

Loasaceae Juss.

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This treatment is composed of the following taxa: Loasaceae, *Aosa*, *Blumenbachia*, *Caiophora*, *Klaprothia*, *Mentzelia*.

HOW TO CITE

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Has as synonym

Cevalliaceae Griseb.

Gronoviaceae (Rchb.) Endl.

DESCRIPTION

Annual or perennial, erect, decumbent, or winding herbs, rarely rosette plants, vines, woody lianas, subshrubs or small trees, from 5 cm to 10 m tall; stem with white pith, rarely solid, terete, rectangular or grooved, often with lenticels and/or tuberculate; rhizome, xylopodium or runners sometimes present; roots fibrous, primary root dominant or evanescent, occasionally primary and/or secondary roots tuberous, or only adventitious roots present in mature plant; indumentum typically with scabrid/glochidiate trichomes and urticant setae, sometimes with uniseriate and/or glandular trichomes. Leaves opposite below and alternate above, opposite throughout or more rarely, alternate throughout, petiolate or sessile, exstipulate or pseudostipulate; lamina linear, ovate, or circular, membranaceous to coriaceous, 2–50 cm long, base cuneate, cordate or peltate, usually lobed, rarely pinnatisect, trifoliolate, bipinnatifid, or palmate; margin serrate or mucronate, rarely entire, with hydathode teeth. Inflorescences often terminal thyrsoids, sometimes reduced to dichasia, monochasia or monads, rarely racemes; bracts present or rarely absent, mostly green. Flowers perfect, proterandric, usually actinomorphic, chasmogamous, rarely cleistogamous; perianth heterochlamydeous, (4)5(–8)-merous; calyx tube conical to globose, densely covered with trichomes; calyx lobes usually persistent and accrescent, rarely caducous, aestivation apert; corolla choripetalous, sympetalous or pseudosympetalous, aestivation apert (inc. valvate), contort or imbricate; petals erect, spreading or reflexed, linear, spatulate, ovate or circular, planar or deeply boat-shaped, margin entire, irregularly serrate, or lacinate, sometimes with filliform apical appendages or longitudinal lamelliform flaps, often with short claw and one lateral tooth on each side, membranaceous to carnose, green, white, yellow, orange, pink or red; androecium haplostemonous, obdiplostemonous or polystemonous (150 or more), all stamens fertile or some staminodial; initiation centripetal; filaments filiform, inserted basally or epipetalous, rarely very short, or petaloid; anthers basifixed, with 1–4 microsporangia; connective usually undifferentiated; staminodia highly diversified, free and filiform or petaloid or united to form elaborate staminodial complexes (nectar scales); nectaries antepetalous glands, or ring- or cup-shaped disc, or absent; ovary completely inferior to 4/5 superior; style filiform, included or exerted; stigma punctiform or with 2–5 papillose, parallel or divergent lobes; ovules anatropous, either single, pendent, or numerous on unbranched or branched parietal placentae, in Mentzelioidae and Loasoideae unitegmic and tenuinucellar with well-developed chalazal and micropylar haustoria. Fruit a capsule or cypsela, typically dehiscent with 3–5 apical valves, septicidal or rarely septifragous, rarely with 3–5 apical valves and 1 longitudinal suture, or only with 3–5 longitudinal sutures, rarely indehiscent; seeds 1–many, globose, ovoidal or angular,

sometimes winged; testa usually pale or dark brown to black, reticulate with or without central papillae, sometimes with fenestrate anticlinal walls, or striate; embryo straight, embedded in copious and oily endosperm, Seedling with 2 ovate to obovate, densely trichomatose, apically emarginate cotyledons, each with a medvein ending in a hydrotode tooth.

Life Form

Herb, Liana/scandent/vine, Shrub, Subshrub

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), High Altitude Grassland, Grassland, Cerrado (lato sensu), Seasonally Deciduous Forest, Seasonally Semideciduous Forest, Ombrophylous Forest (Tropical Rain Forest), Mixed Ombrophylous Forest, Coastal Forest (Restinga), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

North (Amazonas, Pará)

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

Central-west (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 (Tocantins)

Northeast (Alagoas)

Southeast (Minas Gerais, Rio de Janeiro)

IDENTIFICATION KEY

1. Plants without stinging hairs. Antesepalous nectar scales absent or inconspicuous (i.e., groups of apically lobed, yellow staminodes or antesepalous filaments widened) .. **2**
- 1'. Plants with stinging hairs. Antesepalous nectar scales well developed .. **3**
2. Flowers tetramerous. Petals white, deeply boat-shaped with longitudinal lamellae. Leaves opposite .. *Klaprothia* Kunth
- 2'. Flowers pentamerous. Petals yellow, more or less flat, without longitudinal lamellae. Leaves alternate .. *Mentzelia* L.
3. Inflorescences conspicuously zig-zag-shaped monochasia, later more or less straight, ebracteate or with linear, poorly developed bracts. Fruits straight .. *Aosa* Weigend
- 3'. Inflorescences frondose with conspicuous, leaf-like bracts or flowers apparently solitary and axillary. Fruits twisted .. **4**
4. Floral scales without double arch, dorsal threads inserted in the proximal (basal) half of the scale; fruits all twisted in the same direction in the inflorescence; seeds with longitudinal wings or with a fibrous testa, never deeply pitted .. *Blumenbachia* Schrad.
- 4'. Floral scales with double arch, dorsal threads inserted into the distal (apical) half of the scale; fruits twisted in alternating directions in the inflorescence; seeds with deeply pitted testa .. *Caiophora* C.Presl

REFERENCE

- Bovini, M.G. & Giordano, L.C. 2005. Loasaceae Lindl. no Estado do Rio de Janeiro, Brasil. Acta Botanica Brasilica 19(2): 265-271.
- Jussieu de, A.L. 1804. Mémoire sur le Loasa. Annales du Muséum National d'Histoire Naturelle. 5: 18-27. **Original work.**
- Pacheco, A.M.F. 2002. Loasaceae. Pp. 159-161. In: M.G.L.Wanderley, G.J. Sheperd & A.M.Giulietti (eds.). Flora Fanerogâmica do Estado de São Paulo. v.2. São Paulo, Ed. Hucitec.

- Santos, E. & Trinta, E.F. 1985. Loasáceas. Pp. 3-20. In: P.R. Reitz (ed.). Flora Ilustrada Catarinense. Itajaí, Herbário Barbosa Rodrigues.
- Urban, I. 1889. Loasaceae. Pp. 197-224. In: C.F.P. Martius (ed.). Flora Brasiliensis. v. 13(3).
- Urban, I. & Gilg., E. 1900. Monografia Loasacearum. Nova Acta Acad. Caes. Leop. Carol. German. Nat. Cur. 76: 1-368.

Aosa Weigend

This treatment is composed of the following taxa: *Aosa*, *Aosa gilgiana*, *Aosa parviflora*, *Aosa rostrata*, *Aosa rupestris*, *Aosa sigmoidea*, *Aosa uleana*.

HOW TO CITE

Acuña-Castillo, R., Henning, T., Weigend, M., Mello-Silva, R. (in memoriam) Loasaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB119967>.

DESCRIPTION

Annual or perennial herbs or shrubs, with stinging hairs. Leaves opposite below, alternate above, or opposite throughout; lamina oblong, ovate to suborbicular, lobed or entire, margin crenate or serrate to doubly-serrate. Inflorescence a complex terminal thyrsoid, with monochasial or rarely dichasial paracladia; prophylls absent or greatly reduced; petals white or cream to green; nectar scales green, green and brown, or red and yellow, with (0-)3 dorsal filaments, scale apex forming 3 lobules, or entire and recurved. Capsule inferior to 3/4 superior, subglobose to clavate, sometimes curved, opening with 3-5 apical valves; testa often tuberculate reticulate, epidermis cells longer than wide (210 x 60 µm), each cell usually with a crescent-shaped, rugulose tubercle at their chalazal pole, less commonly tubercle absent. 2n = 24. Eight spp. from E Brazil (6 spp.), Hispaniola (1 sp.) and Costa Rica to NW Colombia (1 sp.).

COMMENTS

Includes *Chichicaste* Weigend as a heterotypic synonym. See Acuña et al., Phytotaxa 365 (3): 282. (2018) for supporting evidence of this relationship.

Life Form

Herb, Shrub, Subshrub

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Caatinga, Central Brazilian Savanna, Atlantic Rainforest

Vegetation Types

Anthropic area, Caatinga (stricto sensu), Ombrophyllous Forest (Tropical Rain Forest), Coastal Forest (Restinga), Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

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

Central-west (Goiás)

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

Possible occurrences

North (Tocantins)

Northeast (Alagoas)

IDENTIFICATION KEY

1. Leaves subcircular in outline, 15-25 cm long and wide, strictly opposite and equal, inflorescences repeatedly dichasial, with numerous flowers .. *A. uleana* (Urb. & Gilg) Weigend
- 1'. Leaves elliptical or oblong, considerably longer than wide, rarely exceeding 10-15 cm in length, leaves alternate, rarely in very unequal pairs (one leaf 3-10 times larger than the other, only *A. rostrata*), inflorescences simple or branched often monochasial, never diachasial with terminal flowers in node .. **2**
2. Inflorescences alternating with foliage leaves (apparently internodal) .. *A. parviflora* (Schrad. ex DC) Weigend
- 2'. Inflorescences apparently axillary or obviously terminal ..**3**
3. Inflorescence a complex terminal thyrsoid interspersed with foliage leaves, capsule with long beak .. **4**
- 3'. Inflorescence leafless, with long, leafless stalk, capsule globose, without long beak .. **5**
4. Plant usually under 0.3 m tall, setose, capsule almost completely superior .. *A. rostrata* (Urb. & Gilg) Weigend
- 4'. Plant 1.5-2 m tall, virtually esetose, capsule with inferior portion making up ½ the total length .. *A. sigmoidea* Weigend
5. Inflorescence stalk not thickened at base, leaf veins numerous, parallel, all ending in teeth, margin shallowly and regularly lobate .. *A. gilgiana* (Urb.) Weigend
- 5'. Inflorescence stalk abruptly thickened at base, leaf veins in 2-4 pairs, divergent, upper ones not ending in teeth, margin irregularly serrate and lobate .. *A. rupestris* (Gardner) Weigend

REFERENCE

Weigend, Taxon 55(2): 464. 2006.

Aosa gilgiana (Urb.) Weigend

Has as synonym

basionym *Loasa gilgiana* Urb.

DESCRIPTION

Stem: height (cm) more than 100; **habit** annual. **Leaf: position** alternate; **shape** oblong. **Inflorescence: long (cm)** to 75; **type** monochasium; **number of the branch** 1 to 5; **number of the flower per branch** 10 to 15/more than 15. **Flower: colour of the petal** white; **nectar scale colour** yellow/red; **number stamen per fascicle** 10 or more; **pedicel** medium. **Fruit: capsule long (mm)** 5 to 10; **shape** globose; **capsule** without beak.

ADDITIONAL DESCRIPTION

Perennial herb or small subshrub to shrub from lignescent base, 100-175 cm tall. Stem round, to 12 mm thick, covered with smooth, gland-tipped and glochidiate trichomes 0.2-0.4 mm long and with numerous pale, patent setae 4 mm long, especially in the apical portion of the stem. Leaves alternate, narrowly spaced at the basal part of new shoots which end in a long, leafless, terminal inflorescence, shoot perpetuated from the axil of the uppermost leaf in the following year, displacing the old inflorescence into a pseudolateral position, leaves oblong in outline, 4-5 cm wide, 6-10 cm long, with 7-10 triangular, more or less equally large lobes on each side, sinuses shallow, < 1/5 as deep as leaf diameter, lobe margin finely serrate to subentire, apex round to acute, leaf base truncate to cuneate, subsessile or with petioles to 15 mm long, membranaceous to slightly succulent, densely set with glochidiate hairs and setae above and below, 7-9 simple, parallel leaf veins on each side (= fishbone pattern), blades dark green above, whitish below. Inflorescences terminal with 3-5 monochasial branches, 35-75 cm long, branches to 15 cm long, with 10-25 flowers, bracts absent. Pedicels 2-8 mm long, calyx densely setose, tube globose, 2-3 mm in diameter, calyx lobes triangular-ovate, 1.5 mm long and wide, dorsally setose and set with glochidiate hairs, glabrous within, margin entire. Petals 5, spreading to reflexed, white to pale green, cymbiform, 5 mm long, 2 mm wide, apex acute, base unguiculate. Nectar scales suborbicular-ovate, 1.5 mm long and 1 mm wide, base recurved, basally on back with three threads, these 0.3 mm long, club-shaped, scale neck recurved, laterally protracted into two "ears", scale crimson to brownish red and yellow. Staminodia 2 per scale, 2-2.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 10 each, filaments 4-5 mm long, white, anthers 0.4 mm long and 0.2 mm wide, yellow. Ovary inferior, straight, globose, 3 mm in diameter, with three parietal placentae, ovules numerous, style filiform, papillose, 3-4 mm long. Fruit a globose capsule with persistent calyx lobes, pedicel erect, 11-12 mm long, capsule 5-6 mm in diameter, very densely covered with setae and glochidiate hairs, succulent when young and drying to membranaceous texture, opening with three apical valves; seeds numerous, black, testa tuberculate reticulate.

COMMENTS

This species seems to be endemic to a few municipalities in BA.

Life Form

Herb, Shrub, Subshrub

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Caatinga

Vegetation Types




































Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

HERBARIUM MATERIAL

G. Hatschbach, 42447, MBM (MBM062755), Bahia
M.L.S. Guedes, 30476, ALCB (ALCB052899), Bahia
J. Paula-Souza, 5506, ESA (ESA091143), Bahia
Silva, M.F.B.L.da, 76, HUEFS, 96893,  (HUEFS0096893), Bahia
R.M. Harley, 28221, HUEFS, 24913,  (HUEFS0024913), Bahia
R.M. Harley, 54053, HUEFS, 55800,  (HUEFS0055800), SPF,  (SPF00155163), Bahia
R.M. Harley, 19434, US,  (US01886215), CEPEC,  (CEPEC00021332), NY,  (NY00617828), RB, 256591, 
(RB00203432), Bahia
V.C. Souza, 26504, ESA (ESA074755), Bahia
I. Cordeiro, CFCR482, SPF,  (SPF00022479), Bahia
G. Hatschbach, 75748, RB, 577517,  (RB00786468), US,  (US01886213), Bahia
A.P. Duarte, 9601, RB, 130176,  (RB00203434), Bahia
E. B. dos Santos, 298, CEPEC,  (CEPEC00050730), NY,  (NY00617826), Bahia
G. Hatschbach, 42447, HUEFS, 49229,  (HUEFS0049229), NY,  (NY00617827), CEPEC,  (CEPEC00084995), Bahia
S.A. Mori, 13429, US,  (US01886214), CEPEC,  (CEPEC00020604), RB, 552424,  (RB00719998), NY, 
(NY01310682), Bahia
C. COSTA, 918, RB, 87895,  (RB00203411), Bahia
L. R. Noblick, 3670, HUEFS, 4444,  (HUEFS0004444), CEPEC,  (CEPEC00036979), Bahia
F. França, 5136, HUEFS, 92924,  (HUEFS0092924), CEPEC,  (CEPEC00120873), Bahia
França, F., 1373, HUEFS, 20680,  (HUEFS0020680), Bahia
França, F., 4991, HUEFS, 86265,  (HUEFS0086265), Bahia
Melo, E., 3746, HUEFS, 91634,  (HUEFS0091634), Bahia
Melo, E., 3884, HUEFS, 96273,  (HUEFS0096273), Bahia
Ferreira, J.L., 314, HUEFS, 144494,  (HUEFS0144494), Bahia
R.M. Harley, 20523, CEPEC,  (CEPEC00025147), SPF,  (SPF00019902), Bahia
Melo, E., 4125, HUEFS, 105240,  (HUEFS0105240), Bahia
G. Hatschbach, 45067, CEPEC,  (CEPEC00075293), Bahia

Aosa parviflora (Schrad. ex DC.) Weigend

Has as synonym

basionym *Loasa parviflora* Schrad. ex DC.

heterotypic *Loasa brasiliensis* Mart. ex Colla

heterotypic *Mentzelia urens* Vell.

