

Dennstaedtiaceae Lotsy

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This treatment is composed of the following taxa: Dennstaedtiaceae, *Blotiella*, *Dennstaedtia*, *Histiopteris*, *Hiya*, *Hypolepis*, *Microlepia*, *Paesia*, *Pteridium*.

HOW TO CITE

Schwartzburd, P.B. 2020. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90915>.

DESCRIPTION

Rhizomes generally long-creeping, rarely short-creeping or ascendant, generally solenostelic, commonly furnished with catenate hairs. Fronds generally monomorphic, commonly large, up to 10 m long; petioles commonly adaxially sulcate, often aculeate; laminae generally 2-pinnate-pinnatifid or more decomposed, rarely less decomposed; veins free or anastomosing without included veinlets; indument of laminae formed by several kinds of hairs (catenate, glandular, setose, arachnoid, gnarled, acicular, etc.), scales absent; sori marginal or sub-marginal, commonly protected by inner indusia and/or outer indusia (laminar margins reflexed), rarely unprotected; spores monolete or trilete.

COMMENTS

Dennstaedtiaceae is sub-comsopolitan, monophyletic family of ferns, with ca. 10 - 12 genera, and ca. 270 spp. Genus *Pteridium*, the bracken fern (samambaia do campo) is the most wide spread and common genus, occurring nearly everywhere in Brazil. *Pteridium* is a pioneer aggressive plant, which invades croplands. It is also extremely toxic to cattle, horsestocks, and humans, whenever ingested.

Life Form

Herb, Liana/scandent/vine

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

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

Ocean Islands

Possible occurrences

Abrolhos, Atol das Rocas, São Pedro e São Paulo, 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, Amapá, Pará, Rondônia, Roraima, Tocantins)

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

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

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

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

IDENTIFICATION KEY

1. Sori linear or elongate .. 2
1. Sori discrete, roundish .. 5
2. Veins free .. 3
2. Veins anastomosing ..4
3. Inner indusia absent or vestigial; outer indusia present in sterile fronds .. *Pteridium*
3. Inner indusia distinct; outer indusia absent in sterile fronds .. *Paesia*
4. Rhizomes erect; laminae pilose; sori in the sinuses of the segments .. *Blotiella*
4. Rhizomes long-creeping; laminae glabrous; sori along segment margins .. *Histiopteris*
5. Inner indusia absent .. 6
5. Inner indusia present .. 7
6. Fronds indeterminate; prickles blackish and curved .. *Hiya*
6. Fronds determinate; prickles absent or concolorous and straight .. *Hypolepis*
7. Sori marginal; inner and outer indusia fused, forming a cup-shaped indusia .. *Dennstaedtia*
7. Sori sub-marginal; outer indusia absent .. *Microlepia*

REFERENCE

Kramer, K. U. 1990. Dennstaedtiaceae. Pp. 81#94, in K. U. Kramer and P. S. Green (eds.). Vol. I Pteridophytes and Gymnosperms. In: K. Kubitzki (ed.). *The families and genera of vascular plants*. Springer-Verlag, Berlin.

Schwartsburd, P.B., Perrie, L.R., Brownsey, P., Shepherd, L.D., Shang, H., Barrington, D.S. & Sundue, M.A. 2020.

New insights into the evolution of the fern family Dennstaedtiaceae from an expanded molecular phylogeny and morphological analysis. *Mol. Phylogen. Evol.* 150: 106881.

Smith, A.R., Pryer, K.M., Schuettpelz, E., Korall, P., Schneider, H. & Wolf, P.G. 2008. 16. Fern classification. In: Ranker, T.A. & Haufler, C.H. (eds.). *Biology and evolution of ferns and lycophytes*. Cambridge: Cambridge University Press, pp. 417–467.

Tryon, R. M. and A. F. Tryon. 1982. *Ferns and allied plants, with special reference to Tropical America*. Springer-Verlag, New York.

Blotiella R.M.Tryon

This treatment is composed of the following taxa: *Blotiella*, *Blotiella lindeniana*.

HOW TO CITE

Schwartzburd, P.B. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90916>.

DESCRIPTION

Plants terrestrial. *Rhizomes* ascendant, dictyostelic, with hairs. *Fronde*s monomorphic, with determinate growth; *petioles* adaxially grooved, inermous, pilose to lanose; *laminae* bipinnate or bipinnate-pinnatifid; *rachises* straight, inermous, pilose to lanose; *basal pinnae* equilateral; *pinna axes* smooth, pilose to lanose; *costae* without decurrent adaxial wings; *veins* anastomosing; *indument* of long setose hairs. *Receptacle* supplied by several veins, at the sinuses; *sori* along the sinuses, elongate, marginal, protected by a pseudoindusium; *pseudoindusia* elongate; *spores* monolete.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Bahia)

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

South (Santa Catarina)

Possible occurrences

North (Acre, Roraima)

South (Paraná)

REFERENCE

Kramer, K.U. 1990. Dennstaedtiaceae. In: Kramer & Green. Pteridophytes and Gymnosperms. In: Kubitzki. The families and genera of vascular plants. Springer-Verlag, vol. 1.

Tryon, R.M. 1962. Taxonomic fern notes III. Contr. Gray Herb. 191: 91-107.

Blotiella lindeniana (Hook.) R.M.Tryon

Has as synonym

basionym *Lonchitis lindeniana* Hook.

heterotypic *Lonchitis macrochlamys* Fée

heterotypic *Lonchitis zahlbruckneri* Kümmerle

DESCRIPTION

Plants terrestrial. *Rhizomes* ascendant, dictyostelic, with hairs. *Fronde*s monomorphic, with determinate growth; *petioles* adaxially grooved, inermous, pilose to lanose; *laminae* bipinnate-pinnatifid; *rachises* straight, inermous, pilose to lanose; *basal pinnae* equilateral; *pinna axes* smooth, pilose to lanose; *costae* without decurrent adaxial wings; *veins* anastomosing; *indument* of long setose hairs. *Receptacle* supplied by several veins, at the sinuses; *sori* along the sinuses, elongate, marginal, protected by a pseudindusium; *pseudindusia* elongate; *spores* monolete.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Bahia)

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

South (Santa Catarina)

Possible occurrences

North (Acre, Roraima)

South (Paraná)

HERBARIUM MATERIAL

P.B. Schwartzburd, 3401, RB, SP, VIC, Minas Gerais

A.R. Reitz, 3456, HBR, RB, Santa Catarina

Dennstaedtia Bernh.

This treatment is composed of the following taxa: *Dennstaedtia*, *Dennstaedtia bipinnata*, *Dennstaedtia cicutaria*, *Dennstaedtia cornuta*, *Dennstaedtia dissecta*, *Dennstaedtia globulifera*, *Dennstaedtia mathewsii*.

HOW TO CITE

Schwartzburd, P.B. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90918>.

DESCRIPTION

Rhizomes short to long-creeping, solenostelic or soleno-polycyclostelic, glabrous or with catenate hairs. Fronds monomorphic, up to 7 m long; petioles adaxially sulcate, with or without buds at base; laminae rarely 1-pinnate, generally 2-pinnate-pinnatifid or more decomposed; rachises with or without buds; adaxial wings connecting pinna-rachises and segments commonly present; sori, marginal, roundish, born at the tip of single veins; pseudo-indusia and true indusia fused into a cup shaped indusia.

