

**Folia taxonomica 6. Two new species of Besleria  
(Gesneriaceae) from the Venezuelan Guayana.**

**J. Bot. Res. Inst. Texas 2: 269-273.**

**REFNO: 3570**

**KEYWORDS:**

**Besleria, Guianas, Venezuela**

FOLIA TAXONOMICA 6. TWO NEW SPECIES OF *BESLERIA*  
(GESNERIACEAE) FROM THE VENEZUELAN GUAYANA

Christian Feuillet

Department of Botany, MRC-166  
Smithsonian Institution, P.O. Box 37012  
Washington, DC 20013-7012, U.S.A.  
feuillet@si.edu

ABSTRACT

Two species of *Besleria* (Gesneriaceae) are described from the state of Amazonas in southeastern Venezuela. ***Besleria neblinae*** and ***B. yatuana*** are related to *B. gibbosa* in section *Neobesleria* subsection *Axillares* from which they differ mainly by their leaves strongly unequal in a pair.

RÉSUMÉ

Deux espèces de *Besleria* (Gesneriaceae) sont décrites de l'état d'Amazonas, au sud-est du Venezuela. ***Besleria neblinae*** et ***B. yatuana*** sont poches de *B. gibbosa*, section *Neobesleria* subsection *Axillares*, dont elles diffèrent surtout par leurs feuilles très inégales dans une paire.

RESUMEN

Se describen dos especies de *Besleria* (Gesneriaceae) del estado de Amazonas en el sudeste de Venezuela. ***Besleria neblinae*** y ***B. yatuana*** son relacionados a *B. gibbosa* en sección *Neobesleria* subsección *Axillares*, del cual difieren principalmente por las hojas que no son iguales en un par.

This paper is the first of a series describing new species of Gesneriaceae from the Venezuelan Guayana. This region of Venezuela includes the states of Amazonas, Bolívar, and Delta Amacuro, totaling 454,000 km<sup>2</sup> that represents 50% of the area of Venezuela. The two new species of the subfamily Gesnerioideae Link described herein belong to *Besleria* L., tribe *Beslerieae* Bartl. & H.L. Wendl., and were collected in the state of Amazonas.

***Besleria neblinae*** Feuillet, sp. nov. (**Fig. 1**). TYPE: VENEZUELA. AMAZONAS. Dept. Río Negro: near Cerro de la Neblina, swamp between Río Marawinuma and headwaters of Río Baría, ca. 0°52'N, 66°15'W, 140 m, 8 May 1984, A. Gentry & B. Stein 47253 (HOLOTYPE: US; ISOTYPE: MO).

*Besleriae gibbosae* affinis; lamina angustata, valde inaequali, lobis calycis longioribus, angustioribus et hirsutis, dorsali glande parviorie differt.

Suffrutescent herb, 0.3–2 m tall, often with spreading, sub-horizontal branches. Stem slender, densely villous. Leaves of a pair mostly unequal: smaller leaves with petioles about 1/5 the length of those of the larger leaves, blades about 1/3 the size of the larger; mature larger leaves with petioles 1.5–4.5 cm, densely villous; blades 9–19 × 3–5.5 cm, lanceolate to elliptic, often asymmetric, base acute to obtuse, occasionally nearly rounded, apex acute to acuminate, margin serrulate and ciliate, both surfaces with appressed trichomes, indumentum loose between veins, dense and spreading on midrib and main veins, 8–12 main veins on each side. Inflorescences sessile, 1–2-flowered; pedicels 3–5 mm long, densely villous. Flowers with calyx hirsute, tube 1.5 mm long, lobes lanceolate, 5.5–6 × 1.2–1.5 mm, attenuate at apex, slightly longer in fruit; corolla white, horizontal in the calyx, glandular puberulent outside, prominently spurred, spur 5–5.5 × 2–3 mm, oblong, rounded, prolonging the tube at base, tube 25–35 mm long, 3 mm wide at base and 6 mm at throat, lobes yellow (fide *Davidse & Miller 26864*), suborbicular, 4 × 4 mm; 4 stamens about 25 mm long, anthers with thecae reniform encircling a round connective; 1 staminode 3 mm long, with a sterile linear anther;



FIG. 1. *Besleria neblinae* Feuillet. Stem with flowers, Gentry & Stein 47253 (holotype: US); insets, flowers, *id.* (isotype: MO).

dorsal glands fused into one, semi-annular, tongue-shaped, emarginate; ovary superior, ovoid, glabrous, 3 mm long, style 20 mm long, glabrous. Young fruits green, narrowly ovate, long-tapering,  $9 \times 3$  mm.