DESCRIPTION

Stem: height (cm) less than 100; **habit** annual. **Leaf: position** alternate; **shape** widely ovate. **Inflorescence: long (cm)** less than 10; **type** monochasium; **number of the branch** 1 to 5; **number of the flower per branch** 5 to 10. **Flower: colour of the petal** white; **nectar scale colour** yellow/red; **number stamen per fascicle** 10 or more; **pedicel** short. **Fruit: capsule long (mm)** more than 10; **shape** globose; **capsule** without beak.

ADDITIONAL DESCRIPTION

Annual, much branched, slightly succulent herb, decumbent or erect, 20-60 cm tall. Stem round, to 6-12 mm thick, covered with smooth, gland-tipped and glochidiate trichomes 0.2-0.4 mm long and with numerous pale, patent setae 4 mm long, especially in the apical portion of the stem. Leaves alternate, rarely subopposite, always at least one (often two) leaf between two consecutive inflorescences (the entire apical portion of the stem is a sequence of highly asymmetrical, concaulescent inflorescences), leaves widely ovate, 3-8.5 cm wide, 5-12 cm long, with 3-4 widely ovate to triangular lobes on each side, sinuses usually < 1/2 as deep as leaf diameter, lobe margin serrate to subentire, apex rounded to acute, leaf base cordate, petioles 20-70 mm long, membranaceous to slightly succulent, densely set with scabrid hairs and setae 1.5 mm long above and below, 3-4 branching leaf veins on each side, upper ones ascending. Inflorescences (morphologically) terminal (but overtopped by and concaulescent with one of the branches arising from the subtending foliage leaves), 5-10 cm long, with 1-2 monochasial branches to 5 cm long, with up to 9 pendent flowers, bracts absent. Pedicels 4-10 mm long, calyx densely setose, tube globose, 3 mm in diameter, calyx lobes triangular-ovate, 1.5 mm long and wide, dorsally setose and set with glochidiate hairs, glabrous within, margin entire. Petals 5, spreading to reflexed, white, cymbiform, 5 mm long, 2 mm wide, apex acute, base unguiculate. Nectar scales suborbicular-ovate, 1.5 mm long and 1 mm wide, base recurved, basally on back with three threads, these 0.3 mm long, club-shaped, scale neck recurved, laterally protracted into two "ears", scale yellow to orange basally, intergrading to darker red or orange in the middle, white apically. Staminodia 2 per scale, 2-2.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 10 each, filaments 4-5 mm long, white, anthers 0.4 mm long and 0.2 mm wide, yellow. Ovary inferior, straight, globose, 3 mm in diameter, with three parietal placentae, ovules numerous, style filiform, papillose, 3-4 mm long. Fruit a globose capsule with persistent calyx lobes, fruit deflexed, pedicel 7-12 mm long, capsule 12-15 mm in diameter, covered with setae 1.5 mm long and glochidiate hairs, succulent when young and drying to membranaceous texture, opening with three apical valves; seeds numerous, black, testa tuberculate reticulate.

COMMENTS

The plants from the Inselbergs of the interior of ES and adjacent MG have more robust stems, more deeply incised leaf lobes and apparently longer inflorescences than the more gracile plants of the coastal areas from southern BA to northeasternmost SP.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types






















Anthropic area, Ombrophylloous Forest (Tropical Rain Forest), Coastal Forest (Restinga), Rock outcrop vegetation






Geographic DistributionConfirmed occurrences





















Northeast (Bahia)

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

HERBARIUM MATERIAL

REFLORA provisional entry, s.n., W,  (W19590010061)
 W. W. Thomas, 14278, NY,  (NY01095460), Bahia
 R. Marquete, 1172, RB, 304055,  (RB00203286), Rio de Janeiro
 T. S. dos Santos, 3153, CEPEC,  (CEPEC00011926), Bahia
 V. Demuner, 4830, RB, 531549,  (RB00679954), Espírito Santo
 L. A. M. Silva, 552, CEPEC,  (CEPEC00016689), Bahia
 L. A. M. Silva, 353, CEPEC,  (CEPEC00022665), Bahia
 L.O.F. de Souza, 4, RB, 538758,  (RB00695994), Rio de Janeiro
 J. L. Hage, 584, CEPEC,  (CEPEC00023807), Bahia
 Castellanos, A, 27071, MBM (MBM058074), Bahia
 L. A. M. Silva, 552, CEPEC,  (CEPEC00016689), Bahia
 G. Hatschbach, 60109, SPF,  (SPF00190269), Espírito Santo
 s.c., s.n., W (W0068216)
 J.Külkamp, 1081, RB,  (RB01417000), Rio de Janeiro
 V. Demuner, 4555, MBML,  (MBML032066), Espírito Santo
 L. Kollmann, 12128, MBML,  (MBML041176), Bahia
 J. L. da Paixão, 84, NY,  (NY01092737), CEPEC,  (CEPEC00081226), Bahia
 Mikan, s.n., W (W0068215), Rio de Janeiro
 R. Marquete, 2987, RB, 353411,  (RB00203394), Rio de Janeiro
 L.F.S. Magnago, 569, RB, 531537,  (RB00679940), Espírito Santo
 H.Q. Boudet Fernandes, 3420, RB, 531543,  (RB00679948), Espírito Santo
 L. A. M. Silva, 1560, CEPEC,  (CEPEC00026340), Bahia
 R. G. Barbosa-Silva, 512, RB,  (RB01157421), Espírito Santo
 J. L. Hage, 584, CEPEC,  (CEPEC00023807), Bahia
 J. L. Hage, 974, CEPEC,  (CEPEC00024116), Bahia
 M.G. Bovini, 998, RB, 529217,  (RB00676946), Rio de Janeiro
 M. Santos, 30, RB, 191679,  (RB00203309), Rio de Janeiro
 J.P. Lanna, 1525, CEPEC,  (CEPEC00003152), Bahia
 A.M. Amorim, 2443, NY,  (NY00617829), RB, 552418,  (RB00719992), CEPEC,  (CEPEC00081530), Bahia
 A.M. Amorim, 4225, RB, 444298,  (RB00492499), NY,  (NY01095437), Bahia
 A.M. Amorim, 7835, RB, 487111,  (RB00572007), Espírito Santo
 J.G. Jardim, 3931, CEPEC,  (CEPEC00090683), RB, 552428,  (RB00720002), Bahia
 J. L. Hage, 1151, CEPEC,  (CEPEC00024256), Bahia
 G. Martinelli, 3109, RB, 180306,  (RB00203859), Rio de Janeiro
 L.F.A. de Paula, 938, RB,  (RB01115400), Espírito Santo
 D.A. Folli, 6883, RB, 597148,  (RB00853592), Espírito Santo
 D.A. Folli, 6992, RB,  (RB00879201), Espírito Santo
 A.A.M. de Barros, 4936, RB,  (RB00926907), Rio de Janeiro
 L. P. Mauad, 224, RB, 568686,  (RB00761575), Rio de Janeiro
 P. Occhioni, 518, RB, 55216,  (RB00778176), Rio de Janeiro
 M.S.Wängler, 1672, RB,  (RB00984620), Rio de Janeiro
 J. L. Paixão, 110, NY,  (NY00778048), Bahia
 Ginzberger, s.n., W,  (W19590010061), Rio de Janeiro
 W.W. Thomas, 11820, NY,  (NY00298183), CEPEC,  (CEPEC00079464), Bahia
 W.W. Thomas, 11913, RB, 552414,  (RB00719988), CEPEC,  (CEPEC00082093), NY,  (NY00416455), Bahia
 S.A. Mori, 10683, RB, 236645,  (RB00203272), CEPEC,  (CEPEC00014750), NY,  (NY00617830), Bahia
 JAIR VIEIRA, s.n., RB, 148827,  (RB00203368), Espírito Santo
 Pereira, O.J., 1392, VIES (VIES000770), RB, 413786,  (RB00203636), Espírito Santo

GUERRA, s.n., RB, 48125,  (RB00203313)
 B. LONGO, 04, RB, 332828,  (RB00203324), Rio de Janeiro
 A.C. Brade, 18186, RB, 56173,  (RB00203354), Espírito Santo
 Carlos D. M. Ferreira, 111, RB,  (RB01007372), Rio de Janeiro
 L. Kollmann, 8337, RB, 531533,  (RB00679936), Espírito Santo
 L. Kollmann, 10704, RB, 463725,  (RB00522080), Espírito Santo
 C.N. Fraga, 2510, RB, 479971,  (RB00557950), Espírito Santo
 R. Goldenberg, 1133, RB, 468248,  (RB00529179), Espírito Santo
 A.P. Fontana, 817, RB, 533958,  (RB00682769), Espírito Santo
 A.P. Fontana, 5802, RB, 479421,  (RB00557311), Espírito Santo
 D. Sucre, 4358, RB, 142618,  (RB00218799), Rio de Janeiro
 G. Gardner, 51, W (W0068209)
 W.W. Thomas, 14278, NY,  (NY01095460), Bahia
 M.G. Bovini, 2256, RB, 379241,  (RB00203373), Rio de Janeiro
 M.G. Bovini, 3664, RB, 564352,  (RB00749213), Rio de Janeiro
 J.M.A. Braga, 3447, RB, 557061,  (RB00730397), Rio de Janeiro
 J. Ball, s.n., NY,  (NY00617831), Rio de Janeiro
 s.c., s.n., RB, 1048,  (RB00203237), Rio de Janeiro
 J.P.P. CARAUTA, 3162, RB, 193070,  (RB00203248), Rio de Janeiro
 Gaudichaud, s.n., W (W0068214), Rio de Janeiro
 J.M.A. Braga, 324, RB, 527935,  (RB00675465), Rio de Janeiro
 J.M.A. Braga, 377, RB, 527946,  (RB00675476), Rio de Janeiro
 P.Feliz, 15, RB,   (RB01065045), Rio de Janeiro
 Schott, 5822, W (W0068210), Rio de Janeiro
 Schott, 5821, W (W0068211)
 H. Wawra & J. Maly, s.n., W (W0068213)
 C.F.P. Martius, s.n., E,  (E00085322), **Typus**
 A. Saint-Hilaire, 1544-b1, P (P00123876), Minas Gerais
 W.W. Thomas, 12695, NY,  (NY00810634), CEPEC,  (CEPEC00091069), RB, 552396,  (RB00719970), Bahia
 J.B.E. Pohl, s.n., W (W0068212)
 L.C. GIORDANO, 79, RB, 246049,  (RB00203406), Rio de Janeiro
 R. G. Barbosa-Silva, 512, RB,  (RB01157421), Espírito Santo
 T.S. Mendes, 83, RB,  (RB01206622), Rio de Janeiro
 L.C. GIORDANO, 412, RB, 273749,  (RB00203261), Rio de Janeiro
 L.C. GIORDANO, 553, RB, 278274,  (RB00203364), Rio de Janeiro
 L.F.A. de Paula, 105, RB, 587033,  (RB00818994), Minas Gerais
 L.S. Leoni, 4678, ESA (ESA078867), Minas Gerais
 L.S. Leoni, 4678, RB,  (RB01369932), Minas Gerais
 Lorencini, T.S., 175, VIES (VIES019069), Espírito Santo
 L.F.A. de Paula, 738, RB,  (RB01142495), Minas Gerais
 H. Q. Boudet Fernandes, 3420, MBML (MBML032099), Espírito Santo
 Alves-Araújo, A., 1733, VIES (VIES041806), Espírito Santo
 L.F.A. de Paula, 1089, RB,  (RB01115501), Minas Gerais
 L.F.A. de Paula, 1152, RB,  (RB01384827), Minas Gerais
 L.F. Bondi-Macedo, 4, RB,  (RB01384828), Minas Gerais
 L. F. S. Magnago, 569, MBML (MBML027861), Espírito Santo
 L.O. Azevedo, 519, RB,  (RB01232738), Minas Gerais
 Pereira, O.J., 2329, VIES (VIES005738), Espírito Santo
 V. Demuner, 4555, MBML (MBML032066), Espírito Santo
 V. Demuner, 4830, MBML (MBML032536), Espírito Santo
 R. Goldenberg, 1133, MBML (MBML033904), Espírito Santo
 L. Kollmann, 10704, MBML (MBML033838), Espírito Santo
 J.L. da Paixão., 84, RB,  (RB00721807), Bahia
 Couto, D.R., 1340, VIES (VIES033713), Espírito Santo
 D.R. Couto, 656, MBML (MBML038131), Espírito Santo
 D.R. Couto, 1164, MBML (MBML039631), Espírito Santo
 J.L. Paixão, 110, RB,  (RB00721564), Bahia
 L. Kollmann, 8337, MBML (MBML024958), Espírito Santo

L. Kollmann, 9917, MBML (MBML031257), Espírito Santo
 L. Kollmann, 12128, MBML (MBML041176), Bahia
 L. Kollmann, 12453, MBML (MBML050696), Espírito Santo
 Luber, J., 114, VIES (VIES040995), Espírito Santo
 M.M. Coelho, 521, CEPEC,  (CEPEC00134921), Bahia
 V. Demuner, 1001, RB, 531540,  (RB00679945), Espírito Santo
 V. Demuner, 1001, MBML (MBML012608), Espírito Santo
 J.G. Jardim, 3931, CEPEC,  (CEPEC00090683), Bahia
 J.P. Lanna, 1525, CEPEC,  (CEPEC00003152), Bahia
 J. L. Hage, 1151, CEPEC,  (CEPEC00024256), Bahia
 J. L. Paixão, 84, CEPEC,  (CEPEC00081226), Bahia
 L. A. M. Silva, 1560, CEPEC,  (CEPEC00026340), Bahia
 L. A. M. Silva, 353, CEPEC,  (CEPEC00022665), Bahia
 T. S. Santos, 3153, CEPEC,  (CEPEC00011926), Bahia
 REFLOA provisional entry, s.n., W (W0068216)
 s.c., s.n., RB,  (RB00769568), Rio de Janeiro
 L. Kollmann, 11489, VIES (VIES021751), Espírito Santo
 R. Goldenberg, 1133, UPCB (UPCB0028685), Espírito Santo
 A.P. Fontana, 817, MBML (MBML023179), Espírito Santo
 C.N. Fraga, 2510, CEPEC,  (CEPEC00133655), Espírito Santo
 W.W. Thomas, 12695, MBML (MBML044026), Bahia
 W.W. Thomas, 14278, CEPEC,  (CEPEC00103769), Bahia
 W.W. Thomas, 11913, CEPEC,  (CEPEC00082093), Bahia
 W.W. Thomas, 11820, CEPEC,  (CEPEC00079464), Bahia
 A.M. Amorim, 2443, CEPEC,  (CEPEC00081530), Bahia
 A.M. Amorim, 7835, MBML (MBML039553), Espírito Santo
 V.C. Souza, 32497, ESA (ESA052745), Espírito Santo
 G. Hatschbach, 65224, MBM (MBM203523), Espírito Santo
 J.A. Lombardi, 5706, ESA (ESA101695), Minas Gerais
 H. Q. Boudet Fernandes, 3420, MBML,  (MBML032099), Espírito Santo
 L. F. S. Magnago, 569, MBML,  (MBML027861), Espírito Santo
 V. Demuner, 4830, MBML,  (MBML032536), Espírito Santo
 IRENICE A. RODRIGUES, 96, RB, 179685,  (RB00203645), Rio de Janeiro
 R. Goldenberg, 1133, MBML,  (MBML033904), Espírito Santo

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Aosa parviflora* (Schrad. ex DC.) Weigend



Figure 2: *Aosa parviflora* (Schrad. ex DC.) Weigend



Figure 3: *Aosa parviflora* (Schrad. ex DC.) Weigend



Figure 4: *Aosa parviflora* (Schrad. ex DC.) Weigend



Figure 5: *Aosa parviflora* (Schrad. ex DC.) Weigend



Figure 6: *Aosa parviflora* (Schrad. ex DC.) Weigend



Figure 7: *Aosa parviflora* (Schrad. ex DC.) Weigend

Aosa rostrata (Urb.) Weigend

Has as synonym

basionym *Loasa rostrata* Urb.

