

TWO ATTRACTIVE NEW SPECIES OF *SOBRALIA* FROM PANAMA¹

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ABSTRACT: *Sobralia fuzukiae* Dressler & Bogarín, *sp. nov.* and *Sobralia mireyae* Dressler, *sp. nov.* are described.

PLANT CLASSIFICATION is traditionally based on pressed plants collected in nature, but *Sobralia* can scarcely be understood from field-collected flowers. Unless the flower is dried almost immediately, it becomes a mere stain on the newspaper and even that is usually lost when the rest of the specimen is removed from the paper to be mounted and stored. With cultivated plants, one can press the flowers carefully early in the morning and dry them within an hour (the plants take a bit longer). Such specimens are delicate, but well-preserved. By using such specimens, photographs and drawings, one can get plenty of information on the form and color of the flower, and, at the same time, save useful specimens for future reference. Here, we describe two new species from Panama, both attractive, but quite different from each other.

Sobralia Section *Globosae*, named by Brieger, is a distinctive small group in which the narrow inflorescences usually continue to grow in length as they flower. In most of these species, the inflorescence is an odd combination of distichous (two-ranked) and secund (one-sided). In the new species we describe here, the inflorescences do not elongate much, but they resemble the longer inflorescences of other members of Section *Globosae*, and the flowers are clearly similar to those of *S. quinata*. With the publication of *S. fuzukiae*, we know three distinct species of this group in Costa Rica and Panama, with three other names in South America. The oldest species in the group, *S. candida* (Fig. 1), is distinctive. The other two names known from South America, *S. lancea* and *S. pardalina*, are probably distinct species, but trying to match the available material to the published descriptions is frustrating.



Fig. 1. *Sobralia candida* was published in 1836 as *Cyathoglottis candida*. It is widely distributed in northern South America, from Venezuela to Peru. Photographed in cultivation. Photograph by Kerry Dressler.

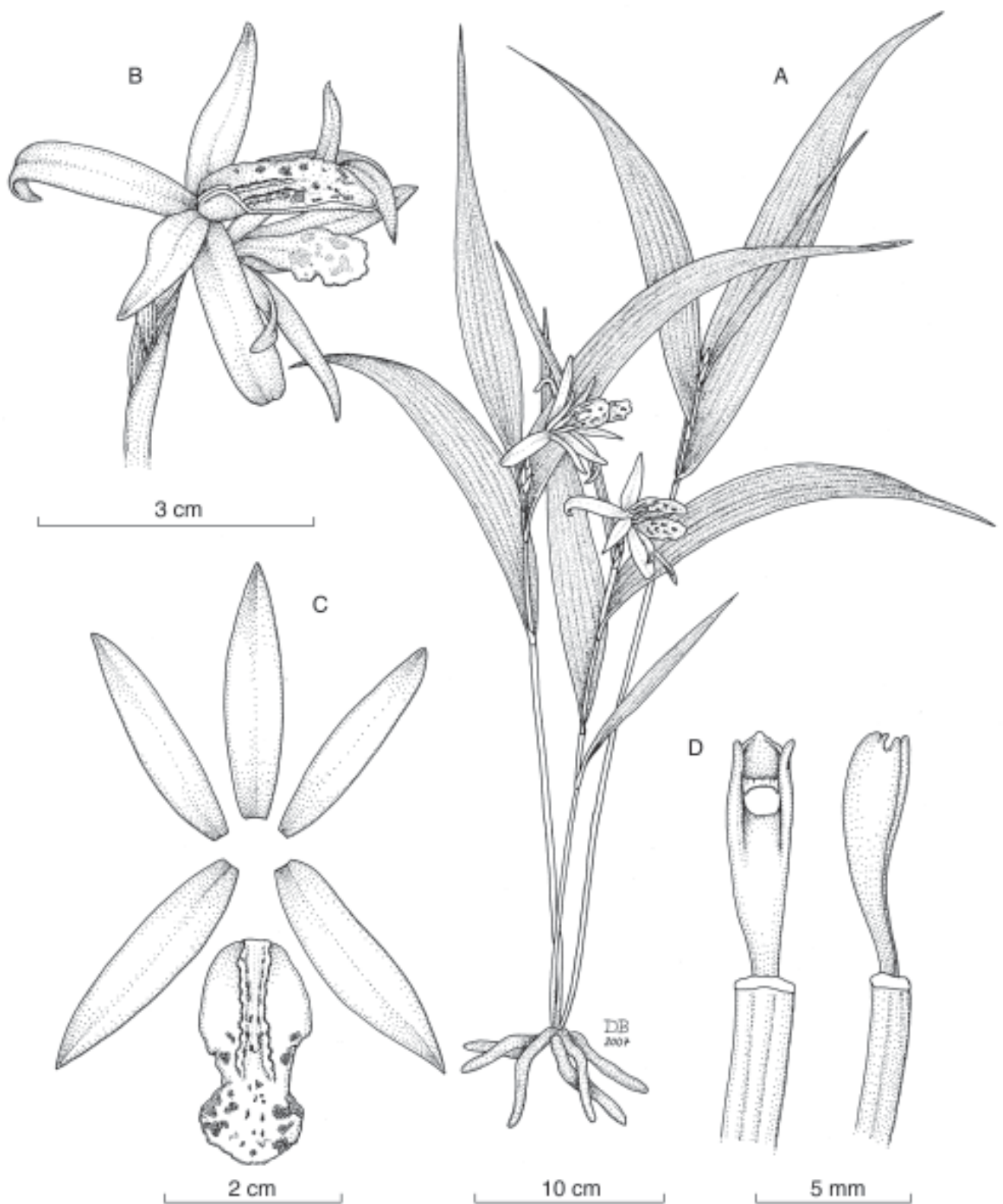
Sobralia fuzukiae* Dressler & Bogarín, *sp. nov.