COMMENTS

Dennstaedtia, as currently recognized, is paraphyletic, and will probably be segregated into two or more genera. Currently, ca. 50 species or more are recognized, of which four occur in Brazil.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest, Pampa, Pantanal

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

North (Acre, Pará)

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

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

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

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

Possible occurrences

North (Acre, Rondônia)

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

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

Southeast (Espírito Santo, Rio de Janeiro)

South (Rio Grande do Sul)

IDENTIFICATION KEY

1. Adaxial wings connecting pinna rachises and segments 2

- 2. Last segments acute *D. bipinnata*
- 2. Last segments obtuse *D. globulifera*
- 1. Adaxial wings absent 3
- 3. Laminar tissue between the veins abaxially pilose *D. cicutaria*
- 3. Laminar tissue between the veins abaxially glabrous 4
- 4. Rhizomes long-creeping, pilose *D. dissecta*
- 4. Rhizomes short-creeping, glabrous *D. obtusifolia*

REFERENCE

- NAVARRETE, H. and B. ØLLGAARD . 2000. The fern genus *Dennstaedtia* (Dennstaedtiaceae) in Ecuador — new characters, new species and a new combination. *Nordic J. Bot.* 20:319–346.
- SEHNEM, A. 1972. Pteridáceas. In: Reitz, P.R. (ed.). *Flora Ilustrada Catarinense*. PTER: 1-244.
- TRYON, R.M. 1960. A review of the genus *Dennstaedtia* in America. *Contr. Gray Herb. Harvard Univ.* 187: 23-52.

Dennstaedtia bipinnata (Cav.) Maxon

Has as synonym

basionym *Dicksonia bipinnata* Cav.

DESCRIPTION

Stem: indumentum pilose; **size** long trailing. **Leaf:** wing costal adaxial present; **base of the petiole** non rooting; **veins abaxial** glabrate; **tissue laminar abaxial** glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Acre)

Possible occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

C. Ferreira, 11418, NY, Acre

Dennstaedtia cicutaria (Sw.) T.Moore

Has as synonym

basionym *Dicksonia cicutaria* Sw.

heterotypic *Dennstaedtia rubiginosa* (Kaulf.) T. Moore

heterotypic *Dicksonia rubiginosa* Kaulf.

DESCRIPTION

Stem: indumentum pilose; **size** long trailing. **Leaf:** wing costal adaxial absent; **base of the petiole** non rooting; **veins abaxial** pilose; **tissue laminar abaxial** pilose.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pantanal

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

North (Pará)

Northeast (Alagoas, Bahia, Ceará)

Central-west (Mato Grosso)

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

South (Paraná, Santa Catarina)

Possible occurrences

Central-west (Mato Grosso do Sul)

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Schwartsburd, P.B., 1629, SP

Dennstaedtia cornuta (Kaulf.) Mett.

Has as synonym

heterotypic *Dennstaedtia deparioides* (Rosenst.) Rosenst.

heterotypic *Dennstaedtia fluminensis* (Fée) C. Chr.

heterotypic *Dennstaedtia lindsayiformis* (Fée) C. Chr.

DESCRIPTION

Stem: indumentum glabrous; **size** short trailing. **Leaf: wing costal adaxial** absent; **base of the petiole** rooting; **veins abaxial** pilose; **tissue laminar abaxial** glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Unknown

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

South (Paraná, Santa Catarina)

Possible occurrences

Northeast (Bahia)

South (Rio Grande do Sul)

HERBARIUM MATERIAL

P.B. Schwartzburd, 3140, VIC, Minas Gerais

Dennstaedtia dissecta T.Moore

Has as synonym

basionym *Polypodium dissectum* Sw.

DESCRIPTION

Stem: indumentum pilose; **size** long trailing. **Leaf:** wing costal adaxial absent; **base of the petiole** non rooting; **veins abaxial** pilose; **tissue laminar abaxial** glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará)

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

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

Possible occurrences

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

Central-west (Distrito Federal, Goiás)

Southeast (Espírito Santo)

HERBARIUM MATERIAL

Schwartsburd, P.B., 1627, SP

Dennstaedtia globulifera (Poir.) Hieron.

Has as synonym

basionym *Polypodium globuliferum* Poir.
heterotypic *Dennstaedtia tamandarei* Rosenst.
heterotypic *Dennstaedtia tenera* (C. Presl) Mett.

DESCRIPTION

Stem: indumentum pilose; **size** long trailing. **Leaf: wing costal adaxial** present; **base of the petiole** non rooting; **veins abaxial** pilose; **tissue laminar abaxial** glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa, Pantanal

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia, Ceará, Pernambuco)
Central-west (Mato Grosso do Sul)
Southeast (Minas Gerais, Rio de Janeiro, São Paulo)
South (Paraná, Rio Grande do Sul, Santa Catarina)

Possible occurrences

Northeast (Alagoas, Paraíba, Piauí, Rio Grande do Norte, Sergipe)
Southeast (Espírito Santo)

HERBARIUM MATERIAL

Schwartsburd, P.B., 1113, UPCB

Dennstaedtia mathewsii (Hook.) C.Chr.

DESCRIPTION

Stem: indumentum pilose; **size** short trailing. **Leaf:** wing costal adaxial absent; **base of the petiole** rooting; **veins abaxial** pilose; **tissue laminar abaxial** glabrous.

ADDITIONAL DESCRIPTION

Sori at the tip of segments.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Pantanal

Geographic Distribution

Confirmed occurrences

Central-west (Mato Grosso do Sul)

Possible occurrences

North (Acre, Rondônia)

Central-west (Mato Grosso)

Histiopteris J.Agardh

This treatment is composed of the following taxa: *Histiopteris*, *Histiopteris incisa*.

HOW TO CITE

Schwartzburd, P.B. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90926>.

DESCRIPTION

Rhizomes long-creeping, solenostelic, with catenate hairs and comose proscapes. Fronds monomorphic, up to 7 m long; petioles adaxially sulcate; laminae 2-pinnate or more dissected, often glaucous; veins anastomosing or partly anastomosing, without included veinlets; sori marginal, linear, born at a commissural receptacle; pseudo-indusia formed by reflexed margins of lamina; true indusia absent; spores monolete.

COMMENTS

A genus of about 7 species occurring in specially Malesia. *Histiopteris incisa* is a sub-cosmopolitan species occurring in the highlands of Brazil.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

North (Roraima)

Northeast (Bahia)

Central-west (Goiás)

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

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

Possible occurrences

Central-west (Mato Grosso)

REFERENCE

- KRAMER, K. U. 1990. Dennstaedtiaceae. Pp. 81-94, in K. U. Kramer and P. S. Green (eds.). Vol. I Pteridophytes and Gymnosperms. In: K. Kubitzki (ed.). The families and genera of vascular plants. Springer-Verlag, Berlin.
- SEHNEM, A. 1972. Pteridáceas. In: Reitz, P.R. (ed.). Flora Ilustrada Catarinense. PTER: 1-244.
- TRYON, R. M. and A. F. TRYON . 1982. Ferns and allied plants, with special reference to Tropical

America. Springer-Verlag, New York.

Histiopteris incisa (Thunb.) J.Sm.

Has as synonym

basionym *Pteris incisa* Thunb.

DESCRIPTION

Rhizomes long-creeping, with catenate hairs and comose proscasles. Fronds monomorphic, up to 3 m long; petioles burgundy, adaxially sulcate, glabrous; laminae 2-pinnate-pinnatifid to 3-pinnate, glaucous; veins anastomosing, glabrous on both sides; laminar tissue between the veins glabrous on both sides; sori marginal, linear, with pseudo-indusia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

North (Roraima)

Northeast (Bahia)

Central-west (Goiás)

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

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

Possible occurrences

Central-west (Mato Grosso)

HERBARIUM MATERIAL

Schwartzburd, P.B., 780, UPCB, MBM, RB, Paraná

L. Kollmann, 5611, MBML, Espírito Santo

REFERENCE

KRAMER, K. U. 1990. Dennstaedtiaceae. Pp. 81-94, in K. U. Kramer and P. S. Green (eds.). Vol. I Pteridophytes and Gymnosperms. In: K. Kubitzki (ed.). The families and genera of vascular plants. Springer-Verlag, Berlin.

TRYON, R. M. and A. F. TRYON. 1982. Ferns and allied plants, with special reference to Tropical America. Springer-Verlag, New York.

