

March 26, 2020

A New Species *Rudolfiella* Hoehne (Orchidaceae) is Described From Colombia.
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Abstract

A new species of *Rudolfiella* Hoehne is described from the Department of Amazonas, Colombia.

The genus *Rudolfiella* Hoehne consists of six species (WCSP, 2018) found from Panama to Peru and including French Guiana and Trinidad. *Rudolfiella* is monophyletic and closely related but phylogenetically distinct from *Bifrenaria* Lindl. (Koehler et al., 2002). All of the species of *Rudolfiella*, except *Rudolfiella peruviana* D.E.Benn. & Christenson, were either described originally in the genus *Bifrenaria* or transferred to it until the genus *Rudolfiella* was established by Hoehne. *Rudolfiella* differs from *Bifrenaria* by its compressed pseudobulbs, the strongly divided lobes of the labellum, the prominent claw at the back of the labellum and the conspicuous callus (Koehler and Amaral, 2004).

Koehler et al. (2002) in their molecular and morphological study of the *Bifrenaria* complex list *Rudolfiella picta* (Schltr.) Hoehne, *Rudolfiella aurantiaca* (Lindl.) Hoehne, *Rudolfiella saxicola* (Schltr.) C. Schweinf. (considered a synonym of *Rudolfiella floribunda* (Schltr.) Hoehne) and *Rudolfiella grandis* (Kraenzl.) Dodson ined. The isotype of *R. grandis* is at HBG under the name of *Lacaena grandis* Kraenzl. The name was transferred to *Bifrenaria* by Leslie Garay, *Bifrenaria grandis* (Kraenzl.) Garay, Bot. Mus. Leaflet 18: 208 (1958). The molecular and morphological data of Koehler et al (2002) and examination of the isotype clearly place *B. grandis* in the genus *Rudolfiella* as Dodson suggested but never published. However, on the isotype, is a note by G. A. Romero of the Oakes Ames Herbarium placing it as a synonym of *Rudolfiella bicornaria* (Rchb.f.) Hoehne.

The list of valid species of *Rudolfiella* species for Colombia is *R. aurantiaca*, *R. bicornaria*, *R. floribunda* and *R. picta*.

In the department of Amazonas a population of *Rudolfiella* was discovered that did not correspond to any of the species known from Colombia, Brazil or Peru. This species had been observed previously by Pedro Ortiz Valdivieso as evidenced by a picture in his archive.

We here describe it as a new species.

***Rudolphiella caquetaense* Uribe-Velez & Sauleda, sp. nov.**

TYPE: Colombia. Department of Amazonas. Near Araracuara along the Río Caquetá (Holotype, HPUJ). From cultivation, in collection of Jose Luis Aguirre, specimen made March 24, 2020.

Etymology

Rudolphiella caquetaense is named for the type locality, the Río Caquetá on the side of the Department of Amazonas.

Diagnosis

The flowers of *Rudolphiella caquetaense* Uribe-Velez & Sauleda are similar to *Rudolphiella aurantiaca* (Lindl.) Hoehne. It differs from *R. aurantiaca* in the shape of the lateral lobes of the labellum, the apex of the midlobe of the labellum, the shape of the petals and the color of the flowers. The apex of the labellum on *R. aurantiaca* is emarginate where on *R. caquetaense* it is subacute. The lateral lobes of the labellum of *R. caquetaense* are truncate to broadly obtuse where in *R. aurantiaca* they are narrowly obtuse to subacute. In *R. aurantiaca* the petals are lanceolate where in *R. caquetaense* the petals are spatulate. *Rudolphiella caquetaense* has dark reddish-brown sepals and petals with a yellow margin where *R. aurantiaca* has yellow sepals and petals with reddish-brown spots.

