

Sarraceniaceae Dumort.

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This treatment is composed of the following taxa: Sarraceniaceae, *Heliophora*, *Sarracenia*.

HOW TO CITE

Fleischmann, A. 2020. Sarraceniaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB218>.

DESCRIPTION

Perennial carnivorous herbs. Roots fibrous, terete, slightly succulent, somewhat brittle, poorly branched. Leaves alternate, rosulate or along horizontal rhizomes, non-stipulate. Leaves pitcher-like, i.e. modified into epiascidiate carnivorous pitfall traps (some species of *Sarracenia* additionally with non-carnivorous phyllodia, i.e. leaves with the tubular part greatly reduced and ala expanded). Pitcher leaves with a single glabrous ventral wing (*Sarracenia*, *Darlingtonia*) or two alae with ciliate margins (*Heliophora*), petiole short, gradually widened into the tubular pitcher part, this median part of the leaf inflated, hollow, leaf apex modified into a cup-like, hood-like or inflated lid. Pitcher exterior glabrous to short pubescent, usually with extrafloral nectaries ("nectar glands"), pitcher interior glabrous with cuticular gaps ("digestion pores", family is lacking digestive glands) in the lower part, median part variously lined with retrorse bristles, upper part glabrous, with stiff retrorse hairs, or finely pubescent. Inflorescence racemose, with solitary flowers (*Darlingtonia*, *Sarracenia*) or with up to 10 flowers (*Heliophora*). Flowers nodding, actinomorphic, hermaphrodite, often proteogynous. Sepals (3)4-6(8), petaloid, persistent in fruit. Petals five (*Darlingtonia*, *Sarracenia*) or absent (*Heliophora*), caducous. Stamens many, filaments thin, anthers bithecate, loculicidal (*Darlingtonia*, *Sarracenia*) or poricidal (*Heliophora*). Ovary superior, 3-5-locular, ovules many, placentation axial, styles 3-5, fused to a single pistil (*Heliophora*), apically divided into 5 free style segments (*Darlingtonia*), or 5 style segments fused to an umbrella-like peltate disk with 5 marginal stigmas (*Sarracenia*). Fruit a dry capsule, loculicidal. Seeds numerous, small, winged or with testa outgrowths.

COMMENTS

Three genera (one in the Flora area): *Darlingtonia*: 1 species, montane Western USA (Oregon, California). *Sarracenia*: 8-9 species, South-Eastern USA, one species extending into northern USA and Eastern Canada. *Heliophora*: 23 species, Guayana shield (Venezuela, Guiana, Brazil).

Life Form

Herb, Subshrub

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Anthropic area, Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas, Roraima)

South (Paraná)

Possible occurrences

Southeast (São Paulo)

Heliamphora Benth.

This treatment is composed of the following taxa: *Heliamphora*, *Heliamphora ceracea*, *Heliamphora glabra*, *Heliamphora hispida*, *Heliamphora neblinae*, *Heliamphora nutans*.

HOW TO CITE

Fleischmann, A. Sarraceniaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB87981>.

DESCRIPTION

Perennial carnivorous herbs with pitcher-like leaves. Leaves rosulate, arranged alternately on short horizontal stems or tall erect stems, growth monopodial, stems simple or branched. Leaves more or less erect, inflated, tubular, pitcher-like, yellowish-green to bright red, apical lid usually dark red, nectariferous, pitcher exterior glabrous to pubescent, with extrafloral nectaries being more or less prominent, pitcher interior in the upper third glabrous, finely pubescent or covered stiff retrorse bristles. Pitcher leaves dimorphic, differing between juvenile and flowering-size plants. Juvenile foliage rather uniform among all species, narrowly tubular with hood-like lid with recurved margins and 2 alae running up to the pitcher opening. Adult pitchers 10-50 cm tall, shape ranging from widely infundibuliform to narrowly tubular, pitcher shape, indumentum and lid shape largely species-specific. Inflorescence racemose, up to 100 cm tall, with (1)3-10 flowers, each subtended by a single, persistent, scale-like bract, the bract of the lowermost flower occasionally developed as an elongated small pitcher leaf. Peduncle and pedicels glabrous or finely pubescent. Flowers solitary on each pedicel, nodding, proterogynous. Tepals 4-6(8), petaloid, subequal in size, ca. 3-6 cm long, lanceolate, white to tinged pink at anthesis, persistent and becoming green to bright red during fructification, fruits usually held upright. Stamens 8- ca. 30, filaments curved, slightly longer as the thecae, anthers basifixed but reflexed during anthesis, anthers bithecate, thick-walled, poricidal, anther length largely species specific. Ovary superior, 3-locular, densely pubescent, styles fused to a single pistil with small apical dot-like stigma, exceeding the ring of anthers, persistent in fruit. Fruit a dry, 3-valvate capsule. Seed numerous, golden-brown, winged.