Hiya H. Shang

This treatment is composed of the following taxa: *Hiya*, *Hiya nigrescens*.

HOW TO CITE

Schwartzburd, P.B. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB606743>.

DESCRIPTION

Similar to *Hypolepis* in having prickles on petioles and rachises, and in the rounded, discrete sori protected only by outer indusia. Differs from *Hypolepis* due to the indeterminate fronds (vs. determinate), and by the blackish and curved prickles. In prickly *Hypolepis*, the prickles are concolorous with the axes and they are straight. *Hiya* has also adaxial wings connecting pinna-rachises to costae - these are absent in *Hypolepis*.

COMMENTS

A genus with three species, recently segregated from *Hypolepis*.

Life Form

Liana/scandent/vine

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Geographic Distribution

Confirmed occurrences

North (Roraima)

Possible occurrences

North (Acre, Amazonas)

REFERENCE

Shang, H. et al. 2018. *Hiya*: a new genus segregated from *Hypolepis* in the fern family Dennstaedtiaceae, based on phylogenetic evidence and character evolution. *Mol. Phylogen. Evol.* 127: 449-458.

Hiya nigrescens (Hook.) H. Shang

Has as synonym

basionym *Hypolepis nigrescens* Hook.

heterotypic *Dennstaedtia rubicaulis* H. Christ

heterotypic *Hypolepis hispaniolica* Maxon

DESCRIPTION

Plants terrestrial. Rhizomes 1.5–5 mm diam.; hairs catenate-acicular, yellowish-brown, 1–2.5 mm long, 15–20-celled, sparse to sometimes caducous. Fronds intermittent, scandent, 3–5(–10?) m long; petioles 1–2.5(–?) m x 3–5(–8) mm, purplish to black proximally, light-brown to brown above, rugose and armed, the aculei curved, blackish, 0.5–1.5 mm long, commonly with a hair at the tip, glabrous abaxially, adaxially with scattered hairs and trichomidia restricted to the groove, the hairs catenate-acicular, hyaline with reddish cross-walls or entirely reddish, 0.4–1 mm long, 6–12-celled, the trichomidia hyaline with reddish cross-walls or entirely reddish, laterally appressed, 0.2–0.3(–0.5) mm long, 5–7(–10)-celled; laminae ovate(?), quadripinnate-pinnatifid to pentapinnate proximally, 2–4.5(–7?) x 0.8–1.6(–?) m; rachises straight, stramineous to light brown, rugose, armed, abaxially and adaxially essentially glabrous but with scattered hairs and trichomidia, with protecting pinnules over pinnae departures and uncoiled apex; basal pinnae 40–80(–?) x 40–60(–?) cm, subequilateral; costae abaxially with trichomidia and scattered hairs, adaxially with trichomidia and with wings subintending onto the costules; costules with trichomidia abaxially and adaxially, sometimes glabrous adaxially; veins with trichomidia abaxially and adaxially, sometimes glabrous adaxially; laminar tissue between the veins abaxially and adaxially glabrous, or rarely with scattered trichomidia; lamina margins glabrous; sori marginal; pseudindusia yellowish, the margins crenate to dentate, glabrous.

COMMENTS

This species was previously named *Hypolepis nigrescens* Hook.

Life Form

Liana/scandent/vine

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Geographic Distribution

Confirmed occurrences

North (Roraima)

Possible occurrences

North (Acre, Amazonas)

HERBARIUM MATERIAL

G.H.H. Tate, 498, NY, Roraima

Hypolepis Bernh.

This treatment is composed of the following taxa: *Hypolepis*, *Hypolepis Xpaulistana*, *Hypolepis acantha*, *Hypolepis forzzae*, *Hypolepis guianensis*, *Hypolepis hostilis*, *Hypolepis krameri*, *Hypolepis miodelii*, *Hypolepis mitis*, *Hypolepis repens*, *Hypolepis rigescens*, *Hypolepis rugosula*, *Hypolepis stolonifera*, *Hypolepis trinationalis*.

HOW TO CITE

Schwartzburd, P.B. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90928>.

DESCRIPTION

Plants terrestrial, rarely humicolous-epipetric. *Rhizomes* long-creeping, branched, solenostelic, with catenate-acicular hairs. *Fronde*s monomorphic, with determinate or intermittent growth; *petioles* adaxially grooved, inermous or aculeate, glabrous to lanose; *laminae* bipinnate to pentapinnate; *rachises* straight or flexuous, inermous or aculeate, glabrous to lanose; *basal pinnae* equilateral, subequilateral, or inequilateral; *pinna axes* smooth to aculeate, glabrous to lanose; *costae* with or without decurrent adaxial wings; *veins* free; *indument* of acicular, catenate-acicular, glandular, or catenate-glandular hairs, bacilliform trichomidia, and/or trichomidia. *Receptacle* supplied by a single vein, at the sinuses; *sori* rounded, marginal or submarginal, protected by a pseudoindusium, by the undifferentiated lamina margin, or not protected; *pseudoindusia* semi-lunate, greenish to hyaline; *spores* monolete.

COMMENTS

The content of this field was omitted due to formatting problems, please consult our page directly (<http://floradobrasil.jbrj.gov.br/>).

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Anthropic area, Amazonian Campinarana, High Altitude Grassland, Grassland, Cerrado (lato sensu), Riverine Forest and/or Gallery Forest, Terra Firme Forest, Seasonal Evergreen Forest, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest, Coastal Forest (Restinga), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas, Pará, Roraima)

Northeast (Alagoas, Bahia, Ceará, Pernambuco)

Central-west (Mato Grosso do Sul)

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

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

Possible occurrences

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

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

Central-west (Mato Grosso)

Southeast (Espírito Santo, Minas Gerais, São Paulo)
South (Rio Grande do Sul, Santa Catarina)

IDENTIFICATION KEY

1. Petioles and rachises armed with prickles .. 2
1. Petioles and rachises inermous .. 8
2. Laminae between the veins abaxially with hairs .. 3
2. Laminae between the veins abaxially glabrous (or glabrescent) .. 5
3. Laminae between the veins abaxially with glandular hairs .. *H. rigescens*
3. Laminae between the veins abaxially with catenate-acicular or acicular hairs .. 4
4. Laminae between the veins abaxially hirsute .. *H. acantha*
4. Laminae between the veins abaxially strigose .. *H. mitis*
5. Laminae glandular (glandular hairs present at least on costae, costules and veins) .. *H. hostilis*
5. Laminae eglandular .. 6
6. Petioles and rachises densely prickly; pseudo-indusia glabrous .. *H. repens*
6. Petioles and rachises sparsely prickly; pseudo-indusia ciliate .. 7
7. Petioles reddish; veins abaxially glabrous .. *H. forzzae*
7. Petioles purplish proximally, stramineous above; veins abaxially pilose .. *H. mitis*
8. Laminae eglandular .. 9
8. Laminae glandular (glandular hairs present at least on costae, costules and veins) .. 10
9. Petioles dark-brown; costae, costules and veins abaxially glabrous .. *H. miodelii*
9. Petioles purplish proximally, golden-brown above; costae, costules and veins abaxially pilose .. *H. stolonifera*
10. Petioles and rachises burgundy; sori sub-marginal; outer indusia absent .. *H. rugosula*
10. Petioles and rachises light to dark brown; sori marginal; outer indusia well developed .. 11
11. Indusia with glandular cilia .. *H. guianensis*
11. Indusia with acicular cilia .. 12
12. Laminae between the veins abaxially with glandular hairs .. *H. trinationalis*
12. Laminae between the veins abaxially glabrous .. 13
13. Petioles and rachises tuberculate; laminae between the veins adaxially with trichomidia .. *H. krameri*
13. Petioles and rachises not tuberculate; laminae between the veins adaxially glabrous .. *H. Xpaulistana*

