, 424693, (RB01377846), TANG, 5772, (TANG000005772), Mato Grosso

M.R. Pietrobom, 5872, MBM, 420429, (MBM420429), RB, 420429, (RB01383605), Pará

P.H. Labiak, 3119, UPCB, 57578, (UPCB0004087), Paraná

W.C. Taylor, 5057, NY, 2597045, (NY02597045), Rondônia

Elaphoglossum riparium Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** entire/subentire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** broad elliptic/lanceolate; **blade base** cuneate/decurrent; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate; **fertile leaf** shorter than sterile.

ADDITIONAL DESCRIPTION

For a more complete and detailed description, see Brade (1965).

COMMENTS

Elaphoglossum riparium is a poorly understood species from Goiás. It is similar to *E. ovalifolium* (Fée) Christ, which differs by acute (vs. acuminate) laminar apices, vein tips united into a submarginal connecting strand (vs. veins free), and fertile leaves longer than the sterile (vs. shorter than the sterile in *E. riparium*). It is also similar to *E. coimbra-buenoi* Brade, which differs by acute (vs. acuminate) laminar apices and more coriaceous laminae (vs. chartaceous).

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

A. Macedo, 1511, SP, 39614,  (SP003782), Goiás, **Typus**

Elaphoglossum scalpellum (Mart.) T. Moore

Has as synonym

basionym *Acrostichum scalpellum* Mart.

heterotypic *Acrostichum latifolium* var. *rubicundum* (Pohl ex Ettingsh.) Baker

heterotypic *Acrostichum rubicundum* Pohl ex Ettingsh.

heterotypic *Elaphoglossum beauverdii* Damazio

heterotypic *Elaphoglossum rubicundum* (Pohl ex Ettingsh.) Alston

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** elliptic/ob lanceolate/oblong; **blade base** narrowly cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** linear lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas, Roraima, Tocantins)

Northeast (Bahia, Piauí)

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

Southeast (Minas Gerais, São Paulo)

HERBARIUM MATERIAL

G. Gardner, 4079, BM (BM000937953), K (K000229694), Goiás

M. Ranal, 581, HUFU, (HUFU00054973), SP, Minas Gerais

W.R. Anderson, 9896, NY, (NY00875294), Mato Grosso

R.S. Fernandes, 973, BHCB, 159300 (BHCB049391), Piauí

G.T. Prance, 13521, NY, (NY02597111), Roraima

R.M. Harley, 15286, IPA, 22785, Bahia

H.S. Irwin, 14100, NY, (NY00875288), Distrito Federal

A. Salino, 1081, UEC, 57966, (UEC076258), São Paulo

C.F.P. Martius, s.n., M (M0274930), Amazonas, **Typus**

P.H. Labiak, 5886, NY, 02697579, (NY02697579), UPCB, 87632, (UPCB0031884), Tocantins

Elaphoglossum schwackeanum Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/black; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** dense; **laminar margin scale shape** stellate; **costal scale shape** stellate; **fertile leaf** shorter than sterile.

ADDITIONAL DESCRIPTION

For a more complete and detailed description, see Brade (1965).

COMMENTS

Differs from *E. actinotrichum* (Mart.) T. Moore by shorter petioles (3-8 vs. 35-40 cm long), chartaceous (vs. coriaceous) laminae, and dull green color of dried sterile leaves (vs. dark brown). Also, the larger petiole scales of *E. schwackeanum* are more sparse and less ciliated.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Highland Rocky Field

Geographic Distribution

Confirmed occurrences

Central-west (Goiás, Mato Grosso)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

M. Magalhães, 2838, BHCB, 74366, (BHCB000109), Minas Gerais, **Typus**

L. Damazio, s.n., RB, 39239, (RB00637959), RB, 39239, (RB00637898), Minas Gerais, **Typus**

Elaphoglossum scolopendrifolium (Raddi) J.Sm.

Has as synonym

basionym *Acrostichum scolopendrifolium* Raddi

heterotypic *Acrostichum amplissimum* Féé

heterotypic *Elaphoglossum amplissimum* (Féé) Christ

DESCRIPTION

Stem: habit short creeping; **scale colour** yellowish/brown; **scale type** concolor; **scale margin** entire/subentire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** oblong-elliptic/oblong; **blade base** broad cuneate/rounded/truncate/cordate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** lanceolate/ovate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

ADDITIONAL DESCRIPTION

For a more complete and detailed description, see Matos & Mickel (2014).

COMMENTS

Like many species of *Elaphoglossum* sect. *Polytrichia*, *E. scolopendrifolium* is highly variable in leaf shape, size, and indument. It is most similar to *E. glaziovii* (Féé) Brade, which usually differs by decurrent, cuneate or rounded lamina bases (vs. truncate to strongly cordate in *E. scolopendrifolium*). Some terrestrial specimens of *E. glaziovii* also have truncate laminar bases (but *E. scolopendrifolium* is never terrestrial).

Life Form

Herb

Substrate

Epiphytic, Rupicolous

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, São Paulo)

HERBARIUM MATERIAL

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

F.B. Matos, 2031, BHCB, 189154 (BHCB189154), R, 234548 (R010052375), RB, 234548, (RB01379123), Rio de Janeiro

A.C. Brade, 8390, MBM, 32018 (MBM032018), NY, 1015660, (NY01015660), RB, 1015660, (RB01075025), São Paulo

Elaphoglossum sporadolepis (Kunze ex Kuhn) T.Moore

Has as synonym

basionym *Acrostichum sporadolepis* Kunze ex Kuhn

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** with irregular process. **Leaf:** phylodium present; **position** approximate; **division** simple; **blade shape** elliptic; **blade base** cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** lanceolate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

F.A. Carvalho, 285, INPA, 216041,  (INPA0216041), Amazonas

P.H. Labiak, 5701, UPCB, 82125,  (UPCB0004356), Amazonas

Elaphoglossum squamipes (Hook.) T.Moore

Has as synonym

basionym *Acrostichum squamipes* Hook.

heterotypic *Acrostichum craspedariiforme* Féé

heterotypic *Acrostichum heterolepis* Baker

heterotypic *Elaphoglossum craspedariiforme* (Féé) Brade

DESCRIPTION

Stem: habit long creeping; **scale colour** orange; **scale type** concolor; **scale margin** entire/with irregular process. **Leaf:** **phylopodium** absent; **position** distant; **division** simple; **blade shape** ovate/elliptic/lanceolate; **blade base** broad cuneate/decurrent from abruptly contracted blade; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** glabrous; **costal scale shape** linear/hastate; **fertile leaf** longer than sterile/shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

M. Wacket, 301, US, 29340, (US01566274), US, 29340, (US01566276), W, 29340, (W19070016224), São Paulo
A.C. Brade, 15531, F, C0671291F, (C0671291F), NY, 1475211, (NY01475211), RB, 32840, (RB00687705), UPCB, 89353, (UPCB0029484), US, 2291253, (US01567669), Rio de Janeiro
F.C.S. Vieira, 2173, FURB, 29340, (FURB07913), Santa Catarina
F.S. Souza, 1252, BHCB, 145321, (BHCB048666), Minas Gerais
J.B.S. Pereira, 434, UPCB, 68065, (UPCB0004359), Paraná

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum squamipes* (Hook.) T.Moore



Figure 2: *Elaphoglossum squamipes* (Hook.) T.Moore



Figure 3: *Elaphoglossum squamipes* (Hook.) T.Moore



Figure 4: *Elaphoglossum squamipes* (Hook.) T.Moore



Figure 5: *Elaphoglossum squamipes* (Hook.) T.Moore



Figure 6: *Elaphoglossum squamipes* (Hook.) T.Moore

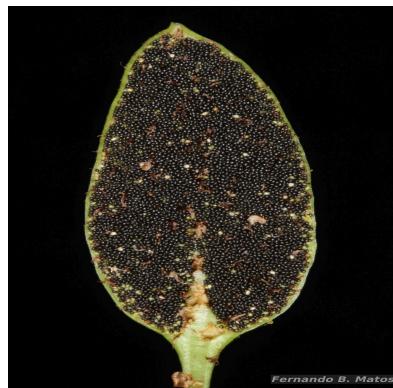


Figure 7: *Elaphoglossum squamipes* (Hook.) T.Moore

REFERENCE

Matos FB & Mickel JT (2019). The Brazilian species of *Elaphoglossum* section *Squamipedia* (Dryopteridaceae). *Brittonia* 71: 225–234.

Elaphoglossum strictum (Raddi) T.Moore

Has as synonym

basionym *Acrostichum strictum* Raddi
heterotypic *Acrostichum elegans* Féé

DESCRIPTION

Stem: habit short creeping; **scale colour** black; **scale type** concolor; **scale margin** ciliate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** narrowly cuneate; **blade apex** acuminate/acute; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** sparsely/dense; **laminar margin scale shape** linear lanceolate; **costal scale shape** lanceolate/linear; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic, Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)
Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

T.J. Cadorin, 1158, FURB, 32831 (FURB00099), Santa Catarina
F.F.F. Mazziero, 1159, UPCB, 32831 (UPCB0004376), UNIP, 32831 (UNIP07720), São Paulo
A.C. Brade, 15522, RB, 32831, (RB00687958), Rio de Janeiro
F.B. Matos, 1004, UPCB, 68697, (UPCB0004372), Bahia
P.H. Labiak, 4589, UPCB, 61855, (UPCB0034163), MBML, 33975, (MBML033975), Espírito Santo
L. Damazio, 1873, RB, 36725, (RB00687728), Minas Gerais
C.A. Royer, 74, UPCB, 85413, (UPCB0004374), RB, 36725, (RB01326719), Paraná

Elaphoglossum styriacum Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** orange/brown; **scale type** concolor; **scale margin** entire/with irregular process. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** broad elliptic/oblanceolate; **blade base** cuneate/decurrent; **blade apex** acute/cuspidate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile/same size.

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)

HERBARIUM MATERIAL

J. Prado, 1381, SP, UFACPZ, Acre

M.A.S. Costa, 728, INPA, 187059,  (INPA0187059), Amazonas

L.A. Pereira, 405, HAMAB, Amapá

S. Maciel, 317, IAN (IAN184778), Pará

Elaphoglossum tantalinum Mickel

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/reddish; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered; **laminar margin scale shape** stellate; **costal scale shape** rounded/stellate; **fertile leaf** shorter than sterile/same size.

ADDITIONAL DESCRIPTION

For a more complete and detailed description, see Mickel (1987).

COMMENTS

Elaphoglossum tantalinum is characterized by abaxial laminar surfaces with ciliate scales or only resinous dots. The adaxial laminar surface has scattered round ciliate scales or stellate scales, which are also present on the laminar margins. It is similar to *E. tenuiculum* (Fée) T. Moore ex C.Chr., but the stellate scales of the laminae have some body and some petiolar scales are lanceolate and toothed (whereas *E. tenuiculum* has strictly stellate, hairlike scales). The species could also be confused with *E. actinotrichum*, which differs by the characters given in the key.

Almeida & Salino 2620 (BHCB) was cited by Almeida & Salino (2015) as *Elaphlogossum stenophyllum* (Sodiro) Diels.

The specific epithet derives from the Latin word tantalus, source of eternal torment, alluding to the taxonomic difficulty of this species group.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre)

HERBARIUM MATERIAL

T.B. Croat, 85166, NY,  (NY01075420), Acre

J. Prado, 1179, SP, Acre

T.E. Almeida, 2620, BHCB, 144743,  (BHCB021099), Acre

Elaphoglossum tectum (Humb. & Bonpl. ex Willd.) T.Moore

Has as synonym

basionym *Acrostichum tectum* Humb. & Bonpl. ex Willd.

heterotypic *Acrostichum elongatum* Kunze

heterotypic *Elaphoglossum elongatum* (Kunze) T.Moore

heterotypic *Elaphoglossum sehnemii* Brade

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** denticulate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** narrowly elliptic/oblong; **blade base** narrowly cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered/dense; **laminar margin scale shape** glabrous; **costal scale shape** rounded/stellate; **fertile leaf** longer than sterile/shorter than sterile/same size.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Highland Rocky Field, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Ombrophylous Forest (Tropical Rain Forest), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Central-west (Goiás)

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

HERBARIUM MATERIAL

L. Lanstyack, s.n., BHCB, 150820, (BHCB048952), RB, 33132, (RB00687686), UPCB, 89360, (UPCB0029453), São Paulo

M.A.L. Rocha, 105, BHCB, 160423, (BHCB048953), Goiás

D.C. Sousa, 05, ALCB, 73657, (ALCB001675), Bahia

H.S. Irwin, 29112, US, 2971805, (US01567716), RB, 258500, (RB00687739), NY, 3108079, (NY03108079), MBM, 72540, (MBM072540), F, C0647848F, (C0647848F), Minas Gerais

A.C. Brade, 9852, NY, 809751, (NY00809751), Rio de Janeiro

L. Lanstyack, s.n., UPCB, 89360, (UPCB0029453), RB, 33132, (RB00687686), BHCB, 150820, (BHCB048952), São Paulo

Elaphoglossum tenuiculum (Fée) Baker

Has as synonym

basionym *Acrostichum tenuiculum* Fée
heterotypic *Elaphoglossum tenax* Rosenst.

DESCRIPTION

Stem: habit short creeping; **scale colour** brown/reddish; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** linear; **blade base** cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** scattered/dense; **laminar margin scale shape** stellate; **costal scale shape** stellate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, São Paulo)

South (Santa Catarina)

HERBARIUM MATERIAL

L.A. Funez, 518, FURB, 38395, (FURB07923), Santa Catarina

P. Campos Porto, 3018, RB, 32211, (RB00706755), P, 02597127 (P01464013), NY, 02597127, (NY02597127), NY, 809718, (NY00809718), BHCB, 150830, (BHCB049320), São Paulo

A. Salino, 7074, NY, 875283, (NY00875283), BHCB, 60411, (BHCB048907), Minas Gerais

Elaphoglossum ulei Christ

Has as synonym

heterotypic *Elaphoglossum spannagelii* Rosenst.

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** entire. **Leaf:** **phylopodium** not conspicuous; **position** approximate; **division** simple; **blade shape** ovate/elliptic/oblong; **blade base** cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** present; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** subulate; **costal scale shape** subulate; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

E.H.G. Ule, 327, NY, 02065983, (NY02065983), B, P, Santa Catarina, **Typus**

F. Gonzatti, 2651, HUCS, 45443, (HUCS001230), Rio Grande do Sul

F.B. Matos, 2520, RB, 45443, (RB01369955), UPCB, 92395, (UPCB0034352), Santa Catarina

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum ulei* Christ



Figure 2: *Elaphoglossum ulei* Christ



Figure 3: *Elaphoglossum ulei* Christ



Figure 4: *Elaphoglossum ulei* Christ



Figure 5: *Elaphoglossum ulei* Christ



Figure 6: *Elaphoglossum ulei* Christ



Figure 7: *Elaphoglossum ulei* Christ

Elaphoglossum vagans (Mett. ex Kuhn) Hieron.

Has as synonym

basionym *Acrostichum vagans* Mett. ex Kuhn

heterotypic *Acrostichum ovatum* Féé

heterotypic *Elaphoglossum bicolor* Rosenst.

heterotypic *Elaphoglossum schiffneri* Christ

DESCRIPTION

Stem: habit long creeping; **scale colour** orange/brown; **scale type** concolor/bicolor; **scale margin** with irregular process. **Leaf:** **phylopodium** present; **position** distant; **division** simple; **blade shape** ovate/elliptic/lanceolate; **blade base** broad cuneate; **blade apex** acuminate; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous/linear lanceolate; **fertile leaf** longer than sterile/shorter than sterile/same size.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

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

F.B. Matos, 1583, UPCB, 68947, (UPCB0004395), NY, 1039701, (NY01039701), Bahia

A.C. Brade, 19243, RB, 64007, (RB00687670), Espírito Santo

F.B. Matos, 2224, US, 3701772, (US01912600), UPCB, 81877, (UPCB0004400), RB, 64007, (RB01379103), Minas Gerais

G. Hatschbach, 31143, MBM, 24495, (MBM024495), Paraná

L.S. Sylvestre, 1927, RB, 434103, (RB00707148), Rio de Janeiro

M.A. Kieling-Rubio, 476, UPCB, 90169, (UPCB0029131), Rio Grande do Sul

F.B. Matos, 2380, UPCB, 92470, (UPCB0037211), RB, 90169, (RB01345990), Santa Catarina

M. Ranal, 98, HUFU, 1493, (HUFU00054865), São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum vagans* (Mett. ex Kuhn) Hieron.



Figure 2: *Elaphoglossum vagans* (Mett. ex Kuhn) Hieron.



Figure 3: *Elaphoglossum vagans* (Mett. ex Kuhn) Hieron.



Figure 4: *Elaphoglossum vagans* (Mett. ex Kuhn) Hieron.



Figure 5: *Elaphoglossum vagans* (Mett. ex Kuhn) Hieron.



Figure 6: *Elaphoglossum vagans* (Mett. ex Kuhn) Hieron.



Figure 7: *Elaphoglossum vagans* (Mett. ex Kuhn) Hieron.

Elaphoglossum viscidum (Fée) Christ

Has as synonym

basionym *Acrostichum viscidum* Fée

DESCRIPTION

Stem: habit short creeping; **scale colour** reddish/black; **scale type** concolor; **scale margin** entire/denticulate. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** linear/oblong-elliptic; **blade base** cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** dense; **laminar margin scale shape** ovate/stellate; **costal scale shape** lanceolate; **fertile leaf** longer than sterile.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

A.F.M. Glaziou, 5372, US, 104057, (US01567795), P (P00250043), P (P00250044), P (P00250045), P (P00250046), P (P00250047), P (P00250048), B (B200072249), B (B200072252), Rio de Janeiro, **Typus**

L.C.N. Melo, 237, BHCB, 104057, (BHCB048906), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Elaphoglossum viscidum* (Fée) Christ



Figure 2: *Elaphoglossum viscidum* (Fée) Christ



Figure 3: *Elaphoglossum viscidum* (Fée) Christ



Figure 4: *Elaphoglossum viscidum* (Fée) Christ



Figure 5: *Elaphoglossum viscidum* (Fée) Christ



Figure 6: *Elaphoglossum viscidum* (Fée) Christ

Elaphoglossum wirdackii Vareschi

DESCRIPTION

Stem: habit short creeping; **scale colour** brown; **scale type** concolor; **scale margin** entire/subentire. **Leaf:** **phylopodium** present; **position** approximate; **division** simple; **blade shape** elliptic/lanceolate; **blade base** narrowly cuneate; **blade apex** acute/rounded; **apical bud** absent; **glandular hair** absent; **veins** free; **hydathode** absent; **blade scale density** glabrescent; **laminar margin scale shape** glabrous; **costal scale shape** glabrous; **fertile leaf** shorter than sterile.

Life Form

Herb

Substrate

Epiphytic

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

F.A. Carvalho, 337, INPA, 216075, ,  (INPA0216075), BHCB, Amazonas

REFERENCE

Carvalho FA, Salino A & Zartman CE (2012). New country and regional records from the Brazilian side of Neblina Massif. American Fern Journal 102: 228–232.

Lastreopsis Ching

This treatment is composed of the following taxa: *Lastreopsis*, *Lastreopsis amplissima*.

HOW TO CITE

Pietrobom, M.R. 2020. *Lastreopsis* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91089>.

Has as synonym

heterotypic *Nephrodium* Marthe ex Michx.

DESCRIPTION

Caule curto a longo-reptante ou subereto, com escamas. **Lâmina** (2-)3-5-pinada, catadrômica ou anadrômica; **pinas proximais** mais desenvolvidas basiscopicamente (em muitas espécies); **raque** com duas bordas proeminentes na face adaxial, contínuas com a raquíola e costa, costa alada; **indumento** presente formado por tricomas glandulares adpressos abaxialmente no tecido laminar ou ausentes e tricomas clavados sobre a raque e a raquíola, escamas ausentes ou presentes; **gemas** presentes, próximas ao ápice da raque ou costa, ou ausentes; **venação** livre, simples ou furcadas, vênulas visíveis ou inconspícua em ambas as superfícies laminares, com ápice delgado (não claviforme), vênula proximal do lado basioscópico das pínulas distais originando-se da cóstula. **Soros** com ou sem indúcio; **indúcio** quando presente arredondado-reniforme; **esporângios** com tricomas glandulares no pedicelo ou tricomas ausentes.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará, Pernambuco)

Central-west (Distrito Federal, Goiás)

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

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

REFERENCE

Tindale, M.D. 1965. A monograph of the genus *Lastreopsis* Ching. Contr. N.S.W. Natl. Herb.,3: 249-339.

Lastreopsis amplissima (C.Presl) Tindale

Has as synonym

basionym *Polystichum amplissimum* C.Presl

DESCRIPTION

Stem: type of the stem short reptant. **Leaf:** pinae basal anadromous; **division of the pinae basal** 3 pinnate/4 pinnate/pinnatifid; **division of the pinae median** 3 pinnate/pinnatisect; **rachis** without bud prolypherating; **rachis of the pinnule side abaxial** scale; **rachis of the pinnule side adaxial** trichome glandulose. **Sporangium:** indusium present/glabrous.