DESCRIPTION

Stem: height (cm) less than 50; **habit** annual. **Leaf: position** opposite; **shape** ovate. **Inflorescence: long (cm)** less than 5; **type** monochasium; **number of the branch** 1 to 5; **number of the flower per branch** 5 to 10. **Flower: colour of the petal** white; **nectar scale colour** white/green; **number stamen per fascicle** 10 or more; **pedicel** short. **Fruit: capsule long (mm)** less than 5; **shape** subglobose; **capsule** with beak.

ADDITIONAL DESCRIPTION

Weak, strictly erect, annual herb 5-45 cm tall. Stem round, to 3 mm thick, covered with glochidiate trichomes < 0.1 mm long and with pale, patent setae 3.4-4 mm long, especially in the apical portion of the stem. Leaves opposite, leaves of one pair extremely unequal, the smaller leaf < 1/5th the size of the larger, all consecutive leaves on main axis subtending a smaller lateral branch and a ebracteate inflorescence (actually morphologically terminal inflorescences subtended by two very unequal foliage leaves from which two very unequal branches arise: One forming the new main axis, the other a smaller replica, repeating the branching pattern of the main axis), leaves ovate, 2-6 cm wide, 3-9 cm long, with 7-10 triangular, similarly shaped lobes, margin serrate, very rarely leaves subentire, apex acute to acuminate, leaf base truncate to shallowly cordate, petioles 10-40 mm long, membranaceous, sparsely set with glochidiate hairs and setae 1.5 mm long above and below, 3-5 lateral veins on each side, the lower 2-3 pairs closely spaced. Inflorescences (morphologically) terminal, but overtopped by and concaulescent with one of the branches arising from the subtending foliage leaves, with 1 monochasial branches, to 2-5 cm long, with up to 5-10 flowers, bracts absent. Pedicels 5-10 mm long, tube absent, calyx lobes ovate-lanceolate, 1-3 mm long and 1 mm wide, margin entire. Petals 5, reflexed, white, cymbiform, 4-6 mm long, 2-3 mm wide, apex acute, base unguiculate. Nectar scales ovate, 2 mm long and 1 mm wide, base recurved, basally on back with three threads which terminate in sterile anthers, these threads 0.5 mm long, scales green and white. Staminodia 2 per scale, 2-2.5 mm long, papillose. Stamens numerous, in 5 epipetalous fascicles of 5-7 each, filaments 4-5 mm long, white, anthers 0.4 mm long and 0.2 mm wide, yellow. Ovary mostly superior, straight, acuminate from subglobose base, with three parietal placentae, ovules numerous, style filiform, papillose, 3-4 mm long. Fruit protracted into a long beak from subglobose base, deflexed, pedicel 10-12 mm long, capsule 5 mm long, 3 mm wide near base, very densely covered with scabrid trichomes and setae, splitting into three valves; seeds numerous, fusiform, dark brown, testa reticulate, weakly tuberculate near both longitudinal 'poles'.

COMMENTS

The mostly superior ovary in this taxon is unusual in Loasaceae.

Life Form

Herb

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Central Brazilian Savanna

Vegetation Types

Rock outcrop vegetation

Geographic Distribution

Confirmed occurrences

Northeast (Bahia)


Central-west (Goiás)

Southeast (Minas Gerais)

Possible occurrences

North (Tocantins)

HERBARIUM MATERIAL

M.A. da Silva, 4350, RB, 577518,  (RB00786470), Goiás




João Bernardo de Azevedo Bringel Jr., 414, CEN (CEN00089190), Goiás


Aécio Amaral-Santos, 2262, CEN (CEN00055101), Goiás



L.P. Queiroz, 14149, HUEFS (HUEFS156167), Goiás



A. Salino, 3278, ESA (ESA048558), Minas Gerais

P.E. Gibbs, 5111, UEC, 9288,  (UEC135294), Minas Gerais

G. Gardner, 3746, K,  (K000372762), K,  (K000372761), W (W0053329), W,  (W18890010488), Goiás, **Typus**

França, F., 3849, HUEFS, 59289,  (HUEFS0059289), Bahia

M. Aparecida da Silva, 4350, RB, 577518,  (RB00786470), RB,  (RB01000844), CEN (CEN00036377), Goiás

W.R. Anderson, 9219, RB, 340430,  (RB00203887), NY,  (NY00955222), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Aosa rostrata* (Urb.) Weigend



Figure 2: *Aosa rostrata* (Urb.) Weigend



Figure 3: *Aosa rostrata* (Urb.) Weigend

Aosa rupestris (Gardner) Weigend

Has as synonym

basionym *Loasa rupestris* Gardner

DESCRIPTION

Stem: height (cm) less than 100; **habit** annual. **Leaf: position** alternate; **shape** narrowly ovate/oblong. **Inflorescence: long (cm)** to 75; **type** monochasium; **number of the branch** 1 to 10; **number of the flower per branch** 10 to 15. **Flower: colour of the petal** white; **nectar scale colour** yellow/red; **number stamen per fascicle** 10 or more; **pedicel** medium. **Fruit: capsule long (mm)** more than 10; **shape** globose; **capsule** without beak.

ADDITIONAL DESCRIPTION

Perennial herb or small subshrub from lignescent base, 30-100 cm tall. Stem round, to 12 mm thick, covered with smooth, gland-tipped and glochidiate trichomes 0.2-0.4 mm long and with numerous pale, patent setae 4 mm long, especially in the apical portion of the stem. Leaves alternate (first 1-2 pairs of seedling opposite), narrowly spaced at the basal part of new shoots which end in a long, leafless, terminal inflorescence, shoot perpetuated from the axil of the uppermost leaf in the following year, displacing the old inflorescence into a pseudolateral position, leaves narrowly ovate to oblong in outline, 4-9 cm wide, 5-25 cm long, sinuate lobate with 4-5 ovate lobes on each side, sinuses ½ as deep as leaf diameter, lower lobes sometimes free to base, lobe margin coarsely crenate-serrate with blunt apex, leaf base cordate, petioles 2-5+ cm long, blade membranaceous to slightly succulent, densely set with glochidiate hairs and setae above and below, 3-5 branched leaf veins on each side, upper ones ascending, lower ones spreading, blades glossy dark green as if wet above, whitish below. Inflorescences terminal with (1-) 3-6 (-7) monochasial branches, 35-75 cm long, branches to 15 cm long, with 7-14 flowers, bracts absent. Pedicels 5-10 mm long, calyx densely setose, tube globose, 1.5 mm in diameter, calyx lobes triangular, 1.5 mm long and wide, dorsally setose and set with glochidiate hairs dorsally, glabrous within, margin entire. Petals 5, spreading to reflexed, white, cymbiform, 5 mm long, 2 mm wide, apex acute, base unguiculate. Nectar scales suborbicular-ovate, 1.5 mm long and 1 mm wide, base recurved, basally on back with three threads, these 0.3 mm long, club-shaped, scale neck recurved, laterally protracted into two "ears", scale crimson red basally, paler red to whitish apically. Staminodia 2 per scale, 2-2.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 10 each, filaments 2.5-3 mm long, white, anthers 0.4 mm long and 0.2 mm wide, yellow. Ovary inferior, straight, globose, 3 mm in diameter, with three parietal placentae, ovules numerous, style filiform, papillose, 2 mm long. Fruit a globose capsule with persistent calyx lobes, pedicel erect, 15-25 mm long, capsule 6-7 mm in diameter, very densely covered with setae and glochidiate hairs, succulent when young and drying to membranaceous texture, opening with three apical valves; seeds numerous, black, testa tuberculate reticulate.

Life Form

Herb, Subshrub

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Caatinga, Atlantic Rainforest

Vegetation Types

Anthropic area, Caatinga (stricto sensu), Rock outcrop vegetation

Geographic Distribution






























Confirmed occurrences

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

Possible occurrences

Northeast (Alagoas)

HERBARIUM MATERIAL

G. Hatschbach, 45082, MBM (MBM076733), Bahia
 Moonlight, P.W., 364, HUEFS,  (HUEFS233317), Bahia
 Souza, RS, 815, ALCB (ALCB032955), Bahia
 Andrade-Lima, D de, ASE1247, ASE (ASE0013390), Paraíba
 Fonseca, 1359, RB, 404435,  (RB00444584), SPF,  (SPF00155209), Bahia
 Fonseca, MR, 4294, ASE (ASE0015586), Sergipe
 Machado, WJ, 890, ASE (ASE0025365), Sergipe
 Matos, GMA, 78, ASE (ASE0031125), Sergipe
 Glocimar Pereira-Silva, 3634, CEN (CEN00030308), Bahia
 S.A. Mori, 11195, RB, 236644,  (RB00203984), NY,  (NY01145143), CEPEC,  (CEPEC00015070), Bahia
 S.A. Mori, 14230, NY,  (NY01145145), CEPEC,  (CEPEC00026596), Bahia
 Grupo Pedra do Cavalo, 387, CEPEC,  (CEPEC00032872), Bahia
 L. R. Noblick, 3176, CEPEC,  (CEPEC00035304), Bahia
 L. R. Noblick, 4012, CEPEC,  (CEPEC00040019), Bahia
 G. Gardner, 2413, W,  (W18890010483), K,  (K000372764), K,   (K000372763), **Typus**
 G. F. J. Pabst, 8672, NY,  (NY01552556), Bahia
 F. P. Bandeira, 260, CEPEC,  (CEPEC00077637), Bahia
 L. R. Noblick, 2014, CEPEC,  (CEPEC00033422), RB, 260140,  (RB00203996), Bahia
 Silva, U.C.S., 128, HUEFS (HUEFS151577), Bahia
 V. F. de Oliveira, 9, CEPEC,  (CEPEC00100679), Bahia
 França, F., 3142, HUEFS (HUEFS038559), Bahia
 M. Weigend, 7138, NY,  (NY02341990), W,  (W20060002166)
 Allemao, 734, P (P00123878), Ceará
 O.B. Borges, 21, RB, 314735,  (RB00203655), Bahia
 Moura, 1334, RB, 368189,  (RB00203871), Sergipe
 MOURA, 1221, RB, 368187,  (RB00203956), Sergipe
 R.M. Harley, 16455, CEPEC,  (CEPEC00011497), NY,  (NY01145176), RB, 189634,  (RB00203970), Bahia
 MARIA CLARA FERREIRA, 588, RB, 319305,  (RB00203942), Bahia
 HONORIO MONTEIRO NETO, 33, RB, 128516,  (RB00203975), Bahia
 E.P. Heringer, 775, RB, 172699,  (RB00203988), Pernambuco
 Haroldo C. de Lima, 751, RB, 428615,  (RB00417736), Bahia
 P. Gomes, 391, RB, 527632,  (RB00675126), Pernambuco
 A.M. Miranda, 6388, RB, 552404,  (RB00719978), Pernambuco
 P. CAMPOS PORTO, 2385, RB, 29721,  (RB00204000), Bahia
 L. PAGANUCCI, 152, RB, 260369,  (RB00204009), Bahia
 J.L. Costa-Lima, 1685, RB,  (RB01110793), Pernambuco
 Queiroz, R.T., 836, UFRN,  (UFRN00003667), Rio Grande do Norte
 Costa-Lima, J.L., 180, UFRN,  (UFRN00009024), Rio Grande do Norte
 A. Ducke, 1099, RB, 21305,  (RB00204016), Ceará
 A.P. Fontana, 9498, RB,  (RB01148006), Pernambuco
 V.C. Souza, 29901, ESA (ESA087334), Bahia
 V.C. Souza, 26572, ESA (ESA074823), Bahia
 J.G. Jardim, 6320, UFRN,  (UFRN00014562), Rio Grande do Norte
 Lyra-Lemos, R.P., 6378, ESA (ESA102647), Alagoas
 V. F. Oliveira, 9, CEPEC,  (CEPEC00100679), Bahia
 Noblick, LR, 3176, MBM (MBM094631), Bahia
 Dutra, E de A, 46, MBM (MBM215219), Bahia
 V.C. Souza, 26536, ESA (ESA074787), Bahia
 V.C. Souza, 29898, ESA (ESA087331), Bahia
 G. Hatschbach, 56648, MBM (MBM157651), Bahia
 M.L.S. Guedes, 24592, ALCB (ALCB017147), Bahia
 Cardoso, D., 2677, HUEFS,  (HUEFS149585), Bahia

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Aosa rupestris* (Gardner) Weigend



Figure 2: *Aosa rupestris* (Gardner) Weigend



Figure 3: *Aosa rupestris* (Gardner) Weigend



Figure 4: *Aosa rupestris* (Gardner) Weigend



Figure 5: *Aosa rupestris* (Gardner) Weigend



Figure 6: *Aosa rupestris* (Gardner) Weigend



Figure 7: *Aosa rupestris* (Gardner) Weigend

Aosa sigmoidea Weigend

DESCRIPTION

Stem: height (cm) more than 100; **habit** perennial. **Leaf: position** alternate; **shape** ovate. **Inflorescence: long (cm)** to 50; **type** monochasium/dichasium; **number of the branch** more than 10; **number of the flower per branch** 5 to 10. **Flower: colour of the petal** yellowish white; **nectar scale colour** white/green; **number stamen per fascicle** less than 10; **pedicel** medium. **Fruit: capsule long (mm)** 5 to 10; **shape** clavate; **capsule** without beak.