COMMENTS

23 species endemic to the Guayana Shield (Venezuela and adjacent Giana and Brazil (Amazonas, Roraima)), 5 species in the Flora area.

Life Form

Herb, Subshrub

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas, Roraima)

IDENTIFICATION KEY

1. Lid erect, flag-like or heart-shaped, the lid forming a more or less right angle with the back of the pitcher mouth, peduncle and pedicels pubescent, plants from Amazonas state 2
- 1'. Lid cup-like, the opening of the lid parallel to the pitcher mouth, peduncle and pedicels glabrous, plants from Roraima state 4
2. Plant forming erect monopodial stems, pitcher leaves ca. 25-50 cm tall, with wide pitcher opening (trumpet-shaped), upper third of the pitcher interior covered with very short, pubescent hairs except for a glabrous area along the midvein running to the pitcher lid (this area and lid bright red and contrasting with the yellowish-green pitcher in living plants, but still visible in dried specimens) ***H. neblinae***
- 2'. Plant rosulate, stems if present very short, pitcher leaves not exceeding 25 cm in height, pitcher opening not notably widened 3
3. Upper third of pitcher interior covered with stiff retrorse hairs, pitcher lid heart-shaped, with a notable constriction ("stalk") at the base (towards the pitcher margin), lateral margins of the lid curved inwards, pitcher stunted, infundibuliform ***H. hispida***
- 3'. Upper third of pitcher interior glabrous, with glaucous waxy cover in living plants, with few very large nectaries along the midvein, pitcher lid tongue-shaped, not constricted at the base, with flat or slightly reflexed margins, pitchers tubular .. ***H. ceracea***
4. Upper third of pitcher interior densely covered with short, pubescent hairs (giving the surface a silk-like appearance), anthers shorter than 5 mm (ca. 3 mm long) .. *H. nutans*
- 4'. Upper third of pitcher interior glabrous, anthers longer than 5 mm (ca. 8 mm long) ***H. glabra***
= if upper third of pitcher interior covered with short pubescent hairs except two well-developed glabrous patches along the midrib .. ***H. nutans x glabra***

REFERENCE

McPherson S., Wistuba A., Fleischmann A., Nerz J. (2011) Sarraceniaceae of South America. Redfern Natural History Productions, Dorset, England.

Heliamphora ceracea Nerz, Wistuba, Grantsau, Rivadavia, A.Fleischm. & S.McPherson

DESCRIPTION

Stem: habit rosetted stemless. **Leaf: pitcher height (cm)** 10 to 20 cm long (cm); **pitcher shape** tubular elongated; **pitcher opening** not widened bigger than tubular part; **pitcher lid** flat vertical acute/sessile; **pitcher interior surface indumentum upper third** glabrous waxy glaucous. **Inflorescence: pedicel** pubescent; **peduncle** glabrous. **Flower: anther size** long (mm) 6 to 9 mm; **stamen number** more than 15; **tepal(s) size** 3 to 5 cm long (cm) 2 to 3 cm wide (cm).

ADDITIONAL DESCRIPTION

Distribuição no Brasil: Pico da Neblina e Pico 31 de Março, 1800 - 2000 m de altitude.
Vegetação campestre de tepui.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

Rivadavia, F., 771, SPF, Amazonas, **Typus**

Heliamphora glabra (Maguire) Nerz, Wistuba & Hoogenstr.

Has as synonym

basionym *Heliamphora heterodoxa* var. *glabra* Maguire

DESCRIPTION

Stem: habit rosetted stemless. **Leaf: pitcher height (cm)** longer than 20 cm 25 to 45 cm long (cm); **pitcher shape** tubular elongated; **pitcher opening** infundibular widened; **pitcher lid** cucullate horizontal rounded/stipitate; **pitcher interior surface indumentum upper third** glabrous. **Inflorescence: pedicel** glabrous; **peduncle** glabrous. **Flower: anther size** long (mm) 6 to 9 mm; **stamen number** less than or equal 15; **tepal(s) size** 3 to 5 cm long (cm) 2 to 3 cm wide (cm).