REFERENCE

- Brade, A.C. 1956. A flora do Parque Nacional do Itatiaia. Boletim do Parque Nacional do Itatiaia 5: 1-69.
- Fée, A.L.A. 1873. Cyptogames vasculaires du Brésil, IIe partie: supplément et révision. J.B. Baillière et Fils, Libraires. Paris, 115 p., 29 t.
- Schwartzburd, P.B. 2012. Three new taxa of *Hypolepis* (Dennstaedtiaceae) from the Brazilian Atlantic Forest, and a key to the Brazilian taxa. Kew Bulletin 67(4): 815-825.
- Schwartzburd, P.B. 2018. Eight new taxa of *Hypolepis* (Dennstaedtiaceae) from the Neotropics. American Fern Journal 108: 151-169.
- Schwartzburd, P.B. & Prado, J. 2014. Subspecies of *Hypolepis rugosula* (Dennstaedtiaceae; Pteridophyta) around the World: morphological and biogeographic perspectives. Acta Botanica Brasilica 28(2): 206-226.
- Schwartzburd, P.B. & Prado, J. 2015. A taxonomic revision of the South American species of *Hypolepis* (Dennstaedtiaceae), part I. American Fern Journal 105(4): 263-313.
- Schwartzburd, P.B. & Prado, J. 2016. A taxonomic revision of the South American species of *Hypolepis* (Dennstaedtiaceae), part II. American Fern Journal 106(1).
- Schwartzburd, P.B., Boudrie, M. & Cremers, G. 2012. Two new species of *Hypolepis* (Dennstaedtiaceae: Pteridophyta) from Mount Roraima region (N South America) and a revised key for the Guianan species. Fern Gazette 19(1): 1-9.

Hypolepis acantha Schwartsb.

DESCRIPTION

Leaf: costa pilose; **growth** determinate; **blade** quadripinnate; **veins abaxial** pilose; **petiole** aculeate/glabrous; **tissue laminar abaxial** hirsute. **Type of sporangium:** **indusium** glabrous; **sori** marginal.

ADDITIONAL DESCRIPTION

Extracted from AMERICAN FERN JOURNAL 105(4). 2015. Plants terrestrial. Rhizomes 3.5–7 mm diam.; hairs catenate-acicular, yellowish-brown, 1–2 mm long, 15–20-celled. Fronds determinate, scandent, (1.7–)3–6.5 m long; petioles (0.8)1.5–4 m x (5–)6.5–10 mm, dark brown proximally, lighter brown above, the aculei conspicuous, straight, 0.5–2.5 mm long, commonly with a hair at the tip, the trichomidia appressed, ca. 0.2 mm long, 4-celled; laminae rhombic, quadripinnate-pinnatifid proximally, (1.1–) 1.7–2.5 x (1.1–)1.4–2.1 m; rachises straight, light brown to brown, aculeate, with trichomidia; basal pinnae 55–105 x 35–60 cm, inequilateral; costae abaxially and adaxially pilose, the hairs catenate-acicular, hyaline with reddish cross-walls, 0.3–0.8 mm long, 6–12-celled; costules abaxially pilose, adaxially sparsely pilose, the hairs 0.2–0.4 mm long, 3–6-celled; veins abaxially pilose, adaxially glabrous; laminar tissue between the veins abaxially hirsute, the hairs acicular, hyaline, erect, 0.1–0.15 mm long, 1–3-celled, adaxially glabrous; lamina margins glabrous; sori marginal; pseudoindusia proximally greenish, distally hyaline, the margins wavy, glabrous or rarely with one or two cilia.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

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

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

Possible occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

P.B. Schwartsburd, 1344, B, RB, VIC, FI, G, K, LP, NY, P, PRC, SP, Paraná, **Typus**

C.F.P. Martius, 382, BR, Bahia

A.F.M. Glaziou, 5328, B, K, Rio de Janeiro

Hypolepis forzzae Schwartsb.

DESCRIPTION

Leaf: costa pilose; **growth** determinate; **blade** quadripinnate; **veins abaxial** glabrate; **petiole** aculeate/glabrous; **tissue laminar abaxial** glabrous. **Type of sporangium:** **indusium** ciliate; **sori** marginal.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains




Amazon Rainforest

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

R.C. Forzza, 7277, RB,  (RB01404948), RB,  (RB01404947), RB,  (RB01404946), VIC, Amazonas, **Typus**

R.C. Forzza, 7277, RB, 571454, ,  (RB00770165), Amazonas, **Typus**

Hypolepis guianensis Klotzsch

DESCRIPTION

Leaf: costa pilose/glanduliferous; **growth** determinate; **blade** tripinnate; **veins abaxial** glanduliferous; **petiole** unarmed/rugose; **tissue laminar abaxial** glanduliferous. **Type of sporangium:** **indusium** ciliate glanduliferous; **sori** marginal.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

High Altitude Grassland, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Roraima)

HERBARIUM MATERIAL

H.R. Schomburgk, 1166, B (200074653), Roraima, **Typus**

Hypolepis hostilis (Kunze) C.Presl

Has as synonym

basionym *Cheilanthes hostilis* Kunze

homotype *Hypolepis repens* var. *hostilis* (Kunze) Baker

heterotypic *Hypolepis parviloba* Fée

DESCRIPTION

Leaf: costa pilose/glanduliferous; **growth** determinate; **blade** quadripinnate; **veins abaxial** glanduliferous; **petiole** aculeate/ glabrous/rugose; **tissue laminar abaxial** glabrous. **Type of sporangium:** indusium glabrous; **sori** marginal.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Amazonian Campinarana, Terra Firme Forest

Geographic Distribution

Confirmed occurrences


North (Amazonas)

Possible occurrences

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

Central-west (Mato Grosso)

HERBARIUM MATERIAL

R. Spruce, 2119, P (00633386), BR, GH, K (000640336), RB, P, B (200074671), US, BM (000937674), B (200074672), BM (000937675), G, K (000640337), LE, OXF, P (00633384), P (00633385), U, NY,  (00149046), Amazonas, **Typus**
E.F.D. Poeppig, 1957, W, K (000640334), PRC, US, **Typus**

Hypolepis krameri Schwartsb., Boudrie & Cremers

DESCRIPTION

Leaf: costa glabrate; **growth** determinate; **blade** tripinnate; **veins abaxial** glabrate; **petiole** glabrous/rugose/verrucose; **tissue laminar abaxial** glabrous. **Type of sporangium:** **indusium** ciliate; **sori** marginal.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

High Altitude Grassland, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Roraima)

HERBARIUM MATERIAL

E.F.Im Thurn, 161, BM, K, US, Roraima, **Typus**

Hypolepis miodelii Schwartsb.

DESCRIPTION

Leaf: costa glabrate; **growth** determinate; **blade** quadripinnate; **veins abaxial** glabrate; **petiole** unarmed/glabrous; **tissue laminar abaxial** glabrous. **Type of sporangium:** **indusium** ciliate; **sori** marginal.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

Possible occurrences

Southeast (São Paulo)

HERBARIUM MATERIAL

A.C. Brade, 16418, RB, CESJ, SP, VIC, Rio de Janeiro, **Typus**

A.C. Brade, 9294, R, Rio de Janeiro

Hypolepis mitis Kunze ex Kuhn

DESCRIPTION

Leaf: costa pilose; **growth** determinate; **blade** quadripinnate; **veins abaxial** pilose; **petiole** aculeate/ glabrous/ rugose/ verrucose; **tissue laminar abaxial** pilose. **Type of sporangium:** **indusium** ciliate; **sori** marginal.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Anthropic area, 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)

Possible occurrences

South (Santa Catarina)

HERBARIUM MATERIAL

P.B. Schwartzburd, 2317, FI, VIC, K, LP, RB, SP, Rio de Janeiro

J. Dutra, 261, ICN, Rio Grande do Sul

J. Prado, 2057, SP, VIC, São Paulo

G. Gardner, 199, FI (214900), G, K (000640335), OXF, PRC, RB, US, W, B, BM (000937676), Rio de Janeiro, **Typus**

Hypolepis repens (L.) C.Presl

This treatment is composed of the following taxa: *Hypolepis repens*, .

