



Sylvia Strigari

# *Phragmipedium schlimii*

Text by Melissa Díaz-Morales and Franco Pupulin/Watercolor by Sylvia Strigari

Subfamily CYPRIPEIDIOIDEAE  
Genus PHRAGMIPEDIUM Rolfe

***Phragmipedium schlimii*** Rolfe, *Orchid Rev.* 4:332. 1896. Basionym: *Selenipedium schlimii* Linden & Rchb.f., *Bonplandia* 2:277. 1854. *Cypripedium schlimii* (Linden & Rchb.f.) Bateman, *Bot. Mag.* 92:t. 5614. 1866. *Paphiopedilum schlimii* (Linden & Rchb.f.) Stein, *Orchideenbuch* 483. 1892. *Phragmopedilum schlimii* (Linden & Rchb.f.) Rolfe, *Orchid Review* 4:332. 1896. *Phragmopedilum schlimii* (Linden & Rchb.f.) Rolfe, *Engler's Pflanzenreich IV*, 50(12):43. 1903, *homonym*. Type: Colombia. "Ocaña, Januar [1852], 7000–8000", L. J. Schlim 405 (holotype, W). *Phragmipedium manzurii* W.E. Higgins & P. Viveros, *Lankesteriana* 8(3):89–92. 2008 *Phragmipedium schlimii* f. *manzurii* (W.E. Higgins & P. Viveros) Braem & Tesón, *Richardiana* 16:305. 2016. *Phragmipedium schlimii* var. *manzurii* (W.E. Higgins & P. Viveros) P.J. Cribb, *Slipper Orchids Trop. Amer.* 129. 2017. The type: Colombia. Santander: *ex hort.* D.A. Manzur, June 2008, *D.A. Manzur 1501* (holotype, FAUC).

A terrestrial *plant* up to 50 cm tall. *Leaves* linear, acute, 15–40 × 2.0–2.5 cm, midgreen. *Inflorescence* erect to arching-suberect, 15–17 cm long, unbranched, successively flowered; peduncle dark purple, finely pubescent, with a large, ovate, conduplicate bract, 2.0–3.8 × 1.2–1.5 cm, green with a dark red base. *Floral bracts* conduplicate, ovate, acute, 1.3–3.8 × 1.5–1.8 cm, green with a dark red base. *Flowers* with white to pale rose sepals, white petals with pink on the base, and yellow staminode with a reddish-purple apical spot; lip white suffused with pink on the frontal part of the lip, dark pink stripes along the opening of the lip and two yellow stripes along the back of the opening of the lip, spotted with dark red on the adaxial surface. *Pedicel* and *ovary* 50–55 × 3.0–3.5 mm, purple with a green base, finely pubescent. *Dorsal sepal* elliptic, obtuse, 15–22 × 12–15 mm, seven-veined, concave at the apex, finely pubescent on both surfaces. *Synsepal* broadly elliptic, obtuse, shorter than the lip, 16–22 × 11–18 mm, concave, the veins green, pubescent on both surfaces. *Petals* elliptic, obtuse, 20–28