ADDITIONAL DESCRIPTION

Robust herb or subshrub up to 2 m tall; stem terete, to 6-8 mm thick, covered with scabrid trichomes < 0.1 mm long and with very few pale, patent setae 2 mm long. Leaves alternate, petiolate with petioles 25-30 mm long, lamina ovate, 50-65 mm wide, 50-105 mm long, with 3-4 narrowly triangular lobes on each side, lobe margin irregularly serrate, apex acute to acuminate, leaf base truncate to cuneate, membranaceous, very densely set with scabrid trichomes above (ca. 5/1 mm) and below (ca. 7-10/1 mm), virtually esetose, venation pinnate with 4 -6 secondary veins on each side, these conspicuously anastomosing. Inflorescence a very complex terminal thyrsoid with (morphologically) terminal dichasial or monochasial elements without bracts, these overtopped by and concaulescent with one of the branches arising from the subtending foliage leaves, inflorescence overall 30-40 cm long with 15-25 branches, branches 2.5-4 cm long, with 5-10 flowers. Pedicels 5-8 mm long, calyx tube conical, 2-3 mm long and wide, calyx lobes narrowly ovate, 4 mm long and 1.5 mm wide, margin entire. Petals 5, espreading to reflexed, yellowish white, deeply cymbiform, 5-6 mm long, 3 mm deep, apex acute, base unguiculate. Nectar scales ovate, 2 mm long and 1 mm wide, base recurved, scale apex lobulate, with with three threads 0.6 mm long inserted in the sinuses, scales green and white. Staminodia 2 per scale, 2-2.5 mm long, papillose. Stamens numerous, in 5 epipetalous fascicles of 5-7 each, filaments ca. 4 mm long, white, anthers 0.4 mm long and 0.2 mm wide, yellow. Ovary semisuperior, straight, inferior part obliquely clavate, superior part obliquely beaked, with three parietal placentae, ovules numerous, style filiform, papillose, 2.5 mm long. Fruit with inferior part obliquely clavate, superior part obliquely beaked, erect, strongly bent (S-shaped from the side), pedicel ca. 8 mm long, capsule 14-16 mm, inferior part 6-8 mm long and 4-5 mm wide, superior part 6-8 mm long, capsule very densely covered with scabrid trichomes but apart from the calyx lobes, esetulose, beak splitting into three valves; seeds numerous, fusiform, dark brown with reticulate testa, weakly tuberculate near its longitudinal "poles".

COMMENTS

This species is very closely related to *Aosa rostrata*, and they grow in sympatry in some areas (eg. the type locality near Januária, MG), however they seem to occupy different habitats, with *A. sigmoidea* growing in more forested areas.

Life Form

Herb, Subshrub

Substrate

Rupicolous, Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Caatinga

Vegetation Types

Rock outcrop vegetation

















Geographic Distribution

Confirmed occurrences

Northeast (Bahia)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

Castro, R.M., 1180, HUEFS, 96428,  (HUEFS0096428), Bahia
W.R. Anderson, 9240, M, MO (MO1515260), NY,  (NY00345460), RB, 490183,  (RB00576915), SPF,  (SPF00184545),
CAS, 1065893,  (CAS0000521), M, M-0113283,  (M0113283), US,  (US00955904), Minas Gerais, **Typus**
J.G. Jardim, 3464, NY,  (NY01806328), RB, 552409,  (RB00719983), RB, 552432,  (RB00720006), SPF, 
(SPF00163475), HUEFS, 62478,  (HUEFS0062478), Bahia
M.L.S. Guedes, 10360, SPF,  (SPF00160657), Bahia
M.L.S. Guedes, 10360, CEPEC,  (CEPEC00101268), Bahia
J.G. Jardim, 3464, CEPEC,  (CEPEC00090333), Bahia
L.P. Queiroz, 12701, HUEFS, 118198,  (HUEFS0118198), Bahia

Aosa uleana (Urb. & Gilg) Weigend

Has as synonym

basionym *Loasa uleana* Urb. & Gilg

DESCRIPTION

Stem: height (cm) more than 100; **habit** annual. **Leaf: position** opposite; **shape** widely ovate/sub circular. **Inflorescence: long (cm)** less than 25; **type** dichasium; **number of the branch** more than 10; **number of the flower per branch** more than 15. **Flower: colour of the petal** white; **nectar scale colour** yellow/red; **number stamen per fascicle** less than 10; **pedicel** long. **Fruit: capsule long (mm)** more than 10; **shape** conical; **capsule** without beak.

ADDITIONAL DESCRIPTION

Annual, much branched, slightly succulent large herb, erect, later decumbent, to 160 cm tall. Stem round, to 20 mm thick, covered with numerous scabrid and glochidiate trichomes 0.2-0.4 mm long and with pale, patent setae 2 (-3) mm long, especially in the apical, younger portions of the stem; glandular trichomes diminutive and inconspicuous in dry material. Leaves strictly opposite, widely ovate to subcircular below, ovate above, 7-20 cm wide, 14-22 cm long, with 2-3 widely ovate lobes on each side, sinuses c. 1/10 as deep as leaf diameter, lobe margin irregularly and shallowly serrate, apex acuminate, leaf base truncate to shallowly cordate, petioles 50-90 mm long, membranaceous to slightly succulent, densely set with scabrid hairs above and below and very few short setae 1.5 mm long and short inconspicuous uniseriate glandular trichomes along the veins, 3-5 ascending branching leaf veins on each side. The inflorescence is terminal, repeatedly dichasial, 20-25 cm long. Primary dichasial branches 10-20 cm long with 30-40 pendent flowers each, bracts foliose below to linear above, apically absent. Pedicels 4-30 mm long, calyx densely set with scabrid and glochidiate hairs. Tube globose, 3 mm in diameter, calyx lobes triangular, 3 mm long and 1.5 mm wide, dorsally densely set with scabrid and glochidiate hairs, almost glabrous within, margin entire. Petals 5, spreading to reflexed, white, deeply cymbiform, 7 mm long, 5 mm wide, apex acute, base shortly unguiculate, set with glochidiate hairs and few setae on back. Nectar scales rectangular to ovoidal, 3 mm long and 1.5 mm wide, base recurved, club-shaped, scale neck recurved, laterally protracted into two "ears", 1-1.5 mm long, scale base greenish-white, banded in red and yellow or white above. Staminodia 2 per scale, 3-3.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 8-10 each, filaments 4-5 mm long, white, anthers 0.6 mm long and 0.3 mm wide, yellow. Ovary inferior, conical, 2.5-3 mm in diameter, with three parietal placentae, ovules numerous, style filiform, papillose, 4-5 mm long. Fruit a conical capsule with persistent calyx lobes, fruit deflexed, capsule 12 mm long and 7-8 mm wide at apex, opening with three apical valves; seeds numerous, ovoid, black, testa reticulate.

COMMENTS

Although very distinctive among its congeners due to its habitat, leaf, flower and seed morphologies (the only Brazilian *Aosa* that lacks seed testa tubercles), as far as we know, this species is entirely restricted to a small area in Itatiaia Nat. Park.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types









Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL

A. Lobão, 1914, RB,  (RB00776067), Rio de Janeiro
J.R. Pirani, 5482, SPF,  (SPF00169220), Rio de Janeiro
M.G. Bovini, 2267, RB, 378362,  (RB00203910), Rio de Janeiro
Joßberger, T., 342, BONN, Rio de Janeiro
Ule, E., 3713, HBG, Rio de Janeiro, **Typus**
Ule, E.H.G., 617 [=3713], R, 90367,  (R000090367), Rio de Janeiro, **Typus**
J.C. LINDEMAN, 5128, RB, 385405,  (RB00203556), Rio de Janeiro
S.J.Silva Neto, 1786, RB, 400182,  (RB00475874), Rio de Janeiro
A.C. Brade, 17485, RB, 52050,  (RB00203920), Rio de Janeiro
A.P. Duarte, 1195, RB, 64892,  (RB00203917), Rio de Janeiro

FIELD IMAGES / ILLUSTRATIONS

Figure 1: *Aosa uleana* (Urb. & Gilg) WeigendFigure 2: *Aosa uleana* (Urb. & Gilg) Weigend



Figure 3: *Aosa uleana* (Urb. & Gilg) Weigend



Figure 4: *Aosa uleana* (Urb. & Gilg) Weigend

Blumenbachia Schrad.

This treatment is composed of the following taxa: *Blumenbachia*, *Blumenbachia amana*, *Blumenbachia catharinensis*, *Blumenbachia eichleri*, *Blumenbachia exalata*, *Blumenbachia insignis*, *Blumenbachia latifolia*, *Blumenbachia scabra*.

HOW TO CITE

Acuña-Castillo, R., Henning, T., Weigend, M., Mello-Silva, R. (in memoriam) Loasaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB8622>.

Has as synonym

heterotypic *Gripidea* Miers

DESCRIPTION

Erect, scandent, ascending or winding, annual or (biennial? to) perennial herbs, with stinging hairs. Root system fibrous, rarely primary root developing into root tuber or thickened tap-root. Leaves opposite; lamina usually widely ovate, trisect to subpalmately lobed or sometimes bipinnatisect. Inflorescences with dichasial or monochasial branches (sect. *Angulatae*), or dichasia (sect. *Gripidea*) or borne singly (sect. *Blumenbachia*); each flower with 2 frondose or bracteose prophylls; petals white, yellow or green; nectar scale with 3 long, dorsal, filiform appendages, white, red and yellow, or green and white; placentae unbranched. Capsule inferior, cylindrical to globose, twisted always anticlockwise, septicidal or septifragous, apex coherent; seeds angular; testa polyhedral with irregular lateral wings (sect. *Angulatae*), or ovoidal and testa fibrous with narrow epidermis cells (sect. *Blumenbachia*), or widely reticulate, with 1-2 terminal wings (sect. *Gripidea*). $2n = 24, 26$. Eleven spp., Brazil, Uruguay, Paraguay, Argentina, Chile. Seven spp. in Brazil, only from sect. *Gripidea* (3 spp.) and sect. *Blumenbachia* (4 spp.).

Life Form

Herb, Liana/scandent/vine

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

Anthropic area, High Altitude Grassland, Grassland, Seasonally Deciduous Forest, Seasonally Semideciduous Forest, Ombrophyllous Forest (Tropical Rain Forest), Mixed Ombrophyllous Forest, Coastal Forest (Restinga)

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)

IDENTIFICATION KEY

1. Stems winding; flowers in dichasial inflorescences with (1-) 2-10 flowers each, bracts and prophylls reniform (*Blumenbachia* Sect. *Gripidea*) .. **2**

1'. Stems decumbent, trailing or erect from decumbent base; flowers borne singly in the leaf axil, prophylls narrowly ovate to linear, adnate to flower (*Blumenbachia* Sect. *Blumenbachia*) .. **4**

2. Seeds with a short wing at only one pole, 1-2 (-3) flowers per inflorescence .. **B. exalata** Weigend

- 2'. Seeds with two long wings (one at each pole), 3-10 flowers per inflorescence .. **3**
3. Capsule broadly elliptical to ovoid in outline .. *B. eichleri* Urb.
- 3'. Capsule clavate to narrowly elliptical in outline .. *B. scabra* (Miers.) Urb.
4. Flower pedicel much shorter than petiole of subtending leaf .. *B. latifolia* Cambess.
- 4'. Flower pedicel longer than petiole of subtending leaf .. **5**
5. Stems erect from decumbent base; leaves palmatifid with serrate lobes or pinnatisect; capsule with all ridges of about the same height .. *B. insignis* Schrad.
- 5'. Stems trailing or ascending; leaves trifoliolate or deeply trilobed; capsule with ridges evidently alternating in height .. **6**
6. Mature capsule broadly ovoid, the larger ridges with wavy surface (only MG and probably SP) .. *B. amana* T.Henning & Weigend
- 6'. Mature capsule spherical, the larger ridges with smooth surface (only SC and RS) .. *B. catharinensis* Urb. & Gilg

REFERENCE

Schrad., Gött. Gel. Anz. 1825 (3): 1705. 1825

Blumenbachia amana T.Henning & Weigend

DESCRIPTION

Stem: height (cm) 30 to 50; **habit** ascending or trailing. **Leaf: shape** broad ovate; **division** trilobate/trifoliolate. **Inflorescence: flower position** axillary; **pedicel long (mm)** 20 to 40. **Flower: petal long (mm)** 8 to 9; **petal colour** white/greenish white; **nectar scale colour** red/yellow/green. **Fruit: capsule shape** ovoid; **capsule long (mm)** 10 to 12; **capsule wide (mm)** 6 to 8.

ADDITIONAL DESCRIPTION

Trailing to ascending herb 30-50 cm tall. Stem quadrangular, 2-3 mm thick at base, sparsely covered with deflexed scabrid trichomes 0.15-0.2 mm long, densely covered with glochidiate trichomes <0.05 mm and very few scattered setae 0.75-1.5 mm long. Leaves opposite and decussate, broadly ovate in outline and deeply trilobate below to trifoliolate above, 2.5-5 cm long, 2-4.5 cm wide, petioles 1-3 cm long, lobes unequally bilobate, lateral lobes diverging >45° to central lobe, margins irregularly and shallowly dentate, apex acuminate, leaf base cordate, lamina membranaceous, adaxial surface sparsely set with very few short setae 0.75-1.5 mm long and scattered with scabrid hairs, 0.1 mm long, abaxial surface esetulose and densely set with glochidiate hairs <0.05 mm, 3 veins from base, lateral ones branching 2-3 mm from base. Flowers borne singly in apparently axillary position from reduced and displaced terminal inflorescences, deflexed, pedicels 2-4 cm long, 1-2 x as long as subtending leaf, with two tiny, linear bracts at base of ovary. Calyx tube densely covered with glochidiate and scabrid trichomes and few setae, globose, 2-2.5 mm in diameter, calyx lobes persistent, widely ovate to deltoid, coarsely serrate, 2.5-3 mm long and 1.5-2 mm wide, acuminate, dorsally densely covered with scabrid hairs. Petals 5, spreading, white with greenish base, cymbiform, 8-9 mm long, 2-2.5 mm wide, unguiculate in lower third, then abruptly widened into two triangular teeth, apex hood-shaped. Nectar scales ovate, 1.5-2 mm long, 1.5 mm wide, base incurved, dorsally in lower third with three threads, these 1-1.5 mm long, scale neck recurved, margin densely papillose, scale crimson red at neck and apex then merging into yellow and green at base, sometimes white near to neck and laterally. The threads more or less resemble the colouration of the scales. Staminodia 2 per scale, 2.5 mm long, slightly twisted and widened basally, filiform above, sometimes bifurcate i.e. with one glabrous thread dividing in upper third, 0.75 mm long and exceeding the actual staminode, remainder of staminode densely papillose. Stamens in 5 epipetalous fascicles of 10-15 each, filaments 4-5 mm long, white, anthers 0.3-0.4 mm long and 0.2 mm wide, yellow. Ovary inferior, twisted, globose, 2 mm in diameter, with five intrusive parietal placentae, ovules numerous, style filiform, papillose, 4-7 mm long, densely pilose. Capsule ovoidal, 10-12 mm long, 6-8 mm wide, deflexed on spreading pedicel 13-15 mm long, twisted, with 10 longitudinal ridges, five of them narrower and lower, five of them higher and wider and clearly elevated, very densely covered with glochidiate trichomes and a few setae, succulent when young, surface wavy, then drying to spongy texture, walls very thick and filled with a spongiouse parenchyma, opening with ten longitudinal sutures, seeds numerous, black, testa fibrous.