ADDITIONAL DESCRIPTION

Caule curto-reptante, 1-2cm espessura, com **escamas** lanceolado-acuminadas, castanho-escuras a castanho-avermelhadas, margem denticulada. **Frondes** (0,7-)1,8-2,4 m compr.; **escamas** da base do pecíolo lineares a lanceoladas, margens inteiras, levemente ciliadas na base, castanho-escuras, quase negras; **lâmina** 3-5-pinado-pinatissecta na base, 3-pinado-pinatissecta na porção mediana, margens da lâmina inteiras; **gemas** ausentes sobre a raque principal; **raque e costa** glandulosos na superfície adaxial, as vezes com glândulas amareladas na superfície abaxial; **pinas** pecioluladas, anádromas, **pina basal** fortemente inequilateral; **pínulas acroscópicas** não reduzidas em direção à base da pina; **raquiola** na superfície abaxial com escamas não buladas, linear-lanceoladas, margens denticuladas, castanho-claras a castanho-escuras, sem tricomas, na superfície adaxial densamente com tricomas clavados, sem escamas; **cóstula** na superfície abaxial com escamas semelhantes às da raquiola, sem tricomas, na superfície adaxial com tricomas clavados semelhantes às da raquiola, sem escamas; **tecido laminar** entre as nervuras na superfície abaxial com escamas uniseriadas esparsas, filiformes, adpressas, castanho-avermelhadas, sem tricomas, na superfície adaxial glabra; últimos segmentos com ápice abruptamente agudo a apiculado; **nervuras** inconspicuas em ambas as superfícies laminares, na superfície abaxial com escamas uniseriadas esparsas, sem tricomas, na superfície adaxial glabra. **Indúdio** presente, glabro.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará, Pernambuco)

Central-west (Distrito Federal, Goiás)

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

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

HERBARIUM MATERIAL

J. Prado, 2054, UEC, 155427, (UEC055849), São Paulo

R.F. Novelino; G. Eiten, 1385, UB, 7334, Distrito Federal

O.J. Pereira, 1661, VIES, 2877, (VIES002877), Espírito Santo

P.G. Delprete, 9118, NYBG, 1019062, Goiás

A. Salino, 2777, BHCB, 32581, Minas Gerais

E. Barbosa; J. Cordeiro; E.F. Costa., 566, HUCS, 35439, (HUCS001367), Paraná
M.S. Lopes; M.R.S. Pietrobom, 228, UFP, 37078, Pernambuco
B.K. Canestraro; F.B. Matos; F.B. Matos, 500, MBM, 394657, (MBM394657), Rio de Janeiro
F. Gonzatti, 3053, HUCS, 46357, (HUCS001161), Rio Grande do Sul
A.A. Oliveira, 2004, FURB, 47265, (FURB12239), Santa Catarina
M.L.S. Guedes, 17972, ALCB, 98465 (ALCB001681), Bahia
M. Almeida Neto, 52, EAC, 29214, (EAC0029214), Ceará
Schwirkowski, P., 3064, FURB (FURB61140), Santa Catarina

Megalastrum Holttum

This treatment is composed of the following taxa: *Megalastrum*, *Megalastrum abundans*, *Megalastrum adenopteris*, *Megalastrum albidum*, *Megalastrum brevipubens*, *Megalastrum canescens*, *Megalastrum connexum*, *Megalastrum crenulans*, *Megalastrum eugenii*, *Megalastrum grande*, *Megalastrum inaequale*, *Megalastrum indusiatum*, *Megalastrum littorale*, *Megalastrum oreocharis*, *Megalastrum organense*, *Megalastrum retrorsum*, *Megalastrum substrigosum*, *Megalastrum umbrinum*, *Megalastrum wacketii*.

HOW TO CITE

Prado, J., Hirai, R.Y., Labiak, P. H., Moran, R.C. 2020. *Megalastrum* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91095>.

DESCRIPTION

Plants terrestrial; rhizomes erect to decumbent; petioles scaly toward the base, with 4–10 vascular bundles, the two adaxial bundles enlarged; laminae 1-pinnate-pinnatifid to 4-pinnate-pinnatifid, catadromic above the basal pinnae; basal pinnae inequilateral and more developed on the basiscopic side or (less commonly) equilateral; rachises, costae, and costules not grooved or only shallowly so adaxially, scaly and pubescent abaxially, densely pubescent on the adaxial surfaces, the hairs whitish, spreading to antrorsely strigose, multicellular, if glands present, these ca. 0.1 mm wide, spherical, shiny, yellowish to orangish, sessile to stalked; basal basiscopic segment of more distal pinnules becoming decurrent and adnate to the pinna rachises, the vein supplying the segment springing from the pinna rachis instead of the costule; hydathodes (enlarged vein ends) present adaxially; indusia absent or (less commonly) present, circular, brown, firm, in some species minute and fugacious.

COMMENTS

Megalastrum is represented in Brazil by 18 species and 13 of them are endemics. The genus does not occur in the Amazon region. Its distribution is concentrated in the Atlantic Rainforest.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

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 *Megalastrum* in Brazil

1. Indusia present, persistent

2. Indusia completely covering the sori; scales bullate on the pinna rachises abaxially; lamina tissue between the veins adaxially glandular
M. crenulans
2. Indusia partially covering the sori, about the size of a single sporangium capsule; scales non-bullate on the pinna rachises abaxially; lamina tissue between the veins adaxially glabrous *M. indusiatum*
1. Indusia absent or (in *M. adenopteris*) minute and fugacious
3. Laminae glandular abaxially
4. Hairs on the abaxial surfaces ca. 1–2 mm long, 2–8-celled; glands on the lamina tissue abaxially stalked, never sessile
5. Laminae 2-pinnate-pinnatisect at base, 2-pinnate-pinnatifid medially; petioles and rachises glabrescent *M. canescens*
5. Laminae 3-pinnate-pinnatisect at base, 3-pinnate medially; petioles and rachises conspicuously pubescent. *M. littorale*
4. Hairs on the abaxial surfaces ca. 0.1–0.2 mm long, 1- or 2-celled; glands on the lamina tissue abaxially sessile or short-stalked
6. Hairs on the abaxial surfaces of the costules more than 1 mm long ...
M. wacketii
6. Hairs on the abaxial surfaces of the costules 0.2–0.3 mm long
7. Laminae adaxially densely and evenly pubescent between veins; rachis scales appressed, inconspicuous; minute fugacious indusia present *M. adenopteris*
7. Laminae adaxially glabrous between veins or sparsely pubescent with a few hairs near the margins; rachis scales spreading, conspicuous; minute fugacious indusia absent .. *M. umbrinum*
3. Laminae eglandular abaxially
8. Scales of the petioles and rachises retrorsely denticulate
9. Lamina tissue between the veins pubescent on both surfaces
M. retrorum
9. Laminar tissue between the veins glabrous on both surfaces
14. *M. organense*
8. Scales of the petioles and rachises entire, or if denticulate, not retrorsely so
10. Lamina tissue pubescent between the veins abaxially, the hairs erect or spreading, often acicular
11. Hairs on the abaxial surfaces of the lamina between the veins 0.4–0.6 mm long *M. albidum*
11. Hairs on the abaxial surfaces of the lamina between the veins ca. 0.1 mm *M. brevipubens*
10. Lamina tissue glabrous between the veins abaxially (sometimes with appressed reddish uniseriate scales, but no hairs)
12. Scales on the abaxial surfaces of the costae and costules sub-bullate to bullate
13. Laminae 3-pinnate-pinnatifid at base, subcoriaceous, lustrous adaxially *M. inaequale*
13. Laminae 4-pinnate-pinnatifid at base, chartaceous, dull adaxially *M. abundans*
12. Scales on the abaxial surfaces of the costae and costules flat (non-bullate)
14. Costae glabrous adaxially *M. grande*
14. Costae pubescent adaxially
15. Hairs on the pinna rachises, costules, and veins abaxially 0.5–0.7 mm long *M. oreocharis*
15. Hairs on the pinna rachises, costules, and veins abaxially 0.1–0.3 mm long
16. Pinna rachises abaxially densely pubescent, hairs substrigose *M. substrigosum*
16. Pinna rachises abaxially glabrous or glabrescent, the hairs (when present) not substrigose

17. Laminae 1-pinnate-pinnatisect at the middle;
petiole scales dark brown *M. eugenii*
17. Laminae 2-pinnate-pinnatifid or more divided at
the middle; petiole scales yellowish brown
- *M. connexum*

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum abundans (Rosenst.) A.R.Sm. & R.C.Moran

Has as synonym

basionym *Dryopteris abundans* Rosenst.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 2.5 m long; scales of petiole bases 1–3 x 0.2–0.35 cm, linear, sparsely denticulate, brown; laminae 1–2 m long, 4-pinnate-pinnatifid at base, 3-pinnate-pinnatifid medially; proximal pinnae ca. 0.7 m long, strongly inequilateral, pinnules acroscopically reduced toward bases of pinnae; pinna rachises abaxially non-glandular, sparsely pubescent, hairs 0.5 mm, 4- or 5-celled, adaxially non-glandular, densely pubescent, hairs 0.3–0.4 mm long, 5- to 7-celled, scales 0.8–1.0 mm long, bullate, brown, ovate-lanceolate; costules on abaxial surfaces non-glandular, pubescent, hairs 0.1–0.5 mm, 1–4-celled, sparsely scaly, scales 0.8–1.0 mm long, bullate, brown, ovate-lanceolate; laminar tissue between veins abaxially non-glandular, glabrous to sparsely pubescent, hairs ca. 0.1 mm long, 2-celled, erect, adaxially glabrous (sparse hairs only on veins); veins visible on both surfaces, abaxially non-glandular, pubescent and minutely scaly, hairs 0.2–0.3 mm long, 1- or 2-celled, scales ca. 0.3 mm long, uniseriate, appressed, reddish, adaxially non-glandular, sparsely pubescent, hairs 0.3–0.5 mm long, 1–3-celled; lamina margins ciliate, hairs ca. mm long, 1-celled, glandular hairs absent; indusia absent.

COMMENTS

Megalastrum abundans is characterized by bullate scales on the pinna rachis and costules abaxially, lamina tissue glabrous adaxially between veins, veins pubescent adaxially, and non-indusiate sori. It and *M. crenulans* are the most finely divided species in Brazil, with laminae 4-pinnate (or more) at their bases. *Megalastrum abundans* differs from *M. crenulans* by lack of indusia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

HERBARIUM MATERIAL

Schwacke, 14801, P, Minas Gerais
P.H. Labiak, 3002, UPCB, Paraná

C. Jürgens, 195, NY, 149415,  (NY00149415), Rio Grande do Sul, **Typus**

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum adenopteris (C.Chr.) A.R.Sm. & R.C.Moran

Has as synonym

basionym *Dryopteris adenopteris* C. Chr.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** with/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** **leptosporangium** pedicellate/glabrous. **Sporangium:** **indusium** present. **Spore:** **monolet** not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 4 m long; scales of petiole bases 1–2 x ca. 0.1 cm, linear, sparingly denticulate (nearly entire), light brown; laminae 1–2 m long, 4-pinnate at base, 3-pinnate-pinnatifid medially; basal pinnae ca. 1 m long, strongly inequilateral, pinnules acroscopically reduced toward bases of pinnae; pinna rachises abaxially glandular with sessile to short-stalked glandular hairs, adaxially pubescent and glandular, hairs 0.1–0.3 mm long, 1–3-celled; costules on abaxial surfaces sparsely scaly, scales 0.5–0.7 mm long, light brown, ovate-lanceolate, non-bullate, pubescent, hairs ca. 0.1–0.2 mm long, with many gland-tipped hairs (more so than on tissue between veins), glandular cell yellowish pubescent, hairs on adaxial surfaces 0.3–0.4 mm long, 3- or 4-celled; laminar tissue between veins densely and evenly puberulent on both surfaces; hairs on abaxial surfaces ca. 0.1 mm long, erect, 1-celled, some of the hairs gland-tipped, glandular cell yellowish, spherical, sometimes sessile or nearly so; hairs adaxially on tissue between veins, ca. 0.2 mm long, 1-celled, glandular hairs sparse; veins visible, pubescent on both surfaces, hairs abaxially ca. 0.3 mm long, 2-celled, hairs adaxially sparser, ca. 0.5 mm long, 3- or 4-celled; lamina margins ciliate, hairs 0.2–0.3 mm long, 1-celled, glandular hairs sparse to absent; indusia, 0.3 mm, fugacious and usually seemingly absent, glandular and pubescent, hairs sometimes appearing mixed among the sporangia.

COMMENTS

Megalastrum adenopteris is characterized by dense even uniform, erect hairs on the abaxial surfaces of the laminae, glands on both surfaces of the laminae, pinna rachises, and costules, and minute fugacious indusia. Glands are usually most evident on the pinna rachises and costules abaxially, either sessile or with a one-celled stalk. Unlike most *Megalastrum* in the region, the rachis scales are widely spreading. The indusia are often apparently absent, or they appear as a cluster of several minute (ca. 0.05 mm long) scales. Whether this condition is homologous with true indusia is uncertain.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

A.R. Reitz, 7516, PACA, Santa Catarina
Jürgens, C., s.n., MICH, Rio Grande do Sul

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum albidum R.C.Moran et al.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 1 to 2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 2 m long; scales of the petiole bases ca. 1.5–2 x 0.04–0.1 cm, linear, sparsely denticulate, yellowish to golden brown, flat (not twisted), en masse not forming a woolly tuft; laminae 1.5 m long, to 3-pinnate-pinnatisect at base, 2-pinnate-pinnatifid medially; basal pinnae to 45 cm long, stalks to 2 cm long, strongly inequilateral, pinnules acroscopically slightly reduced toward the bases of pinnae; pinna rachises abaxially non-glandular, sparsely pubescent, very sparsely scaly, hairs 0.3–0.6 mm long, 3–5-celled, scales 1–2 mm long, linear, brown, denticulate, flat (not bullate), slightly spreading, adaxially non-glandular, densely pubescent, hairs ca. 0.3–0.6 mm long, 3–5-celled, patent (not strigose); costules abaxially non-glandular, pubescent, hairs of relatively uniform length, ca. 0.8–1.0 mm long, 5–8-celled, acicular, whitish, scaly, scales small (ca. 0.5–1 mm long), subentire to denticulate, linear, subappressed, adaxially non-glandular, pubescent, hairs ascending to antrosely strigose, ca. 0.5 mm long, 3–5-celled; laminar tissue between veins abaxially non-glandular, densely pubescent, sparsely scaly, hairs ca. 1–1.5 mm long, 6–9-celled, erect, scales ca. 0.1 mm long, uniseriate, linear, appressed, reddish, inconspicuous, adaxially pubescent, hairs 0.4–0.7 mm long, 4–7-celled, spreading to erect, very sparse scaly, scales ca. 0.2–0.4 mm long, uniseriate, appressed, light reddish, both surfaces dull; veins visible on both surfaces, non-glandular, pubescent and scaly, hairs ca. 1–1.5 mm long, 6–9-celled, adaxially densely pubescent, hairs 0.4–0.7 mm long, 4–7-celled; lamina margins ciliate, non-glandular, hairs ca. 0.2–0.3 mm long, 2–3-celled; indusia absent.

COMMENTS

Megalastrum albidum has linear scales on the pinna rachises abaxially, these mixed with whitish hairs 0.4–0.6 mm long. Also characteristic are the laminae pubescent on both surfaces between the veins.

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)

HERBARIUM MATERIAL

Mosén, 3091, S, São Paulo

P.H. Labiak, 3011, UPCB (UPCB0058853), Paraná, **Typus**

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum brevipubens R.C.Moran et al.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 1 to 2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves ca. 1.0 m long; scales of petiole bases ca. 2 x 0.15 cm, linear to lanceolate, sparsely denticulate, light brown to yellowish or golden, twisted or crispatate, en masse forming a dense wool; laminae ca. 75 cm long, to 3- pinnate-pinnatifid at base, 2-pinnate medially; basal pinnae ca. 30–50 cm long, stalks to 2 cm long, strongly inequilateral, pinnules acroscopically slightly reduced toward the base of pinna; pinna rachises abaxially nonglandular, glabrous or nearly so, with a few (usually at pinna base) scales, these 2.5 mm long, linear, denticulate, adaxially densely pubescent, nonglandular, hairs 0.1–0.3 mm long, 1–4-celled; costules abaxially non-glandular, pubescent to lacking hairs, sparsely scaly, hairs 0.2–0.4 mm long, 2–4-celled, scales 1–2 mm long, filiform to narrowly lanceolate, non-bullate, adaxially pubescent, hairs 0.1–0.6 mm long, 3–5-celled; laminar tissue between veins abaxially non-glandular, puberulent, hairs ca. 1 mm, 1-celled, erect to substrigose, sometimes with sparse uniseriate scales, these ca. 0.2 mm long, appressed, brown, glabrous adaxially; veins adaxially pubescent, visible, abaxially pubescent, hairs 0.2–0.3 mm long, 1–3-celled, with sparse uniseriate, filiform scales, these ca. 0.2 mm long, appressed, brown; lamina margins nonglandular, sparsely ciliate, hairs ca. 0.1–0.2 mm long, 1(2)-celled; indusia absent.

COMMENTS

Megalastrum brevipubens is distinctive by the short (ca. 0.1 mm long), erect, acicular hairs between the veins on the abaxial surfaces of the laminae. It resembles *M. connexum*, a species that is glabrous between the veins abaxially.

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 (São Paulo)

South (Paraná)

HERBARIUM MATERIAL

A. Salino, 1987, AAU, São Paulo

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum canescens (Kunze ex Mett.)

A.R.Sm. & R.C.Moran

Has as synonym

basionym *Phegopteris canescens* Kunze ex Mett.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** with/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 2 m long; scales of petiole bases ca. 1 x ca. 0.1 cm, lanceolate, sparsely denticulate, brown to dark brown, sometimes with blackish denticulate margins (this color often absent on scales on the distal portion of petiole); laminae 1–2 m long, 2-pinnate-pinnatisect at base, 2-pinnate medially; basal pinnae ca. 0.4 m long, stalks to 3.5 cm long, strongly inequilateral, pinnules acroscopically reduced toward pinna bases; pinna rachises abaxially glandular, pubescent and sparsely scaly (scales sometimes apparently absent), glands ca. 0.1 mm long, hairs ca. 1 mm long, 5–7-celled, scales ca. 1.5 mm, non-bullate, ovate-lanceolate, subentire, apices long acuminate; adaxially apparently non-glandular, densely pubescent, hairs ca. 1.2 mm long, 5- or 8-celled; costules glandular, glands 0.1 mm long, pubescent abaxially with two sizes of hairs, longer ones ca. 1 mm long, 3–5-celled, shorter ones ca. 0.2 mm long, 1- or 2-celled, sparsely scaly, scales to 1 mm long, uniseriate, appressed, brown; laminar tissue between veins abaxially glandular and pubescent, glands ca. 0.1 mm long, 1- or 2-celled, yellowish, abundant to nearly absent, hairs 0.3–0.5 mm long, 2- or 3-celled, adaxial surfaces sparsely pubescent, hairs 0.2–0.4 mm long, 1- or 2-celled, appressed; veins visible and pubescent on both surfaces, hairs on abaxial surfaces 0.4–0.8 mm long, 1–3-celled, adaxial surfaces with hairs 0.5–0.8 mm long, 3–6-celled, glandular hairs absent; lamina margins ciliate, hairs ca. 0.4–0.5 mm long, 1- or 2-celled, glandular hairs apparently absent; indusia absent.

COMMENTS

Megalastrum canescens is characterized by hairs ca. 1 mm long and 5–8-celled on the abaxial surfaces of the laminae, intermixed with shorter ones, up to 0.2 mm long, non-bullate scales, and lack of indusia. The petiole base scales of this species tend to have blackish margins. Superficially, this species resembles *M. albidum*, which see for comparison.

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

Northeast (Bahia, Ceará, Rio Grande do Norte)

Southeast (Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

A.C. Brade, 7713, NY, 678918, (NY00678918), São Paulo
P.H. Labiak, 4372, NY, 1010368, (NY01010368), Rio de Janeiro

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum connexum (Kaulf.) A.R.Sm. & R.C.Moran

Has as synonym

basionym *Polypodium connexum* Kaulf.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1.5–2.5 m long; scales of the petiole bases ca. 2 x 0.15 cm, linear to lanceolate, sparsely denticulate, light brown to yellowish or golden, twisted or crisplate, en masse forming a dense wool; laminae 1–2 m long, to 3-pinnate at base, 2-pinnate medially; basal pinnae ca. 30–50 cm long, stalks to 2 cm long, strongly inequilateral, pinnules acroscopically slightly reduced toward pinna bases; pinna rachises abaxially non-glandular, glabrous or nearly so, with a few (usually at pinna base) scales, these 2.5 mm long, linear, denticulate, adaxially densely pubescent, non-glandular, hairs 0.1–0.3 mm long, 1–4-celled; costules abaxially non-glandular, pubescent or lacking hairs, sparsely scaly, hairs 0.2–0.3 mm long, 2–4-celled, scales 1–2 mm long, filiform to narrowly lanceolate, non-bullate, adaxially pubescent, hairs 0.1–0.6 mm long, 3–5-celled; laminar tissue between veins abaxially nonglandular, glabrous, sometimes with sparse uniseriate scales, these ca. 0.2 mm long, appressed, brown, adaxially glabrous; veins adaxially glabrous or with scattered hairs, visible, abaxially glabrous or pubescent, hairs ca. 0.2 mm long, 1–3-celled, with sparse uniseriate, filiform scales, these ca. 0.2 mm long, appressed, brown; lamina margins non-glandular, sparsely ciliate or apparently eciliate, hairs ca. 0.1 mm long, 1(2)-celled; indusia absent.