HOLOTYPE: Panamá, Bocas del Toro, Culebra; pressed from cult. 9 Jan. 2007. *R. L. Dressler 6810* (PMA, Isotype J.B.L. spirit.)

Differt a Sobralia quinata Dressler inflorescentiis multo brevioribus non valde recurvis, floribus non valde tortilibus, labelli tribus carinis interioribus per totam longitudinis quam exteriorum humilioribus lobulis elatioribus destitutis.

Roots to ca. 6 mm in diameter; stems 14–31 cm (the shorter stems sometimes leafless), ca. 2.5 mm wide basally; Leaves 0–4 per stem, 13.5–24.5 × 1.8–3 cm, elliptic, long-acuminate;

¹We wish to thank Dr. Silvera for the plants from La Pintada, Joel Rodríguez for information on this and other orchids of El Valle, Andrés Maduro for his generous help and council, Franco Pupulin for help with the Latin diagnoses, and the authorities of ANAM for facilitating the CITES export permits that let us bring plants for study.



inflorescence terminal, ellipsoid, 20–22 × 4 mm; ovary and pedicel ca. 15 mm; sepals and petals pale yellow or yellow-tan, lip white, the two outer, crenate keels with purple margins, other keels and mid-lobe spotted with red-purple; sepals and petals lance-elliptic, acute, dorsal sepal 24–30 × 5.5–6 mm; lateral sepals 23–30 × 5.5–6 mm; petals 22–26 × 5–5.5

Fig. 2. *Sobralia fuzukiae*. A. Habit. B. Flowers in natural position. C. Sepals, petals and lip, flattened. D. Column, ventral and lateral views. Illustration by Diego Bogarin.



Fig 3. *Sobralia fuzukiae*. The first flowering of the type plant in the Jardín Botánico Lankester. The species is floriferous and attractive. Photograph by Franco Pupulin.

mm; lip 21–27 × 11–14; base of lip rounded, ovate, 12–14 mm wide, isthmus 7–8 mm wide; midlobe obovate, 10–16 × 10–11 mm; lip with 2 prominent outer undulate-crenate keels 12–14 mm long from near base, and 3 much lower keels 12–14 mm long that usually decrease in height to disappear on the midlobe; in some flowers, these inner keels rise a bit near the middle of the lip and then decrease in height; basal callus U-shaped, 1.5 mm, 1 mm tall; column 9.5 × 10 mm, 2.5 mm tall, lobule (arm) ca. 2 mm, porrect.