ADDITIONAL DESCRIPTION

Distribuição no Brasil: Serra do Sol (= Uei-tepui/Wei-tepui/Cerro El Sol), Maringma-tepui, Wei-Assipu tepui (= Roraiminha/Roraimita), em encostas e no planalto do Monte Roraima, somente do lado norte da Guiana. 1200 - 2100 m de altitude (no Monte Roraima norte na Guiana a 2750 m). Vegetação campestre de tepui.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Rock outcrop vegetation


Geographic Distribution

Confirmed occurrences

North (Roraima)

HERBARIUM MATERIAL

Cordeiro, M.R., 408, SP (SP032531)

B. Maguire, s.n., RB, 166950,  (RB00282297)

Heliamphora hispida Wistuba & Nerz

DESCRIPTION

Stem: habit rosetted stemless. **Leaf: pitcher height (cm)** 10 to 20 cm long (cm); **pitcher shape** infundibular constricted; **pitcher opening** infundibular widened; **pitcher lid** cucullate horizontal rounded/sessile/stipitate; **pitcher interior surface indumentum upper third** hair sparsely stiff longer than 2 mm 2 to 4 mm long. **Inflorescence: pedicel** pubescent; **peduncle** glabrous. **Flower: anther size** long (mm) 6 to 9 mm; **stamen number** less than or equal 15; **tepal(s) size** 3 to 5 cm long (cm) 2 to 3 cm wide (cm).

ADDITIONAL DESCRIPTION

Distribuição no Brasil: Pico da Neblina e Pico 31 de Março (para o topo), 1800 - 3000 m de altitude. Vegetação campestre de tepui.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

Wistuba, A., 01.01.99.01, VEN, **Typus**

Heliamphora neblinae Maguire

Has as synonym

homotype *Heliamphora tatei* var. *neblinae* (Maguire) Steyerem.

DESCRIPTION

Stem: habit monopodial. **Leaf:** **pitcher height (cm)** longer than 20 cm 25 to 45 cm long (cm); **pitcher shape** tubular elongated; **pitcher opening** infundibular widened; **pitcher lid** flat vertical acute/sessile; **pitcher interior surface indumentum upper third** pubescent hair short shorter than 2 mm dense. **Inflorescence:** **pedicel** pubescent; **peduncle** pubescent. **Flower:** **anther size** long (mm) 6 to 9 mm; **stamen number** more than 15; **tepal(s) size** 6 to 7 cm long (cm) 3 to 4 cm wide (cm).

ADDITIONAL DESCRIPTION

Distribuição no Brasil: Serra da Neblina: Pico da Neblina (e na Venezuela adjacente, mas não foi encontrado no Pico 31 de Março), 2000 - 2200 m de altitude, e Serra Pirapucú, 1300 - 1700 m de altitudue.

Vegetação campestre de tepui.

Life Form

Herb, Subshrub

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types


Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

Nilo T. Silva, s.n., RB, 166949,  (RB00380870)

C. Farney, 839, RB, 236611,   (RB00380831), Amazonas

B. Maguire, s.n., RB, 102083, Amazonas

C. Farney, 839, INPA, 164761, Amazonas

Heliamphora nutans Benth.

DESCRIPTION

Stem: habit rosetted stemless. **Leaf: pitcher height (cm)** 10 to 20 cm long (cm); **pitcher shape** infundibular constricted; **pitcher opening** infundibular widened; **pitcher lid** cucullate horizontal rounded/stipitate; **pitcher interior surface indumentum upper third** pubescent hair short shorter than 2 mm dense. **Inflorescence: pedicel** glabrous; **peduncle** glabrous. **Flower: anther size** long (mm) 3 to 4 mm; **stamen number** more than 15; **tepal(s) size** 3 to 5 cm long (cm) 2 to 3 cm wide (cm).

ADDITIONAL DESCRIPTION

Distribuição no Brasil: Monte Roraima, Wei-Assipu tepui (= Roraiminha/Roraimita), Maringma-tepui, pequenos platôs no flanco oriental do Monte Roraima. 2000 - 2700 m de altitude. Vegetação campestre de tepui.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Roraima)

REFERENCE

McPherson et al. (2011). Sarraceniaceae of South America.

Sarracenia L.

This treatment is composed of the following taxa: *Sarracenia*, *Sarracenia minor*.

HOW TO CITE

Fleischmann, A. Sarraceniaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB609433>.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

Vegetation Types

Anthropic area

Geographic Distribution

Confirmed occurrences

South (Paraná)

Possible occurrences

Southeast (São Paulo)

Sarracenia minor Walter

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Cultivated, Not endemic to Brazil

Vegetation Types

Anthropic area

Geographic DistributionConfirmed occurrences

South (Paraná)

Possible occurrences

Southeast (São Paulo)