COMMENTS

Megalastrum connexum is characterized by glabrous pinna rachises abaxially and filiform scales on the costules and veins abaxially. Both surfaces of the lamina between the veins are glabrous. The costular indument is variable. In all specimens there are hairs and scales on the costules abaxially, but some specimens have more scales than hairs, and vice-versa. Judging from the number of specimens, this is one of the most common species in Brazil.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará)

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

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

HERBARIUM MATERIAL

P.H. Labiak, 4262, NY, 1010346,  (NY01010346), Paraná
A.C. Brade, 7714, NY, 678928,  (NY00678928), São Paulo

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum crenulans (Fée) A.R.Sm. & R.C.Moran

Has as synonym

basionym *Aspidium crenulans* Fée

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** with/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium present. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 2.5 m long; scales of the petiole bases ca. 2 x ca. 0.1 cm, linear, sparsely denticulate, light brown, twisted, en masse forming a dense woolly tuft; laminae 1 m long, to 4-pinnate at base, 2-pinnate-pinnatifid medially; basal pinnae ca. 30–50 cm long, stalks to 2.5 cm long, strongly inequilateral, pinnules acroscopically slightly reduced toward the pinna bases; pinna rachises abaxially glandular, pubescent, hairs 0.8–1.2 mm long, 4- or 5-celled, densely glandular, glands ca. 0.1 mm long, 2-celled, scaly, scales ca. 1 mm long, lanceolate, subentire, flat (non-bullate), adaxially densely pubescent, hairs ca. 1 mm long, 3–6-celled, non-glandular; costules abaxially glandular, pubescent, hairs 0.3–0.4 mm long, 1–3-celled, glands ca. 0.1 mm, 2-celled, scaly, scales ca. 1 mm long, bullate, subentire, adaxially pubescent, hairs 0.4–0.8 mm long, 1–3-celled, sparsely glandular, glands like those on the abaxial surfaces; laminar tissue between veins abaxially densely glandular and pubescent, hairs ca. 0.1 mm long, 1-celled, adaxially glandular but slightly less so than abaxially, hairs absent; veins visible on both surfaces, very sparsely glandular abaxially, pubescent abaxially, hairs 0.2–0.3 mm long, 1- or 2-celled, adaxially sparsely pubescent, hairs ca. 0.4–0.5 mm long, 1–3-celled; lamina margins densely ciliate, hairs ca. 0.3–0.4 mm long, 1- or 2-celled; indusia present, circular, dark brown, glandular, pubescent, or both, hairs 0.3–0.4 mm long, 1- or 2-celled.

COMMENTS

Megalastrum crenulans is nearly unique in the region by having a large persistent indusium. It is further distinctive by glands on both surfaces of the laminae and bullate scales on the abaxial surfaces of the costules. The indusia are variable in the presence of hairs and glands, but no other character apparently correlates with this.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

South (Paraná, Rio Grande do Sul)

HERBARIUM MATERIAL

A.F.M. Glaziou, 2351, P (P00610622), Rio de Janeiro, **Typus**
J. Prado, 2026, NY, 1145284,  (NY01145284), Minas Gerais
A.C. Brade, 9695, NY, 678830,  (NY00678830), Rio de Janeiro

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum eugenii (Brade) A.R.Sm. & R.C.Moran

Has as synonym

basionym *Dryopteris eugenii* Brade

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1.0–1.5 m long; scales of the petiole bases ca. 1.5 x 0.05–0.07 cm long, linear, sparsely denticulate, brown, slightly twisted, en masse forming a woolly tuft; laminae 1 m long, to 2-pinnate-pinnatifid at base (rarely 1-pinnate-pinnatisect), 1-pinnate-pinnatisect medially; basal pinnae 20–30 cm long, stalks to 1 cm long, inequilateral, pinnules acroscopically not or only slightly reduced toward pinna bases; pinna rachises abaxially non-glandular, glabrous to puberulent, sparsely scaly, hairs 0.1–0.2 mm long, 1–3-celled, scales 1–2 mm long, narrowly lanceolate, brown, denticulate, flat (non-bullate), adaxially non-glandular, pubescent, hairs 0.3–0.4 mm long, 2- or 3-celled, strigose; costules abaxially non-glandular, glabrous to puberulent, hairs 0.1–0.2 mm long, 1–3-celled, scaly, scales ca. 1 mm long, linear to narrowly lanceolate, non-bullate, sparsely denticulate, adaxially puberulous throughout, hairs 0.4–0.5 mm long, 1–3-celled; laminar tissue between veins abaxially non-glandular, glabrous to subglabrous, hairs (when present) ca. 0.2 mm long, 1- or 2-celled, uniseriate scales often present, these appressed, reddish, inconspicuous, adaxially non-glandular, glabrous to sparsely pubescent (often near margins), hairs 0.3–0.4 mm long, 2- or 3-celled; veins visible or obscure on both surfaces, non-glandular, glabrous to sparsely pubescent; lamina margins sparsely to densely ciliate, hairs 0.2–0.4 mm long, 2–3-celled; indusia absent.

COMMENTS

Megalastrum eugenii resembles *M. grande* but differs by the presence of hairs on the costae adaxially. This is the only species that occurs in the northern part of northeastern Brazil.

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 (Alagoas, Bahia, Ceará, Pernambuco)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

M. R. Pietrobom-Silva, 4394, NY, 678958,  (NY00678958), Pernambuco

P.Eugenio Leite, s.n., RB, 77650,  (RB00660161), Ceará, **Typus**
P.H. Labiak, 3678, NY, 870945,  (NY00870945), Bahia

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum grande (C.Presl) A.R.Sm. & R.C.Moran

Has as synonym

basionym *Polypodium grande* C.Presl

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1.0–1.5 m long; scales of the petiole bases ca. 1.5 x 0.05–0.07 cm long, linear, sparsely denticulate, brown, slightly twisted, en masse forming a woolly tuft; laminae 1 m long, to 2-pinnate at base (rarely 1-pinnate-pinnatifid), 1-pinnate-pinnatifid medially; basal pinnae 20–40 cm long, stalks to 1 cm long, inequilateral, pinnules acroscopically not or only slightly reduced toward pinna bases; pinna rachises abaxially non-glandular, glabrous to puberulent, sparsely scaly, hairs 0.1–0.2 mm long, 1–3-celled, scales 1–2 mm long, narrowly lanceolate, brown, denticulate, flat (non-bullate), adaxially non-glandular, glabrous; costules abaxially non-glandular, glabrous to puberulent, hairs 0.1–0.2 mm long, 1–3-celled, scaly, scales ca. 1 mm long, linear to narrowly lanceolate, non-bullate, sparsely denticulate, adaxially glabrous; laminar tissue between veins abaxially non-glandular, glabrous to subglabrous, hairs (when present) ca. 0.2 mm long, 1- or 2-celled, uniseriate scales often present, these appressed, reddish, inconspicuous, adaxially non-glandular, glabrous to sparsely pubescent (often near margins), hairs 0.3–0.4 mm long, 2- or 3-celled; veins visible or obscure on both surfaces, non-glandular, glabrous to sparsely pubescent (similar to lamina tissue between veins); lamina margins sparsely to densely ciliate, hairs 0.2–0.4 mm long, 1–3-celled; indusia absent.

COMMENTS

Megalastrum grande is unique in the genus by having the pinna rachises glabrous adaxially. It is the least divided species in coastal Brazil, with laminae to 2-pinnate at the base, and usually broadly adnate segments that are slightly falcate. The hairs (when present abaxially) are generally inconspicuous, and the costal scales are sparse and linear to linear-lanceolate. Glandular hairs are absent from all parts of the plant.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

HERBARIUM MATERIAL

A.F.M. Glaziou, 2066, P (P02141753), Rio de Janeiro
P.H. Labiak, 4047, NY, 1010303,  (NY01010303), Espírito Santo
A.C. Brade, 8588, NY, 678943,  (NY00678943), Rio de Janeiro

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum inaequale (Kaulf. ex Link)

A.R.Sm. & R.C.Moran

Has as synonym

basionym *Polypodium inaequale* Kaulf. ex Link

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 3 m long; scales of the petiole bases ca. 2 x 0.15 cm, narrowly lanceolate, denticulate, brown, flat (not twisted), en masse not forming a woolly tuft; laminae 2 m long, to 3-pinnate-pinnatifid at base, 2-pinnate-pinnatifid medially, shiny on both surfaces, paler abaxially; basal pinnae 20–40 cm long, stalks to 1 cm long, inequilateral, pinnules acroscopically slightly reduced toward the pinna bases; pinna rachises abaxially non-glandular, pubescent, scaly, hairs 0.1–0.3 mm long, 1–3-celled, antorsely subtrigose (slightly curved toward apex), scales ca. 2.5 mm long, ovate-lanceolate to (less commonly) linear, light brown, subentire, flat to sub-bullate, adaxially non-glandular, densely pubescent, hairs ca. 0.5 mm long, 3- or 4-celled, strigose; costules abaxially non-glandular, pubescent, hairs ca. 0.1–0.2 mm long, 1–3-celled, scaly, scales like those of pinna rachises but more bullate, adaxially with hairs like those of costae; laminar tissue between veins non-glandular and glabrous on both surfaces; veins visible on both surfaces, non-glandular, abaxially sparsely pubescent and inconspicuously scaly, hairs ca. 0.1 mm long, 1-celled, slightly strigose, scales 0.3–0.4 mm long, uniseriate, appressed, reddish, adaxially sparsely puberulent, hairs 0.2–0.3 mm long, 1–3-celled; lamina margins thick, glabrous to sparsely ciliate, hairs ca. 0.1 mm long, 2-celled, strigose; indusia absent or appearing absent, if present easily overlooked, fugacious.

COMMENTS

Megalastrum inaequale is characterized by slightly antorsely strigose hairs on the pinna rachises and costules abaxially and moderately dense, sub-bullate scales on the axes. The laminae are thick, slightly shiny adaxially, and paler abaxially.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

HERBARIUM MATERIAL

A.C. Brade, 8276, NY, São Paulo

A.C. Brade, 14017, RB, 455618,  (RB00607122), Rio de Janeiro

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum indusiatum R.C.Moran et al.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium present. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 2.0 m long; scales of the petiole bases ca. 2 cm long, linear, sparsely denticulate, light brown, twisted, en masse forming a dense woolly tuft; laminae 1 m long, to 4-pinnate-pinnatifid at base, 2-pinnate-pinnatisect medially; basal pinnae ca. 30–50 cm long, stalks to 2.5 cm long, strongly inequilateral, pinnules acroscopically slightly reduced toward pinna bases; pinna rachises abaxially non-glandular, slightly pubescent, hairs 0.8–1.0 mm long, 4- or 5-celled, scaly, scales ca. 5 mm long, lanceolate, subentire, flat (non-bullate), adaxially densely pubescent, hairs ca. 1 mm long, 3–6-celled, non-glandular; costules abaxially non-glandular, pubescent, hairs 0.3–0.4 mm long, 1–3-celled, scaly, scales ca. 1 mm long, non-bullate, subentire, adaxially pubescent, hairs 0.4–0.8 mm long, 1–3-celled, non-glandular; laminar tissue between veins abaxially non-glandular, pubescent, hairs ca. 0.1 mm long, 1-celled, adaxially non-glandular, hairs absent; veins visible on both surfaces, non-glandular abaxially, minutely scaly and pubescent abaxially, hairs 0.2–0.3 mm long, 1- or 2-celled, scales ca. 0.1–0.3 mm long, uniserial, reddish, appressed; adaxially sparsely scaly and pubescent, hairs ca. 0.4–0.5 mm long, 1–3-celled, scales like those abaxially; lamina margins ciliate, hairs ca. 0.3–0.4 mm long, 1- or 2-celled; indusia present, circular, dark brown, pubescent, hairs 0.3–0.4 mm long, 1- or 2-celled.

COMMENTS

Megalastrum indusiatum is characterized by small indusia (about the size of a single sporangial capsule), non-bullate scales on the axes, glabrous tissue adaxially between the veins, and non-glandular axes abaxially. The laminae typically dry dark brown adaxially.

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

Northeast (Alagoas, Bahia)

HERBARIUM MATERIAL

Matos, F.B., 1365, UPCB (UPCB0058850), Bahia, **Typus**
S.A. Mori, 12991, NY, 678951, ,  (NY00678951), Bahia

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum littorale R.C.Moran et al.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** with/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 2 m long; scales of the petiole bases ca. 1 cm, lanceolate, sparsely denticulate but not retrorsely so, brown to dark brown, without blackish denticulate margins; laminae 1–2 m long, 3-pinnate-pinnatifid at base, 2-pinnate-pinnatisect medially; basal pinnae ca. 50 cm long, stalks to 5 cm long, strongly inequilateral, pinnules acroscopically reduced toward pinna bases; pinna rachises abaxially sparsely glandular, pubescent and sparsely scaly (sometimes apparently absent), glands ca. 0.1 mm long, hairs 1–2 mm long, 5–8-celled, scales ca. 1.5 mm, non-bullate, linear, subentire, adaxially apparently non-glandular, densely pubescent, hairs ca. 2 mm long, 7- or 8-celled; costules sparsely glandular abaxially, glands 0.1 mm long, pubescent abaxially, hairs 1–2 mm long, longer ones ca. 2 mm long, 5–8-celled, shorter ones ca. 1 mm long, 5- to 8-celled, sparsely scaly, scales to 1 mm long, uniseriate, appressed, brown; laminar tissue between veins abaxially glandular and pubescent, glands 0.1–0.2 mm long, 1- or 3-celled, capitate, whitish, abundant, hairs 1–2 mm long, 5- to 8-celled; adaxial surfaces densely pubescent, hairs 0.5–1 mm long, 4- to 6-celled, erect; veins visible and pubescent on both surfaces, hairs on abaxial surfaces 1–2 mm long, 5–8-celled, on adaxial surfaces hairs 0.5–1 mm long, 4–6-celled, glandular hairs sparse; lamina margins ciliate, hairs ca. 1–2 mm long, 5–8-celled, glandular hairs apparently absent; indusia absent.

COMMENTS

Megalastrum littorale is distinctive by being densely pubescent throughout with whitish hairs ca. 2 mm long. Also distinctive are its stalked glands with one or two basal cells below the capitate apical cell.

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, São Paulo)

HERBARIUM MATERIAL

P.H. Labiak, 4378, NY, 1010376, (NY01010376), NY, 1010375, (NY01010375), NY, 1010374, (NY01010374), Rio de Janeiro, **Typus**

Válio, I.M., 112, SP, São Paulo

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum oreocharis (Sehnem) Salino & Ponce

Has as synonym

basionym *Dryopteris oreocharis* Sehnem

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 1 to 2/mm long. **Type of sporangium:** **leptosporangium** pedicellate/glabrous. **Sporangium:** **indusium** absent. **Spore:** **monolet** not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1 m long; scales of the petiole bases 1–2 x 0.15 cm, linear, sparsely denticulate, light brown to brown, twisted, en masse forming a dense wool; laminae 80 cm long, to 2-pinnate-pinnatisect at base, 2-pinnate-pinnatifid medially; basal pinnae ca. 15–20 cm long, stalks to 1 cm long, strongly inequilateral, pinnules acroscopically slightly reduced toward the pinna bases; pinna rachises abaxially non-glandular, very sparsely pubescent, hairs 0.5–1.5 mm long, 4–9-celled, with a few (usually at pinna base) scales, these 2.5 mm long, linear, denticulate; adaxially pubescent, non-glandular, hairs 0.1–0.3 mm long, 1–4-celled; costules abaxially non-glandular, pubescent, sparsely scaly, hairs 0.7–1.5 mm long, 6–11-celled, scales 1–2 mm long, filiform to narrowly lanceolate, non-bullate, adaxially pubescent, hairs 0.6–1 mm long, 4–5-celled; laminar tissue between veins abaxially non-glandular, glabrous, sometimes with sparse uniseriate scales, these ca. 0.2 mm long, appressed, brown, adaxially glabrous; veins adaxially sparsely pubescent, visible, abaxially pubescent, hairs to 1 mm long, 4–10-celled, with sparse uniseriate, filiform scales, these ca. 0.2 mm long, appressed, brown, veins adaxially pubescent, hairs 1.5–2.0 mm long, 8–10-celled; lamina margins non-glandular, sparsely ciliate or apparently eciliate, hairs 0.1–0.2 mm long, 1(2)-celled; indusia absent.

COMMENTS

Megalastrum oreocharis resembles a small version of *M. connexum* but differs by longer hairs (0.7–1.7 mm) on the pinna rachises, costules, and veins abaxially. The plants are generally thinner textured than *M. connexum*.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

HERBARIUM MATERIAL

A.Sehnem, 5508, PACA, Santa Catarina

G.Hatschbach, 10745, U, Paraná

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum organense R.C.Moran et al.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1.5 m long; scales of the petiole bases ca. 1.5 x 0.15 cm, narrowly lanceolate, retrorsely denticulate, brown, flat (not twisted), en masse not forming a woolly tuft; laminae to 1 m long, to 3-pinnate-pinnatifid at base, 2-pinnate-pinnatisect medially, dull on both surfaces, paler abaxially; basal pinnae 35–45 cm long, stalks to 1.5 cm long, inequilateral, pinnules acroscopically slightly reduced toward the pinna bases; pinna rachises abaxially non-glandular, pubescent to glabrescent, scaly, hairs 0.2–0.3 mm long, 3- or 4-celled, patent, scales ca. 3–7 mm long, narrowly lanceolate to linear, brown, retrorsely denticulate, flat (not bullate), adaxially non-glandular, pubescent, hairs ca. 0.5 mm long, 3–5-celled, spreading to antrorsely strigose; costules abaxially non-glandular, puberulent, hairs ca. 0.2–0.3 mm long, 3-celled, scaly, scales like those of pinna rachises but smaller and lanceolate, entire to retrorsely denticulate so, shiny and brown, loosely appressed, ca. 3 mm long, adaxially puberulent, hairs ca. 0.1 mm long, 2- or 3-celled, spreading; laminar tissue between veins abaxially non-glandular, glabrous with some inconspicuous, uniseriate, appressed, reddish scales, adaxially glabrous; veins visible on both surfaces, non-glandular, abaxially glabrous or sparsely pubescent, hairs ca. 0.1–0.2 mm long, 1- or 2-celled, adaxially pubescent, hairs ca. 0.3–0.5 mm long, 1–3-celled, spreading to antrorsely strigose; lamina margins sparsely ciliate, hairs ca. 0.1–0.2 mm long, 2-celled, spreading to appressed; indusia absent.

COMMENTS

Megalastrum organense is named for the Organ Mountains of Rio de Janeiro. Like *M. retrosum*, it has retrorsely denticulate scales.

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 (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

P.H. Labiak, 4502, NY, 1010410, (NY01010410), NY, 1010409, (NY01010409), Rio de Janeiro
P.H. Labiak, 4485, UPCB (UPCB0064997), Rio de Janeiro, **Typus**

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum retrorsum R.C.Moran et al.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1.5 m long [estimate]; scales of the petiole bases ca. 1.5 x 0.2 cm, narrowly lanceolate, retrorsely denticulate, brown, flat (not twisted), en masse not forming a woolly tuft; laminae to 1 m long, to 3-pinnate-pinnatifid at base, 2-pinnate-pinnatifid medially, dull on both surfaces, paler abaxially; basal pinnae 30–40 cm long, stalks to 2 cm long, inequilateral, pinnules acroscopically slightly reduced toward the pinna bases; pinna rachises abaxially non-glandular, puberulous, scaly, hairs 0.1–0.2 mm long, 2- or 3-celled, patent, scales ca. 5 mm long, narrowly lanceolate, brown, retrorsely denticulate, flat (not bullate), adaxially non-glandular, puberulent, hairs ca. 0.4–0.7 mm long, 3–5-celled, patent; costules abaxially non-glandular, puberulent, hairs ca. 0.1–0.2 mm long, 1–3-celled, scaly, scales like those of pinna rachises but smaller, ca. 3 mm long, adaxially puberulent, hairs ca. 0.3–0.5 mm long, 3- or 4-celled; laminar tissue between veins abaxially non-glandular, densely to sparsely puberulent, hairs ca. 0.1, 1- or 2-celled, mixed with some inconspicuous, uniseriate, appressed, reddish scales, adaxially densely puberulent, hairs 0.2–0.3 mm long, 1–3-celled, erect; veins visible or obscure on both surfaces, non-glandular, abaxially densely puberulent and inconspicuously scaly, hairs ca. 0.1 mm long, 1- or 2-celled, adaxially densely puberulent, hairs ca. 0.3 mm, 1–3-celled; lamina margins sparsely puberulent, hairs ca. 0.1–0.2 mm long, 1- or 2-celled, subtrigose; indusia absent.

COMMENTS

Megalastrum retrorsum is named for its retrorsely denticulate scales, a character it shares with *M. organense*. It can be distinguished from *M. organense* by the abaxial surfaces of laminae densely and evenly puberulent between the veins, whereas *M. organense* is glabrous between the veins.