Sobralia fuzukiae (Figs. 2 [page 697], 3) is closely allied to *S. quinata* Dressler, a species widely distributed in Costa Rica. In *S. quinata* (Fig. 4), the flowers twist around during development, so that the lip usually faces the stem of the plant. In other words, it seems determined to hide its face. Further, *S. quinata* has three prominent keels between the outer keels and these are tallest at or near their apices, with some erect lobules. The flowers of *S. fuzukiae* twist a bit to one side, but not so much as to hide the lip. Further, the inner keels of *S. fuzukiae* start much lower than the outer keels at their bases and then (usually) decrease until they can scarcely be distinguished on the mid-lobe. It is noteworthy that the shortest of the flowering stems at hand is quite leafless, as often occurs in *S. leucoxantha* and some of its close allies; and the remaining stems each have only one to four leaves. The inflorescences of *S. quinata*, and most of its close allies, are markedly curved, and grow up to



Fig. 4. *Sobralia quinata*, a close relative of *S. fuzukiae*, showing the flowers in the usual unattractive position, and the long curved inflorescence. Photograph by Kerry Dressler.

3.5 cm (1.5 inches) in length, with the flowers being produced from the outer edge of the curved inflorescence. In the case of *S. fuzukiae*, the inflorescences are only 20 to 22 mm long (less than 1 inch), and only slightly curved. The vein pattern beneath the leaf of *S. fuzukiae* is also unusual, though similar to the patterns of *S. nutans* and *S. quinata*. Each leaf is corrugated, with about nine longitudinal folds or ridges, as seen from beneath (each “ridge” is, of course, a shallow groove as seen from above). In each of the two outer ridges on each side, there is a single vein running the length of the leaf; in the next two on each side, there are two closely spaced veins on each ridge, and in the less prominent central ridge, there are three longitudinal veins. Although unusual, this pattern is not terribly obvious without a lens.

ETYMOLOGY: This species is named in honor of Julia Fuzuki Miura, who worked as a volunteer at La Yeguada in Panama for two years in 1995–1997. She became a member of COSPA (Conservación de Orquídeas Silvestres de Panamá) in February 2003, stayed in Panama until May in El Valle de Antón, where she worked with APROVACA (Asociación de Productores de Orquídeas de El Valle y Cabuya), visited Panama for several months in 2004 and returned in 2005. Then, she took a job as secretary to the president of Panasonic Central America, so that she could remain in Panama, where she visited her friends in El Valle every weekend. Her activities in Panama ended with her



death in January 2007. Friends describe her as “more Panamanian than the Panamanians.” She is deeply missed by her many Panamanian friends, who wish to honor her with the name of one of the Panamanian orchids that she so loved.

YET ANOTHER WHITE SOBRALIA FROM EL VALLE DE ANTON — El Valle de Antón is an area with a rich and varied flora, including a number of species of *Sobralia*, and El Valle has long been a mecca for botanists and orchidophiles. Except for *Sobralia macrophylla*, which is quite distinct in its vegetative features, nearly every other large white-flowered *Sobralia* in Panama, or even in Central America, was misidentified as *Sobralia leucoxantha* by early collectors and botanists. In fact, the real *S. leucoxantha* has not been found near El Valle, though similar species occur farther west in Panama. We already know at least five white-flowered sobralias in the area of El Valle with relatively large flowers: *S. citrea*, *S. kerryae* (Fig. 5), *S. kruskayae* (Fig. 6), *S. macrophylla* and *S. theobromina*. Erick Olmos told Dressler that there was another attractive white-flowered species in the area, and a couple of plants were grown at the Florida Museum of Natural History greenhouse in Gainesville, but neither plant flowered while Dressler was there. Since then, Gaspar Silvera, PhD, gave us a couple of plants, said to have white flowers, from La Pintada, about 35 km (22 miles) west of El Valle. From the heavily corrugated leaves, the long internode beneath the inflorescence, and discussion with Joel Rodríguez, we believe that these are the same species that Olmos had picked out for cultivation

Fig. 5. *Sobralia kerryae*, a species described in 1998 from Costa Rica, has proven to be widespread and rather common in both Costa Rica and Panama. In the Valle de Antón, it is known as “la olorosa,” or the fragrant one. The plants can generally be recognized even without flowers by the tiny hairs on the leaf sheaths, almost too small to see, but easily recognized by experienced fingertips. Photograph by Kerry Dressler.



Fig. 6. *Sobralia kruskayae*, a medium-sized white-flowered species, so far known only near El Valle de Antón. The flower has a spot of purple in the base of the lip and has a very distinctive column, looking a bit like a tiny oar. Photograph by Kerry Dressler.

in Florida. One of the plants from La Pintada has flowered in the Lankester Botanical Garden, and we can now name the other white-flowered *Sobralia* from El Valle (realizing, of course, that others may appear). More recently, we have received a quite small, but mature plant of this species, only about 7 inches (17.5 cm) tall, from “La India dormida,” one of the high ridges near El Valle.