Has as synonym

homotype *Cheilanthes repens* (L.) Kaulf.
 heterotypic *Cheilanthes aculeata* (Spreng.) Kaulf.
 heterotypic *Hypolepis aculeata* (Spreng.) J. Sm.
 heterotypic *Hypolepis delicatula* Fée
 heterotypic *Hypolepis dicksonioides* Fée

DESCRIPTION

Leaf: costa pilose; **growth** determinate; **blade** quadripinnate; **veins abaxial** pilose; **petiole** aculeate/glabrous/rugose; **tissue laminar abaxial** glabrous. **Type of sporangium:** **indusium** glabrous; **sori** marginal.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Anthropic area, Amazonian Campinarana, Riverine Forest and/or Gallery Forest, Seasonal Evergreen Forest, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Pará)
 Northeast (Alagoas, Bahia, Ceará, Pernambuco)
 Central-west (Mato Grosso do Sul)
 Southeast (Minas Gerais, Rio de Janeiro, São Paulo)

Possible occurrences

North (Acre, Amazonas, Amapá, Rondônia, Roraima)
 Northeast (Paraíba, Rio Grande do Norte, Sergipe)
 Central-west (Mato Grosso)
 Southeast (Espírito Santo)

HERBARIUM MATERIAL

C. Plumier, s.n., P (00322132), **Typus**
 G. Raddi, s.n., FI, Rio de Janeiro
 C.R. Sperling, 5912, NY, MG, INPA, HUEFS, Pará
 P.B. Schwartsburd, 2510, SP, VIC, LP, Ceará

Hypolepis rigescens (Kunze in Mart.) T.Moore

This treatment is composed of the following taxa: *Hypolepis rigescens*, *Hypolepis rigescens* var. *paranaensis*, *Hypolepis rigescens* var. *rigescens*.

Has as synonym

basionym *Cheilanthes rigescens* Kunze

homotype *Polypodium punctatum* f. *rigescens* (Kunze) Baker

homotype *Polypodium punctatum* var. *rigescens* Baker

heterotypic *Hypolepis rubiginosopilosula* Lellinger

DESCRIPTION

Leaf: costa pilose/glanduliferous; **growth** determinate; **blade** quadripinnate; **veins abaxial** glanduliferous; **petiole** aculeate/pilose/glanduliferous/rugose; **tissue laminar abaxial** glanduliferous. **Type of sporangium:** **indusium** glabrous; **sori** marginal.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Anthropic area, Amazonian Campinarana, Grassland, Cerrado (lato sensu), Terra Firme Forest, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Bahia, Pernambuco)

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

South (Paraná)

Possible occurrences

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

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

Central-west (Mato Grosso)

IDENTIFICATION KEY

1. Fronds 0.5–0.7 m long; pinnae ascendant .. *Hypolepis rigescens* var. *paranaensis*

1. Fronds 1–2 m long; pinnae patent .. *Hypolepis rigescens* var. *rigescens*

HERBARIUM MATERIAL

C.F.P. Martius, 383, BR, Bahia, **Typus**

A.C. Brade, 19355, RB, SP, Espírito Santo

J. Badini, 312, RB, Minas Gerais

G.H. Langsdorff, 99, LE, Rio de Janeiro
M.S. Lopes, 510, RB, UFP, Pernambuco

Hypolepis rigescens (Kunze in Mart.) T.Moore var. *rigescens*

DESCRIPTION

Hypolepis rigescens is a widespread species, occurring from Costa Rica to southern Brazil and Bolivia, and also in a wide range of elevation, from 400 to 2000 m (Schwartzburd and Prado 2016). Throughout most of its range, *H. rigescens* have leaves ranging from 1 to 2.3 m long, 0.5–0.8 m wide, and copiously aculeate petioles and rachises. Some specimens from Bolivia, have shorter leaves (0.3–1 x 0.2–0.5 m) and sparsely aculeate petioles and rachises. Schwartzburd et al. (2017) regarded these specimens as a local endemic variety, *H. rigescens* var. *buchtienii* (Rosenst.) Schwartzb. In the state of Paraná, southern Brazil, the specimens of *Hypolepis rigescens* are also different—they are dwarf sized with more stout petioles, and with ascendant pinnae. These specimens come from the southernmost limits of the species, and they are also regarded as a local endemic variety: *H. rigescens* var. *paranaensis*.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Central Brazilian Savanna, Atlantic Rainforest

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Bahia, Pernambuco)

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

Possible occurrences

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

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

Hypolepis rigescens var. *paranaensis* Schwartzb.

DESCRIPTION

Plants terrestrial. Rhizomes ca. 3 mm diam.; the hairs catenate-acicular, reddish-brown, 1–2 mm long, 15–20 celled. Leaves determinate, erect, 50–70 cm long; petioles 15–45 cm x 3–4 mm, proximally purplish, distally golden-brown, aculeate, rugose, abaxially and adaxially sparsely pilose to glabrescent, the aculei straight, to 1 mm long, the hairs of two kinds, the first kind of hair catenate-acicular, 0.1–0.2 mm long, 4–7-celled, the second kind of hair catenate-glandular, 0.1–0.5 mm long, 4–8-celled; blades ovate, proximally tripinnate-pinnatifid to quadripinnate, 30–40 x 40–70 cm, herbaceous to chartaceous; rachises straight, proximally golden-brown, distally stramineous, rugose, aculeate, abaxially and adaxially sparsely pilose, with hairs similar to those on the petioles; basal pinnae 20–35 x 12–17 cm, subequilateral; costae abaxially and adaxially densely pilose, with both kinds of hairs, but the first kind longer, 0.4–1.5 mm long, 7–15-celled; costules abaxially densely pilose, adaxially glabrescent, the hairs similar to those on costae; veins abaxially pilose, adaxially glabrescent, with only the second kind of hair, and this shorter, 0.1–0.15 mm long, 2–3-celled; laminar tissue between the veins abaxially with hairs similar to those on veins, adaxially glabrous; lamina margins glabrous; sori abaxial-marginal; indusia reflexed, proximally greenish, distally hyaline, the margins crenate to dentate, rarely with one or two hairs.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Geographic Distribution

Confirmed occurrences

South (Paraná)

HERBARIUM MATERIAL

P.K. Dusén, 10222, K, BM, BR, G, GH, LE, NY, Paraná, **Typus**

Hypolepis rugosula (Labill.) J.Sm.

This treatment is composed of the following taxa: *Hypolepis rugosula*, *Hypolepis rugosula* subsp. *pradoana*.

Has as synonym

basionym *Polypodium rugosulum* Labill.

DESCRIPTION

Leaf: costa pilose/glanduliferous; **growth** determinate; **blade** tripinnate; **veins abaxial** glanduliferous; **petiole** unarmed/pilose/glanduliferous/rugose; **tissue laminar abaxial** glabrous. **Type of sporangium:** **indusium** absent; **sori** sub marginal.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Seasonally Semideciduous Forest, 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

J.J.H. Labillardiere, s.n., FI (214897), PRC, FI (214898), FI (214899), FI (214903), FI (214904), FI (216239), FI (218473), G (00048249), G (00048250), G (00048252), G (00048253), G (00048255), LE, G (00048251), K, L (908837), **Typus**

Hypolepis rugosula subsp. *pradoana* Schwartzb.

Has as synonym

heterotypic *Hypolepis juergensii* Rosenst.