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

Northeast (Rio Grande do Norte)

Southeast (Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

P.H. Labiak, 4396, NY, 1010383, (NY01010383), Rio de Janeiro

P.H. Labiak, 4396, NY, 1010382, (NY01010382), Rio de Janeiro

A.C. Brade, 12712, NY, 678894, (NY00678894), Rio de Janeiro, **Typus**

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum substrigosum R.C.Moran et al.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** without/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1 m long [estimate]; scales of the petiole bases ca. 1.5 x 0.07–0.08 cm, linear, denticulate, light brown to yellowish, flat (not twisted), en masse forming a wool-like tuft; laminae 0.5 m long [our estimate], to 3-pinnate-pinnatifid at base, 2-pinnate-pinnatifid medially, drying light green on both surfaces; basal pinnae to 35 cm long, stalks to 2 cm long, strongly inequilateral, pinnules acroscopically slightly reduced toward pinna bases; pinna rachises abaxially non-glandular, pubescent, scaly, hairs 0.2–0.5 mm long, 1–3-celled, scales ca. 1.3–2 mm long, narrowly lanceolate, brown, sparsely denticulate, flat (non-bullate), adaxially non-glandular, densely pubescent, hairs ca. 0.4–0.5 mm long, 2–4-celled, strigose; costules abaxially non-glandular, pubescent, scaly, hairs ca. 0.2–0.4 mm long, 2- or 3-celled, scales like those of the pinna rachises, also with reduced, uniseriate, reddish appressed scales, adaxially densely pubescent, not scaly, hairs 0.3–0.4 mm long, 2–4-celled; laminar tissue between veins abaxially non-glandular, sparsely puberulent, very sparsely scaly, hairs ca. 0.2 mm long, 1- or 2-celled, spreading, scales ca. 0.3 mm long, uniseriate, linear, appressed, adaxially appearing glabrous but actually very sparsely pubescent, hairs ca. 0.2 mm long, substrigose, whitish; veins visible on both surfaces, non-glandular, abaxially sparsely pubescent and inconspicuously scaly, hairs 0.2–0.3 mm long, 1- or 2-celled, erect, scales 0.3–0.4 mm long, uniseriate, appressed, reddish, adaxially nearly glabrous to pubescent, hairs ca. 0.2–0.3(–0.5) mm, 1–3-celled, substrigose, scales ca. 0.3–0.4 mm long, uniseriate, appressed, reddish; lamina margins ciliate, hairs ca. 0.2 mm long, 1- or 2-celled, substrigose; indusia absent.

COMMENTS

Megalastrum substrigosum can be recognized by substrigose hairs (thus the meaning of the specific epithet) on the abaxial surfaces of the pinna rachises, costules, and veins. Also characteristic are the puberulent abaxial lamina surfaces between the veins.

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 (Espírito Santo, Minas Gerais)

HERBARIUM MATERIAL

P.H. Labiak, 4222, UPCB, Espírito Santo, Typus

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum umbrinum (C.Chr.) A.R.Sm. & R.C.Moran

Has as synonym

basionym *Dryopteris umbrina* C. Chr.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** with/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1.5 m long; scales of the petiole bases 1.5–2 x 0.07–0.1 cm, linear, sparsely denticulate (nearly entire), brown; laminae ca. 1 m long, 3-pinnate-pinnatisect at base, 2-pinnate-pinnatisect medially; basal pinnae ca. 30 cm long, strongly inequilateral, pinnules acroscopically reduced toward pinna bases; pinna rachises abaxially glandular, pubescent, scaly, glands ca. 0.05 mm long, sessile, yellowish, hairs of two sizes, from 0.1–0.4 mm long, 2–6-celled, acicular, scales to 3.5 mm long, lanceolate, non-bullate, entire to subentire, brown, spreading, adaxially inconspicuously glandular, pubescent, glands like those abaxially, hairs 0.4–0.7 mm long, 2- to 5-celled; costules abaxially with indument like that of the pinna rachises, adaxially pubescent, not scaly, hairs 0.4–0.7 mm long, 2–5-celled, erect; laminar tissue between veins abaxially sparsely glandular, not scaly, hairs ca. 0.1–0.2 mm long, 1- or 2-celled, erect to (rarely) appressed, inconspicuous, adaxially glabrous or rarely with a few hairs near margins; veins visible on both surfaces, pubescent on both surfaces, abaxially hairs 0.2–0.3 mm long, 1- or 2-celled, adaxially the hairs denser, 0.1–0.5 mm long, 2–5-celled, spreading to appressed; lamina margins ciliate, non-glandular, hairs 0.2–0.3 mm long, 2- or 3-celled, appressed; indusia absent.

COMMENTS

Megalastrum umbrinum is distinctive by small but conspicuous, spreading scales along the rachises and pinna rachises—a characteristic that will help distinguish this species from many others in Brazil. Also helpful are the abaxial surfaces of the axes that are densely puberulent with short glandular hairs, and acicular (non-glandular) hairs of mixed sizes.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Pernambuco)

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

Lindberg, 547, K, Minas Gerais
F. B. Matos, 1193, NY, 1010305, (NY01010305), Paraná
P.H. Labiak, 4316, NY, 1010352, (NY01010352), São Paulo

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Megalastrum wacketii (Rosenst. ex C.Chr.)

A.R.Sm. & R.C.Moran

Has as synonym

basionym *Dryopteris wacketii* Rosenst. ex C. Chr.

DESCRIPTION

Leaf: scale denticulate; **laminar tissue** with/gland(s); **petiole** pubescent; **hair** 0.1 to 0.2/mm long. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** indusium absent. **Spore:** monolete not/chlorophylate.

ADDITIONAL DESCRIPTION

Leaves to 1.5 m long [estimate]; scales of the petiole bases ca. 2 x 0.3–0.35 cm, narrowly lanceolate to linear, sparsely denticulate, brown, flat (not twisted), en masse not forming a woolly tuft; laminae 1 m long [our estimate], to 3-pinnate-pinnatisect at base, 2-pinnate-pinnatifid medially; basal pinnae to 35 cm long, stalks to 1 cm long, strongly inequilateral, pinnules acroscopically slightly reduced toward pinna bases; pinna rachises abaxially non-glandular, moderately to densely pubescent, very sparsely scaly, hairs 0.3–1.0 mm long, 2–7-celled, scales 0.5–1 mm long, narrowly lanceolate to linear, brown, entire to sparsely denticulate, flat (not bullate) adaxially non-glandular, densely pubescent, hairs ca. 1 mm long, 5- or 6-celled, patent, not strigose; costules abaxially non-glandular, pubescent, hairs generally of two lengths, long ones ca. 0.8–1.0 mm long, 4- or 5-celled, and shorter ones ca. 0.2 mm long, 1- or 2-celled, scaly, scales like those of pinna rachises, adaxially non-glandular, pubescent, hairs of two sizes, longer ones ca. 1 mm, 3- or 4-celled, and shorter ones ca. 0.3 mm, 1- or 2-celled; laminar tissue between veins abaxially glandular, densely pubescent, and sparsely scaly, glands 0.1–0.2 mm long, 2-celled, erect, capitate, hairs ca. 0.2 mm long, 1-celled, erect, scales ca. 0.3 mm long, uniseriate, linear, appressed, reddish, inconspicuous, adaxially sparsely pubescent, hairs 0.2–0.3 mm long, 1- or 2-celled, spreading, sparsely scaly, scales ca. 0.2–0.4 mm long, uniseriate, appressed, light reddish, surfaces shiny and darker than abaxial surfaces; veins visible on both surfaces, non-glandular, pubescent and scaly, hairs of two sizes, longer ones ca. 0.6 mm, 1–3-celled, and shorter ones ca. 0.2 mm, 1- or 2-celled, adaxially densely pubescent, hairs 0.6–0.7 mm long, 3–4(–5)-celled, smaller ones ca. 0.2 mm long, 1- or 2-celled; lamina margins ciliate, non-glandular, hairs ca. 0.3 mm long, 1- or 2-celled; indusia absent.

COMMENTS

Megalastrum wacketii has laminae that dry dark greenish or blackish. The short, capitate-glandular hairs are distinctive on the laminar surfaces abaxially.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo, São Paulo)

South (Paraná)

HERBARIUM MATERIAL

P.H. Labiak, 4000, UPCB, Espírito Santo
Wacket, 223, BM, São Paulo, **Typus**

REFERENCE

Moran, R.C., Prado, J. & Labiak, P.H. 2009. *Megalastrum* (Dryopteridaceae) in Brazil, Paraguay, and Uruguay. American Fern Journal 99(1): 1–44.

Mickelia R.C.Moran, Labiak & Sundue

This treatment is composed of the following taxa: *Mickelia*, *Mickelia bernoullii*, *Mickelia guianensis*, *Mickelia lindigii*, *Mickelia nicotianifolia*, *Mickelia oligarchica*, *Mickelia pradoi*, *Mickelia scandens*, *Mickelia ×atrans*.

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Matos, F.B., Labiak, P. H. 2020. *Mickelia* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91093>.

DESCRIPTION

Stems long-creeping, dorsi-ventral, the ventral meristele elongate (as seen in cross-section), the ventral surface root-bearing, the dorsal surface bearing 3 or more ranks of leaves; *phyllodia* absent; *leaves* continuous with rhizome or (in *M. ×atrans*, *M. guianensis*, and *M. pradoi*) articulate; *sterile and fertile leaves* dimorphic, the petioles of the fertile leaves longer and the fertile pinnae smaller; *leaves* 1-pinnate, rarely simple; *laminae* usually with a free apical segment similar to (conform) the lateral pinnae; *lamina buds* absent or (in *B. hemiotis* and *B. oligarchica*) present in the axils of the pinnae (buds never associated with the terminal segment as in *Bolbitis*); *pinnae* articulate or continuous with (i.e., not articulate to) the rachis, entire or serrate distally; *veins* various but never free, either areolate throughout without main lateral veins and without included veinlets, or with main lateral veins connected by slightly arched cross veins, and typically with included veinlets in the areoles; *sori* acrostichoid; *paraphyses* absent; *spores* monolete, brown or black (non-green); *perine* broadly folded; $x = 41$.

Life Form

Herb

Substrate

Hemiepiphytes, 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)

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

1. Areoles with free included veinlets.
2. Leaves trifoliolate, with 1 pair of lateral pinnae; buds present at pinnae bases.. *M. oligarchica*
- 2'. Leaves pinnate (rarely simple in *M. nicotianifolia*), with (1)-2-19 pairs of lateral pinnae; buds absent at pinnae bases.
3. Lateral pinna pairs 2-4, rarely 1 or absent.. *M. nicotianifolia*
- 3'. Lateral pinna pairs 8-19.. *M. bernoullii*
- 1'. Areoles without free included veinlets or (in *M. lindigii*) occasionally present.
4. Petioles continuous with (not articulate to) the rhizome, rhizomes ca. 1 cm wide, densely scaly, the scales ca. 10 mm long, not clathrate.. *M. lindigii*

- 4'. Petioles articulate to the rhizome; rhizomes ca. 0.5 cm wide, sparsely scaly, the scales 1.5-5.5 mm long, clathrate.
5. Laminae with (16-)22-25 pairs of pinnae; rhizome scales 4-5.5 x 0.3-0.5 mm, brown to castaneous, cell lumens broad, easily visible; lamina apices often gradually reduced.. *M. scandens*
- 5'. Laminae with 8-16 pairs of pinnae; rhizome scales 1.2-2.2 x 0.3-0.4 mm, blackish, cell lumens narrow, not easily visible; lamina apices abruptly reduced.
6. Rhizomes light brown to castaneous; pinnae (1.5-)2-2.7(-3.2) cm wide; Amazonia.. *M. guianensis*
- 6'. Rhizomes darkly castaneous to blackish; pinnae 1.3-1.7 cm wide; Atlantic forest.. *M. pradoi*

REFERENCE

- Moran, R.C., Labiak, P.H. & Sundue, M. 2010a. Phylogeny and character evolution of the bolbitidoid ferns (Dryopteridaceae). International Journal of Plant Sciences 171: 547–559.
- Moran, R.C., Labiak, P.H. & Sundue, M. 2010b. Synopsis of Mickelia, a newly recognized genus of bolbitidoid ferns (Dryopteridaceae). Brittonia 62: 337–356.
- Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. Biota Neotropica 17(4): e20170369.

Mickelia ×atrans R.C.Moran, Labiak & Sundue

DESCRIPTION

Leaf: bud absent; **lateral pinna pairs** 21 - 23; **venation** areolate without included free veins; **sterile pinna margin** serrate.

COMMENTS

Mickelia ×atrans is known only from the type, which was collected in southern Bahia, Brazil. It appears to be a hybrid between *M. pradoi* and *M. scandens*. Its spores are aborted, being of irregular sizes and shapes. In number of pinna pairs (21– 23) it resembles *M. scandens* ([16-]22–25) instead of *M. pradoi* (14–16), but by its dark rhizome it resembles *M. pradoi*. The hybrid's rhizome scales are short (1.5– 2.2 mm long) like those of *M. pradoi* (1.2–1.6 mm long) instead of the longer ones (4–5.5 mm) found in *M. scandens*, but in color and visibility of the cell lumens they appear intermediate between the two putative parents (Moran et al., 2010).

Life Form

Herb

Substrate

Hemiepiphytes

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

HERBARIUM MATERIAL

R.M. Harley, 17837, CEPEC, 20188, K, NY,  (NY00810525), Bahia, **Typus**

REFERENCE

Moran, R.C., Labiak, P.H. & Sundue, M. 2010. Synopsis of *Mickelia*, a newly recognized genus of bolbitiidoid ferns (Dryopteridaceae). *Brittonia* 62(4): 337–356.

Mickelia bernoullii (Kuhn ex Christ)

R.C.Moran, Labiak & Sundue

Has as synonym

basionym *Acrostichum bernoullii* Kuhn ex Christ

DESCRIPTION

Leaf: bud absent; **lateral pinna pairs** 8 - 19; **venation** areolate with included free veins; **sterile pinna margin** entire/crenate.

Life Form

Herb

Substrate

Hemiepiphytes

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre)

HERBARIUM MATERIAL

F.A. Michelangeli, 1321, NY, 1075378,  (NY01075378), Acre

Mickelia guianensis (Aubl.) R.C.Moran, Labiak & Sundue

Has as synonym

basionym *Polypodium guianense* Aubl.

DESCRIPTION

Leaf: bud absent; **lateral pinna pairs** 8 - 13; **venation** areolate without included free veins; **sterile pinna margin** serrate.

Life Form

Herb

Substrate

Hemiepiphytes

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

J.M. Pires, 51528, NY, (NY02596965), Amapá

M.H. Nee, 34952, NY, (NY02596971), Rondônia

C.R. Sperling, 5790, NY, (NY02596968), HUEFS (HUEFS151195), Pará

P.G. Windisch, 6450, US, (US01563221), Mato Grosso

W.A. Egler, 46696, US, (US01563227), NY, (NY02596964), Amapá

D. Daly, 6757, INPA, 173871, (INPA0173871), Acre

REFERENCE

Moran, R.C., Labiak, P.H. & Sundue, M. 2010. Synopsis of *Mickelia*, a newly recognized genus of bolbitiidoid ferns (Dryopteridaceae). *Brittonia* 62(4): 337–356.

Mickelia lindigii (Mett.) R.C.Moran, Labiak & Sundue

Has as synonym

basionym *Chrysodium lindigii* Mett.
homotype *Bolbitis lindigii* (Mett.) C.Chr.

DESCRIPTION

Leaf: bud absent; **lateral pinna pairs** 10 - 19; **venation** areolate with included free veins; **sterile pinna margin** crenate.

Life Form

Herb

Substrate

Hemiepiphytes

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará)

HERBARIUM MATERIAL

D. Daly, 10252, NY (NY00674431), MO, 6052408 (MO2082102), Acre

G. Zuquim, 408, INPA (INPA 223554), Amazonas

C.R. Sperling, 6037, NY (NY02596972), Pará

G.T. Prance, 12069A, NY, Acre

REFERENCE

Moran, R.C., Labiak, P.H. & Sundue, M. 2010. Synopsis of *Mickelia*, a newly recognized genus of bolbitiidoid ferns (Dryopteridaceae). *Brittonia* 62(4): 337–356.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): 1-59.

Mickelia nicotianifolia (Sw.) R.C.Moran, Labiak & Sundue

Has as synonym

basionym *Acrostichum nicotianifolium* Sw.
homotype *Bolbitis nicotianifolia* (Sw.) Alston

DESCRIPTION

Leaf: bud absent; **lateral pinna pairs** (1 -) 2 - 4; **venation** areolate with included free veins; **sterile pinna margin** entire.

Life Form

Herb

Substrate

Hemiepiphytes

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará)

Northeast (Maranhão)

HERBARIUM MATERIAL

W.R. Anderson, 12122, NY, (NY00868254), US, (US01563315), Acre

D. Daly, 9128, NY, (NY00403060), Acre

G.T. Prance, 16152, INPA, 34371, (INPA0034371), Amazonas

G. Zuquim, 286, INPA, (INPA 222304), INPA, 222304, , (INPA0222304), Amazonas

R.S. Fernandes, 635, MG, Maranhão

C.A.C. Ferreira, 2083, US, 2988102, (US01563314), NYBG, 02596973, (NY02596973), INPA, 96322, (INPA0096322), Pará

REFERENCE

Moran, R.C., Labiak, P.H. & Sundue, M. 2010. Synopsis of *Mickelia*, a newly recognized genus of bolbitiidoid ferns (Dryopteridaceae). *Brittonia* 62(4): 337–356.

Mickelia oligarchica (Baker) R.C.Moran, Labiak & Sundue

Has as synonym

basionym *Acrostichum oligarchicum* Baker

homotype *Bolbitis oligarchica* (Baker) R.C.Moran, Labiak & Sundue

DESCRIPTION

Leaf: bud present; **lateral pinna pairs 1;** **venation** areolate with included free veins; **sterile pinna margin** entire/undulate.

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

M. Silveira, 1361, UFACPZ, NY (NY00482545), Acre

REFERENCE

Moran, R.C., Labiak, P.H. & Sundue, M. 2010. Synopsis of Mickelia, a newly recognized genus of bolbitiidoid ferns (Dryopteridaceae). *Brittonia* 62(4): 337–356.

Prado, J., Hirai, R.Y. & Moran, R.C. 2017. Fern and lycophyte flora of Acre state, Brazil. *Biota Neotropica* 17(4): 1-59.

Mickelia pradoi R.C.Moran, Labiak & Sundue

DESCRIPTION

Leaf: bud absent; **lateral pinna pairs** 14 - 16; **venation** areolate without included free veins; **sterile pinna margin** serrate.

Life Form

Herb

Substrate

Hemiepiphytes

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

HERBARIUM MATERIAL

F.B. Matos, 1841, CEPEC, 126969, Bahia

P. Fiaschi, 2254, CEPEC, 100896, NY,  (NY00822312), Bahia, **Typus**

A.M. Amorim, 1147, CEPEC, 57596, RB, 477902,  (RB00554790), Bahia

REFERENCE

Moran, R.C., Labiak, P.H. & Sundue, M. 2010. Synopsis of *Mickelia*, a newly recognized genus of bolbitiidoid ferns (Dryopteridaceae). *Brittonia* 62(4): 337–356.

Mickelia scandens (Raddi) R.C.Moran, Labiak & Sundue

Has as synonym

basionym *Acrostichum scandens* Raddi

DESCRIPTION

Leaf: bud absent; **lateral pinna pairs** (16 -) 22 - 25; **venation** areolate without included free veins; **sterile pinna margin** serrate.

Life Form

Herb

Substrate

Hemiepiphytes

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia, Pernambuco)

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

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

HERBARIUM MATERIAL

I. Pontual, 254, IPA, 14181, PEUFR, 1869, Alagoas

F.B. Matos, 974, CEPEC, 110603, UPCB (UPCB0004673), Bahia

A. Salino, 14015, BHCB, 126291, Espírito Santo

C.A.W. Schwacke, 14616, BHCB, 1437, RB, (RB00687796), Minas Gerais

M.S. Lopes, 242, RB, (RB00687787), UFP, 37029, Pernambuco

F.B. Matos, 567, MBM (MBM333007), UPCB (UPCB0004493), Paraná

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

F. Gonzatti, 2391, VIC, 50386, , (VIC050386), HUCS, 44639, Rio Grande do Sul

J. Prado, 2025, RB, 593059, (RB00836472), SP, NY, São Paulo

A.R. Reitz, 286, RB (RB00687800), Santa Catarina

REFERENCE

Moran, R.C., Labiak, P.H. & Sundue, M. 2010. Synopsis of *Mickelia*, a newly recognized genus of bolbitiidoid ferns (Dryopteridaceae). *Brittonia* 62(4): 337–356.

Olfersia Raddi

This treatment is composed of the following taxa: *Olfersia*, *Olfersia cervina*, *Olfersia corcovadensis*.

HOW TO CITE

Pietrobom, M.R. 2020. *Olfersia* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91120>.