Description

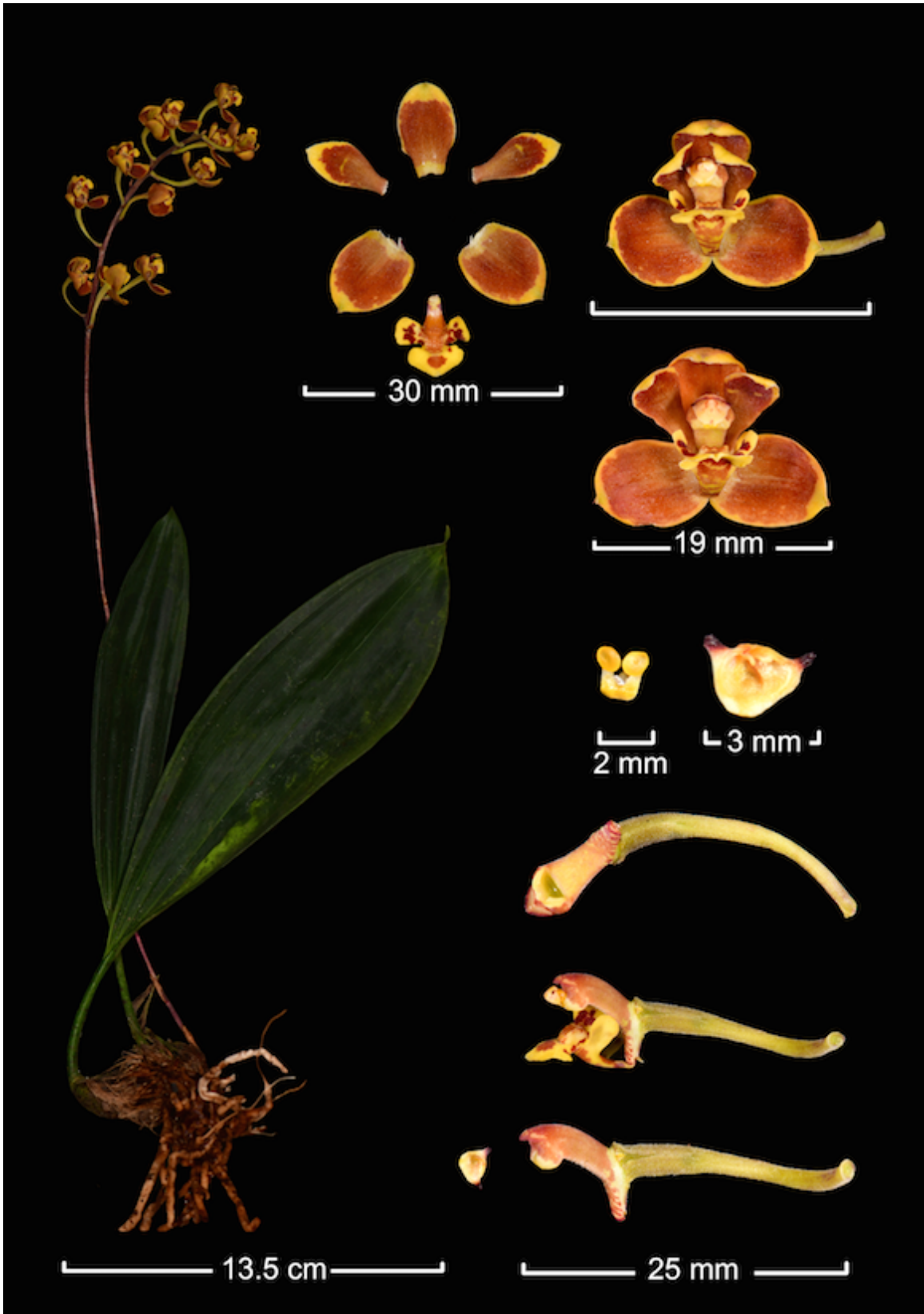
Plant epiphytic caespitose, to 34 cm tall; pseudobulbs suborbiculate, compressed, green with tiny purple-brown spots, smooth, unifoliate to 6 cm wide, 6 cm tall, enclosed by basal scarious sheaths to 6 cm wide, 8 cm tall; leaves green lightly spotted with tiny purple-brown spots, erect to 26 cm tall, 6 cm wide, coriaceous, elliptical to oblanceolate, abruptly acute, base narrow becoming constricted into a petiole to 5 cm long; inflorescence basal, erect, to 34 cm tall, with dark brown bracts to 1.5 cm long, 3 mm wide, narrowly lanceolate, acute; floral bracts narrow, acute to 3 mm long, 1.5 mm wide; pedicel smooth to 15 cm long; sepals and petals dark reddish-brown with yellow margin, recurved, concave, dorsal sepal broadly elliptical, obtuse to 1.0 cm long, 8 mm wide; lateral sepals orbicular, obtuse, becoming abruptly minutely acute, to 1.0 cm long, 1.0 cm wide; petals spatulate, abruptly acute, to 1.0 cm long, 5 mm wide; labellum yellow with reddish-brown spots on the lateral lobes and a reddish-brown spot on the midlobe, to 1.0 cm wide 1.2 cm long, reniform with obtuse sides, apex subacute, to 8 mm wide, 4 mm long, lateral lobes truncate, crest is two raised glabrous longitudinal lamellae united in front; column reddish-brown, elliptic with obtuse wings at apex, to 5 mm long, 2.5 mm wide; column foot white with reddish-brown spots to 3 mm long; stigma transverse oval, to 2 mm wide; anther white with reddish-brown suffusion to 2.5 mm wide.