DESCRIPTION

Same description of *Hypolepis rugosula* (Labill.) J. Sm.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Seasonally Semideciduous Forest, 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

P.H. Labiak, 4778, UPCB, Paraná

P.B. Schwartsburd, 2310, SP, B, FI, G, K, LP, NY, P, PRC, RB, SI, UC, UPCB, VIC, WELT, Rio de Janeiro, **Typus**

P.B. Schwartsburd, 2000, VIC, SP, Minas Gerais

Hypolepis stolonifera Fée

This treatment is composed of the following taxa: *Hypolepis stolonifera*, *Hypolepis stolonifera* var. *delasotae*, *Hypolepis stolonifera* var. *nebularis*, *Hypolepis stolonifera* var. *stolonifera*.

DESCRIPTION

Leaf: costa pilose; **growth** determinate; **blade** quadripinnate; **veins abaxial** pilose; **petiole** unarmed/glabrous/rugose; **tissue laminar abaxial** glabrous. **Type of sporangium:** **indusium** ciliate; **sori** marginal.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

High Altitude Grassland, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

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

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

Possible occurrences

Southeast (Minas Gerais, São Paulo)

South (Rio Grande do Sul, Santa Catarina)

IDENTIFICATION KEY

1. Laminar tissue between the veins abaxially pilose . *H. stolonifera* var. *delasotae*
1. Laminar tissue between the veins abaxially glabrous
2. Petioles and rachises immaculate . *H. stolonifera* var. *stolonifera*
2. Petioles and rachises with purple spots . *H. stolonifera* var. *nebularis*

HERBARIUM MATERIAL

A.F.M. Glaziou, 4435, P (00633494), B (200074973), P (00633495), B (200075126), C, GH, P (00633493), Rio de Janeiro,

Typus

Hypolepis stolonifera Fée var. *stolonifera*

Has as synonym

homotype *Hypolepis repens* var. *stolonifera* (Fée) M. Lisboa

DESCRIPTION

Petioles and rachises immaculate; *laminar tissue between the veins* abaxially glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

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

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

HERBARIUM MATERIAL

P.B. Schwartsburd, 1914, PACA, SP, VIC, Santa Catarina

P.B. Schwartsburd, 1369, VIC, SP, UPCB, Paraná

Hypolepis stolonifera var. *delasotae* Arana et al.

DESCRIPTION

Petioles and rachises immaculate; *laminar tissue between the veins* abaxially pilose.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Seasonally Semideciduous Forest, Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

South (Paraná)

Possible occurrences

South (Santa Catarina)

HERBARIUM MATERIAL

P.B. Schwartsburd, 1112, UPCB, SP, MBM, Paraná

R. Capurro, 1354, BA, **Typus**

Hypolepis stolonifera var. *nebularis* Schwartzb.

DESCRIPTION

Petioles and *rachises* with purple spots; *laminar tissue between the veins* abaxially glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

South (Paraná, Santa Catarina)

Possible occurrences

Southeast (Minas Gerais, São Paulo)

South (Rio Grande do Sul)

HERBARIUM MATERIAL

P.B. Schwartzburd, 2309, B, FI, K, NY, P, VIC, SP, Rio de Janeiro, **Typus**

P.B. Schwartzburd, 1969, SP, VIC, RB, LP, Santa Catarina

Hypolepis trinationalis Schwartsb.

DESCRIPTION

Leaf: costa pilose/glanduliferous; **growth** determinate; **blade** tripinnate; **veins abaxial** pilose/glanduliferous; **petiole** unarmed/ glabrous/rugose; **tissue laminar abaxial** glanduliferous. **Type of sporangium:** indusium ciliate; **sori** marginal.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

High Altitude Grassland, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Roraima)

HERBARIUM MATERIAL

G.H.H. Tate, 461, K, NY, Roraima

R. Persaud, 182, K, BRG, Roraima, **Typus**

Y. Vivas, 3104, UC, Roraima

Hypolepis Xpaulistana Schwartsb. & J.Prado

DESCRIPTION

Leaf: costa pilose; **growth** determinate; **blade** quadripinnate; **veins abaxial** glanduliferous; **petiole** unarmed/pilose/rugose; **tissue laminar abaxial** glabrous. **Type of sporangium:** **indusium** ciliate; **sori** marginal.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

Southeast (São Paulo)

HERBARIUM MATERIAL

P.B. Schwartsburd, 2298, DUKE, LP, MO, RB, VIC, SP, São Paulo, **Typus**

Microlepia C.Presl

This treatment is composed of the following taxa: *Microlepia*, *Microlepia speluncae*.

HOW TO CITE

Schwartzburd, P.B. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90937>.

DESCRIPTION

Rhizomes long-creeping, solenostelic, with catenate hairs. Fronds monomorphic, up to 3 m long; laminae rarely 1-pinnate, commonly 2-pinnate or more dissected; veins free; sori sub-marginal, roundish, born on the tip of a single vein; pseudo-indusia absent; indusia basally attached, pouch shaped, opening outwards; spores trilete.

COMMENTS

A genus with ca. 40-50 spp. specially in Asia and Oceania. One sub-comsopolitan species (*Microlepia speluncae*) occurring in Brazil.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Anthropic area, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest

Geographic Distribution

Confirmed occurrences

North (Pará)

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

South (Santa Catarina)

Possible occurrences

Northeast (Bahia)

Southeast (Espírito Santo)

South (Paraná, Rio Grande do Sul)

REFERENCE

KRAMER, K. U. 1990. Dennstaedtiaceae. Pp. 81-94, in K. U. Kramer and P. S. Green (eds.). Vol. I Pteridophytes and Gymnosperms. In: K. Kubitzki (ed.). The families and genera of vascular plants. Springer-Verlag, Berlin.

TRYON, R. M. and A. F. TRYON. 1982. Ferns and allied plants, with special reference to Tropical America. Springer-Verlag, New York.

Microlepia speluncae (L.) T.Moore

Has as synonym

basionym *Polypodium speluncae* L.

homotype *Davallia speluncae* (L.) Baker

DESCRIPTION

Rhizomes long-creeping, with catenate hairs. Fronds up to 3 m long; petioles adaxially sulcate, pilose; laminae 3-pinnate-pinnatifid; veins free, sparsely pilose on both surfaces; sori sub-marginal; indusia pouch shaped.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Anthropic area, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest

Geographic Distribution

Confirmed occurrences

North (Pará)

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

South (Santa Catarina)

Possible occurrences

Northeast (Bahia)

Southeast (Espírito Santo)

South (Paraná, Rio Grande do Sul)

HERBARIUM MATERIAL

P.H. Labiak, 4522, UPCB, Rio de Janeiro

Paesia A.St.-Hil.

This treatment is composed of the following taxa: *Paesia*, *Paesia glandulosa*.

HOW TO CITE

Schwartzburd, P.B. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90939>.

DESCRIPTION

Rhizomes long-creeping, solenostelic, with catenate hairs. Fronds monomorphic, commonly intermittent, to 2 m long; petioles adaxially sulcate, commonly pilose; laminae 2-pinnate-pinnatifid or more decomposed; veins free, commonly glandular; sori marginal, linear or elongate, born at a commissural receptacle; pseudo-indusia formed by the reflexed laminar margins; true indusia evident; spores monolete.

COMMENTS

Paesia is a genus with ca. 15 species, with 3 or 4 species in the Americas. The genus is specially diverse in SE Asia and Oceania. Only one species occur in Brazil: *P. glandulosa*.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Southeast (Minas Gerais)

Possible occurrences

Southeast (Espírito Santo, Rio de Janeiro)

REFERENCE

KRAMER, K. U. 1990. Dennstaedtiaceae. Pp. 81-94, in K. U. Kramer and P. S. Green (eds.). Vol. I Pteridophytes and Gymnosperms. In: K. Kubitzki (ed.). The families and genera of vascular plants. Springer-Verlag, Berlin.

TRYON, R. M. and A. F. TRYON. 1982. Ferns and allied plants, with special reference to Tropical America. Springer-Verlag, New York.