DESCRIPTION

Rupícolas as vezes terrícolas. **Caule** curto-reptante, ocasionalmente curto-trepador; **escamas** do caule linear, 25mm compr., 2 mm largura, amarelada a dourada, margens denticuladas a visivelmente inteiras, base truncada, basifixas. **Frondes estéreis** 0,5-1,3 m compr., 0,4-0,5m largura; **pecíolo** mais curto que a lâmina foliar, 20-50cm compr., escamoso na base, com escamas similares as do caule; **lâmina foliar** pinada com pina terminal conforme, subcoriácea, aparentemente glabra, mas com diminutas escamas; **pinas** ovado-lanceoladas a lanceoladas, comumente 15-30cm compr., 3-8cm largura, 4-12 pares, curto pecioladas, não articuladas a raque, margens inteiras, com base desigual, o lado basioscópico escavado, lado acroscópico amplamente arredondado, ápice agudo a acumulado; **venação livre**, furcada, vênulas conectadas por uma comissura submarginal. **Frondes fértileis** 1-2-pinadas, mais eretas e mais altas do que as frondes estéreis; **pecíolo** maior do que o pecíolo das frondes estéreis, 40-85cm compr.; **pinas** pectinadas, linear; **soros** sem indúcio, espalhados ao longo dos segmentos; **esporos** monoletes, equinulados.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Pará, Rondônia, Tocantins)

Northeast (Alagoas, Bahia, Ceará, 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)

IDENTIFICATION KEY

1. Pinas laterais estéreis com 5-12 pares; base da pina fortemente desigual, lado basioscópico escavado e acroscópico arredondado 1. *Olfersia cervina*

1. Pinas laterais estéreis com 3-4 pares; base da pina levemente desigual, os dois pares de pinas basais geralmente cuneado a acumulado, as vezes levemente desigual, lado basioscópico levemente escavado e acroscópico levemente arredondado, os pares de pinas medianos e distais são levemente desiguais, lado basioscópico levemente escavado a reto e acroscópico levemente arredondado a reto 1. *Olfersia corcovadensis*

REFERENCE

Moran, R. C. 1986. The Neotropical fern genus *Olfersia*. American Fern Journal 76(4): 161-178.

Olfersia cervina (L.) Kunze

Has as synonym

basionym *Osmunda cervina* L.

DESCRIPTION

Leaf: apex of the pinnae acuminate; **frond sterile** 5 or more pairs pinnae; **frond fertile** 1 to 2 pinnate; **pairs basal pinae** strongly non equal/rounded/hollow; **pairs distal pinae** strongly non equal.

ADDITIONAL DESCRIPTION

Caule curto-reptante, com escamas lineares, amarelada a dourada. **Pecíolo** com escamas na base semelhantes aos do caule; **lâmina** 1-pinda, com pina apical conforme; **pinas** ovado-lanceoladas a lanceoladas, 5-12 pares, curto pecioluladas, margem inteira, base fortemente desigual, lado basioscópico escavado e acroscópico arredondado, ápice agudo a acuminado; **nervuras** furcadas próximo da costa, paralelas, conectadas por uma vênula submarginal. **Frondes férteis** 1-2-pinada; pinas pectinadas, linear; soros anfiacrosticoides, exindusiados.

Life Form

Herb

Substrate

Rupicolous

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas, Pará, Rondônia, Tocantins)

Northeast (Alagoas, Bahia, Ceará, 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

M.R. Pietrobom-Silva, 1083, SJRP, 8655, Mato Grosso

M.R. Pietrobom-Silva, 1281, SJRP, 09463, Mato Grosso do Sul

J.F Souza, 189, BHCB, 163811, Minas Gerais

B.K. Canestraro, 323, MBM, 387175 (MBM387175), Paraná

M.S. Lopes, 274, MAC, 20254 (MAC0020254), Pernambuco

A.P. Fontana, 1274, MBML, 25650, Espírito Santo

M.R. Pietrobom, 4820, UFP, 32532, Alagoas

F.A. Carvalho, 265, INPA, 216033, Amazonas

F.B. Matos, 995, UPCB, 69009, Bahia

M.A. Neto, 49, EAC, 29212, (EAC0029212), Ceará

P. Fiaschi, 3849, SPF, 212817 (SPF00212817), Rio de Janeiro

A. Korte, 2836, FURB, 24164, (FURB08133), Santa Catarina

P.G. Delprete, 9878, UFG, 41956, Goiás

- G.A. Nóbrega, 390, UEC, 163258, (UEC019579), São Paulo
L.G. Sousa, s.n., VIC, 48794, Tocantins
R. G. Barbosa-Silva, 538, RB, , (RB01135878), Rio de Janeiro
Schwirkowski, P., 3296, FURB (FURB63659), Santa Catarina
M.R. Pietrobom, 9855, HBRA, 12174, Pará
A. Sehnem, 4215, INPA, 130486, (INPA0130486), Rio Grande do Sul
S.Z. Neiva, 258, HBRA, 12175, Rondônia
P. Schwirkowski, 3296, RB, (RB01418544), Santa Catarina

Olfersia corcovadensis Kaulf. ex Raddi

DESCRIPTION

Leaf: apex of the pinæ acute to acuminate/falcate; **frond sterile** 3 to 4 pairs pinæ; **frond fertile** 1; **pairs basal pinæ** slightly non equal/cuneate/acuminate; **pairs distal pinæ** slightly non equal.

ADDITIONAL DESCRIPTION

Caule curto-reptante, com escamas lineares, amarelada a dourada. **Pecíolo** glabro, exceto na base com escamas semelhantes aos do caule; **lâmina** 1-pinda, com uma pina apical conforme; **pinas estéreis** ovadas a lanceoladas, 3-4 pares, curto pecioladas, alternas, margem inteira, base levemente desigual, os dois pares de pinas basais geralmente cuneado a acuminado, as vezes levemente desigual, lado basioscópico levemente escavado e acroscópico levemente arredondado, os pares de pinas medianos e distais são levemente desiguais, lado basioscópico levemente escavado a reto e acroscópico levemente arredondado a reto, ápice acuminado, falcado; **nervuras** furcadas próximo da costa, paralelas, conectadas por uma vênula submarginal. **Frondes fértileis** 1-pinadas; pinas pectinadas, lineares; soros anfiacrosticoides, exindusiados.

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 (Rio de Janeiro)

South (Paraná)

HERBARIUM MATERIAL

M.G. Nunes, 295, UPCB, 94051 (UPCB0042056), Paraná

R. Schnell, 8367, P (P01537292), Rio de Janeiro

Parapolystichum (Keyserl.) Ching

This treatment is composed of the following taxa: *Parapolystichum*, *Parapolystichum acutum*, *Parapolystichum effusum*.

HOW TO CITE

Pietrobom, M.R. 2020. *Parapolystichum* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB618509>.

DESCRIPTION

Caule curto-reptante, com escamas. **Lâmina** 2-4-pinado-pinatíffida, anadrômica; **pinas proximais** mais desenvolvidas basiscopicamente; **raque** com duas bordas proeminentes na face adaxial, contínuas com a raquíola e costa, costa alada; **indumento** presente formado por tricomas glandulares adpressos abaxialmente no tecido laminar ou ausentes e tricomas clavados sobre a raque e a raquíola, escamas ausentes ou presentes; **gemas** presentes, próximas ao ápice da raque; **venação** livre, simples, vênulas visíveis ou inconspícuas em ambas as superfícies laminares, com ápice delgado. **Soros** com ou sem indúsio; **indúsio** quando presente arredondado-reniforme.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

North (Acre, Pará, Rondônia)

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

1. Indúsio ausente 2. *Parapolystichum effusum*
1. Indúsio presente, com tricomas cilíndricos 1. *Parapolystichum acutum*

Parapolystichum acutum (Kuntze) Labiak, Sundue & R.C. Moran

Has as synonym

basionym *Dryopteris acuta* Kuntze
homotype *Lastreopsis acuta* (Hook.) Tindale
homotype *Nephrodium acutum* Hook.

DESCRIPTION

Stem: stem short trailing; **scale of the stem** lanceolate. **Leaf:** division of the blade 2 pinnate pinnatifid/4 pinnate pinnatifid; **petiole** with bud node apex. **Type of sporangium:** indusium present.

ADDITIONAL DESCRIPTION

Caule curto-reptante, 0,6-0,8 cm espessura, com **escamas** lanceoladas, com margem inteira. **Pecíolo** com escamas semelhantes às da raque produzidas na gema abaixo do ápice; **lâmina** 2-4-pinada-pinnatifida, superfície adaxial, incluindo a costa e cóstula, glabras, superfície abaxial com tricomas cilíndricos amarelados espalhados; **raque** escamosa, com escamas inteiras lanceoladas; **gemas** escamosas presentes sobre a raque na base das pinas distais; **pinas** 2-3-pinado-pinnatifidas nas basais, 2-pinado-pinnatifidas nas medianas, catádromas, lanceoladas, acuminada com um ápice agudo serrilhado; **pínulas** lanceoladas, acuminado-mucronadas, curtamente estreitadas em direção a base, decurrentes, pinatífidas cerca 2/3, segmento maiores obliquamente denteados, os posteriores basais reduzidos e amplamente adnado-decurrente na costa; **venação** simples. **Indússios** decíduos, reniformes, com tricomas cilíndricos amarelados.

COMMENTS

De acordo com Paulo H. Labiak: *Nephrodium acutum* Hook. é um homônimo posterior (non Presl, 1825). Por isso é um nome ilegítimo. A combinação da Tindale em *Lastreopsis* (*Lastreopsis acuta* (Hook.) Tindale) também é ilegítima, pois foi baseada nem um nome ilegítimo. O nome do Kuntze (*Dryopteris acuta* Kuntze) é o nome mais antigo disponível para esta espécie, por isso que usamos este nome na combinação para *Parapolystichum*.

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 (Espírito Santo, Minas Gerais, São Paulo)

HERBARIUM MATERIAL

R.S. Cribari, 120, MBML, 47440 (MBML047440), Espírito Santo
F.R. Nonato, 382, HUEFS, 55230, (HUEFS055230), São Paulo

T.E. Almeida et al., 2099, BHCB, 133147,  (BHCB001202), Minas Gerais

Parapolystichum effusum (Sw.) Ching

Has as synonym

basionym *Polypodium effusum* Sw.
homotype *Lastreopsis effusa* (Sw.) Tindale

DESCRIPTION

Stem: stem short trailing; **scale of the stem** lanceolate. **Leaf:** division of the blade 3 pinnate pinnatifid/4 pinnate pinnatifid; **petiole** without bud. **Type of sporangium:** indusium absent.

ADDITIONAL DESCRIPTION

Caule curto-reptante, com **escamas** lanceoladas, castanhas, com margem inteira. **Pecíolo** com escamas na base semelhantes às do caule; **lâmina** 4-pinado-pinatífida, em lâminas menores 3-pinadas, deltoide, margem profundamente serreada, ápice pinatírido, gradualmente reduzido, tecido laminar glabro na superfície adaxial e com tricomas dispersos na superfície abaxial; **raque de 1º, 2º, 3º ordem** na superfície abaxial glabra, na superfície adaxial com densos tricomas curtos avermelhados no interior dos sulcos; **pinas** catádromas, deltóide-triangulares, pecioluladas, **pinas** 3-pinado-pinatífididas nas basais, 2-pinado-pinatisectas nas medianas, **pínulas** ovalado-lanceoladas, pecioluladas, ápice agudo, pinatírido; **costa da pina;** **costa da pina 4º ordem** na superfície adaxial glandulosa, na superfície abaxial glabra; **gemas** escamosas presentes sobre a raque principal na base das pinas distais; **venação** livre. **Soros** arredondados, amarelados, medianos; **indúcio** ausente.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

North (Acre, Pará, Rondônia)

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)

HERBARIUM MATERIAL

C.D.M. Ferreira, 340, RB, 658913 (RB01169605), Rio de Janeiro

D. Daly, 11421, MO, 3383478, Acre

M. Verdi, 4138, RB, 644274 (RB01100540), Santa Catarina

D.T. Souza, 1103, IAN, 187293 (IAN187293), Pará

P.G. Windisch, 9598, SJRP, 24934 (SJRPO0021751), Rio Grande do Sul

A. Salino, 311, SJRP, 2023 (SJRPO0022411), Mato Grosso

J. Prado et al., 2113, NY (NY02330528), São Paulo

M.R. Pietrobom-Silva, 1841, SJRP, 11543 (SJRPO0015501), Minas Gerais

M. Almeida-Neto, 179, SJRP, 24769 (SJRPO0015510), Ceará

A.P. Freitas, 145, HUEM, 33214 (HUEM000015594), Paraná
P.H. Labiak, 6181, UPCB, 91145 (UPCB0028396), Rondônia
O.J. Pereira, 2260, VIES, 5284 (VIES005284), Espírito Santo
E.L.M Catharino, 1899, UPCB, 93615 (UPCB0033686), Mato Grosso do Sul
F. Gonzatti, 4776, HUCS, 50049,  (HUCS003838), Bahia
C.E. Rodrigues Jr., 534, SJRP, 15933, Goiás
M.G.A. Lobo, 278, NY, 840471,  (NY00840471), Maranhão
D. Andrade-Lima, 5276, PACA, 78281, Pernambuco
D. Sucre, 444, US, 2682239,  (US01560523), Distrito Federal

Polybotrya Willd.

This treatment is composed of the following taxa: *Polybotrya*, *Polybotrya caudata*, *Polybotrya crassirhizoma*, *Polybotrya cylindrica*, *Polybotrya espiritosantensis*, *Polybotrya fractiserialis*, *Polybotrya glandulosa*, *Polybotrya goyazensis*, *Polybotrya matosii*, *Polybotrya osmundacea*, *Polybotrya pilosa*, *Polybotrya pubens*, *Polybotrya semipinnata*, *Polybotrya sessilisora*, *Polybotrya sorbifolia*, *Polybotrya speciosa*, *Polybotrya tomentosa*.

HOW TO CITE

Canestraro, B.K. 2020. *Polybotrya* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91122>.

DESCRIPTION

Plantas escandentes, terrícolas não escandentes (duas espécies) ou hemiepífitas (raramente). Caule curto ou longo-reptante, 1-3,5 cm de espessura, monopodial, dictiotélico, com 5-12 feixes vasculares arranjados circularmente, cada feixe rodeado por uma bainha negra de esclerênquima e traços foliares interligando os feixes em um semicírculo; aeróforos geralmente presentes, lineares e contínuos, formando duas linhas laterais no pecíolo; mucilagem caulinar geralmente presente; escamas numerosas recobrindo o caule, basifixas, patentes ou adpressas, opacas ou brilhantes, castanhas, avermelhadas, alaranjadas ou amareladas, margens inteiras, denticuladas, erosas ou laceradas, não clatradas; pecíolo com 8-16 feixes vasculares em formato de cogumelo invertido, estramíneo, sulcado adaxialmente, com escamas na base. Frondes estéreis até 2 m compr., 1-4 pinadas, geralmente lanceoladas, base deltóide ou cuneada, ápice pinatífido ou subconforme (raramente), reflexas quando adultas; lâmina papirácea a subcoriácea; pinas alternas, contínuas com a raque, lineares, lanceoladas ou deltoides, simétricas ou prolongadas acroscopicamente, pinas basais raramente prolongadas basiscópicamente; pínulas todas catadrônicas ou anadrônicas ou anadrônicas nas pinas basais e catadrônicas nas pinas medianas e apicais, base simétrica ou assimétrica, quando assimétrica o lado basiscópico reduzido e oblíquo, sulcos das cóstulas decurrentes; tricomas diminutos unicelulares a longos pluricelulares, 0,1-2,0 mm, avermelhados a alvos, cilíndricos a achatados, presentes sobre a face abaxial ou adaxial da fronde; margem dos segmentos pilosa ou glabra; raque trisulcada basalmente, unisulcada em direção ao ápice, sulcos geralmente pubescentes; venação livre ou anastomosada com terminações próximas à margem, hidatódios ausentes. Frondes férteis com tecido laminar reduzido, semelhante a um esqueleto da folha estéril, efêmeras, produzidas no ápice caulinar; paráfises geralmente presentes, ramificadas, simples ou com uma bifurcação discreta (raramente), glândulas presentes ou ausentes; venação livre e furcada ou diplodésmica (sistema secundário de nervuras sob as nervuras normais da lâmina, abaixo dos esporângios); soros sem indúcio e de três tipos: 1) arredondado, discreto e pinatidicamente arranjado nos ápices dos peciolulos (botrióide), 2) oblongo ou linear, formado pela fusão de diversos soros (cenosoro) e 3) soros em ambas superfícies de uma pínula caudada (anfiacrosticóide); esporângios com 64 esporos, cápsula glabra ou raramente pilosa; pedicelo com três fileiras de células apicalmente e duas basalmente, ânulo com 15-22 células; esporos 45-65 micro m, castanho-escuros em microscópio óptico e alaranjados em lupa, monoletos, abertura linear com 1/3 a 3/4 compr. do eixo longitudinal, exósporo liso, perisporo com duas camada e dobras infladas e equinadas em várias escalas. x = 41.

Life Form

Herb, Liana/scendent/vine

Substrate

Hemiepíphytes, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

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

Possible occurrences

North (Rondônia)
 Central-west (Distrito Federal)
 Southeast (Espírito Santo, Minas Gerais)

IDENTIFICATION KEY

- 1 Caule curto-reptante, plantas terrestres e não escandentes quando maduras
- 2 Glândulas sésseis globosas presentes na face abaxial da lâmina, ápice foliar com 3-7 lobos ... *Polybotrya sorbifolia* 2' Glândulas ausentes, ápice foliar com 2 ou 3 lobos *Polybotrya fractiserialis*
- 1' Caule longo-reptante; plantas maduras escandentes
- 3 Frondes estéreis adultas pinadas a bipinadas basalmente, com a margem inteira 4 Frondes pinadas a bipinadas (raramente) quando maduras; Norte do Brasil 5 Pinas inteiras; lâmina abaxial glabra a subglabra . *Polybotrya crassirhizoma* 5' Pinas pinatífidas a pinatissectas; lâmina abaxial pubescente ... *Polybotrya pubens* 4' Frondes pinadas quando jovens e em direção ao ápice e bipinadas quando maduras e em direção à base; endêmica do Espírito Santo ... *Polybotrya espiritosantensis*
- 3' Frondes estéreis adultas bipinado-pinatífidas ou mais basalmente 6 Margem dos segmentos da fronde estéril glabra 7 Pínulas basais anadrônicas e pínulas medianas a apicais catadrônicas a opostas *Polybotrya osmundacea* 7' Pínulas todas anadrônicas 8 Soros botrióides *Polybotrya sessilisora* 8' Soros cenosóricos 9 Lâmina cartácea; pínulas lobadas e com o segmento basal acroscópico mais dividido que os demais; raque e raquíola pilosas (tricomas curtos de 0,2 mm); face abaxial subglabra com microescamas e tricomas sobre as nervuras .. *Polybotrya semipinnata* 9' Lâmina papirácea; pinulas não lobadas; raque e raquíola glabras; face abaxial glabra, com microescamas apenas *Polybotrya matosii* 6' Margem dos segmentos da fronde estéril pilosa 10 Escamas patentes e castanho-avermelhadas; paráfises nitidamente ramificadas 11 Face adaxial com tricomas em toda a lâmina; tricomas abaxiais recobrindo densamente toda a lâmina, especialmente sobre as nervuras, 0,2-0,6 mm compr., 3-6 células .. *Polybotrya tomentosa* 11' Face adaxial com tricomas apenas nos sulcos da raque e costa; tricomas abaxiais apenas sobre as nervuras, 0,3 mm compr., 2-4 células *Polybotrya speciosa* 10' Escamas addressas e castanhas a castanho-escuras; paráfises simples 12 Glândulas sésseis, castanhas, avermelhadas ou translúcidas geralmente presentes na face abaxial da lâmina 13 Pínulas das pinas basais anadrônicas e pínulas das pinas restantes opostas ou catadrônicas; soro anfiacrosticóide *Polybotrya goyazensis* 13' Pínulas todas catadrônicas; soro botrióide *Polybotrya glandulosa* 12' Glândulas ausentes 14 Escamas brilhantes e macias, com a margem denticulada a lacerada .. *Polybotrya pilosa* 14' Escamas opacas e rígidas, com a margem inteira a subinteira 15 Pínulas basais anadrônicas e medianas e apicais catadrônicas; soro cenosórico; pinas férteis deltóides *Polybotrya cylindrica* 15' Pínulas todas catadrônicas; soro anfiacrosticóide; pinas férteis caudadas .. *Polybotrya caudata*

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138. <https://www.ideals.illinois.edu/bitstream/handle/2142/26525/Bulletin34%281%29.pdf?sequence=2&isAllowed=y>
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya*(Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. Brittonia 67: 191-215.
- O gênero *Polybotrya* (Dryopteridaceae) da Floresta Atlântica do Brasil
https://fieldguides.fieldmuseum.org/sites/default/files/rapid-color-guides-pdfs/1033_brazil_polybotrya_da_mata_atlantica_1.pdf

Polybotrya caudata Kunze

Has as synonym

heterotypic *Polybotrya costaricensis* Brade

heterotypic *Polybotrya villosula* Christ

DESCRIPTION

Stem: trailling long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** opaque; **scale** concolor; **texture scale** stiff; **margin scale** entire/denticulate. **Leaf:** division bipinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** catadromous; **texture blade** chartaceous; **margin blade** pilose; **disposition hair** in veins abaxial or adaxial/in rachis and rachilla; **density hair on the blade** subglabrous; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori amphiacrostichoid. **Sporangium:** paraphyses simple.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, 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, Rondônia, Roraima)

Northeast (Bahia)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

E. F. D. Poeppig, s.n., B, **Typus**

G.T. Prance, 12069, RB, 6855,  (RB00661100), NY, F, LP, UC, Acre

R. Spruce, 2116, K,  (K000957015), Amazonas

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya caudata* Kunze



Figure 2: *Polybotrya caudata* Kunze



Figure 3: *Polybotrya caudata* Kunze

REFERENCE

Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.