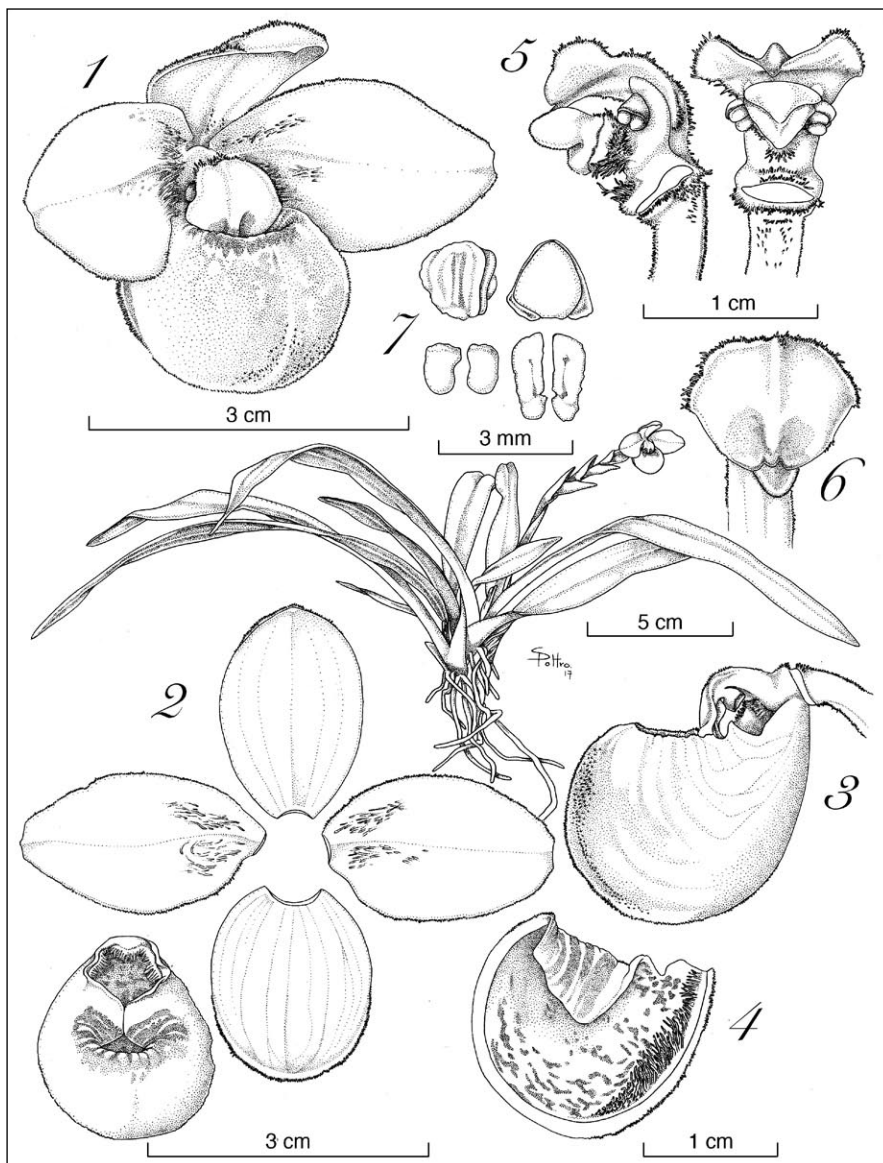
× 13–25 mm, finely white pubescent on both surfaces, densely pubescent on the base of the adaxial surface. *Lip* urceolate, 18–25 × 12–18 mm, finely pubescent on the abaxial surface, densely pubescent on the base of the adaxial surface, the frontal lobe subspherical, the rim rounded, provided with distinct, translucent, lateral windows toward the base. *Column* 8 mm long; the staminode obtrapezoidal, minutely bifid at apex, approx. 10 × 7 mm, finely pubescent; stigma 4.5–5.0 mm long, hidden by the staminode, covered by small papillae, the base pubescent. *Anthers* small, 1–2 mm long, bilocular. *Pollinia masses* granulate, 1–2 mm long. According to Atwood (1984), the species has  $2n = 30$ .

The Belgian Louis Joseph Schlim (1819–1863) entered the orchidology scene in 1841, when he accompanied Jean Jules Linden (1817–1898) (his half-brother) on his third exploration of the American tropics. They collected plants in Colombia and Venezuela, with a short stop in Jamaica, until the end of 1844. It was during this trip that Linden realized his "vocation" for orchids and the orchid business, which would become the central axis of his life. Back to Brussels in December 1844, Linden made plans to found his first company in partnership with Nicolas (Nicholas) Funck (1816–1896), the *Etablissement d'Introduction de Plantes*, which would be officially launched in January 1845. Meantime, he dispatched his partner, Funck, and his half-brother (Schlim) on a new collecting trip in South America. When exploring the Colombian Eastern Cordillera near Ocaña, in January 1852, Schlim found what Reichenbach (1854a) would eventually describe as "one of the most beautiful discoveries of the well-deserved traveler Schlim, Mr. Linden's half-brother." Linden (in Linden et al. 1855) did not share his excitement in considering that "*Selenipedium schlimii*, though much more modest in its proportions [than *Phragmipedium caudatum*], must not fear any comparison in regard to the delicacy of its form and colors." In the same year, 1854, Reichenbach provided an expanded and improved description of the species, together with additional details about its origins and an

illustration, in the first volume of his *Xenia Orchidacea* (Reichenbach 1854b). Here he also provided another collecting date (February) and a more exact elevation of the original population discovered by Schlim, at 4,000 feet (about 1,200 m).