Paesia glandulosa (Sw.) Kuhn

Has as synonym

basionym *Cheilanthes glandulosa* Sw.

heterotypic *Paesia amazonica* (Christ) C.Chr.

heterotypic *Paesia viscosa* A. St-Hil.

heterotypic *Pteris viscosa* (J.St.-Hil.) T.Moore

DESCRIPTION

Rhizomes long-creeping, with catenate hairs. Fronds intermittent; petioles burgundy to blackish, with catenate and glandular hairs; laminae 3-pinnate-pinnatifid; veins abaxially with glandular hairs; laminar tissue between the veins anaxially with glandular hairs; sori elongate.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

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

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Southeast (Minas Gerais)

Possible occurrences

Southeast (Espírito Santo, Rio de Janeiro)

HERBARIUM MATERIAL

Badini, J., 2455, OUPR, Minas Gerais

Schwartzburd, P.B., 2929, VIC, Minas Gerais

Pteridium Gled. ex Scop.

This treatment is composed of the following taxa: *Pteridium*, *Pteridium caudatum*, *Pteridium esculentum*.

HOW TO CITE

Schwartzburd, P.B. Dennstaedtiaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB90941>.

DESCRIPTION

Rhizomes long-creeping, dictio-polycyclostelic, with catenate hairs. Fronds monomorphic, up to 7 m long; petioles adaxially sulcate; laminae 3-pinnate or more dissected; veins free; indument formed by different types of hairs (gnarled, acicular, setose, arachnoid, catenate, etc.); sori marginal, linear, born on a commissural receptacle; outer indusium formed by the reflexed laminar margins; inner indusium vestigial; spores trilete.

COMMENTS

Pteridium is a sub-cosmopolitan genus with a controversial taxonomy. The number of species is of great debate: some author recognize one species, and others up to a dozen. *Pteridium* taxa are better referred to as "morpho-types". Each morpho-type is sometimes referred to as species, subspecies, variety, or form. I here recognize one diploid species species, *P. esculentum* (with three subspecies and one variety), and one allopolyploid species, *P. caudatum*.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

Anthropic area, Caatinga (stricto sensu), Amazonian Campinarana, High Altitude Grassland, Grassland, Highland Rocky Field, Carrasco Vegetation, Cerrado (lato sensu), Coastal Forest (Restinga), Amazonian Savanna, Rock outcrop vegetation

Ocean Islands

Possible occurrences

Abrolhos, Atol das Rocas, São Pedro e São Paulo, Trindade

Geographic Distribution

Confirmed occurrences

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

Possible occurrences

North (Acre, Amazonas, Amapá, Pará, Rondônia, Roraima, Tocantins)
 Northeast (Alagoas, Maranhão, Piauí, Rio Grande do Norte, Sergipe)
 Central-west (Distrito Federal, Goiás, Mato Grosso do Sul, Mato Grosso)

Southeast (Espírito Santo)

IDENTIFICATION KEY

1. Simple distal segments 4 - 7 cm long, without free lobes between them . *P. caudatum*
1. Simple distal segments to 4 cm long, generally with free lobes between them . *P. esculentum*

REFERENCE

- Der, J.P., Thomson, J.A., Stratford, J.K. & Wolf, P.G. 2009. Global phylogeny and biogeography of bracken (Pteridium; Dennstaedtiaceae). *Am. J. Bot.* 96(5): 1041-1049.
- Schwartsburd, P.B., Moraes, P.L.R. & Lopes-Matos, K.L.B. 2014. Recognition of two morpho-types in eastern South American brackens (Pteridium - Dennstaedtiaceae - Polypodiopsida). *Phytotaxa* 170(2): 103-117.
- Tryon, R.M. 1941. A revision of the genus Pteridium. *Contr. Gray Herb. Harvard Univ.* 134: 1-31; 37-70 (reprint de *Rhodora* 43).

Pteridium caudatum (L.) Maxon

This treatment is composed of the following taxa: *Pteridium caudatum*, .

Has as synonym

basionym *Pteris caudata* L.

DESCRIPTION

Leaf: lobe(s) between the segment absent; **tissue laminar on the side abaxial** glabrous/pilose; **hair of the veins on the side abaxial** acicular/absent; **last segment compound** irregular; **last segment linear** long.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Anthropic area, Amazonian Campinarana, Amazonian Savanna

Geographic Distribution

Confirmed occurrences

North (Acre, Amazonas, Rondônia)

Possible occurrences

North (Amapá, Pará, Roraima)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

Costa, M.S., 69, UPCB

Pteridium esculentum (G. Forst.) Cockayne

This treatment is composed of the following taxa: *Pteridium esculentum*, *Pteridium esculentum* subsp. *arachnoideum*, *Pteridium esculentum* subsp. *campestre*, *Pteridium esculentum* subsp. *gryphus*, *Pteridium esculentum* var. *harpianum*, *Pteridium esculentum* var. *paedomorficum*.

Has as synonym

heterotypic *Pteridium arachnoideum* (Kaulf.) Maxon subsp. *arachnoideum*

heterotypic *Pteridium arachnoideum* (Kaulf.) Maxon

heterotypic *Pteridium psittacinum* (C. Presl) Maxon

DESCRIPTION

Leaf: lobe(s) between the segment usually present; **tissue laminar on the side abaxial** floury/glabrous; **hair of the veins on the side abaxial** acicular/arachnoid; **last segment compound** regular/irregular; **last segment linear** short/long.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

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

Vegetation Types

Anthropic area, Caatinga (stricto sensu), Amazonian Campinarana, High Altitude Grassland, Grassland, Highland Rocky Field, Carrasco Vegetation, Cerrado (lato sensu), Coastal Forest (Restinga), Amazonian Savanna, Rock outcrop vegetation

Ocean Islands

Possible occurrences

Abrolhos, Atol das Rocas, São Pedro e São Paulo, Trindade

Geographic Distribution

Confirmed occurrences

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

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

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

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

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

Possible occurrences

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

Northeast (Alagoas, Maranhão, Piauí, Rio Grande do Norte, Sergipe)

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

Southeast (Espírito Santo)

IDENTIFICATION KEY

1. Laminar tissue between the veins abaxially with farinose aspect, fully covered by gnarled hairs . 2
1. Laminar tissue between the veins abaxially visible, not with farinose aspect, glabrous . 4
2. Simple distal segments to 1 (- 1.5) cm long . *P. esculentum* subsp. *campestre*
2. Simple distal segments 2.5 - 4 cm long . 3
3. Veins abaxially with sericeous appearance, with lax, arachnoid hairs, 0.6–0.8 mm long . *P. esculentum* subsp. *gryphus*
3. Veins abaxially glabrous or nearly glabrous . *P. esculentum* var. *harpianum*

4. Margins of sterile laminae regularly transformed into continuous outer indusia; simple distal segments linear, 2.5 - 4 cm long .
P. esculentum subsp. *arachnoideum*
4. Margins of sterile laminae mostly not transformed into outer indusia and ciliate; simple distal segments triangular elongate, to 1.5 cm long . *P. esculentum* var. *paedomorphicum*

HERBARIUM MATERIAL

P.B. Schwartsburd, 3323, VIC, Rio de Janeiro

Pteridium esculentum subsp. *arachnoideum* (Kaulf.) Thomson

Has as synonym

basionym *Pteris arachnoidea* Kaulf.

homotype *Pteridium aquilinum* var. *arachnoideum* (Kaulf.) Brade

homotype *Pteridium arachnoideum* (Kaulf.) Maxon subsp. *arachnoideum*

homotype *Pteridium arachnoideum* (Kaulf.) Maxon

homotype *Pteridium caudatum* subsp. *arachnoideum* (Kaulf.) Lellinger

heterotypic *Pteridium psittacinum* (C. Presl) Maxon

DESCRIPTION

Plants forming extensive thickets. Rhizomes long-creeping. Fronds to 3(–4.5) m long; petioles proximally with epipetiolar roots; laminae proximally 3–4-pinnate-pinnatifid; pinnae and pinnules distally with free lobes between the segments; compound distal segments inequilateral, irregularly dissected, caudate at apex; simple distal segments linear, to 3(–4) cm long; costae abaxially with reddish catenate hairs, 5–7-celled, 0.3–0.5 mm long, adaxially glabrous; costules abaxially with reddish catenate hairs, adaxially glabrous; veins abaxially sericeous, with lax, arachnoid hairs, 0.6–0.8 mm long, adaxially glabrous; laminar tissue between the veins abaxially glabrous and totally visible, without farinaceous appearance, adaxially glabrous; laminar margins regularly transformed into pseudo-indusia; pseudo-indusia glabrous.