Polybotrya crassirhizoma Lellinger

Has as synonym

heterotypic *Polybotrya macbridei* Lellinger

DESCRIPTION

Stem: trailling long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** patent; **colour scale** brown/orange; **scale** shiny; **scale** bicolor; **texture scale** downy; **margin scale** denticulate/erose. **Leaf:** **division** pinnate; **division** entire; **disposition pinna or pinnule** absent; **texture blade** papyraceous; **margin blade** glabrate; **disposition hair** in veins abaxial or adaxial/in rachis and rachilla; **density hair on the blade** subglabrous; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses absent.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre)

HERBARIUM MATERIAL

Schunke J., 268, US, F, GH, NY, UC, **Typus**

G.T. Prance, 12180, NY, Acre

Robbin C.Moran, 3640, RB, 356356,   (RB00661102)

REFERENCE

Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.

Polybotrya cylindrica Kaulf.

Has as synonym

heterotypic *Polybotrya frondosa* Féé

heterotypic *Polybotrya incisa* Link

DESCRIPTION

Stem: trailling long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** opaque; **scale** concolor; **texture scale** stiff; **margin scale** entire. **Leaf:** **division** bipinnate/tripinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** anadromous on the base and catadromous on the apex; **texture blade** papyraceous; **margin blade** pilose; **disposition hair** in veins abaxial or adaxial/on the blade abaxial or adaxial/in rachis and rachilla; **density hair on the blade** subglabrous; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses simple.

Life Form

Herb, Liana/scendent/vine

Substrate

Hemiepiphytes, 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

Chamisso L.A. von, s.n., LE, Santa Catarina, **Typus**

G. Hatschbach, 8141, RB, 391386, ,  (RB00661202), US

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya cylindrica* Kaulf.Figure 2: *Polybotrya cylindrica* Kaulf.Figure 3: *Polybotrya cylindrica* Kaulf.Figure 4: *Polybotrya cylindrica* Kaulf.



Figure 5: *Polybotrya cylindrica* Kaulf.

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya* (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. Brittonia 67: 191-215.

Polybotrya espiritosantensis Brade

DESCRIPTION

Stem: trailing long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** shiny; **scale** bicolor; **texture scale** downy; **margin scale** denticulate/erose. **Leaf:** **division** pinnate/bipinnate; **division** entire; **disposition pinna or pinnule** anadromous; **texture blade** chartaceous; **margin blade** glabrate; **disposition hair** in rachis and rachilla; **density hair on the blade** glabrate; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses simple/absent.

Life Form

Herb

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Espírito Santo)

HERBARIUM MATERIAL

A.C. Brade, 18224, RB, 56736, (RB00662344), RB, 56736, (RB00543375), RB, 56736, (RB00662505), RB, 56736, (RB00662503), RB, 56736, (RB00662501), RB, 56736, (RB00662500), RB, Espírito Santo, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya espiritosantensis* Brade



Figure 2: *Polybotrya espiritosantensis* Brade



Figure 3: *Polybotrya espiritosantensis* Brade



Figure 4: *Polybotrya espiritosantensis* Brade

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya* (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. Brittonia 67: 191-215.

Polybotrya fractiserialis (Baker) J. Sm.

Has as synonym

heterotypic *Polybotrya plumbicaulis* (Baker) J. Sm.

DESCRIPTION

Stem: trailling short; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** opaque; **scale** bicolor; **texture scale** stiff; **margin scale** entire/denticulate. **Leaf:** **division** pinnate; **division** entire; **disposition pinna or pinnule** absent; **texture blade** chartaceous/subcoriaceous; **margin blade** glabrate; **disposition hair** in rachis and rachilla; **density hair on the blade** glabrate; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** absent. **Type of sporangium:** sori cenosore. **Sporangium:** **paraphyses** with cell globose glandular on the base.

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)

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

HERBARIUM MATERIAL

Silva, M. R. & Rodrigues, Jr. C. E., 1170, HB, MO, MBM, Mato Grosso do Sul

R. Spruce, 4337, K, **Typus**

Costa, M.S.da, 38, UPCB (UPCB0004750), Rondônia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya fractiserialis* (Baker) J. Sm.Figure 2: *Polybotrya fractiserialis* (Baker) J. Sm.Figure 3: *Polybotrya fractiserialis* (Baker) J. Sm.

REFERENCE

Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.

Polybotrya glandulosa Mett. ex Kuhn

Has as synonym

heterotypic *Polybotrya subelliptica* Lellinger

DESCRIPTION

Stem: trailing long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** opaque; **scale** concolor/bicolor; **texture scale** stiff; **margin scale** entire. **Leaf:** division bipinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** catadromous; **texture blade** papyraceous; **margin blade** pilose; **disposition hair** in veins abaxial or adaxial/in rachis and rachilla; **density hair on the blade** abundant/subglabrous; size **hair** long with approximate 1.3 mm; **hair glandular** present side abaxial/absent; **microscale** present. **Type of sporangium:** sori botryoid. **Sporangium:** paraphyses simple.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Central-west (Goiás)

HERBARIUM MATERIAL

R. Spruce, 2116, NY,  (NY00149493), Goiás, **Typus**

REFERENCE

Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.

Polybotrya goyazensis Brade

Has as synonym

heterotypic *Polybotrya macedoi* Brade

DESCRIPTION

Stem: trailing long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** shiny; **scale** concolor; **texture scale** downy; **margin scale** denticulate/erose. **Leaf:** division bipinnate; **division** pinnatifid; **disposition pinna or pinnule** anadromous on the base and catadromous on the apex; **texture blade** papyraceous; **margin blade** pilose; **disposition hair** in veins abaxial or adaxial/on the blade abaxial or adaxial/in rachis and rachilla; **density hair on the blade** abundant/subglabrous; **size hair** short with approximate 0.4 mm; **hair glandular** present side abaxial; **microscale** present. **Type of sporangium:** sori amphiacrostichoid. **Sporangium:** paraphyses simple.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Seasonally Semideciduous Forest

Geographic Distribution

Confirmed occurrences

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

Southeast (Minas Gerais, São Paulo)

Possible occurrences

Central-west (Distrito Federal)

HERBARIUM MATERIAL

A.C. Brade, 15373, RB, NY, Goiás, **Typus**

G. Argent, 6336, 167443, (RB00661220), Mato Grosso

G. Argent, 6651, K, (K000956983), Mato Grosso

A. Macedo, 1447, RB, 66424, (RB00661478), Goiás, **Typus**

G. Argent, 6651, K, (K000956982), Mato Grosso

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya goyazensis* Brade



Figure 2: *Polybotrya goyazensis* Brade



Figure 3: *Polybotrya goyazensis* Brade

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya* (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. Brittonia 67: 191-215.

Polybotrya matosii Canestraro & Labiak

DESCRIPTION

Stem: trailing long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** shiny; **scale** bicolor; **texture scale** downy; **margin scale** lacerate. **Leaf:** **division** bipinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** anadromous; **texture blade** papyraceous; **margin blade** glabrate; **disposition hair** absent; **density hair on the blade** glabrate; **size hair** absent; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses simple.

Life Form

Herb, Liana/scendent/vine

Substrate

Hemiepiphytes, 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

Matos, F.B, 992, CEPEC, UPCB, Bahia, Typus

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya matosii* Canestraro & Labiak



Figure 2: *Polybotrya matosii* Canestraro & Labiak

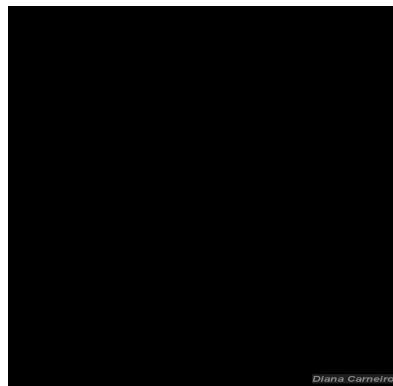


Figure 3: *Polybotrya matosii* Canestraro & Labiak



Figure 4: *Polybotrya matosii* Canestraro & Labiak

REFERENCE

Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya* (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. *Brittonia* 67: 191-215.

Polybotrya osmundacea Willd.

This treatment is composed of the following taxa: *Polybotrya osmundacea*, .

DESCRIPTION

Stem: trailling long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** opaque; **scale** concolor/bicolor; **texture scale** downy; **margin scale** denticulate/lacerate. **Leaf:** **division** bipinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** anadromous on the base and catadromous on the apex; **texture blade** papyraceous; **margin blade** glabrate; **disposition hair** in veins abaxial or adaxial/on the blade abaxial or adaxial/in rachis and rachilla; **density hair on the blade** subglabrous; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses simple.

Life Form

Herb, Liana/scendent/vine

Substrate

Hemiepiphytes, 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 (Amazonas, Pará, Roraima)

Northeast (Alagoas, Bahia, Pernambuco)

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

Possible occurrences

North (Rondônia)

HERBARIUM MATERIAL

F.W.H.A. von Humboldt, 459, B, F, GH, **Typus**

R.C.Moran, 3592, RB, 356358,  (RB00661486)

Calvin R. Sperling, 5915, GH, NY, Pará

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya osmundacea* Willd.



Figure 2: *Polybotrya osmundacea* Willd.



Figure 3: *Polybotrya osmundacea* Willd.



Figure 4: *Polybotrya osmundacea* Willd.



Figure 5: *Polybotrya osmundacea* Willd.

REFERENCE

Moran, R. C. 1987. Monographs of the neotropical fern genus Polybotrya (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.

Polybotrya pilosa Brade

DESCRIPTION

Stem: trailing long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** shiny/opaque; **scale** concolor/bicolor; **texture scale** downy; **margin scale** denticulate/erose/lacerate. **Leaf:** division bipinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** anadromous; **texture blade** papyraceous; **margin blade** pilose; **disposition hair** in veins abaxial or adaxial/in rachis and rachilla; **density hair on the blade** abundant; **size hair** long with approximate 1.3 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses simple/bifurcate discrete.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Is endemic from 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)

HERBARIUM MATERIAL

J. P. S. Condack, 149, RB, 482368, (RB00563459), Minas Gerais

A.C. Brade, 9787, RB, 109527, (RB00543378), RB, 109527, (RB00561341), RB, 109527, (RB00561342), R, HB, Rio de Janeiro, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya pilosa* Brade



Figure 2: *Polybotrya pilosa* Brade



Figure 3: *Polybotrya pilosa* Brade



Figure 4: *Polybotrya pilosa* Brade



Figure 5: *Polybotrya pilosa* Brade

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya* (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. Brittonia 67: 191-215.

Polybotrya pubens Mart.

Has as synonym

basionym *Polybotrya pubens* Kunze
heterotypic *Polybotrya decorata* Lellinger

DESCRIPTION

Stem: trailling long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** opaque; **scale** concolor; **texture scale** downy; **margin scale** denticulate. **Leaf:** division pinnate/bipinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** catadromous; **texture blade** papyraceous; **margin blade** pilose; **disposition hair** in veins abaxial or adaxial/in rachis and rachilla; **density hair on the blade** abundant; size **hair** long with approximate 1.3 mm; **hair glandular** present side abaxial/absent; **microscale** present. **Type of sporangium:** sori amphiacrostichoid. **Sporangium:** paraphyses simple.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Pará)

HERBARIUM MATERIAL

J. Prado, 1394, SP, Acre

Poeppig, s.n., K (K000590559), **Typus**

REFERENCE

Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.

Polybotrya semipinnata Féé

Has as synonym

heterotypic *Polybotrya scandens* (Raddi) Christ

DESCRIPTION

Stem: trailling long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** shiny; **scale** bicolor; **texture scale** downy; **margin scale** erose/lacerate. **Leaf:** division bipinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** anadromous; **texture blade** chartaceous; **margin blade** glabrate; **disposition hair** in veins abaxial or adaxial/in rachis and rachilla; **density hair on the blade** abundant/subglabrous; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** **sori** cenosore. **Sporangium:** **paraphyses** simple/bifurcate discrete.

Life Form

Herb, Liana/scendent/vine

Substrate

Hemiepiphytes, 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, São Paulo)

HERBARIUM MATERIAL

A. Salino, 7450, CESJ, 57314, (CESJ0057314), São Paulo

A.F.M. Glaziou, 2427, RB, 30589, (RB00561338), RB, 30589, (RB00561339), P, RB, RB, 30589, (RB00543381), K, (K000590545), Rio de Janeiro, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya semipinnata* FééFigure 2: *Polybotrya semipinnata* FééFigure 3: *Polybotrya semipinnata* FééFigure 4: *Polybotrya semipinnata* Féé

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya* (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. *Brittonia* 67: 191-215.

Polybotrya sessilisora R.C.Moran

DESCRIPTION

Stem: trailing long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** opaque; **scale** bicolor; **texture scale** downy; **margin scale** denticulate. **Leaf:** division bipinnate/tripinnate; **division** pinnatifid/pinnatisect; **disposition pinna or pinnule** anadromous; **texture blade** subcoriaceous; **margin blade** glabrate; **disposition hair** in rachis and rachilla; **density hair on the blade** glabrate; **size hair** median with approximate 0.9 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori botryoid. **Sporangium:** paraphyses simple.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Terra Firme Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

R.E.Schultes & I.Cabrera, 13963, US, COL, GH, **Typus**

A.C. Smith, 2984, K,  (K000957005)

J. Prado, 667, RB, 333842,  (RB00661437), Amazonas

G.T. Prance, 15332, K,  (K000957004), Amazonas

REFERENCE

Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.

Polybotrya sorbifolia Mett. ex Kuhn

Has as synonym

heterotypic *Polybotrya salicifolia* Lellinger

DESCRIPTION

Stem: trailling short; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** adpressed; **colour scale** brown; **scale** shiny; **scale** concolor; **texture scale** downy; **margin scale** entire/denticulate. **Leaf: division** pinnate; **division** entire; **disposition pinna or pinnule** absent; **texture blade** papyraceous/chartaceous; **margin blade** glabrate; **disposition hair** in veins abaxial or adaxial/in rachis and rachilla; **density hair on the blade** subglabrous; **size hair** short with approximate 0.4 mm; **hair glandular** present side abaxial; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses simple.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Terra Firme Forest, Seasonally Semideciduous Forest

Geographic Distribution

Confirmed occurrences

North (Pará, Roraima)

Northeast (Alagoas, Pernambuco)

Central-west (Goiás, Mato Grosso)

Southeast (Minas Gerais, São Paulo)

Possible occurrences

North (Rondônia)

HERBARIUM MATERIAL

G.T. Prance, 10466, NY, Roraima

G. Gardner, 1901, RB, 199238, (RB00661439), K, (K000590542), K, Pernambuco, **Typus**

P.G. Delprate, 9878, RB, 482134, (RB00563067), Goiás

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya sorbifolia* Mett. ex Kuhn



Figure 2: *Polybotrya sorbifolia* Mett. ex Kuhn



Figure 3: *Polybotrya sorbifolia* Mett. ex Kuhn

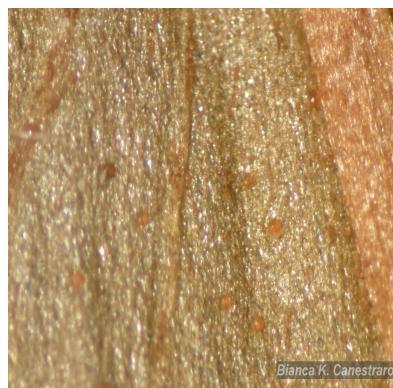


Figure 4: *Polybotrya sorbifolia* Mett. ex Kuhn



Figure 5: *Polybotrya sorbifolia* Mett. ex Kuhn



Figure 6: *Polybotrya sorbifolia* Mett. ex Kuhn

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya* (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. *Brittonia* 67: 191-215.

Polybotrya speciosa Schott

Has as synonym

heterotypic *Polybotrya osmundacea* subsp. *crispopaleacea* Rosenst.

heterotypic *Polybotrya rosenstockiana* Brade

DESCRIPTION

Stem: trailing long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** patent; **colour scale** reddish; **scale** shiny; **scale** concolor; **texture scale** downy; **margin scale** denticulate. **Leaf:** division bipinnate; division pinnatisect; **disposition pinna or pinnule** anadromous; **texture blade** papyraceous; **margin blade** pilose; **disposition hair** in veins abaxial or adaxial/in rachis and rachilla; **density hair on the blade** subglabrous; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses branched.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, 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, São Paulo)

Possible occurrences

Southeast (Espírito Santo, Minas Gerais)

HERBARIUM MATERIAL

C.M. Mynssen, 1084, RB, 466307, (RB00526515), Rio de Janeiro

A.C. Brade, 9843, 109500, (RB00661367), Rio de Janeiro

FIELD IMAGES / ILLUSTRATIONS



Bianca K. Canestraro

Figure 1: *Polybotrya speciosa* SchottFigure 2: *Polybotrya speciosa* SchottFigure 3: *Polybotrya speciosa* Schott

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus Polybotrya (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus Polybotrya (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. Brittonia 67: 191-215.

Polybotrya tomentosa Brade

Has as synonym

heterotypic *Polybotrya litoralis* Brade

DESCRIPTION

Stem: trailing long; **bundle** dictyostele with bundle circular in wrapping sheath black of the sclerenchymatose; **disposition scale** patent; **colour scale** reddish; **scale** shiny; **scale** concolor; **texture scale** downy; **margin scale** denticulate. **Leaf:** division bipinnate; **division** pinnatifid; **disposition pinna or pinnule** anadromous; **texture blade** papyraceous; **margin blade** pilose; **disposition hair** in veins abaxial or adaxial/on the blade abaxial or adaxial/in rachis and rachilla; **density hair on the blade** abundant; **size hair** short with approximate 0.4 mm; **hair glandular** absent; **microscale** present. **Type of sporangium:** sori cenosore. **Sporangium:** paraphyses branched.

Life Form

Herb, Liana/scandent/vine

Substrate

Hemiepiphytes, 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, São Paulo)

HERBARIUM MATERIAL

A.C. Brade, 10351, RB, Minas Gerais, **Typus**

A.C. Brade, 12616, RB, 30588, (RB00662461), RB, 30588, (RB00662321), RB, 30588, (RB00543383), RB, 30588, (RB00662462), Rio de Janeiro, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polybotrya tomentosa* BradeFigure 2: *Polybotrya tomentosa* BradeFigure 3: *Polybotrya tomentosa* BradeFigure 4: *Polybotrya tomentosa* Brade



Figure 5: *Polybotrya tomentosa* Brade



Figure 6: *Polybotrya tomentosa* Brade

REFERENCE

- Moran, R. C. 1987. Monographs of the neotropical fern genus *Polybotrya* (Dryopteridaceae). Illinois Natural History Bulletin 34: 1-138.
- Canestraro, B. K. & Labiak, P. H. 2015. The fern genus *Polybotrya* (Dryopteridaceae) in the Atlantic Forest of Brazil, with the description of a new species. Brittonia 67: 191-215.

Polystichum Roth

This treatment is composed of the following taxa: *Polystichum*, *Polystichum auritum*, *Polystichum bradei*, *Polystichum caudescens*, *Polystichum laniceps*, *Polystichum montevidense*, *Polystichum opacum*, *Polystichum pallidum*, *Polystichum platylepis*, *Polystichum platyphyllum*, *Polystichum rochaleanum*.

HOW TO CITE

Condack, J.P.S. 2020. *Polystichum* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90988>.