*Distribution*.—*Besleria neblinae* grows in wet forests and on hummocks in swamp forests in the southern part of the Municipio Río Negro, Amazonas (Venezuela) near the base of Cerro de la Neblina, at 100–140 m elevation. The Neblina massif is on the border with Brazil and it is possible that populations of this new species are present in nearby Brazil.

*Phenology*.—Blooming probably not seasonal, documented in February–March, May, July, November.

*Besleria neblinae* corollas have a spur at the base that prolongs the tube at a  $0$ – $20^\circ$  angle (cf. Fig. 1 inset) and displaces the attachment to the receptacle in a lateral position. According to Morton (1939), this character places *B. neblinae* in sect. *Neobesleria* C.V. Morton. Furthermore, its obsolete inflorescence peduncle and the size of the corolla limb indicate the species belongs to subsect. *Axillares* C.V. Morton, one of the two subsections of sect. *Neobesleria* that remain after five were transferred to the reinstated genus *Gasteranthus* Benth. In the same subsection and from Amazonian Brazil and Venezuelan Guayana, *B. gibbosa* (Poepp.) Hanst. also has white corollas, but *B. neblinae* differs by: 1) the leaf blades which are clearly unequal in a pair (versus equal or subequal) and narrower, 2) the calyx lobes that are longer, narrower, and hirsute (versus glabrous), and 3) the dorsal glands that are smaller. In the specimen *Liesner 17300*, most pairs of leaves are subequal but the smaller petioles are  $1/2$  as long as the larger ones which is distinctive from *B. gibbosa*. The collection *Thomas 3396* was made in the same locality and the same day as the type collection, *Gentry & Stein 47253*. Although a different collection (W. Thomas, pers. com.), it is possible that both represent the same population. This species was *Besleria* “sp. B” in Feuillet and Steyermark (1999).

*Etymology*.—*Besleria neblinae* is named for Cerro de la Neblina near the base of which all the known collections have been made.

PARATYPES: **VENEZUELA. Amazonas. Dept. Río Negro:** at base of Cerro de la Neblina, swamp forest between Río Marawinuma and Río Baría,  $0^\circ 50'N$ ,  $66^\circ 09'W$ , 8 May 1984, W.W. Thomas 3396 (NY, US); Upper Caño Baría, ca.  $0^\circ 52'N$ ,  $66^\circ 15'W$ , 130 m, 26 Mar 1984, R. L. Liesner 16964 (MO, US, VEN); 1 km E of Cerro de la Neblina base camp which is on Río Marawinuma,  $0^\circ 50'N$ ,  $66^\circ 10'W$ , 140 m, 25 Feb 1984, R. L. Liesner 16254 (MO, US, VEN), 25–26 Nov 1984, R.L. Liesner 17300 (MO, US), 30 Nov 1984, R. L. Liesner 17382 (MO, US); Upper Río Baría, ca.  $0^\circ 52'N$ ,  $66^\circ 15'W$ , 100 m, 2–3 Jul 1984, G. Davidse & J. S. Miller 26864 (MO, US, VEN).

***Besleria yatuana* Feuillet, sp. nov. (Fig. 2).** TYPE: VENEZUELA. AMAZONAS. Dept. Río Negro: near Cerro de la Neblina, uppermost Río Yatúa, 100–140 m, 7–8 Dec 1953, B. Maguire, J.J. Wurdack & G.S. Bunting 36729 (HOLOTYPE: US sheet 2195721; ISOTYPE: NY, US sheets 2195722 & 2614591).

*Besleria neblinae* affinis; lamina longe acuminata, lobis calycis liberis, longioribus, latioribus et minute appressis-pubescentibus difert.