COMMENTS

Este é o nome corrente mais aceito ao táxon que já foi chamado *Pteridium arachnoideum* ou *Pteridium aquilinum* var. *arachnoideum*. Notar que *Pteridium aquilinum* s. str. não ocorre no Brasil, apenas no hemisfério Norte.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Vegetation Types

Anthropic area, Caatinga (stricto sensu), Amazonian Campinarana, High Altitude Grassland, Grassland, Highland Rocky Field, Carrasco Vegetation, Cerrado (lato sensu), Coastal Forest (Restinga), Amazonian Savanna, Rock outcrop vegetation

Ocean Islands

Possible occurrences

Abrolhos, Atol das Rocas, São Pedro e São Paulo, Trindade

Geographic Distribution

Confirmed occurrences

North (Roraima)

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

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

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

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

Possible occurrences

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

Northeast (Maranhão, Piauí, Sergipe)

Central-west (Mato Grosso)

HERBARIUM MATERIAL

P.B. Schwartsburd, 3323, VIC, Minas Gerais

Chamisso, C.A., s.n., LE, **Typus**

Pteridium esculentum subsp. *campestre* (Schrad.) Schwartsb. & J Prado

Has as synonym

homotype *Pteridium arachnoideum* subsp. *campestre* (Schrad.) Schwartsb. & P.L.R. Moraes

DESCRIPTION

Plants sparse or forming small thickets. Rhizomes long-creeping. Fronds to 1.5(–2) m long; petioles proximally with epipetiolar roots; laminae proximally 3-pinnate-pinnatifid; pinnae and pinnules distally without free lobes between the segments, with a few decurrent lobes only; compound distal segments equilateral, regularly dissected, not or slightly caudate at apex; simple distal segments linear, to 1(–1.5) cm long; costae abaxially with reddish catenate hairs, 5–7-celled, 0.3–0.5 mm long, adaxially glabrous; costules abaxially with reddish catenate hairs, adaxially glabrous; veins abaxially strigose, with stiff, acicular hairs, 0.2–0.3 mm long, adaxially glabrous; laminar tissue between the veins abaxially with farinaceous appearance, not visible, totally covered by gnarled hairs, adaxially glabrous; laminar margins regularly transformed into pseudo-indusia; pseudo-indusia glabrous.

COMMENTS

Este táxon foi descrito por Schrader em 1824, mas ficou praticamente ignorado até 2014. Só então Schwartsburd et al. (2014) resgataram este nome e recircunscreveram os táxons brasileiros de *Pteridium*. Este táxon ocorre, principalmente em terrenos arenosos, especialmente ao longo da Restinga. Mas também ocorre no interior do Brasil, porém, aparentemente, restrito a terrenos arenosos.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Atlantic Rainforest

Vegetation Types

Coastal Forest (Restinga), Amazonian Savanna

Ocean Islands

Possible occurrences

São Pedro e São Paulo

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Bahia, Ceará, Paraíba, Pernambuco)

Southeast (Espírito Santo, Rio de Janeiro)

Possible occurrences

North (Amapá, Pará, Roraima)

Northeast (Alagoas, Maranhão, Piauí, Rio Grande do Norte, Sergipe)

HERBARIUM MATERIAL

P.B. Schwartzburd, 3785, VIC, NY, UC, Espírito Santo

M.A.P. Wied-Neuwied, s.n., LE, BR, 5419005, BR, 5418022, Bahia, **Typus**

Pteridium esculentum subsp. *gryphus* Schwartzb.

DESCRIPTION

Plants forming extensive thickets. Rhizomes long-creeping. Fronds to 3 m long; petioles proximally with epipetiolar roots; laminae proximally 3–4-pinnate-pinnatifid; pinnae and pinnules distally with free lobes between the segments; compound distal segments inequilateral, irregularly dissected, caudate at apex; simple distal segments linear, to 3(–4) cm long; costae abaxially with reddish catenate hairs, 5–7-celled, 0.3–0.5 mm long, adaxially glabrous; costules abaxially with reddish catenate hairs, adaxially glabrous; veins abaxially sericeous, with lax, arachnoid hairs, 0.6–0.8 mm long, adaxially glabrous; laminar tissue between the veins abaxially with farinaceous appearance, not visible, totally covered by gnarled hairs, adaxially glabrous; laminar margins regularly transformed into pseudo-indusia; pseudo-indusia glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Geographic Distribution

Possible occurrences

North (Acre, Amazonas, Rondônia, Roraima)

Pteridium esculentum var. *harpianum* Schwartzb. & A. Yanez

DESCRIPTION

Plants probably forming extensive thickets. Rhizomes long-creeping. Fronds to 2.5 m long; petioles proximally with epipetiolar roots; laminae proximally 3-pinnate-pinnatifid; pinnae and pinnules distally with free lobes between the segments; compound distal segments inequilateral, irregularly dissected, caudate at apex; simple distal segments linear, to 3 cm long; costae abaxially with reddish catenate hairs, 5–7-celled, 0.3–0.5 mm long, or glabrescent, adaxially glabrous; costules abaxially with sparse reddish catenate hairs, or glabrescent, adaxially glabrous; veins abaxially glabrescent to glabrous, adaxially glabrous; laminar tissue between the veins abaxially with farinaceous appearance, not visible, totally covered by gnarled hairs, adaxially glabrous; laminar margins regularly transformed into pseudo-indusia; pseudo-indusia glabrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Geographic Distribution

Confirmed occurrences

North (Amazonas, Amapá)

Possible occurrences

North (Pará, Roraima)

HERBARIUM MATERIAL

R. W. Barreto, 1623, VIC, Amazonas

Pteridium esculentum var. *paedomorficum* Schwartzb. & J.Prado

DESCRIPTION

Plants sparse, not forming thickets. Rhizomes short-creeping. Fronds to 1.5 m long; petioles proximally with epipetiolar roots; laminae proximally 3-pinnate-pinnatifid; pinnae and pinnules distally occasionally with free lobes between the segments, generally with only a few decurrent lobes; compound distal segments equilateral, regularly dissected, not caudate at apex; simple distal segments triangular elongate, to 1.5 cm long; costae abaxially with reddish catenate hairs, 5–7-celled, 0.3–0.5 mm long, or sometimes glabrous, adaxially glabrous; costules abaxially with reddish catenate hairs, or sometimes glabrous, adaxially glabrous; veins abaxially with setose to arachnoid hairs, 0.3–0.6 mm long, adaxially with a few setose hairs or glabrescent; laminar tissue between the veins abaxially glabrous and totally visible, without farinaceous appearance, adaxially glabrous; laminar margins irregularly transformed into pseudo-indusia, copiously ciliate; pseudo-indusia interrupted, copiously ciliate.

COMMENTS

Este táxon é uma forma pedomórfica de *P. esculentum* subsp. *arachnoideum*.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Anthropic area, High Altitude Grassland, Highland Rocky Field

Geographic Distribution

Confirmed occurrences

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

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

Possible occurrences

North (Rondônia)

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

Southeast (Espírito Santo)

HERBARIUM MATERIAL

L.C. Jurgens & A. Stier, 118, NY, MVM, SI, US, Rio Grande do Sul, **Typus**