COMMENTS

This is the northernmost naturally occurring species of *Blumenbachia* sect. *Blumenbachia*. Would be found in adjacent SP.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil


Phytogeographic Domains

Atlantic Rainforest

Geographic DistributionConfirmed occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

C. Schindwein & S. Oliveira, 1989, BONN, B (B 10 0610559), BHCB, 162877,  (BHCB006394), Minas Gerais, **Typus**
J.R. Stehmann, 3137, MBM (MBM276936), Minas Gerais

FIELD IMAGES / ILLUSTRATIONS

Figure 1: *Blumenbachia amana* T.Henning & Weigend



Figure 2: *Blumenbachia amana* T.Henning & Weigend



Figure 4: *Blumenbachia amana* T.Henning & Weigend



Figure 5: *Blumenbachia amana* T.Henning & Weigend



Figure 6: *Blumenbachia amana* T.Henning & Weigend



Figure 7: *Blumenbachia amana* T.Henning & Weigend

Blumenbachia catharinensis Urb. & Gilg

DESCRIPTION

Stem: height (cm) 30 to 50; **habit** ascending or trailing/sub scandent or scandent. **Leaf: shape** broad ovate; **division** trilobate/trifoliolate. **Inflorescence: flower position** axillary; **pedicel long (mm)** 20 to 30. **Flower: petal long (mm)** 10 or more; **petal colour** white; **nectar scale colour** red/yellow. **Fruit: capsule shape** globose; **capsule long (mm)** 8; **capsule wide (mm)** 8.

ADDITIONAL DESCRIPTION

Weak, trailing or pendent or scandent herb 30-50 cm tall. Stem grooved or quadrangular, to 1.5 mm thick, covered with deflexed scabrid trichomes 0.3 mm long and tack-shaped trichomes 0.1 mm. Leaves opposite and decussate, broadly ovate in outline and deeply trilobate to trifoliolate, 2.5-5 cm long, 2-4.5 cm wide, petioles 1.5-5 cm long, lateral lobes unequally bilobate, lobe margin obsoletely serrate, apex acuminate, leaf base cordate, lamina membranaceous, very sparsely set with short setae and scabrid hairs 0.2 mm long above and more densely set with scabrid hairs below, 3 veins from base, lateral ones branching 2.5 mm from base. Flowers borne singly in apparently axillary position (reduced and displaced terminal inflorescences), pendent, pedicel 2-3 cm long (1-1.5 x as long as subtending leaf), with two tiny, linear bracts at base of ovary. Calyx tube densely covered with tack-shaped and scabrid trichomes, globose, 2 mm in diameter, calyx lobes lanceolate to deltoid, entire to serrate, 2 mm long and 1.5 mm wide, acuminate, dorsally densely covered with scabrid hairs. Petals 5, reflexed, white, cymbiform, 10 mm long, 3 mm wide, unguiculate in lower third, then abruptly widened into two triangular teeth, apex hood-shaped. Nectar scales ovate, 2-3 mm long, 1.5 mm wide, base incurved, dorsally in lower third with three threads, these 1-1.5 mm long, scale neck recurved, laterally protracted into two "ears", margin densely papillose, scale banded in crimson red and yellow. Staminodia 2 per scale, 3 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 8-10 each, filaments 3-5 mm long, white, anthers 0.2 mm long and 0.15 mm wide, yellow. Ovary inferior, twisted, globose, 2 mm in diameter, with five parietal placentae, ovules numerous, style filiform, papillose, 4-7 mm long, densely pilose. Fruit a twisted, globose capsule, pedicel deflexed, 15-20 mm long, capsule 8 mm in diameter, with 10 longitudinal ridges, five of them narrower and lower, five of them higher and wider and clearly elevated (although usually not as evidently as in *Blumenbachia amana*), very densely covered with scabrid and tack-shaped trichomes, succulent when young, surface mostly smooth, drying to membranaceous texture, walls very thick and filled with a spongy parenchyma, opening with ten longitudinal sutures; seeds numerous, black, testa fibrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types


Anthropic area, High Altitude Grassland


Geographic Distribution


Confirmed occurrences




South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

M. Sobral, 5057, NY,  (NY01145163), Rio Grande do Sul

A.R. Reitz, 2703, US,  (US01886226), Santa Catarina

L.B. Smith, 7832, NY,  (NY00617836), Santa Catarina

L.B. Smith, 7832, US,  (US01886225), RB, 101265,  (RB00203625), Santa Catarina
A.R. Reitz, 7959, US,  (US01886224), Santa Catarina
R. Trevisan, 1723, BONN, Santa Catarina
Funez, L.A., 8289, FURB (FURB64341), Santa Catarina
Funez, L.A., 8643, FURB (FURB64380), Santa Catarina

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Blumenbachia catharinensis* Urb. & Gilg

Blumenbachia eichleri Urb.

Has as synonym

homotype *Catophora eichleri* (Urb.) Urb.

DESCRIPTION

Stem: height (cm) 100 to 150; **habit** ascending or trailing/sub scandent or scandent. **Leaf: shape** broad ovate/sub circular/reniform; **division** triangular lobate. **Inflorescence: flower position** in inflorescence; **pedicel long (mm)** less than 10. **Flower: petal long (mm)** to 8; **petal colour** green/yellow/greenish white; **nectar scale colour** red/yellow. **Fruit: capsule shape** elliptic; **capsule long (mm)** 18 to 25; **capsule wide (mm)** 8.

ADDITIONAL DESCRIPTION

Weak, trailing or scandent herb 100-150 cm tall. Stem winding, terete, to 2-4 mm thick, covered with deflexed scabrid trichomes 0.3 mm long and very few setae and tack-shaped hairs. Leaves opposite and decussate, suborbicular to reniform, 6-12 cm long, 5-9 cm wide, petioles 2-5 cm long, margin divided into 1-3 triangular-ovate lobes, central lobe very much larger than lateral lobes, lobe margin finely denticulate, apex acuminate, leaf base deeply cordate, lamina thinly membranaceous, very sparsely set with white setae 5 mm long, scabrid hairs 0.5 mm long above and more densely set with glochidiate hairs 0.2 mm long below, 3 veins from base, lateral ones branching 10-12 mm from base. Flowers borne in depauperate dichasia in apparently axillary position (displaced terminal inflorescences), 10-20 flowers per inflorescence, peduncle 10-15 cm long, branches 5-7 cm long, flowers pendent, pedicels 7-10 mm long, every flower subtended by two widely ovate to reniform, sessile, semiamplexicaul bracts, these to 25 mm long and wide (first pair). Calyx tube densely covered with scabrid trichomes 1-2 mm long and longer setae, clavate to ovoidal, 5 mm long and 2 mm wide, calyx lobes ovate-lanceolate, margin entire, 2 mm long and 1.5 mm wide, acuminate, dorsally densely covered with scabrid hairs. Petals 5, reflexed, green, yellow or greenish white, cymbiform, 8 mm long, 2 mm wide, unguiculate in lower third, then widened, apex hood-shaped. Nectar scales rectangular, 3 mm long, 1.5 mm wide, base incurved, dorsally in lower third with three threads, these 2 mm long, scale neck recurved, laterally protracted into two "ears", margin densely papillose, scale banded in crimson red and yellow. Staminodia 2 per scale, 3.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 8-10 each, filaments 6-7 mm long, white, anthers 0.2 mm long and 0.15 mm wide, yellow. Ovary inferior, twisted, globose, with 3 parietal placentae, ovules numerous, style filiform, papillose, 6-8 mm long, densely pilose. Fruit a twisted, broadly elliptical to ovoid capsule, deflexed, pedicel 15-20 mm long, capsule 18-25 mm long, 8-10 mm thick, very densely covered with glochidiate trichomes 1 mm long, succulent when young and drying to membranaceous texture, opening with three longitudinal sutures; seeds numerous, black, testa fibrous, protracted into long ovoidal wing on both ends of the seed.

COMMENTS

This species is frequently misidentified with *B. scabra* in herbaria, especially when mature fruits are lacking. Specimens from NE SP and NW RJ are tentatively included here, mostly based in their ovoid fruit shape, but these are disjunct >400 km from the closest typical *B. eichleri* populations in SC. Leonardo P. Deble (in litt.) has also noticed there are morphological differences in these northern plants, and may be worth of taxonomic recognition (under study). The previous status of *Blumenbachia aspera* (Vell) Urb. and *Blumenbachia scabra* (Miers) Urb. var. *schlenckiana* Urb. as synonyms of this species may need to be reevaluated (the designated neotypes of the latter in particular are typical *B. scabra*).

Life Form

Herb, Liana/scandent/vine

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophylous Forest (Tropical Rain Forest)

Geographic DistributionConfirmed occurrences


Southeast (Rio de Janeiro, São Paulo)


South (Rio Grande do Sul, Santa Catarina)

HERBARIUM MATERIAL

Funez, LA, 735, FURB (FURB27900), Santa Catarina

Ule, 924, P (P02273180), US,  (US01886233), Santa Catarina

R. Marquete, 3442, RB, 393303,  (RB00075046), Rio de Janeiro

J.G. Kuhlmann, s.n., RB, 21419,  (RB00203492), Rio de Janeiro


Funez, LA, 5252, FURB (FURB51098), Santa Catarina


J.A. Jarenkow, 3227, MBM (MBM218108), Rio Grande do Sul

J.M.A. Braga, 3081, RB, 333672,  (RB00475872), Rio de Janeiro

Ule, 924, P (P02273180)

A.R. Reitz, 1864, US,  (US01886232), Santa Catarina

Reitz, R. (Reitz, Raulino/ Reitz, P. R./ Reitz, P. Raulino / Reitz, Pe. R./ Reitz, Padre Raulino), 1864, US,  (US01886232), Santa Catarina

E. Ule (Ule, Ernst Heinrich Georg), 924, US,  (US01886233), Santa Catarina

Blumenbachia exalata Weigend

DESCRIPTION

Stem: height (cm) 100 to 150; **habit** ascending or trailing/sub scandent or scandent. **Leaf: shape** sub orbicular/reniform; **division** triangular lobate. **Inflorescence: flower position** in inflorescence; **pedicel long (mm)** 20 to 40. **Flower: petal long (mm)** to 8; **petal colour** green/yellow/greenish white; **nectar scale colour** red/yellow. **Fruit: capsule shape** elliptic; **capsule long (mm)** 15 to 18; **capsule wide (mm)** 8.

ADDITIONAL DESCRIPTION

Weak, trailing or scandent herb 100-150 cm tall. Stem winding, terete, to 2-4 mm thick, covered with deflexed scabrid trichomes 0.3 mm long and numerous setae. Leaves opposite and decussate, suborbicular to reniform, 6-14 cm long, 5-12 cm wide, petioles 2-7 cm long, margin divided into 2-4 triangular-ovate lobes, central lobe slightly larger than lateral lobes, lobe margin finely denticulate, apex acuminate, leaf base deeply cordate, lamina thinly membranaceous, very sparsely set with white setae 5 mm long, scabrid hairs 0.5 mm long above and more densely set with glochidiate hairs 0.2 mm long below, 3 veins from base, lateral ones branching 10-12 mm from base. Flowers borne in very depauperate dichasia in apparently axillary position (displaced terminal inflorescences), 2-5 flowers per inflorescence, peduncle 10-15 cm long, branches 5-7 cm long, flowers pendent, pedicels 2-4 mm long, every flower subtended by two widely ovate to reniform, semiamplexicaul bracts, these 5-10 mm long petiolate with lamina 25 mm long and 20 mm wide (first pair). Calyx tube densely covered with very short scabrid trichomes only 0.2 mm long and esetulose, clavate to ovoidal, 10-12 mm long and 3 mm wide, calyx lobes ovate-lanceolate, margin entire, 2 mm long and 1.5 mm wide, acuminate, dorsally densely covered with scabrid hairs. Petals 5, reflexed, green, yellow or greenish white, cymbiform, 8 mm long, 2 mm wide, unguiculate in lower third, then widened, apex hood-shaped. Nectar scales rectangular, 3 mm long, 1.5 mm wide, base incurved, dorsally in lower third with three threads, these 2 mm long, scale neck recurved, laterally protracted into two "ears", margin densely papillose, scale banded in crimson red and yellow. Staminodia 2 per scale, 3.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 8-10 each, filaments 6-7 mm long, white, anthers 0.2 mm long and 0.15 mm wide, yellow. Ovary inferior, twisted, globose, with 3 parietal placentae, ovules numerous, style filiform, papillose, 6-8 mm long, densely pilose. Fruit a twisted, elliptical capsule, fruit deflexed, pedicel 15-20 mm long, capsule 15-18 mm long, 8 mm thick, very densely covered with white setae 2-3 mm long and shorter glochidiate hairs, succulent when young and drying to membranaceous texture, opening with three longitudinal sutures; seeds numerous, black, testa deeply reticulate, with a single, short, indistinct, apical wing.

COMMENTS

This species is closely related to other *Blumenbachia* sect. *Gripidea*: *B. eichleri* and *B. scabra*. However differs most notably from both in seed morphology (see description). This species is apparently rare and endemic to RS.

Life Form

Herb, Liana/scandent/vine

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types






Seasonally Deciduous Forest, Seasonally Semideciduous Forest

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Sehnm, S.J., 3996, PACA, 47760,  (PACA047760), B, B 10 0250597,  (B100250597), M, M-0113278,  (M0113278), SI, F, MBM, 108113,  (MBM0108113), Rio Grande do Sul, **Typus**
B. Rambo, 42886, W,  (W19570010380), P (P00123868), Rio Grande do Sul

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Blumenbachia exalata* Weigend



Figure 2: *Blumenbachia exalata* Weigend



Figure 3: *Blumenbachia exalata* Weigend

Blumenbachia insignis Schrad.

Has as synonym

heterotypic *Blumenbachia multifida* Hook.f.
 heterotypic *Blumenbachia palmata* Cambess.
 heterotypic *Blumenbachia parviflora* Gillies ex G.Don
 heterotypic *Loasa muralis* Griseb.
 heterotypic *Loasa palmata* Spreng.
 heterotypic *Loasa patula* Graham

DESCRIPTION

Stem: height (cm) 30 to 50; **habit** erect/ascending or trailing. **Leaf: shape** broad ovate/sub circular; **division** palmate lobate. **Inflorescence: flower position** axillary; **pedicel long (mm)** 60 to 130. **Flower: petal long (mm)** 10 or more; **petal colour** white; **nectar scale colour** red/yellow. **Fruit: capsule shape** globose; **capsule long (mm)** 15 to 20; **capsule wide (mm)** 15 to 20.