DESCRIPTION

Plantas terrestres, rupícolas ou saxícolas. **Caule** ereto ou levemente decumbente, raro reptante, escamoso; escamas lineares, lanceoladas a oblongas, castanho-claras a castanho-nigrescentes, não clatradas, translúcidas ou opacas, ápice longo acuminado a filiforme, inteiro, denteado a ciliado, torcido ou não, margem inteira, denteada a ciliada. **Folhas** monomorfias, raro subdimorfias, eretas a arqueadas, fasciculadas; pecíolo cilíndrico abaxialmente, sulcado adaxialmente, com três ou mais feixes vasculares organizados em forma de arco na base do pecíolo, revestido em toda a sua extensão por escamas lineares, lanceoladas, oblongas a ovadas, castanho-claras a nigrescentes, mais densamente na porção proximal, não raro dois ou mais tipos de escamas ocorrendo simultaneamente; lâmina pinada a bipinado-pinatífida, membranácea, cartácea ou coriácea, glabra ou escamosa; raque cilíndrica na face abaxial, às vezes profundamente sulcada na adaxial, glabrescente ou densamente revestida por escamas lineares a lanceoladas, margem inteira ou com dentes simples ou bifurcados, concóreto ou bicolores; gemas presentes ou não na inserção das pinas; veias livres, simples ou furcadas. **Soros** arredondados, cobertos por indúcio ou não; indúcio peltado e membranáceo, quando presente. **Esporos** monoletes, elipsoidais a esferoidais, perina sacada, alada ou equinada, superfície perfurada e equinulada.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Anthropic area, High Altitude Grassland, Seasonally Deciduous Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

1. Lâmina pinada a pinado-pinatífida
2. Soro com indúcio
3. Escamas da raque castanho-claras, translúcidas *Polystichum auritum*
3. Escamas da raque castanho-escuras a nigrescentes, opacas *Polystichum bradei*

2. Soro sem indúcio *Polystichum platyphyllum* (indivíduos jovens)
1. Lâmina 2-3 pinada
4. Gema presente na axila das pinas; ápice da lâmina longo atenuado
5. Margem das escamas da base do pecíolo densamente longo-ciliada, com células centrais alongadas (três vezes ou mais compridas que largas), paredes sinuosas *Polystichum platyphyllum*
5. Margem das escamas da base do pecíolo esparsamente curto-ciliada, com células centrais curto-hexagonais (no máximo duas vezes mais compridas que largas), paredes retilíneas *Polystichum opacum*
4. Gema ausente; ápice da lâmina agudo a acuminado, se longo atenuado, as margens das escamas da base do pecíolo são densamente longo ciliadas
6. Escamas aracnóides presentes na face abaxial das pínulas; escamas da base do pecíolo castanho-avermelhadas, pecíolo e raque densamente revestido por escamas ao longo de todo eixo *Polystichum caudescens*
6. Escamas aracnóides ausentes; escamas da base do pecíolo castanhas a nigrescentes ou bicolores com uma estreita margem hialina
7. Tricomas glandulares presentes no tecido laminar da face adaxial da pínula; escamas da base do pecíolo castanho escuro a nigrescentes; escamas da raque castanho-claras *Polystichum montevidense*
7. Tricomas glandulares ausentes; escamas da base do pecíolo castanhas a nigrescentes ou bicolores; escamas da raque castanho-claras a nigrescentes
8. Aurícula das pínulas com ápice arredondado a obtuso; superfície do esporo sem cristas *Polystichum rochaleanum*
8. Aurícula das pínulas com ápice agudo; superfície do esporo cristada ou alada
9. escamas da base do pecíolo castanhas e com a margem densamente longo-ciliada *Polystichum platyphyllum*
9. escamas da base do pecíolo castanhas a nigrescentes e com margem inteira, denteadas ou com poucos cílios na porção apical
10. Escamas da base do pecíolo lanceoladas a oblongo-lanceoladas, castanhas a nigrescentes ou bicolores com uma banda central mais escura e margens mais claras a hialinas *Polystichum platylepis*
10. Escamas da base do pecíolo lineares a lanceoladas, castanho-claro a douradas ou castanho-escuro
11. Lâmina foliar 10-40 cm de comp., folha com 7-20 pares de pinas, pínulas menores que 3,5 cm e mais estreitas que 1,5 cm *Polystichum laniceps*
11. Lâmina foliar maior que 50 cm, folha com 11-15 pares de pinas, pínulas maiores que 3,5 cm e mais largas que 1 cm *Polystichum pallidum*

Polystichum auritum (Fée) Yatsk.

DESCRIPTION

Stem: size short; **position** erect; **type of the indumentum** scale; **density of the indumentum** densely squamose; **form of the scale** elliptic/linear/oblong lanceolate; **colour of the scale** brown pale/translucid; **apex of the scale** acuminate/filiform/twining; **margin of the scale** dentate/fimbriate. **Leaf:** division pinnate; **texture of the blade** coriaceous/chartaceous; **indumentum of the blade foliar** with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate/linear; **colour of the scale** brown pale/translucid; **apex of the scale** filiform; **margin of the scale** ciliate/dentate. **Type of sporangium:** indusium peltate present brown opaque membranous margin entire to erose; **leptosporangium** pedicellate/glabrous. **Spore:** perine winged; **surface** perforate/echinulate.

ADDITIONAL DESCRIPTION

Caule 5-7 cm comp. Folhas 2-11 por caule. Pecíolo 20-47 x 0,2-0,4 cm (> 1/2 do comprimento da lâmina). Lâmina foliar 34-62 x 12-22 cm. Pinas 20-32 pares. Pinas medianas 6,5-11 x 1,2-1,5 cm.

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 (Espírito Santo, Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

A.C. Brade, 16513, RB, 43153, (RB00720023), Rio de Janeiro

A.F.M. Glaziou, 4431, RB, 36222, (RB00661048), Rio de Janeiro, **Typus**

R.C. Forzza, 3411, RB, 400751, (RB00661043), Rio de Janeiro

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polystichum auritum* (Fée) Yatsk.



Figure 2: *Polystichum auritum* (Fée) Yatsk.



Figure 3: *Polystichum auritum* (Fée) Yatsk.

Polystichum bradei Rosenst.

DESCRIPTION

Stem: size short; **position** erect/ slightly decumbent; **type of the indumentum** scale; **density of the indumentum** densely squamose; **form of the scale** lanceate/oval-lanceolate; **colour of the scale** brown dark/black; **apex of the scale** acuminate; **margin of the scale** dentate. **Leaf:** **division** pinnate; **texture of the blade** coriaceous; **indumentum of the blade foliar** with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate; **colour of the scale** black; **apex of the scale** filiform; **margin of the scale** dentate. **Type of sporangium:** indusium peltate present brown opaque membranous margin entire to erose; leptosporangium pedicellate/glabrous. **Spore:** perine winged; surface perforate/echinulate.

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 (Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

A.C. Brade, 6482, HB, Rio de Janeiro, **Typus**

A.C. Brade, 6482, NY, 149443, (NY00149443), Rio de Janeiro, **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polystichum bradei* Rosenst.



Figure 2: *Polystichum braeui* Rosenst.



Figure 3: *Polystichum braeui* Rosenst.

Polystichum caudescens Dutra

DESCRIPTION

Stem: size long; **position** erect/slightly decumbent; **type of the indumentum** scale; **density of the indumentum** densely squamose; **form of the scale** lanceate/oblong; **colour of the scale** brown dark; **apex of the scale** filiform/twining; **margin of the scale** ciliate/dentate. **Leaf:** **division** bipinnate/bipinnate pinnatifid; **texture of the blade** coriaceous/chartaceous; **indumentum of the blade foliar** with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate/linear/oblong lanceolate; **colour of the scale** brown dark/translucid; **apex of the scale** acuminate; **margin of the scale** ciliate/dentate. **Type of sporangium:** indusium peltate absent; leptosporangium pedicellate/glabrous. **Spore:** perine winged; **surface** perforate/echinulate.

ADDITIONAL DESCRIPTION

Caule com até 30 cm comp. por 10 cm diam. Folhas 3-12 por caule. Pecíolo 40-73 x 0,8-1,0 cm (ca. 1/2 do comp. da lâmina) Lâmina foliar 52-82 x 25x34 cm. Pinas 30-40 pares. Pinas medianas 13-14 x 2-3,5 cm. Pínulas 1-1,5 x 0,3-0,6 mm.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

Southeast (São Paulo)

South (Rio Grande do Sul)

HERBARIUM MATERIAL

A.C. Brade, 20713, RB, 73819, , (RB00702164), São Paulo
Dutra, J., 216, RB, (RB00543401), Rio Grande do Sul, **Typus**
Campos Porto, 3036, RB, 32316, , (RB00661147), São Paulo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polystichum caudescens* Dutra



Figure 2: *Polystichum caudescens* Dutra



Figure 3: *Polystichum caudescens* Dutra

Polystichum laniceps Rosenst.

DESCRIPTION

Stem: size short; **position** erect/ slightly decumbent; **type of the indumentum** scale; **density of the indumentum** densely squamose; **form of the scale** lanceate; **colour of the scale** brown pale/translucid; **apex of the scale** filiform/twining; **margin of the scale** ciliate/dentate. **Leaf:** **division** bipinnate; **texture of the blade** chartaceous; **indumentum of the blade foliar** with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate/linear; **colour of the scale** brown pale; **apex of the scale** filiform; **margin of the scale** ciliate/dentate. **Type of sporangium:** **indusium peltate** absent; **leptosporangium** pedicellate/glabrous. **Spore:** perine winged; **surface** perforate/echinulate.

ADDITIONAL DESCRIPTION

Caule com ca. 5 cm comp. por 3 cm de diam. Pecíolo 8-36 x 0,2-0,3 cm (ca. 1/2 do compr. da folha). Lâmina foliar 10-40 x 8-25 cm. Pinas 7-20 pares. Pinas medianas 6,5-20 x 1,2-5 cm. Pínulas 9-16 pares, menores que 3,5 x 1,5 cm.

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

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Jürgens, C., 276, RB

Jürgens, C., 179, NY,  (NY00149448), Rio Grande do Sul, **Typus**

Polystichum montevidense (Spreng.) Rosenst.

DESCRIPTION

Stem: size long; **position** erect/slightly decumbent; **type of the indumentum** scale; **density of the indumentum** densely squamose; **form of the scale** lanceate/ovate; **colour of the scale** brown dark; **apex of the scale** acuminate; **margin of the scale** ciliate/entire. **Leaf:** **division** bipinnate; **texture of the blade** chartaceous; **indumentum of the blade foliar** with scale/with hair; **indumentum of the rachis** with scale; **form of the scale** lanceolate; **colour of the scale** black/brown dark; **apex of the scale** filiform; **margin of the scale** fimbriate/entire. **Type of sporangium:** **indusium peltate** absent; **leptosporangium** pedicellate/glabrous. **Spore:** perine winged; **surface** perforate/echinulate.

ADDITIONAL DESCRIPTION

Caule 10-12 cm comp. x 7-8 cm de diam. Folhas 5-12 por caule. Pecíolo 27-55 x 0,3-0,8 cm (ca. de 1/2 do comp. da folha). Lâmina foliar 35-72 x 13-28 cm. Pinas 25-40 pares. Pinas mediana 9-19 x 1,5-2,2 cm.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

F. Sellow, s.n., K, (K000954598)

Condack, J.P.S., 694, R

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polystichum montevidense* (Spreng.) Rosenst.



Figure 2: *Polystichum montevidense* (Spreng.) Rosenst.



Figure 3: *Polystichum montevidense* (Spreng.) Rosenst.

REFERENCE

Condack, J.P.S.; McHenry, M.A.; Morero, R.E.; Sylvestre, L.S. & Barrington, D.S. 2013. *Polystichum montevidense* Demystified: Molecular and Morphological Data Reveal a Cohesive, Widespread South American Species. *American Fern Journal* 103(2): 118-130.

Polystichum opacum Rosenst.

DESCRIPTION

Stem: size short; **position** erect; **type of the indumentum** scale; **density of the indumentum** sparsely squamose; **form of the scale** lanceate/oblong lanceolate; **colour of the scale** brown pale; **apex of the scale** acuminate; **margin of the scale** ciliate. **Leaf:** **division** bipinnate; **texture of the blade** chartaceous; **indumentum of the blade foliar** with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate/oblong lanceolate; **colour of the scale** brown pale; **apex of the scale** filiform; **margin of the scale** ciliate. **Type of sporangium:** indusium peltate absent; leptosporangium pedicellate/glabrous. **Spore:** perine winged; **surface** perforate/echinulate.

ADDITIONAL DESCRIPTION

Caule 3-5 cm de comp. x 1-2 cm de diam. Folhas 3-7 por caule. Pecíolo 17-22 x 0,2-0,7 cm. Lâmina foliar 28-45 x 12-22 cm. Portando uma ou mais gemas nas axilas das pinas. Pinas 10-14 pares. Pinas medianas 6,5-11,5 x 1,2-1,5 cm.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

Southeast (Minas Gerais)

South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

Jürgens L.C., 140, P (P00636328), **Typus**

Jürgens L.C., 140, P (P00636329), **Typus**

Jürgens, 140, RB, 36224, (RB00288186)

A.P. Duarte, 3073, RB, 71899, (RB00660994)

A.C. Brade, 17979, RB, 52545, (RB00661321)

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polystichum opacum* Rosenst.



Figure 2: *Polystichum opacum* Rosenst.

Polystichum pallidum Gardner

Has as synonym

heterotypic *Polystichum lanosum* Féé

DESCRIPTION

Stem: size short; **position** erect; **type of the indumentum** scale; **density of the indumentum** sparsely squamose; **form of the scale** lanceate; **colour of the scale** brown dark; **apex of the scale** acuminate; **margin of the scale** dentate. **Leaf:** division bipinnate; **texture of the blade** chartaceous; **indumentum of the blade foliar** with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate; **colour of the scale** brown dark; **apex of the scale** filiform; **margin of the scale** dentate. **Type of sporangium:** indusium peltate absent; leptosporangium pedicellate/glabrous. **Spore:** perine winged; surface perforate/echinulate.

ADDITIONAL DESCRIPTION

Caule 6 x 3 cm. Folhas 3-13 por caule. Pecíolo 28-53 x 0,3-0,8 cm. (#1/2 do comp. da lâmina). Lâmina foliar 51-70 x 27-42 cm. Pinas 11-14 pares. Pinas medianas 17-22 x 4,5-8,5 cm. Pínulas maiores que 3,5 cm comp. por 1 cm larg.

Life Form

Herb

Substrate

Rupicolous, 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

Condack, 662, RBR, Rio de Janeiro

A.C. Brade, 14154, RB, 109537,  (RB00661555)

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polystichum pallidum* Gardner

Polystichum platylepis Féé

Has as synonym

heterotypic *Polystichum aculeolatum* Féé
 heterotypic *Polystichum giganteum* Féé
 heterotypic *Polystichum longecuspis* Féé
 heterotypic *Polystichum microsorium* Féé
 heterotypic *Polystichum tijucense* Féé

DESCRIPTION

Stem: size short; **position** erect/slightly decumbent; **type of the indumentum** scale; **density of the indumentum** densely squamose/sparsely squamose; **form of the scale** lanceate/oblong lanceolate; **colour of the scale** brown dark/black/bicolor with portion central dark and margin hyaline; **apex of the scale** acuminate; **margin of the scale** ciliate/dentate/entire. **Leaf:** division bipinnate/bipinnate pinnatifid; **texture of the blade** chartaceous; **indumentum of the blade foliar** with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate/linear; **colour of the scale** black/brown dark; **apex of the scale** filiform/twining; **margin of the scale** dentate. **Type of sporangium:** indusium peltate absent; leptosporangium pedicellate/glabrous. **Spore:** perine winged; surface perforate/echinulate.

ADDITIONAL DESCRIPTION

Folhas 3-11 por caule. Pecíolo 18-92 x 0,3-1,0 cm. (ca. 1/2 do comp. da folha). Lâmina foliar 22-110 x 10-39 cm. Pinas 10-39 pares. Pinas medianas 7-21 x 1,5-5 cm.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Anthropic area, High Altitude Grassland, Seasonally Deciduous Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)
 Central-west (Mato Grosso)
 Southeast (Espírito Santo, Minas Gerais, Rio de Janeiro, São Paulo)
 South (Paraná, Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

A.F.M. Glaziou, 2354, P (P00636450), Rio de Janeiro, **Typus**
 A.F.M. Glaziou, 2065, P (P00636436), Rio de Janeiro, **Typus**
 A.F.M. Glaziou, 2355, P (P00636393), Rio de Janeiro, **Typus**
 A.F.M. Glaziou, 2355, P (P00636391), Rio de Janeiro, **Typus**
 A.F.M. Glaziou, 2357, K (P00636373), Rio de Janeiro, **Typus**
 A.F.M. Glaziou, 2065, P (P00636354), Rio de Janeiro, **Typus**
 A.F.M. Glaziou, 2065, P (P00636353), Rio de Janeiro, **Typus**
 A.F.M. Glaziou, 5273, K (P00636324), Rio de Janeiro, **Typus**

A.F.M. Glaziou, 2356, P (P00636321), Rio de Janeiro, **Typus**
A.F.M. Glaziou, 2356, P (P00636320), Rio de Janeiro, **Typus**

Polystichum platyphyllum (Willd.) C.Presl

DESCRIPTION

Stem: size short; **position** erect/ slightly decumbent; **type of the indumentum** scale; **density of the indumentum** densely squamose; **form of the scale** lanceate/oblong lanceolate; **colour of the scale** brown pale/translucid; **apex of the scale** acuminate; **margin of the scale** ciliate. **Leaf:** **division** pinnate/bipinnate; **texture of the blade** chartaceous; **indumentum of the blade** foliar with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate; **colour of the scale** brown pale; **apex of the scale** filiform; **margin of the scale** ciliate. **Type of sporangium:** indusium peltate absent; leptosporangium pedicellate/glabrous. **Spore:** perine winged; surface perforate/echinulate.

ADDITIONAL DESCRIPTION

Folhas 3-9 por caule. Pecíolo 6-35 x 0,1-0,3 cm. Lâmina foliar 16-64 x 5-24 cm. Ápice longo atenuado, geralmente portando gemas. Pinas 9-35 pares. Pinas medianas 6,5-11,5 x 1,2-1,5 cm.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

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

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

HERBARIUM MATERIAL

H.S. Irwin, 17873, NY,  (NY00875321), Goiás

Polystichum rochaleanum Glaz. ex Fée

DESCRIPTION

Stem: size short; **position** erect/slightly decumbent; **type of the indumentum** scale; **density of the indumentum** sparsely squamose; **form of the scale** oblong; **colour of the scale** brown dark/black/bicolor with portion central dark and margin hyaline; **apex of the scale** acuminate; **margin of the scale** ciliate/dentate/fimbriate. **Leaf:** **division** bipinnate; **texture of the blade** chartaceous; **indumentum of the blade foliar** with scale; **indumentum of the rachis** with scale; **form of the scale** lanceolate; **colour of the scale** black; **apex of the scale** filiform/twining; **margin of the scale** dentate. **Type of sporangium:** indusium peltate absent; leptosporangium pedicellate/glabrous. **Spore:** perine echinate; surface perforate/echinulate.

ADDITIONAL DESCRIPTION

Caule ca. 5 x 3 cm. Folhas 2-7 por caule. Pecíolo 18-35 x 0,2-0,3 cm (ca. 1/2 do comp. da folha). Lâmina foliar 16-38 x 10-14 cm. Pinas 12-32 pares por caule. Pinas medianas 7-15 x 1-1,5 cm. Pínulas 7-14 pares na pina mediana.

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 (Espírito Santo, Minas Gerais, Rio de Janeiro)

HERBARIUM MATERIAL

A.C. Brade, 15543, RB, RB, 32854,  (RB00661484), Rio de Janeiro

A.F.M. Glaziou, 5272, P (P00636358), **Typus**

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Polystichum rochaleanum* Glaz. ex Féé



Figure 2: *Polystichum rochaleanum* Glaz. ex Féé



Figure 3: *Polystichum rochaleanum* Glaz. ex Féé

Rumohra Raddi

This treatment is composed of the following taxa: *Rumohra*, *Rumohra adiantiformis*, *Rumohra glandulosissima*, *Rumohra quadrangularis*.

HOW TO CITE

Prado, J., Hirai, R.Y., Sundue, M. 2020. *Rumohra* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91139>.

DESCRIPTION

Plants terrestrial, epipetric, epiphyte, or climbing; roots inserted ventrally; rhizomes long-creeping, frequently branching, dictyostelic, with an elongate ventral meristele, densely scaly, the scales ovate to broadly lanceolate, or deltate, subpeltately or pseudopeltately attached, sub-clathrate; leaves dorsal, monomorphic; petioles grooved adaxially, moderately to densely scaly throughout, the scales sub-peltately attached, subclathrate, sometimes also with glandular hairs; laminae deltate to narrowly deltate, lanceolate to broadly lanceolate, sometimes rhombic; proximally 2–3-pinnate-pinnatifid, becoming gradually less divided toward the pinnatifid apex, glabrous or with glandular hairs; rachises with scales like those of the petioles but more reduced, glabrous to occasionally with glandular hairs; pinnae stipitate or short-stipitate, lanceolate to narrowly deltate, slightly asymmetrical and enlarged basiscopically; veins free; sori roundish, medial, indusiate, not paraphysate, receptacle brown to black, indusium peltate, roundish, deciduous, glabrous, sometimes glandular; spores ellipsoidal, monolet.

COMMENTS

Rumohra was established by Raddi (1819) based on Brazilian material that he named *Rumohra aspidioides* Raddi (= *R. adiantiformis* (G. Forst.) Ching). It can be distinguished from other genera in the family by a long-creeping rhizome, with an elongate ventral meristele, dorsal leaf arrangement, ventral root insertion, and peltate indusia.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

Central-west (Distrito Federal, 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 *Rumohra* in Brazil

1. Laminar tissue provided with two types of glandular hairs, the first type erect, capitate, 0.1 mm long, hyaline, without exudate, the second type sessile (dot-like), ca. 0.1 mm wide, and less than 0.1 mm tall surrounded by a shiny reddish exudate *R. glandulosissima*
1. Laminar tissue lacking glands, or if present, the hairs of a single type, minute, 0.01 mm long, capitate, two-celled, clear, and without any exudate
 2. Laminae widest in the middle, proximally 3-pinnate-pinnatifid; pinnae forming 8–15 pairs; base of petiole scales with margins often ciliate, the cilia up to 0.5 mm long; spores tuberculate (visible at 100x)
..... *R. adiantiformis*
 2. Laminae widest just below the middle, proximally 2-pinnate-pinnatifid; pinnae forming (16–)18–22 pairs, base of petiole scales with weakly denticulate margins; spores echinate (visible at 100x)
..... *R. quadrangularis*

REFERENCE

Sundue, M., Hirai, R.Y. & Prado, J. 2013. *Rumohra glandulosissima* (Dryopteridaceae) a new species from the Atlantic Rainforest, and revision of the species occurring in Brazil. Systematic Botany 38(4): 915–924.

Rumohra adiantiformis (G.Forst.) Ching

Has as synonym

homotype *Polystichum adiantiforme* (G.Forst.) J.Sm.

heterotypic *Polystichum coriaceum* Schott

heterotypic *Polystichum remotum* Fée

DESCRIPTION

Stem: horizontal with/scale/margin/denticulate/or/entire. **Leaf:** frond tripinnate/pinnatifid. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous/or/glandular. **Spore:** monolete surface/tuberculate.