Due to the exact description of the original collecting locality provided by Schlim, Hermann Wagerer (1823–1887) managed to collect a few additional specimens two years later, and to send them alive to Europe. In Reichenbach's herbarium in Vienna there is material from both collections, together with specimens grown by Linden and the celebrated horticulturist, Consul Gustav Wilhelm Schiller (1803–1870), in his renowned collection at Ovelgönne, near Hamburg. It is likely that the description prepared by Reichenbach for *Xenia Orchidacea* was therefore based on a mix of different plants. Nevertheless, the accompanying plate was prepared entirely from one of Schlim's specimens (Reichenbach 1854). The original, hand-colored illustration of *Selenipedium schlimii* shows a flower with almost white sepals and petals, faintly flushed with rose at the base, with a red lip and bright yellow staminode. The species is obviously variable as to flower color. The amply illustrated monograph by Gruss (2014) presents photographs of more than 20 variants in the general scheme of *Phragmipedium schlimii* color, ranging from almost pure white (var. *albiflorum* Linden, 1874; f. *albiflorum* O. Gruss, 1996) to striped with purple along the veins of the petals, to white with rose lip, to a form with almost solid red lip and the sepals and petals boldly blotched with bright red at the base. It was rather ironic that in their informative papers on the *Phragmipedium schlimii* complex, Braem and Tesón (2016) interpreted the oxidation process that frequently darkens the lead white used to hand-paint the old botanical illustrations (eventually transforming the pigment to a solid brown color), and which also affected numerous original copies of *Xenia Orchidacea*, as "another flower colouration which [...] must have been added at a later date."

Natural populations of *Phragmipedium schlimii* have been traditionally known exclusively from central Colombia, not only from the original localities around



*Phragmipedium schlimii*. The plant.

1. Flower.
2. Dissected perianth.
3. Column and lip, lateral view.
4. Lip, longitudinal section.
5. Column, lateral and frontal views.
6. Staminodal shield.
7. Anthers cap and pollen masses.

All drawn from ECUA-00023 (Ecuagenera) by Sara Díaz Poltronieri.

Ocaña in the eastern Cordillera, but also from the central Cordillera in the vicinity of Medellín (Gruss 2014). Recent claims would extend the geographic range of the species to southern Colombia and to within Ecuadorean borders. The habitat of *Phragmipedium schlimii* is apparently restricted to the middle elevation range of the Colombian Cordilleras (south to Ecuador?), between about 3,900 and 6,200 feet (1,200–1,900 m).

Wes Higgins and Paula Viveros described *Phragmipedium manzurii* from a plant with distinctly colored green sepals and petals, and the petals tinged with purple, originally collected in the department of Santander in central Colombia (Higgins and Viveros 2009). They compared *Phragmipedium manzurii* with *Phragmipedium fischeri*, a quite distant, autogamous species in *Phragmipedium* subgenus *Micropetalum*, mostly distinguishing the new taxon by

the color of the flowers, the rounded, shortly emarginate staminodal shield, provided with a central low ridge, and the lip with the apex turned up in front. Populations of *Phragmipedium manzurii* are exclusively known from the central Cordillera, in the same regions where *Phragmipedium schlimii* also occurs.

We follow here Cribb and Purver (2017) and other authors, who consider *Phragmipedium manzurii* conspecific with *Phrag. schlimii*, at whichever subspecific rank should it be treated. Our personal examination of a large number of living plants of both *Phragmipedium schlimii* and *Phrag. manzurii* failed to reveal critical features useful to maintain them as distinct.

It is curious to note that such spectacular and highly sought after orchid plants may have for such a long time escaped the attention of collectors. After the publication of *Phragmipedium schlimii* in 1854, 125 years elapsed before another species of the same group, *Phragmipedium besseae*, was discovered in Peru. In the last 20 years, five more species and three natural hybrids have been added to the subgenus *Micropetalum*, even though not all of them are actually recognized as good taxa.

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