ADDITIONAL DESCRIPTION

Erect or trailing herb 30-50 cm tall. Stem grooved or quadrangular, to 4 mm thick, covered with white setae 1-1.5 mm long, deflexed scabrid trichomes 0.7 mm long and glochidiate trichomes 0.2 mm long. Leaves opposite and decussate, broadly ovate to subcircular in outline and palmately lobed nearly to base, 3-5 (-7) cm long, 2-3.5 (-5) cm wide, petioles 0.7-1 cm long, lobes deeply lobed to pinnatisect, lobe margin sparsely serrate, apex acuminate, central lobe 8-10 mm wide near base, leaf base cordate, lamina membranaceous to subchartaceous, very densely to very sparsely set with white setae 2-3 mm long, scabrid hairs 0.4 mm long above and more densely set with glochidiate hairs 0.2 mm long below, 3 veins from base, lateral ones branching 2 mm from base. Flowers borne singly in apparently axillary position (displaced and reduced terminal inflorescences), pendent, pedicel 6-13 cm long (1.5-2.5 x as long as subtending leaf), with two tiny, linear bracts at base of ovary. Calyx tube densely covered tack-shaped and scabrid trichomes and setae 2-4 mm long, globose, 2 mm in diameter, calyx lobes narrowly lanceolate to linear, entire to serrate, 4 mm long and 1 mm wide, acuminate, dorsally densely covered with scabrid hairs. Petals 5, reflexed, white, cymbiform, 10-14 mm long, 3 mm wide, unguiculate in lower third, then abruptly widened into two triangular teeth, apex hood-shaped. Nectar scales ovate, 3 mm long, 1.5 mm wide, base incurved, dorsally in lower third with three threads, these 2 mm long, scale neck recurved, laterally protracted into two "ears", margin densely papillose, scale banded in crimson red and yellow. Staminodia 2 per scale, 3.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 8-10 each, filaments 4 mm long, white, anthers 0.2 mm long and 0.15 mm wide, yellow. Ovary inferior, twisted, globose, 2 mm in diameter, with five parietal placentae, ovules numerous, style filiform, papillose, 6-8 mm long, densely pilose. Fruit a twisted, globose capsule, fruit deflexed on erect pedicel, pedicel 60-130 mm long, capsule 15-20 mm in diameter, very densely covered with scabrid and tack-shaped trichomes, all the ridges of about the same height, succulent when young, surface smooth and drying to membranaceous texture, walls very thick and filled with a spongy parenchyma, opening with ten longitudinal sutures; seeds numerous, black, testa fibrous.

COMMENTS

Although in Brazil is restricted to RS, this species is abundant in some localities. It is also found in Uruguay and Argentina.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains




Atlantic Rainforest, Pampa

Vegetation Types

High Altitude Grassland, Grassland

Geographic DistributionConfirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIALSeijo, G, 2613, SPF,  (SPF00157511)Fée, s.n., RB, 157727,  (RB00838925)M. FRUCARD, s.n., RB, 41699,  (RB00203610)Gillies, s.n., K,  (K000372910)Lorentz, s.n., K,  (K000372909)Tweedie, s.n., K,  (K000372908)

Schlindwein, C., 958, TUB, Rio Grande do Sul

Marchiori, J N C, 929, HDCF (HDCF003330), Rio Grande do Sul


Seijo, G, 2640, HUEFS (HUEFS071848), HUEFS, 71848,  (HUEFS0071848)s.c., s.n., US,  (US01886235)M. Sobral, 5057, SPF,  (SPF00065693), Rio Grande do SulMarchiori, J N C, 929, HDCF,  (HDCF003330), Rio Grande do Sul**FIELD IMAGES / ILLUSTRATIONS**Figure 1: *Blumenbachia insignis* Schrad.

Figure 2: *Blumenbachia insignis* Schrad.



Figure 3: *Blumenbachia insignis* Schrad.



Figure 4: *Blumenbachia insignis* Schrad.



Figure 5: *Blumenbachia insignis* Schrad.



Figure 6: *Blumenbachia insignis* Schrad.



Figure 7: *Blumenbachia insignis* Schrad.

Blumenbachia latifolia Cambess.

Has as synonym

heterotypic *Blumenbachia urens* (Vell.) Urb.

heterotypic *Loasa urens* Vell.

DESCRIPTION

Stem: height (cm) 30 to 70; **habit** ascending or trailing/sub scandent or scandent. **Leaf: shape** broad ovate; **division** trifoliolate. **Inflorescence: flower position** axillary; **pedicel long (mm)** 7 to 23. **Flower: petal long (mm)** 7 to 10; **petal colour** white; **nectar scale colour** red/yellow. **Fruit: capsule shape** globose; **capsule long (mm)** 14; **capsule wide (mm)** 14.

ADDITIONAL DESCRIPTION

Trailing or scandent or subscandent herb 30-70 cm tall. Stem grooved or quadrangular, to 4 mm thick, covered with white setae 1-1.5 mm long, deflexed scabrid trichomes 0.5-0.7 mm long and glochidiate trichomes 0.1-0.2 mm long. Leaves opposite and decussate, broadly ovate, deeply trilobed to trifoliolate, 3-10 cm long and wide, petioles 30-50 mm long, central lobe larger than lateral lobes, often with 1-2 lobules in each side, lobe margin obsolete serrate, apex acuminate, leaf base cordate, lamina membranaceous to subchartaceous, very densely to very sparsely set with white setae 2-3 mm long, scabrid hairs 0.4 mm long above and more densely set with glochidiate hairs 0.2 mm long below, 3 veins from base, lateral ones branching 5 mm from base. Flowers borne singly in apparently axillary position (displaced and reduced terminal inflorescences), pendent, pedicel 7-23 mm long (1/10-1/2 as long as subtending leaf petiole), with two tiny, linear bracts at base of ovary. Calyx tube densely covered tack-shaped and scabrid trichomes and setae 2-4 mm long, globose, 3 mm in diameter, calyx lobes ovate, margin deeply dissected, 2-3 mm long and 1.5 mm wide, acuminate, dorsally densely covered with scabrid hairs. Petals 5, reflexed, white, cymbiform, 7-10 mm long, 1.5 mm wide, unguiculate in lower third, then abruptly widened into two triangular teeth, apex hood-shaped. Nectar scales ovate, 3 mm long, 1.5 mm wide, base incurved, dorsally in lower third with three threads, these 2 mm long, scale neck recurved, laterally protracted into two "ears", margin densely papillose, scale banded in crimson red and yellow. Staminodia 2 per scale, 3.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 8-10 each, filaments 5-6 mm long, white, anthers 0.2 mm long and 0.15 mm wide, yellow. Ovary inferior, twisted, globose, 2 mm in diameter, with five parietal placentae, ovules numerous, style filiform, papillose, 6-8 mm long, densely pilose. Fruit a twisted, globose capsule, fruit deflexed on erect pedicel, pedicel 7-15 mm long, capsule 14 mm in diameter, very densely covered with scabrid and tack-shaped trichomes, succulent when young, all ridges of about the same height, surface smooth, drying to membranaceous texture, walls very thick and filled with a spongy parenchyma, opening with ten longitudinal sutures; seeds numerous, black, testa fibrous.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Atlantic Rainforest, Pampa

Vegetation Types

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

Geographic Distribution

Confirmed occurrences






















Southeast (São Paulo)






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

Possible occurrences

Southeast (Minas Gerais)

HERBARIUM MATERIAL

- A. Saint-Hilaire, s.n., P (P02273183), **Typus**
 A. Saint-Hilaire, C1/1067, P (P04588632), São Paulo, **Typus**
 A. Saint-Hilaire, C1/1064, P (P04588635), São Paulo, **Typus**
 G. Hatschbach, 17140, NY,  (NY00617838), Paraná
 G. Hatschbach, 22513, NY,  (NY00617837), Paraná
 R.M. Klein, 5736, CRI (CRI003831), CRI (CRI003802), Santa Catarina
 L.B. Smith, 12937, NY,  (NY00617835), Santa Catarina
 A. Saint-Hilaire, C2/1866, RB, 41698,  (RB00203584), P (P04588634), P (P04589032), Rio Grande do Sul, **Typus**
 Aécio Amaral-Santos, 2949, CEN (CEN00072408), Rio Grande do Sul
 Gonzatti, F, 1289, FURB (FURB49197), Rio Grande do Sul
 Falkenberg, DB, 7966, FURB (FURB04246), Santa Catarina
 R. dos Santos, s.n., CRI (CRI006311), Santa Catarina
 Longhi, S. J., 0, HDCF (HDCF004611)
 FRITZ PLAUMANN, 136, RB, 53927,  (RB00203579), Santa Catarina
 J.G. KUHLMANN, s.n., RB, 57741,  (RB00203591), Paraná
 A. SCHININI, 7351, RB, 176500,  (RB00203602)
 Vanni, R, 740, SPF,  (SPF00065292)
 M. Reineck & Czermack, 9, W,  (W19000001469), Rio Grande do Sul
 B. Rambo, 42136, W,  (W19570000098), Rio Grande do Sul
 B. Rambo, 43083, W,  (W19570000105), Rio Grande do Sul
 B. Rambo, 43440, W,  (W19570002216), Rio Grande do Sul
 B. Rambo, 43908, W,  (W19570003195), Rio Grande do Sul
 L.B. Corrêa, s.n., ECT (ECT0003004), Rio Grande do Sul
 Falkenberg, DB, 7966, FURB (FURB04246), RB, 577516,  (RB00786466), Santa Catarina
 Schwirkowski, P., 1896, FURB (FURB52002), Santa Catarina
 Sello, 2985, P (P04588640), Rio Grande do Sul, **Typus**
 V. MARUŇAK, 384, RB, 172592,  (RB00203566)
 Kassner-Filho, A., 5289, FURB (FURB64602), Santa Catarina
 Falkenberg, D.B., 7966, FURB (FURB04246), Santa Catarina
 L.B. Corrêa, s.n., ECT (ECT0003004), Rio Grande do Sul
 Falkenberg, DB, 6763, MBM (MBM203083), Santa Catarina
 R.M. Klein, 5605, CRI (CRI003829), Santa Catarina
 R.M. Klein, 5736, CRI (CRI003802), Santa Catarina
 R.M. Klein, 5605, CRI (CRI003829), Santa Catarina
 R.M. Klein, s.n., CRI (CRI003831), Santa Catarina
 Kummrow, R, 1988, MBM (MBM076731), Paraná
 Silva, JM, 3707, MBM (MBM280827), Paraná
 Kozera, C, 176, MBM (MBM222772), Paraná
 Longhi, S. J., 0, HDCF (HDCF004611)
 Jablonski, EFA, 053, HUCP,  (HUCP00012961), Paraná
 Kuniyoshi, YS, 4907, MBM (MBM216059), Paraná
 Krapovickas, A, s.n., MBM (MBM008674)
 Krapovickas, A, 16440, MBM (MBM017172)
 REFLOA provisional entry, s.n., W,  (W19920016603)
 s.c., s.n., RB,  (RB00769567), Paraná
 G. Hatschbach, 78172, SPF,  (SPF00170435), RB, 415126,  (RB00203616), Santa Catarina
 G. Hatschbach, 78172, MBM (MBM300658), Bahia
 G. Hatschbach, 78172, SPF,  (SPF00170435), Santa Catarina
 G. Hatschbach, 51510, MBM (MBM120712), Paraná
 G. Hatschbach, 42690, MBM (MBM070017), Paraná
 G. Hatschbach, 72348, MBM (MBM262850), Paraná
 G. Hatschbach, 78341, MBM (MBM300005), Rio Grande do Sul
 G. Hatschbach, 35185, MBM (MBM041994), Paraná
 G. Hatschbach, 30812, MBM (MBM024551), Paraná
 G. Hatschbach, 22613, MBM (MBM017414), Paraná

G. Hatschbach, 72348, ESA (ESA078648), Paraná
J. Cordeiro, 636, W,  (W19920016603), Paraná
J. Cordeiro, 5281, MBM (MBM393439), Santa Catarina
J. Cordeiro, 636, MBM (MBM154429), Paraná
J.A. Jarenkow, 3131, MBM (MBM212600), Santa Catarina
J.A. Jarenkow, 478, MBM (MBM178209), Rio Grande do Sul
G. Hatschbach, 17140, MBM (MBM004029), Paraná
G. Hatschbach, 72348, SPF,  (SPF00153301), Paraná
D.B. Falkenberg, 7966, RB, 577516,  (RB00786466), Santa Catarina
Falkenberg, D.B., 7966, FURB,  (FURB04246), Santa Catarina
C. Gaudichaud, 1246, P (P04588639)
Kassner-Filho, A., 5289, FURB,  (FURB64602), Santa Catarina

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Blumenbachia latifolia* Cambess.



Figure 2: *Blumenbachia latifolia* Cambess.



Figure 3: *Blumenbachia latifolia* Cambess.



Figure 4: *Blumenbachia latifolia* Cambess.



Figure 5: *Blumenbachia latifolia* Cambess.



Figure 6: *Blumenbachia latifolia* Cambess.



Figure 7: *Blumenbachia latifolia* Cambess.

Blumenbachia scabra (Miers) Urb.

Has as synonym

basionym *Gripidea scabra* Miers

homotype *Caiophora scabra* (Miers) Urb.

heterotypic *Blumenbachia aspera* (Vell.) Urb.

heterotypic *Caiophora aspera* (Vell.) Urb.

heterotypic *Gripidea asperata* (Vell.) Miers

heterotypic *Mentzelia aspera* Vell.

DESCRIPTION

Stem: height (cm) 100 to 150; **habit** ascending or trailing/sub scandent or scandent. **Leaf: shape** sub orbicular/reniform; **division** triangular lobate. **Inflorescence: flower position** in inflorescence; **pedicel long (mm)** 20 to 40. **Flower: petal long (mm)** to 8; **petal colour** green/yellow/greenish white; **nectar scale colour** red/yellow. **Fruit: capsule shape** elliptic; **capsule long (mm)** 15 to 18; **capsule wide (mm)** 8.

ADDITIONAL DESCRIPTION

Weak, trailing or scandent herb 100-150 cm tall. Stem winding, terete, to 2-4 mm thick, covered with deflexed scabrid trichomes 0.3 mm long and very few setae and glochidiate, tack-shaped hairs. Leaves opposite and decussate, suborbicular to reniform, 6-14 cm long, 5-12 cm wide, petioles 2-7 cm long, margin divided into 2-4 triangular-ovate lobes, central lobe slightly larger than lateral lobes, lobe margin finely denticulate, apex acuminate, leaf base deeply cordate, lamina thinly membranaceous, sparsely set with white setae 5 mm long, scabrid hairs 0.5 mm long above and more densely set with glochidiate hairs 0.2 mm long below, 3 veins from base, lateral ones branching 10-12 mm from base. Flowers borne in depauperate dichasia in apparently axillary position (displaced terminal inflorescences), 10-20 flowers per inflorescence, peduncle 10-15 cm long, branches 5-7 cm long, flowers pendent, pedicels 2-4 mm long, every flower subtended by two widely ovate to reniform, sessile, semiamplexicaul bracts, these to 25 mm long and wide (first pair). Calyx tube densely covered with very short scabrid trichomes only 0.2 mm long, esetulose (especially in N part of range) or not (variable in S part of range), clavate to narrowly ovoidal, 5 mm long and 2 mm wide, calyx lobes ovate-lanceolate, margin entire, 2 mm long and 1.5 mm wide, acuminate, dorsally densely covered with scabrid hairs. Petals 5, reflexed, green, yellow or greenish white, cymbiform, 8 mm long, 2 mm wide, unguiculate in lower third, then widened, apex hood-shaped. Nectar scales rectangular, 3 mm long, 1.5 mm wide, base incurved, dorsally in lower third with three threads, these 2 mm long, scale neck recurved, laterally protracted into two "ears", margin densely papillose, scale banded in crimson red and yellow. Staminodia 2 per scale, 3.5 mm long, slightly widened basally, filiform above, papillose. Stamens numerous, in 5 epipetalous fascicles of 8-10 each, filaments 6-7 mm long, white, anthers 0.2 mm long and 0.15 mm wide, yellow. Ovary inferior, twisted, globose, with 3 parietal placentae, ovules numerous, style filiform, papillose, 6-8 mm long, densely pilose. Fruit a twisted, clavate to narrowly elliptical capsule, deflexed, pedicel 15-20 mm long, capsule 25-40 mm long, 5-10 mm thick, covered with short glochidiate trichomes, and usually with relatively few, sparse stinging trichomes to 1 mm long (although the setae density can be variable, even in a single plant), succulent when young and drying to membranaceous texture, opening with three longitudinal sutures; seeds numerous, black, testa fibrous, protracted into long ovoidal wing on both ends of the seed.