Suffrutescent herb, 1 m tall, spreading branches. Stem somewhat succulent, appressed-pubescent. Leaves of a pair mostly unequal; smaller leaves with petioles up to  $1/4$  the length of those of the larger leaves, blades less than  $1/2$  the length of the larger; mature larger leaf with petioles 3–5 cm, appressed-pubescent; blades  $11$ – $20 \times 4$ – $6$  cm, lanceolate to elliptic, slightly asymmetric, base acute, apex long acuminate, margin serrulate, adaxially glabrous, abaxially glabrous except for the midrib and main veins sparsely appressed-short-pilose, 9–10 secondary veins on each side. Inflorescences sessile, 1–2-flowered; pedicels 3–6 mm long, appressed-pubescent. Flowers with calyx minutely appressed-pubescent, lobes free to base, lanceolate-linear, attenuate at apex,  $6$ – $10 \times 2.5$  mm; corolla horizontal in the calyx, white, sparsely to moderately pilose outside, trichomes with spherical glandular tip, prominently spurred, spur  $6 \times 4$  mm, ovoid-oblong, rounded, prolonging the tube at base, tube 25 mm long, 4 mm wide at base and 2 mm at throat, lobes suborbicular,  $5$ – $6 \times 1.5$  mm; 4 stamens about 2.5 cm long, anthers orbicular-reniform; staminode not seen; dorsal glands fused into one; ovary superior, ovoid, glabrous, 3 mm long. Fruits not seen.

*Distribution*.—The type collection of *Besleria yatuana* in bloom was made in December in the flooded forests along the upper-most Río Yatúa in the southern part of the Municipio Río Negro, Amazonas (Venezuela).

*Besleria yatuana* shares with *B. neblinae* the characters that places both of them in subsect. *Axillares*.



FIG. 2. *Besleria yatuana* Feuillet. **Top:** stem showing unequal leaves in a pair, *Maguire, Wurdack & Bunting 36729* (holotype: US); **bottom:** nodes with flowers, *id.* (isotype: US).

It has white corollas like *B. gibbosa* and *B. neblinae*, but differs from the first one in having leaves that are strongly unequal in a pair (versus equal or subequal) and long acuminate (versus acute to acuminate), its longer and appressed-pubescent (versus glabrous) calyx lobes, and its smaller dorsal gland. *Besleria yatuana* differs from *B. neblinae* in having the leaf blades adaxially glabrous (versus appressed pubescent), the calyx minutely appressed pubescent (versus hirsute), calyx lobes free to the base, and the slightly shorter corolla tube. *Besleria yatuana* was *Besleria* "sp. C" in Feuillet and Steyermark (1999).

*Etymology*.—*Besleria yatuana* is named for the Río Yatúa near which the type specimens have been collected.

KEY TO *BESLERIA* SUBSECTION *AXILLARES* IN THE GUIANA SHIELD

1. Corolla not spurred, but sometimes a little saccate at base \_\_\_\_\_ sect. **Besleria**
1. A spur at the base that prolongs the corolla tube and displaces the attachment to the receptacle in a lateral position. \_\_\_\_\_ sect. **Neobesleria**
2. Inflorescence peduncle, much exceeding the pedicel in length \_\_\_\_\_ subsect. **Pendulae**
2. Inflorescence peduncle obsolete. \_\_\_\_\_ subsect. **Axillares**
3. Leaves in a pair equal or subequal; calyx lobes glabrous \_\_\_\_\_ **B. gibbosa**
3. Leaves in a pair, at least the petiole, strongly unequal in a pair; calyx lobes hairy.
  4. Stems, petioles, pedicels, and calyx appressed pubescent; leaf blades glabrous except for the main veins underneath; calyx lobes free to base, 6–10 × 2.5 mm, appressed-pubescent \_\_\_\_\_ **B. yatuana**
  4. Stems, petioles, pedicels, and calyx densely villous with lax spreading trichomes up to 2 mm long; leaf blades with appressed trichomes; calyx tube 1.5 mm long, lobes 5.5–6 × 1.2–1.5 mm, hirsute \_\_\_\_\_ **B. neblinae**

ACKNOWLEDGMENTS

I am grateful for the suggestions of Larry Skog, Jim Smith and an anonymous reviewer. I want to thank the curators of the herbaria MO and NY for lending the material in their care, and especially Jim Solomon (MO) and Wayt Thomas (NY) for the information about the collections cited. This paper is published as No. 135 in the Smithsonian's Biological Diversity of the Guiana Shield Program publication series.

REFERENCES

- FEUILLET, C. and J.A. STEYERMARK. 1999. Gesneriaceae. In: Steyermark, J.A., P.E. Berry, K. Yatskievych, and B.K. Holst, Flora of the Venezuelan Guayana, vol. 5. Missouri Botanical Garden Press, St. Louis. Pp. 542–573.
- MORTON, C.V. 1939. A revision of *Besleria*. Contr. U.S. Natl. Herb. 26(9):395–474.