ADDITIONAL DESCRIPTION

Plants terrestrial, epipetric, or climbing; roots inserted ventrally; rhizomes long-creeping, frequently branching, 6–12mm diam., dictyostelic, with an elongate ventral meristele, densely scaly, the scales 4–9 x 2.5–6.0 mm, ovate, pseudopeltately attached, the base cordate, the apex acute, the margins entire to denticulate, medium brown, sub-clathrate; leaves dorsal, spaced 1.5–2.5 cm apart along the rhizome, 25–120 cm long, monomorphic; petioles 10–50 cm x 2.0–7.0 mm, brown, grooved adaxially, moderately to densely scaly throughout, the scales sub-peltately attached, pale- to medium-brown, subclathrate, the apices long-attenuate to filiform, tortuous, the margins sparsely denticulate to denticulate, the scales of the basal petiole up to 5–10 x 2.5–3.5 mm, broadly lanceolate, the scales of the medial and distal petiole up to 5–10 x 0.5–1.5 mm, lanceolate, to broadly lanceolate, bases often with ciliate margins, the cilia up to 0.5 mm long, detached scales leaving behind a conspicuous darkened scale base; laminae (12–)18–40 x (14–)18–28 cm, lanceolate to broadly lanceolate, sometimes rhombic, widest in the middle of the lamina, proximally 3-pinnate-pinnatifid, becoming gradually less divided toward the pinnatifid apex; rachises with scales like those of the petioles but more reduced, abaxially rounded, adaxially with a central raised ridge flanked on both sides by a groove and lateral ridge, the lateral ridges continuous with the leaf margin and departing from the rachis to form the basal margin of each pinna, glabrous to occasionally moderately glandular, the glands capitate, minute, ca. 0.1 mm long, hyaline to reddish brown, apparently composed of 1 cell, without any exudate; pinnae forming 8–15 pairs, basal pinnae 4.0–20.0 x 2.0–12.0 cm, ascending to spreading, stipitate, lanceolate, slightly asymmetrical and enlarged basiscopically, with 8–16 segments, the segment margins entire to coarsely serrate, the proximal segments stipitate, the medial ones short-stipitate, the distal ones adnate, the medial pinnae spreading to ascending, the pinna costae provided with scales like those of the petioles and rachises, but smaller, up to 0.5–2.0 x 0.1–0.4 mm; the lamina on both surfaces mostly glabrous, sometimes moderately to densely glandular, the glands similar to those of the rachis, abaxial lamina surfaces scaly along veins, the scales like those of the pinna costae; sori roundish, medial, indusiate, not paraphysate, receptacle brown to black, indusium peltate, roundish, 1.0–1.5 mm diam., deciduous, glabrous, sometimes glandular medium-brown, slightly darker in the center; spores ellipsoidal, monolete, brown to light brown, tuberculate.

COMMENTS

Rumohra adiantiformis can be distinguished by leaves broadest in the middle; pinnae with 8–15 pairs per frond, and by having tuberculate spores

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Central Brazilian Savanna, Atlantic Rainforest, Pampa

Vegetation Types

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

Geographic DistributionConfirmed occurrences

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

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

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

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

HERBARIUM MATERIAL

W.R. Anderson, 35820, NY,  (NY00908711), Minas Gerais

A.C. Brade, 14044, RB

FIELD IMAGES / ILLUSTRATIONS

Figure 1: *Rumohra adiantiformis* (G.Forst.) Ching



Figure 2: *Rumohra adiantiformis* (G.Forst.) Ching

REFERENCE

Sundue, M., Hirai, R.Y. & Prado, J. 2013. *Rumohra glandulosissima* (Dryopteridaceae) a new species from the Atlantic Rainforest, and revision of the species occurring in Brazil. Systematic Botany 38(4): 915–924.

Rumohra glandulosissima Sundue & J. Prado

DESCRIPTION

Stem: horizontal with/scale/margin/glandular. **Leaf:** frond bipinnate/pinnatifid. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glandular. **Spore:** monolete surface/echinate/or/tuberculate.

ADDITIONAL DESCRIPTION

Plants terrestrial; roots inserted ventrally; rhizomes long-creeping, frequently branching, 4–6 mm diam., dictyostelic, with an elongate ventral meristele, densely scaly, the scales 1.5–3.0 x 1.0–2.0 mm, ovate to broadly lanceolate, subpeltately attached, medium brown, sub-clathrate, the margins sparsely glandular; leaves dorsal, spaced 1.5–2.0 cm apart along the rhizome, 35–45 cm long, monomorphic; petioles 14–26 cm x 1.5–3.0 mm, brown, adaxially grooved, moderately to densely scaly throughout, the scales subpeltately attached, pale- to medium-brown, sub-clathrate, the apices long-attenuate, tortuous, the margins sparsely provided with gland-like papillae, the scales of the basal petiole up to 4.5 x 1.0 mm, broadly lanceolate, the scales of the medial and distal petiole 0.1–0.5 mm, narrowly lanceolate, detached scales leaving behind a conspicuous darkened scale base, the petioles also provided with scattered glandular hairs, ca. 0.1 mm long; laminae 18–28 x 6.5–15 cm, deltate to narrowly deltate, widest at the base, proximally 2-pinnate-pinnatifid, becoming gradually less divided toward the pinnatifid apex; rachises with scales like those of the petioles and hairs like those of the laminae, abaxially rounded, adaxially with a central raised ridge flanked on both sides by a groove and lateral ridge, the lateral ridges continuous with the leaf margin and departing from the rachis to form the basal margin of each pinna; pinnae forming 18–25 pairs, basal pinnae 4.0–8.0 x 2.0–4.0 cm, spreading, short-stipitate, narrowly deltate, slightly asymmetrical and enlarged basiscopically, with 14–16 segments, the segment margins finely serrate, the proximal segments short-stipitate, the distal ones sessile, the medial pinnae ascending, and often falcate, the pinna costae provided with scales like those of the petioles and rachises, but smaller, up to 2.5 x 0.5 mm; adaxial and abaxial lamina surfaces densely and evenly provided with two types of glandular hairs, the first type erect, capitate, 0.1 mm long, hyaline, apparently composed of three cells, the basal and apical cells pale yellow, the central cell clear, the apical cell slightly enlarged compared to the other cells, without any apparent exudate, the second type sessile (dot-like), apparently a single cell surrounded by a shiny reddish exudate, ca. 0.1 mm wide, less than 0.1 mm tall; sori roundish, medial, not paraphysate, receptacle brown to black, indusium peltate, roundish, 0.7–1.0 mm diam., deciduous, glandular, the glands like those of the laminar tissue; spores ellipsoidal, monolete, brown to light brown, echinate to echinate-tuberculate.

COMMENTS

This species differs by the laminar tissue provided with two types of glandular hairs, the first type erect, capitate, 0.1 mm long, hyaline, without exudate, the second type sessile (dot-like), ca. 0.1 mm wide, and less than 0.1 mm tall surrounded by a shiny reddish exudate.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro, São Paulo)

HERBARIUM MATERIAL

A.C. Bade, 20712, NY

REFERENCE

Sundue, M., Hirai, R.Y. & Prado, J. 2013. *Rumohra glandulosissima* (Dryopteridaceae) a new species from the Atlantic Rainforest, and revision of the species occurring in Brazil. Systematic Botany 38(4): 915–924.

Rumohra quadrangularis (Fée) Brade

Has as synonym

basionym *Polystichum quadrangulare* Fée

heterotypic *Rumohra turficola* R.M.Senna

DESCRIPTION

Stem: horizontal with/scale/margin/denticulate. **Leaf:** frond bipinnate/pinnatifid. **Type of sporangium:** leptosporangium pedicellate/glabrous. **Sporangium:** annulus vertical/with/indusium/glabrous. **Spore:** monolete surface/echinate.

ADDITIONAL DESCRIPTION

Plants terrestrial; roots inserted ventrally; rhizomes long-creeping, frequently branching, (1.2–)4–6 mm diam., dictyostelic, with an elongate ventral meristele, densely scaly, the scales 4–8 x 2.5–3.0 mm, deltate, pseudopeltately attached, the base cordate, the apex acuminate, the margins weakly denticulate, medium brown, sub-clathrate; leaves dorsal, spaced 1.5–7.0 cm apart along the rhizome, (45–)50–85 cm long, monomorphic; petioles (23.5–)25–50(–59) cm x (0.15–)1.5–3.5 mm, brown, adaxially grooved, moderately scaly throughout, the scales up to 5.5 x 0.3–0.6 mm, narrowly lanceolate, sub-peltately attached, medium- to dark-brown, sub-clathrate, the apices long-attenuate, tortuous, the margins weakly denticulate to sub-entire, detached scales leaving behind a conspicuous darkened scale base; laminae 20–35(–37) x (7.0–)9.0–15 cm, lanceolate, widest just below the middle, proximally 2-pinnate-pinnatifid, becoming gradually less divided toward the pinnatifid apex; rachises with scales like those of the petioles, abaxially rounded, adaxially with a central raised ridge flanked on both sides by a groove and lateral ridge, the lateral ridges continuous with the leaf margin and departing from the rachis to form the basal margin of each pinna; pinnae forming (16–)18–22 pairs, basal pinnae 5.5–9.0(–15) x 2.0–4.0(–6.0) cm, ascending, short-stipitate, narrowly deltate, slightly asymmetrical and enlarged basiscopically, with 12–16 ascending segments, the segment margins finely serrate, the proximal segments short-stipitate, the distal ones sessile, the pinna costae provided with scales like those of the petioles and rachises, but smaller, up to 3.5 x 0.6 mm; adaxial and abaxial lamina surfaces glabrous; sori roundish, medial, indusiate, not paraphysate, receptacle brown to black, indusium peltate, roundish, 1.0–1.5 mm diam., medium-brown, slightly darker in the center, deciduous, the margins entire; spores ellipsoidal, monolete, brown to light brown, echinate.

COMMENTS

Rumohra quadrangularis is recognized by the rigidly chartaceous to subcoriaceous lamina, that is proximally 2-pinnate-pinnatifid, widest just below the middle, and glabrous on both surfaces.

Life Form

Herb

Substrate

Epiphytic, Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Highland Rocky Field, Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

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

South (Rio Grande do Sul)

HERBARIUM MATERIAL

A.F.M. Glaziou, 4430, P, Rio de Janeiro, **Typus**

REFERENCE

Sundue, M., Hirai, R.Y. & Prado, J. 2013. *Rumohra glandulosissima* (Dryopteridaceae) a new species from the Atlantic Rainforest, and revision of the species occurring in Brazil. Systematic Botany 38(4): 915–924.

Stigmatopteris C.Chr.

This treatment is composed of the following taxa: *Stigmatopteris*, *Stigmatopteris bradei*, *Stigmatopteris caudata*, *Stigmatopteris heterocarpa*, *Stigmatopteris longicaudata*, *Stigmatopteris prionites*, *Stigmatopteris tyucana*, *Stigmatopteris ulei*.

HOW TO CITE

Matos, F.B., Labiak, P. H. 2020. *Stigmatopteris* in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB91141>.

DESCRIPTION

Stems short-creeping to erect; leaves monomorphic; blades 1-pinnate to 2-pinnate-pinnatifid, the apex pinnatifid, the tissue usually membranaceous, with internal punctate glands, lacking hairs (but often with reduced, uniseriate scales that may resemble hairs); pinnae linear to narrowly oblong, often with a decurrent basal wing, the apices long-attenuate, serrate; rachis and costae usually lacking hairs abaxially, scaly, the scales thin, ciliate or papillate, the cilia usually ending in a glandular cell, the adaxial surface grooved, the grooves pubescent within, the hairs ca. 0.1 mm long, 1–3-celled; *veins* ending before the margin in a conspicuous hydathode, free or (in 3 spp.) anastomosing; sori round; *indusia* absent; $x=41$.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Alagoas, Bahia, Pernambuco)

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

South (Paraná, Santa Catarina)

IDENTIFICATION KEY

1. Pinnae entire, crenate, or cut less than 1/2 to the costa; veins 3-7 per lobe.
2. Pinnae confluent in the distal 1/2-1/3 of the lamina by a conspicuous, long-decurrent wing; northern Brazil.. *S. longicaudata*
- 2'. Pinnae confluent in the distal 1/4-1/8 of the lamina by a short-decurrent wing; southeastern Brazil.
3. Pinnae entire to lobed less than 1/4 to the costa.. *S. heterocarpa*
- 3'. Pinnae lobed 1/3 to 1/2 to the costa.
4. Sori inframedial; fertile pinnae 1.1-2.3 cm wide, the sinuses broad, U-shaped.. *S. prionites*
- 4'. Sori medial to supramedial; fertile pinnae 2.5-4 cm wide, the sinuses narrow, V-shaped.. *S. tyucana*
- 1'. Pinnae cut 1/2 to nearly all the way to the costa; veins 5-15 per lobe.
5. Pinnae cut 2/3 to nearly all the way to the costa, the distal ones often with the basal basiscopic lobe adnate and ca. perpendicular to the rachis; veins 9-15 per lobe.. *S. caudata*
- 5'. Pinnae cut 1/2-2/3 to the costa, the distal ones lacking a basal basiscopic lobe adnate to the rachis; veins 5-8(-10) per lobe.
6. Sinuses narrow, V-shaped.. *S. bradei*
- 6'. Sinuses broad, U-shaped.. *S. ulei*

REFERENCE

Moran, R.C. 1991. Monograph of the Neotropical fern genus *Stigmatopteris* (Dryopteridaceae). Annals of Missouri Botanical Garden 78: 857-914.

Moran, R.C. & Labiak, P.H. 2016. Phylogeny and character evolution of the neotropical fern genus *Stigmatopteris* (Dryopteridaceae). Brittonia 68: 476–488.

Stigmatopteris bradei Rosenst.

Has as synonym

heterotypic *Stigmatopteris brevinervis* (Fée) R.C.Moran

DESCRIPTION

Stem: habit short - creeping. **Leaf:** blade 1 - pinnate - pinnatifid; **pinna** lobate more than half distance to costa; **sinus** narrowed; **veins** 5 - 8 (- 10) per lobe(s). **Sporangium:** **soral position** inframedian.

COMMENTS

Stigmatopteris bradei Rosenst. is the earliest name available for this species. The combination *Stigmatopteris brevinervis* (Fée) Moran is illegitimate because it was based on *Phegopteris brevinervis* Fée (Crypt. Vasc. Brés. 1: 243. 1869), a later homonym of *P. brevinervis* Fée (Mém. Foug. 10: 32. 1865). While *P. brevinervis* Fée (1869) is illegitimate, *P. brevinervis* (1865) is a heterotypic synonym of *Megalastrum connexum* (Kaulf.) A.R.Sm. & R.C.Moran (Moran et al. 2009, Amer. Fern J. 99: 13).

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Geographic Distribution

Confirmed occurrences

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

A.C. Brade, 8343, US, (US01545714), São Paulo

A.C. Brade, 8250, S (S-R-5949), NY, (NY00149535), PH, UC (UC442961), São Paulo, **Typus**

A.F.M. Glaziou, 3333, P (P01472316), Rio de Janeiro

A.F.M. Glaziou, 2400, P (P01472317), Minas Gerais

J.A. Rohr, 353, US, (US01546312), RB, (RB00662879), Santa Catarina

F.B. Matos, 1240, UPCB (UPCB0004937), Paraná

Stigmatopteris caudata (Raddi) C.Chr.

Has as synonym

basionym *Polypodium caudatum* Raddi

DESCRIPTION

Stem: habit short - creeping. **Leaf:** blade 1 - pinnate - pinnatisect; **pinna** lobate more than half distance to costa; **sinus** broad; **veins** 9 - 15 per lobe(s). **Sporangium:** soral position median.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

P.K.H. Dusén, 14687, Z, NY, (NY01016944), G, F, BM, US, 30509, (US01546288), US, 30509, (US01546292), Paraná

J.P.S. Condack, 453, RB, (RB00563481), Minas Gerais

A.C. Brade, 18228, RB, (RB00662849), NY, (NY01016935), Espírito Santo

G. Raddi, s.n., PI (PI010892), FI (FI005041), Rio de Janeiro, **Typus**

A.R. Reitz, 1909, RB, (RB00662846), BM, Santa Catarina

J. Prado, 1984, NY, (NY01018571), São Paulo

A.F.M. Glaziou, 395, P, 30509 (P01472294), NY, (NY01016939), RB, (RB00610934), Rio de Janeiro

Stigmatopteris heterocarpa (Fée) Rosenst.

This treatment is composed of the following taxa: *Stigmatopteris heterocarpa*, .

Has as synonym

basionym *Phegopteris heterocarpa* Fée

heterotypic *Stigmatopteris carrii* (Baker) C.Chr.

heterotypic *Stigmatopteris heterocarpa* var. *basilaris* Rosenst.

DESCRIPTION

Stem: habit short - creeping. **Leaf:** blade 1 - pinnate/1 - pinnate - pinnatifid; **pinna** entire to crenate/lobate less than half distance to costa; **sinus** absent; **veins** 3 - 5 per lobe(s). **Sporangium:** **soral position** inframedian/median.

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

Northeast (Alagoas)

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

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

A.F.M. Glaziou, 2400, P (P01472272), Minas Gerais

A.C. Brade, 8231, US, 92909, (US00386245), US, 92909, (US00386244), S, 92909 (S05-10925), São Paulo, **Typus**

F.B. Matos, 209, UPCB (UPCB0004796), Paraná

P.K.H. Dusén, 14680, F, G, GH, NY, (NY01016949), US, (US01546387), Paraná

A.F.M. Glaziou, 2401, S (S05-10926), P (P00630798), P (P00630797), K, (K000590512), Rio de Janeiro, **Typus**

L.B. Smith, 6127, RB, 92909, (RB00658090), US, 92909, (US01546373), Santa Catarina

Stigmatopteris longicaudata (Liebm.) C. Chr.

Has as synonym

basionym *Polypodium longicaudatum* Liebm.

DESCRIPTION

Stem: habit erect/short - creeping. **Leaf:** blade 1 - pinnate; **pinna** entire to crenate/lobate less than half distance to costa; **sinus** absent; **veins** 3 - 6 per lobe(s). **Sporangium:** soral position median/supramedian.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

F.A. Carvalho, 279, BHCB, 104398, (BHCB001242), Amazonas

F.A. Carvalho, 324, INPA, 219388, (INPA0219388), Amazonas

REFERENCE

Carvalho, F.A., Salino, A & Zartman, C.E.. 2012. New Country and Regional Records from the Brazilian side of Neblina Massif. Am. Fern. J. 102(3): 228-232.

Stigmatopteris prionites (Kunze) C.Chr.

This treatment is composed of the following taxa: *Stigmatopteris prionites*, .

Has as synonym

basionym *Polypodium prionites* Kunze

heterotypic *Stigmatopteris prionites* var. *denticulata* (Fée) C.Chr.

DESCRIPTION

Stem: habit short - creeping. **Leaf:** blade 1 - pinnate - pinnatifid; **pinna** lobate less than half distance to costa; **sinus** broad; **veins** 3 - 5 per lobe(s). **Sporangium:** soral position inframedian.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Alagoas, Bahia, Pernambuco)

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

HERBARIUM MATERIAL

C.F.P. Martius, 305, B, BM, BR, G, K, (K000590515), L, MO (MO255606), NY, P (P00630786), P (P00630787), **Typus**
M.J.N. Rodal, 1352, NY (NY00684590), Alagoas

M.R. Pietrobom, 4364, NY, 469822, (NY01016934), UFP, 24152, Pernambuco

Y. Mexia, 5492, NY, 56784, (NY00840536), US, 56784, (US01546394), P, 56784 (P01472215), RB, 465890,
(RB00525810), RB, 469822, (RB00531304), IAN, 469822 (IAN082241), Minas Gerais

F.B. Matos, 1548, NY, 469822, (NY02478944), UPCB, 469822 (UPCB0004854), UPCB, 469822 (UPCB0004860), Bahia

A.C. Brade, 18405, NY, (NY01016954), NY, (NY01016955), P (P01472221), RB, 56784, (RB00662812), Espírito Santo

Stigmatopteris tyucana (Raddi) C.Chr.

Has as synonym

basionym *Polypodium tyucanum* Raddi

DESCRIPTION

Stem: habit short - creeping. **Leaf:** blade 1 - pinnate - pinnatifid; **pinna** lobate less than half distance to costa; **sinus** narrowed; **veins** 4 - 7 per lobe(s). **Sporangium:** **soral position** median/supramedian.

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

HERBARIUM MATERIAL

A.C. Brade, 16123, RB, 41279 (RB00662918), Rio de Janeiro

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

M. Wacket, 21149, NY,  (NY01016960), NY,  (NY01016959), São Paulo

A. Salino, 14968, BHCB, 141458, Espírito Santo

Stigmatopteris ulei (Christ) Sehnem

Has as synonym

basionym *Phegopteris ulei* Christ

DESCRIPTION

Stem: habit short - creeping. **Leaf:** blade 1 - pinnate - pinnatifid; **pinna** lobate more than half distance to costa; **sinus** broad; **veins** 5 - 8 (- 10) per lobe(s). **Sporangium:** **soral position** inframedian.

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, Santa Catarina)

HERBARIUM MATERIAL

G. Hatschbach, 16361, MBM, 3494, PACA, Paraná

A. Salino, 10326, RB, 496606, (RB00587869), BHCB, São Paulo

E.H.G. Ule, 70, B, (B200069000), B, (B200068999), Santa Catarina, **Typus**