COMMENTS

So far this species is known unequivocally from S SP, PR and SC. Without mature fruits, specimens of this taxon are often confused with *B. eichleri*. The neotypes of *Blumenbachia scabra* (Miers) Urb. var. *schenckiana* Urb. correspond to typical *B. scabra* (Miers) Urb., so the status of that taxon may need reevaluation.

Life Form

Herb, Liana/scandent/vine

Substrate

Terrestrial

DISTRIBUTION

Native, Is endemic from Brazil

Phytogeographic Domains

Atlantic Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)




















Geographic Distribution

Confirmed occurrences

Southeast (São Paulo)

South (Paraná, Santa Catarina)

HERBARIUM MATERIAL

Schwacke, 12951, P (P00123869), Santa Catarina
 G. Hatschbach, 6812, MBM (MBM039276), Paraná
 G. Hatschbach, 41572, MBM (MBM060272), Paraná
 G. Hatschbach, 16334, MBM (MBM002557), Paraná
 G. Hatschbach, 21702, MBM (MBM017413), Paraná
 Korte, A, 6947, FURB (FURB27899), Santa Catarina
 Schwirkowski, P., 2043, FURB (FURB52147), RB,  (RB01330711), Santa Catarina
 Silva, J.M., 1752, INPA, 200646, ,  (INPA0200646), MBM (MBM203525), Paraná
 Weir, J., 465, K,  (K000372954), K,  (K000372953), Paraná, **Typus**
 J.A. Lombardi, 8631, RB, 378315,  (RB00786472), UNOP (UNOP007066), São Paulo
 P. K. H. Dusén, 15452, NY,  (NY00617843), Paraná
 Silva, J.M. da, 1752, INPA, 200646,  (INPA0200646), Paraná
 G. Hatschbach, 17414, NY,  (NY00617842), US,  (US01886248), Paraná
 G. Hatschbach, 16334, RB, 142051,  (RB00203523), NY,  (NY00617844), Paraná
 A.R. Reitz, 5600, PACA, 64754,  (PACA064754), Santa Catarina, **Typus**
 G. Hatschbach, 78054, MBM (MBM300659), Santa Catarina
 P. Schwirkowski, 2043, RB,  (RB01330711), Santa Catarina
 G. Hatschbach, 17526, US,  (US01886247), Paraná
 Schwirkowski, P., 2178, FURB (FURB55839), Santa Catarina
 A.R. Reitz, 5600, MBM (MBM039277), Santa Catarina
 Funez, L.A., 5492, FURB,  (FURB51439), Santa Catarina
 Hatschbach, G. G. (Hatschbach, Gerdt Guenther), 1495, US,  (US01886231), Paraná
 Hatschbach, G, 1495, MBM (MBM039278), Paraná
 Schwirkowski, P., 2179, FURB,  (FURB55839), Santa Catarina
 Hatschbach, G. G. (Hatschbach, Gerdt Guenther), 17526, US,  (US01886247), Paraná

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Blumenbachia scabra* (Miers) Urb.



Figure 2: *Blumenbachia scabra* (Miers) Urb.



Figure 3: *Blumenbachia scabra* (Miers) Urb.



Figure 4: *Blumenbachia scabra* (Miers) Urb.



Figure 5: *Blumenbachia scabra* (Miers) Urb.



Figure 6: *Blumenbachia scabra* (Miers) Urb.



Figure 7: *Blumenbachia scabra* (Miers) Urb.

Caiophora C.Presl

This treatment is composed of the following taxa: *Caiophora*, *Caiophora arechavaletae*.

HOW TO CITE

Acuña-Castillo, R., Henning, T., Weigend, M., Mello-Silva, R. (in memoriam) Loasaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB117599>.

Has as synonym

heterotypic *Illairea* Lenné & C.Koch

heterotypic *Raphisanthe* Lilja

DESCRIPTION

Rosulate, erect or scandent herbs, always densely covered with urticant setae and glochidiate hairs. Stems terete, without dark streaks. Leaves from broadly ovate to lanceolate, pinnatilobed, pinnatifid or bipinnatisect. Inflorescences terminal, symmetrical or assymmetrical dichasia or monochasia with foliose bracts. Calyx tube cylindrical, conical or globose, lobes 5—8, entire or dentate to pinnatifid, setose. Petals 5—8, free, valvate in bud, spreading or erect (campanulate), usually deeply cymbiform, rarely more or less flat, with urticant setae on back, orange, red, pink, yellow, greenish or white. Nectar scales 5—8, usually with filiform appendages on back, carinate, deeply cymbiform, often with additional calli forming an apical double arch. Staminodia bent at right angle from the base, often with long, filiform apex. Stamens numerous, in epipetalous fascicles. Ovary inferior, unilocular, with 3—5 Y-branched, parietal placentae, ovules numerous, style persistent. Capsule clavate, cylindrical or globose, straight or twisted, when twisted, both clockwise and anticlockwise in the same plant, opening with longitudinal sutures only, or more rarely with apical valves. Seeds variable in size and structure, with reticulate testa, often angular and variously winged.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Pampa

Vegetation Types

Grassland

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

REFERENCE

C.Presl, Reliq. Haenk. 2: 41. 1831.

Caiophora arechavaletae (Urb.) Urb.

Has as synonym

basionym *Blumenbachia arechavaletae* Urb.

DESCRIPTION

Annual erect herbs (20-) 40-70 (-100) cm tall, root system fibrous. Stems weakly lignescent, ca. 5 mm thick, densely covered with whitish setae 3-5 mm long, and scabrid (ca 1 mm long) and glochidiate trichomes (0.1-0.4 mm long). Basal leaves 6-22 cm long; laminas narrowly ovate, 50 x 25 to 150 x 90 mm, deeply pinnatisect (lower lobes shorter and generally free) with 5-11 lobes on each side; lobes narrowly ovate, up to 40 x 20 mm; lobe margins pinnatifid to lobulate to grossly serrate (very rarely entire), with 2-6 serrations or segments on each side; lobules up to 10 mm long; adaxial leaf surface sparsely setose with stinging hairs 1-3 mm long and covered with scabrid trichomes up to 1.5 mm long; abaxial covered with scabrid (up to 1 mm long) and glochidiate trichomes (up to 0.3 mm long) rarely with few stinging trichomes to 5 mm long. Inflorescences twinning, frondose, asymmetrical dichasia; with 7-16 flowers, with internodes 2-6.5 cm long; pedicels 3-10 mm long during anthesis, to 25 mm in fruit. Flowers deflexed, pentamerous. Calyx lobes spreading or deflexed, narrowly ovate-oblong to lanceolate, 3 x 2 mm to 6 x 4 mm, densely setose and covered mostly with scabrid trichomes rarely with few glochidiate trichomes; margin subentire or with up to 3 teeth indistinct teeth on each side. Corolla widely star shaped; petals spreading, white, cymbiform deepest towards the middle or between the base and the middle of the petal, 7-12 mm long and 2-4 mm deep, dorsally setose and covered with scabrid and glochidiate trichomes, apex emarginated. Stamens in 5 epipetalous fascicles, ca. 20 per each fascicle; filaments ca. 4-6 mm long, white; anthers ovoidal, pale yellow, ca. 0.5 mm long. Nectar scales deeply cymbiform, bright yellow to orange with red markings on the neck, weakly keeled in dorsal view with two lateral smaller ridges near the margin, ca. 3 x 2 to 4 x 2 mm; scale neck rounded, slightly thickened with a double arc under the tip, with three filiform dorsal filaments up to 2 mm long, yellow to orange with white apex, inserted in the upper half of scale back. Free staminodia L shaped, 5-6 mm long, base thickened and papillose, abruptly thinner towards middle; apex of staminodia filiform. Style weakly ridged, up to 7 mm long (towards the end of anthesis); ovary inferior, conical, with 3-5 placentae and numerous ovules. Mature fruits deflexed capsules, twisted clockwise and anticlockwise in successive nodes of the inflorescence, narrowly ovoidal, 12 x 6 to 25 x 12 mm, sometimes protracted into a short cone, opening with 3 longitudinal slits, apex coherent. Seeds ca. 500; testa deeply pitted, dark brown.

COMMENTS

This species is the only one in its genus found outside the Andes. It is possible that Gibert 1415 (K) and s.c. 1415 (P) were actually collected by Arechavaleta and represent isotypes of this species (collection numbers and localities are identical). This species is known from only from Southern Brazil and Uruguay.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Pampa

Vegetation Types

Grassland

Geographic Distribution

Confirmed occurrences

South (Rio Grande do Sul)

HERBARIUM MATERIAL

Schlindwein, C., 112, TUB, Rio Grande do Sul

Arechavaleta, J., 3425, ZT, F, **Typus**

Weigend, M., 9330, P (P00871166), BONN, Rio Grande do Sul

Gilbert, 1415, K,  (K000372919), P

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Caiophora arechavaletae* (Urb.) Urb.



Figure 2: *Caiophora arechavaletae* (Urb.) Urb.



Figure 3: *Caiophora arechavaletae* (Urb.) Urb.



Figure 4: *Caiophora arechavaletae* (Urb.) Urb.



Figure 5: *Caiophora arechavaletae* (Urb.) Urb.



Figure 6: *Caiophora arechavaletae* (Urb.) Urb.



Figure 7: *Caiophora arechavaletae* (Urb.) Urb.

Klaprothia Kunth

This treatment is composed of the following taxa: *Klaprothia*, *Klaprothia fasciculata*, *Klaprothia mentzelioides*.

HOW TO CITE

Acuña-Castillo, R., Henning, T., Weigend, M., Mello-Silva, R. (in memoriam) Loasaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB120187>.

Has as synonym

heterotypic *Ancyrostemma* Poepp. & Endl.

heterotypic *Sclerothrix* C.Presl

DESCRIPTION

Annual or perennial herbs to subshrubs, erect or decumbent. Stems terete, to 0.5 cm in diam., covered with erect glochidiate hairs approx. 0.5 mm long. Leaves opposite, petioles 10-15 mm long; lamina slightly bullate or flat, elliptical to ovate, chartaceous to slightly succulent, base cuneate, apex acuminate, margins serrate to mucronate, very densely covered with glochidiate trichomes. Flowers in terminal dichasia with monochasial branches or in more complex terminal thyrsoids, flowers erect, bracts minute, 0.5-0.75 mm long. Pedicels 1-2 mm long. Calyx densely set with glochidiate hairs, tube ovoidal to clavate, calyx lobes 4, tiny, ovate acuminate. Petals 4, spreading, cymbiform, ovate, base narrowed, sometimes with 2 longitudinal, lamelliform flaps, 1-10 mm long, 1-6 mm wide, apex acuminate, margin entire or slightly lobed, dorsally set with numerous glochidiate hairs, glabrous within, white. Staminodial groups 4, with 2-6 staminodia each, 3-4 outer ones slightly connate basally or all free, filiform, very densely papillose-hairy, apex irregularly club-shaped and lobed, yellow. Stamens in 4 epipetalous fascicles of 1-5-7 each, filaments 2-5 mm long, white, anthers tiny, pale yellow. Fruit an inferior capsule crowned by persistent calyx lobes, pedicel erect or deflexed, 4-6 mm long, capsule ovoidal, cylindrical or clavate, smooth or with 4 prominent longitudinal ridges, straight or twisted, 3-8 mm long and 2-3 mm wide apically, indehiscent or apically opening with four tiny valves or additionally splitting with longitudinal sutures, seeds 2-8.

Life Form

Herb, Subshrub

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Caatinga

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

Northeast (Ceará)

Possible occurrences

Southeast (Rio de Janeiro)

IDENTIFICATION KEY

Petals 5.0-10 mm long, 2-6 mm wide, stamens 16-28; staminodial groups with 5-6 staminodes each. Capsule ovoid to cylindrical, straight to slightly twisted .. *K. mentzelioides* Kunth

Petals 1.0-2 mm long, 0.5-1.0 mm wide; stamens 4-12; staminodial groups with 3 staminodes each. Capsule clavate, strongly twisted .. *K. fasciculata* (C.Presl) Poston

REFERENCE

Kunth, Nov. Gen. Sp. (folio ed.) 6: 96-97. 1823.

Klaprothia fasciculata (C.Presl) Poston

Has as synonym

basionym *Sclerothrix fasciculata* C. Presl

heterotypic *Ancyrostemma micranthum* Poepp. & Endl.

heterotypic *Blumenbachia micrantha* G.Don

heterotypic *Loasa micrantha* Ruiz & Pav.

DESCRIPTION

Flower: petal long (mm) 1 to 2; **petal wide (mm)** 0.5 to 1; **number of the stamen** 4 to 12; **number of the staminodium per staminodial series** 3. **Fruit: capsule shape** clavate.

ADDITIONAL DESCRIPTION

Erect or straggling annual herb, 0.3-0.5 (0.7) m high. Stems to 0.2 cm in diam., covered with erect glochidiate hairs ca. 0.5 mm long. Leaves opposite, petioles 1-3 cm long; lamina flat, elliptical to narrowly ovate, 5-7 (-10) cm long, 1.8-3 cm wide, membranaceous, base cuneate, apex acuminate, margins evenly serrate, very densely covered with glochidiate trichomes. Inflorescences terminal, dichasial with two cymose branches, last internode never elongated and accessory buds in axils of upper leaves always forming accessory paraclades, 6-10 cm long overall, with 10-15 erect, white flowers; bracts subulate, minute, 0.5-0.75 mm long, 0.5 mm wide. Pedicel 1-2 mm long. Calyx densely set with glochidiate hairs, tube ovoid, 0.5-0.75 mm, Calyx lobes 4, ovate-acuminate, 1 mm long, 0.5 mm wide. Petals 4, spreading, cymbiform, ovate, base narrowed, 1-2 mm long, 0.5-1 mm wide, apex acuminate, margin entire, dorsally set with numerous glochidiate hairs, glabrous within, white. Staminodial groups with 3 staminodia each, free, 1.0-1.5 mm long, filliform, very densely papillose-hairy, apex irregularly club-shaped and lobed, yellow. Stamens in 4 epipetalous fascicles of 3 each, filaments 0.5-0.75 mm long, white, anthers tiny, pale yellow. Fruit an inferior capsule, crowned by persistent calyx lobes, pedicel erect, 4-6 mm long, capsule clavate with 4 prominent longitudinal ridges, twisted, 5-8 mm long and 1-1.5 mm wide apically, apically opening with four tiny valves and then splitting along sutures. Seeds ca. 8, 3-4 larger ones (1 mm long) and the remainder smaller (0.5-0.75 mm) testa reticulate.