Rudolfiella caquetaense Uribe-Velez & Sauleda.



Rudolfiella caquetaense Uribe-Velez & Sauleda.



Rudolfiella caquetaense Uribe-Velez & Sauleda.



Rudolfiella caquetaense Uribe-Velez & Sauleda from the archive of Pedro Ortiz Valdivieso.



Rudolfiella aurantiaca (Lindl.) Hoehne from the archive of Pedro Ortiz Valdivieso.



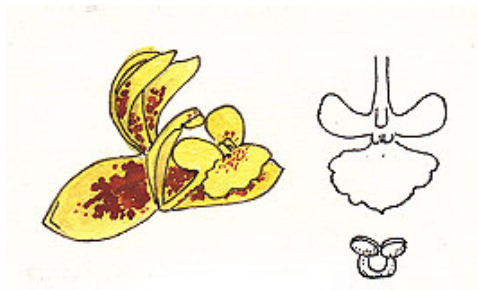
Rudolfiella aurantiaca (Lindl.) Hoehne in Curtis's Botanical Magazine, vol. 64 (N. S. 11) plate 3597 (1837) as *Bifrenaria aurantiaca* Lindl.



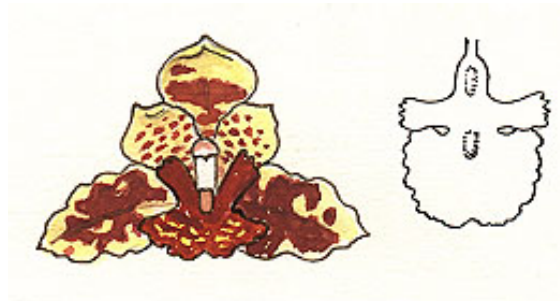
Rudolfiella aurantiaca (Lindl.) Hoehne
@ K. Senghas



Rudolfiella caquetaense Uribe-Velez & Sauleda



Rudolphiella caquetaense Uribe-Velez & Sauleda



Rudolphiella floribunda (Schltr.) Hoehne



Rudolphiella picta (Schltr.) Hoehne



Rudolphiella bicornaria (Rchb.f.) Hoehne

Drawings from archive of Pedro Ortiz Valdivieso.

Literature Cited

Koehler, S., Williams, N., Whitten, W., & Amaral, M. (2002). Phylogeny of the Bifrenaria (Orchidaceae) Complex Based on Morphology and Sequence Data from Nuclear rDNA Internal Transcribed Spacers (ITS) and Chloroplast trnL-trnF Region. *International Journal of Plant Sciences*, 163(6), 1055-1066. doi:10.1086/342035.

Koehler, S, and MCE Amaral. 2004. A taxonomic study of the South American Genus *Bifrenaria* Lindl. (Orchidaceae), *Brittonia*, vol. 56 (pg. 314-345).

Senger, K. 1994. *Rudolphiella aurantiaca* (Lindl.) Hoehne. Swiss Orchid Foundation at the Herbarium Jany Renz. Botanical Institute, University of Basel, Switzerland. URL: <https://orchid.unibas.ch/index.php/en/specimen/en/601899/rudolphiella/aurantiaca>.

WCSP (2018). World Checklist of Selected Plant Families. Facilitated by the Royal Botanic Gardens, Kew. Published on the Internet.