COMMENTS

Due to its habit and inconspicuous flowers, this species is often overlooked or misidentified and probably it is more common and widespread than the few confirmed records and vouchered specimens indicate, most of which come from CE. *Glaziou 10876* (R) was supposedly collected in RJ, however until today, this is the only specimen of this species known from such a southern locality. We have not been able to examine unequivocal specimens of this taxon from other states of Brazil. Outside Brazil, *K. fasciculata* occurs from Mexico to Venezuela and Bolivia as well as Haiti.

The poorly known combination *Sclerothrix micrantha* (Poepp. & Endl.) C.Presl, in Epimel. Bot. 246 (1851), is another synonym of this taxon.

Life Form

Herb

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Caatinga

Geographic Distribution


Confirmed occurrences

Northeast (Ceará)

Possible occurrences

Southeast (Rio de Janeiro)

HERBARIUM MATERIAL


A. Fernández & P. Bezerra, s.n., UFRN, 406,  (UFRN00000406), CearáA. Ducke, 1364, RB, 21306,  (RB00203698), Ceará

F. Allemão e Cysneiros, 736, R, Ceará

Gomes, FS, 1003, MBM (MBM394031), Ceará

Kriebel, R, 1740, MBM (MBM305398)

Sparre, B, 13608, MBM (MBM135779)

A. Ducke, 1364, RB, 21306,  (RB00203698), CearáA.F.M. Glaziou, 10876, R,  (R000010238), Rio de JaneiroFernandes, A., UFRN406, UFRN,  (UFRN00000406), Ceará

FIELD IMAGES / ILLUSTRATIONS

Figure 1: *Klaprothia fasciculata* (C.Presl) PostonFigure 2: *Klaprothia fasciculata* (C.Presl) Poston

Klaprothia mentzelioides Kunth

DESCRIPTION

Flower: petal long (mm) 5 to 10; petal wide (mm) 2 to 6; number of the stamen 20 to 28; number of the staminodium per staminodial series 5 to 6. **Fruit:** capsule shape ovoid to cylindrical.

ADDITIONAL DESCRIPTION

Sprawling perennial herb or subshrub, erect from decumbent base, 0.3-1.7 m long. Stems terete, to 0.5 cm in diam., covered with erect glochidiate hairs approx. 0.5 mm long. Leaves opposite, petioles 10-15 mm long; lamina slightly rugose or flat, elliptical to ovate, 35-105 mm long, 15-45 mm wide, chartaceous to slightly succulent, base cuneate, apex acuminate, margins serrate to mucronate, very densely covered with glochidiate trichomes. Flowers in terminal dichasia, 80-110 mm long, with up to 20 erect, white flowers, bracts minute, 0.5-0.75 mm long. Last internode usually well developed, no accessory buds in axils of upper leaves. Pedicel 1-2 mm long. Calyx densely set with glochidiate hairs, tube ovoidal, 1.5 x 1.5 mm, calyx lobes 4, ovate acuminate, 1.5 mm long, 1 mm wide. Petals 4, spreading, deeply cymbiform, ovate, base narrowed, with 2 longitudinal, lamelliform flaps, 3-10 mm long, 2-6 mm wide, apex acuminate, margin entire or slightly lobed, dorsally set with numerous glochidiate hairs, glabrous within, white. 5 staminodial groups with 5-6 staminodia each, 3-4 outer ones slightly connate basally, 1.5-3 mm long, filiform, very densely papillose-hairy, apex irregularly club-shaped and lobed, yellow. Stamens in 4 epipetalous fascicles of 5-7 each, filaments 5 mm long, white, anthers tiny, pale yellow. Fruit an inferior capsule, crowned by persistent calyx lobes, pedicel erect, 4-6 mm long, capsule ovoidal to cylindrical, smooth or with 4 prominent longitudinal ridges, straight to markedly twisted, 3-6 mm long and 2-3 mm wide apically, indehiscent or apically opening with four tiny valves, seeds c. 8, 3-4 larger ones (1 mm long) and the remainder smaller (0.5-0.75 mm), testa reticulate.

COMMENTS

This species is widespread in the tropical Andes and southern Central America, common on roadsides and trails in the montane forest. It is found in middle elevation areas from Costa Rica to Bolivia. In Brazil has been collected only on the slopes of Pico da Neblina.

The obscure name *Guapurium herbaceum* Spreng. in Syst. Veg., ed. 16 [Sprengel] 2: 479 (1825) is considered a synonym.

Life Form

Herb, Subshrub

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest

Vegetation Types

Ombrophyllous Forest (Tropical Rain Forest)

Geographic Distribution

Confirmed occurrences

North (Amazonas)

HERBARIUM MATERIAL

N.T. Silva, 60646, MO (MO1230840), NY,  (NY02219628), US,  (US01886212), Amazonas
Nilo T. Silva, 60646, MO (MO1230840)

FIELD IMAGES / ILLUSTRATIONS

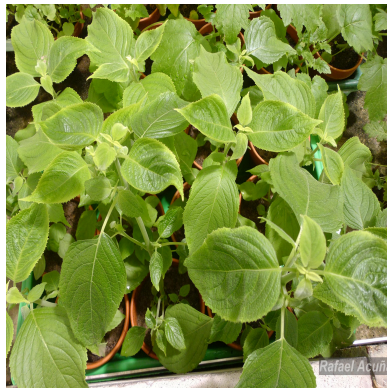


Figure 1: *Klaprothia mentzelioides* Kunth



Figure 2: *Klaprothia mentzelioides* Kunth



Figure 3: *Klaprothia mentzelioides* Kunth



Figure 4: *Klapprothia mentzelioides* Kunth



Figure 5: *Klapprothia mentzelioides* Kunth

Mentzelia L.

This treatment is composed of the following taxa: *Mentzelia*, *Mentzelia aspera*.

HOW TO CITE

Acuña-Castillo, R., Henning, T., Weigend, M., Mello-Silva, R. (in memoriam) Loasaceae in **Flora do Brasil 2020**. Jardim Botânico do Rio de Janeiro. Available at: <http://floradobrasil.jbrj.gov.br/reflora/floradobrasil/FB19306>.

Has as synonym

heterotypic *Acrolasia* C.Presl
 heterotypic *Bartonia* Pursh ex Sims
 heterotypic *Bicuspidaria* (S.Watson) Rydb.
 heterotypic *Chrysostoma* Lilja
 heterotypic *Creolobus* Lilja
 heterotypic *Hesperaster* Cockerell
 heterotypic *Nuttallia* Raf.
 heterotypic *Torreya* Eaton
 heterotypic *Touthera* Eaton & Wright

DESCRIPTION

Annual or perennial herbs, subshrubs, shrubs or small trees with scabrid-glochidiate trichomes, without stinging hairs, dominant and persistent tap root present. Leaves sessile or petiolate, opposite below and alternate above, rarely opposite or alternate throughout; lamina ovate to triangular-ovate, occasionally lyrate, usually lobed, margin serrate or mucronate. Inflorescences complex, terminal, basitonic thyrsoids, frondose, bracteose or frondose-bracteose; each flower with 2 frondose prophylls; sepals green, triangular or ovate, acuminate, margin entire; flowers with inferior ovary, calyx lobes ovate, acuminate or apiculate, white, yellow, or orange; stamens 10-#, filaments equal to very unequal in size, sometimes outer filaments dilated or apically forked, or petaloid staminodes; style 1, filiform, stigmatic surfaces long decurrent on style. Capsule inferior, sessile or pedicellate, opening with 3-7 apical valves; seeds angular or laterally compressed; testa reticulate or polyhedral, each testa cell sometimes with central papillae, sometimes narrowly winged. Ca. 90 spp., from Argentina to Canada incl. Caribbean and Galapagos Is., most diverse in southwestern U.S.A. and Mexico. The majority of species in desert and semi-desert habitats, some penetrating into grasslands and seasonally deciduous forests.

Life Form

Herb, Subshrub

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Caatinga, Central Brazilian Savanna, Pantanal

Vegetation Types

Anthropic area, Cerrado (lato sensu), Seasonally Deciduous Forest, Seasonally Semideciduous Forest

Geographic Distribution

Confirmed occurrences

North (Pará)

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

Central-west (Mato Grosso do Sul)

Southeast (Minas Gerais)

REFERENCE

L., Sp. Pl. 1: 516. 1753.

Mentzelia aspera L.

Has as synonym

heterotypic *Acrolasia squalida* Hook.f.
 heterotypic *Mentzelia corumbaensis* Hoehne
 heterotypic *Mentzelia fragilis* Huber
 heterotypic *Mentzelia propinqua* F.Aesch.
 heterotypic *Mentzelia triloba* Ruiz & Pav.

DESCRIPTION

Erect, decumbent or straggling annual herb or subshrub (0.1-) 0.3-1.5 (-2) m tall; stem up to 6 mm thick, densely set with erect glochidiate trichomes 0.6-1 mm long and scabrid, apically tapering trichomes 0.1-0.3 mm long; stem and branches slightly succulent and extremely brittle. Leaves spirally inserted, petioles 10-40 (-80) mm long; lamina ovate to triangular-ovate, 40-110(-160) x 20-80(-120) mm; base truncate to cuneate; apex acuminate; margin coarsely serrate, with 1 ovate to oblong lobe on each side, lobes 5-25 x 10-25 mm. Inflorescences as terminal dichasia or thyrsoids, widely branched (branching angle between paraclades of dichasia ca. 90#).with opposite, recaulescent (to the next flower), frondose bracts. Flowers with calyx tube shortly cylindrical, 4-8 x 1.5-2 mm, slightly narrowed at base, with dense cover of glochidiate hairs 50-700 µm long, calyx lobes narrowly ovate to linear, 5-8 x 2 mm; petals widely ovate to subcircular, 5-15 x 2.5-7 mm, base narrowed, apex acute, golden yellow to pale orange; stamens 20-30, 10 outer ones with filiform or petaloid filaments, all filaments ca. 5 mm long, anthers ca. 1 x 1 mm, ovate to oblong, yellow; style filiform, ca. 5 mm long, with 3 decurrent stigmas. Capsule initially erect, then deflexed, narrowly cylindrical and only slightly narrowed at base, 9-25 x 2.5-3.5 mm, covered with glochidiate trichomes longer ones 500-600 x 100 µm, with 12-16 bands of short hooks, short ones rather uniformly 100-130 x 20 µm thick with 5-6 bands of short hooks, seeds 6 to 9, irregularly oblong, 2.5-3.5 x 1.5 mm, yellowish gray.

COMMENTS

This is one of the most widely distributed species of the family. It bears superficial similarity to some Malvaceae.

Life Form

Herb, Subshrub

Substrate

Terrestrial

DISTRIBUTION

Native, Not endemic to Brazil

Phytogeographic Domains

Amazon Rainforest, Caatinga, Central Brazilian Savanna, Pantanal

Vegetation Types

Anthropic area, Cerrado (lato sensu), Seasonally Deciduous Forest, Seasonally Semideciduous Forest

Geographic Distribution

Confirmed occurrences



North (Pará)

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

Central-west (Mato Grosso do Sul)

Southeast (Minas Gerais)

HERBARIUM MATERIAL

C.G.T.Ferreira, 283, RB, 493763,  (RB00583589), UFRN,  (UFRN00008496), Rio Grande do Norte
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 G. Hatschbach, 65984, CEPEC,  (CEPEC00080299), Bahia
 V.C. Souza, 28754, ESA (ESA078338), Ceará
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 W.R. Anderson, 37180, NY,  (NY00617854), Minas Gerais
 A.A. Roque, 514, UFRN,  (UFRN00007961), Rio Grande do Norte
 Grupo Pedra do Cavalo, 208, CEPEC,  (CEPEC00032871), Bahia
 J.G. Jardim, 2033, NY,  (NY00634359), Bahia
 G. Hatschbach, 67606, CEPEC,  (CEPEC00083766), Bahia
 A. Ducke, s.n., RB, 21304,  (RB00203723), Ceará
 A. Ducke, s.n., RB, 21302,  (RB00203796), Pará
 H.P. BAUTISTA, 751, RB, 226730,  (RB00203807), Bahia
 FRANCISCO C.F. DA SILVA, 227, RB, 235470,  (RB00203816), Ceará
 W.R. Anderson, 37024, NY,  (NY00617851), Bahia
 Sidney McDaniel, 12716, RB, 326762,  (RB00308149)
 Solís-Neffa, VG, 835, SPF,  (SPF00157515)
 R. Spruce, 4922, RB, 21303,  (RB00203799)
 E.P. Heringer, 219, RB, 171876,  (RB00203774), Pernambuco
 G. Hatschbach, 56610, NY,  (NY00617850), Bahia
 A.M. Giulietti, 1168, HUEFS (HUEFS112181), Pernambuco
 J.G. Jardim, 6324, UFRN,  (UFRN00014566), Rio Grande do Norte
 E.P. Heringer, 801, RB, 171794,  (RB00203786), Pernambuco
 A.M. Carvalho, 3948, CEPEC,  (CEPEC00055345), NY,  (NY00617849), Bahia
 G.M. Barroso, s.n., RB, 117481,  (RB00203831), Mato Grosso do Sul
 Ferreira, CGT, 177, ASE (ASE0002791), Rio Grande do Norte
 Ferreira, CGT, 177A,B, HEPH,   (HEPH00011305), Rio Grande do Norte
 Lanna, JP, s.n., MBM (MBM045421), Bahia
 Almeida Rego, 502, COR,  (COR00013519), Mato Grosso do Sul
 J.G. Jardim, 2033, CEPEC,  (CEPEC00081381), Bahia
 Tomaz, E.C., 52, UFRN,  (UFRN00019215), Rio Grande do Norte
 Almeida Rego, 339, COR,  (COR00013530), Mato Grosso do Sul
 Conceição, A.A., 1990, BRBA (BRBA000600), Bahia
 A. Ducke, 21304, K,  (K000372665)
 Meireles, A.C., 42, UFRN,  (UFRN00025462), Rio Grande do Norte

FIELD IMAGES / ILLUSTRATIONS



Figure 1: *Mentzelia aspera* L.



Figure 2: *Mentzelia aspera* L.



Figure 3: *Mentzelia aspera* L.



Figure 4: *Mentzelia aspera* L.



Figure 5: *Mentzelia aspera* L.



Figure 6: *Mentzelia aspera* L.



Figure 7: *Mentzelia aspera* L.

REFERENCE

Weigend, M. 2007: Systematics of the genus *Mentzelia* (Loasaceae) in South America, *Ann. Missouri Bot. Gard.* 94: 655–689.