***Sobralia mireyae* Dressler, sp. nov.**

HOLOTYPE: Panama, prov. Coclé, La Pintada; flowered in cult. 30 May 2006; *R. L. Dressler 6707* (PMA, isotype, J.B.L. spirit).

A Sobralia kerryae Dressler similibus, vaginis laevibus (absque trichomatibus minutis), cristis basalibus 2/3 parte conjunctis, labello decem carinis prominentibus, columna in sectione acute triangulari recedit.

Roots about 5 mm in diameter; stems to at least 50 cm; sheaths smooth and green; leaves 8–14 × 2.8–4.4 cm, ovate or lance-ovate, slightly acuminate, minutely bilobed, stiff, heavily corrugated, veins 9, including marginals; bract cluster approx. 4.5 × 1 cm, clasped by 2 leaf-bearing sheaths, the sheaths and bracts smooth and green or with a few purple spots, inflorescence bracts with narrow purplish-brown margins; pedicel and ovary 2.8–3 cm, flower white with orange and yellow keels; sepals basally united for about 1 cm, the bases not inflated, sepals 7.2–7.4 × 2.4–2.6 cm, apices subobtuse, apiculate, dorsal sepal elliptic or elliptic-oblongate, lateral sepals oblong or oblong-elliptic, asymmetrical; petals 7.5–8 × 3 cm, oblong-obovate, subobtuse, minutely apiculate; lip 7–7.7 × 5.5–5.7 cm, obovate, tapering a bit distally; basal ridges 12 mm long, united for 8–10 mm, lip with about 10 major keels with minor divergent keels, the 3 median keels continuing to near apex, most others reaching midlobe; column 4 cm, apically 6–7 mm thick and 8 mm wide, triangular in section, ventrally concave, with two low ridges; column arms 3 × 2.3 mm, curved upward, subobtuse.

Sobralia mireyae (Figs. 7–8) is, as Erick had indicated, attractive. As noted above, the plants are easily recognized, even without flowers. In nature, the species apparently grows in exposed sites, and the leaves are stiff and heavily corrugated. The base of the stem is usually leafless for a way, and then has several leaves that are more or less evenly spaced. Above this there is an elongate stem (internode) between the uppermost foliage leaf and the inflorescence. This upper leafless stem may vary from 4 to 8 cm (about 1.5–3 inches). The type plant, no longer growing on a sunny, windy mountain top, now has a new stem with the leafless base about 63 cm (25 inches). We hesitate to guess just how long the rest of the stem will become under the milder conditions of the greenhouse. Rather than drawing the type plant, now quite atypical after having been in cultivation for many months, we have illustrated the habit of the small plant recently collected by Joel Rodríguez on La India Dormida, one of the high, exposed ridges near El Valle de Anton. In the unlikely event that the plants from La Pintada are a different species from those from El Valle, it should be understood that the flower shown here represents *S. mireyae*,



Fig. 7. *Sobralia mireyae*. The type specimen was prepared from this plant from La Pintada, Coclé, Panama. Photograph by Kerry Dressler.

even if the plant drawn is not the same species. Please note, too, that the plant shown in the drawing is not the same plant, part of which is preserved as the type specimen. Even if the plants from La Pintada are a different species from those of El Valle, there is no mixture in the type specimen. Still, in its proportions, the recently collected plant from La India Dormida looks very much as the plant from La Pintada was when it first left La Pintada. Florally, *S. mireyae* is distinctive in the basal callus, whose ridges are united for 2/3 their length or more, the ten prominent keels on the lip and the column that is strongly triangular in section, with only very small ventral ridges. The smooth green inflorescence bracts are similar in color and texture to those of *S. bouchei* and *S. wilsoniana*, neither of which is similar to this species in other features. At first glance, the alternating bands of white and yellow on the blade of the lip give the impression of stripes, though the pattern is not regular enough to be called “striped.”

ETYMOLOGY: The epithet honors Mireya D. Correa A., one of the authors of *Catálogo de las Plantas Vasculares de Panamá*, and curator of the Herbarium at the University of Panama. It is not easy to maintain a herbarium near sea level in the tropics, but Correa has fought for the herbarium and kept it going for some years now. In all honesty, we cannot hope to really understand the tropical floras through the work of occasional visitors from the temperate zone. We must have resident collectors and resident botanists to be able even to fully catalog the tropical floras.

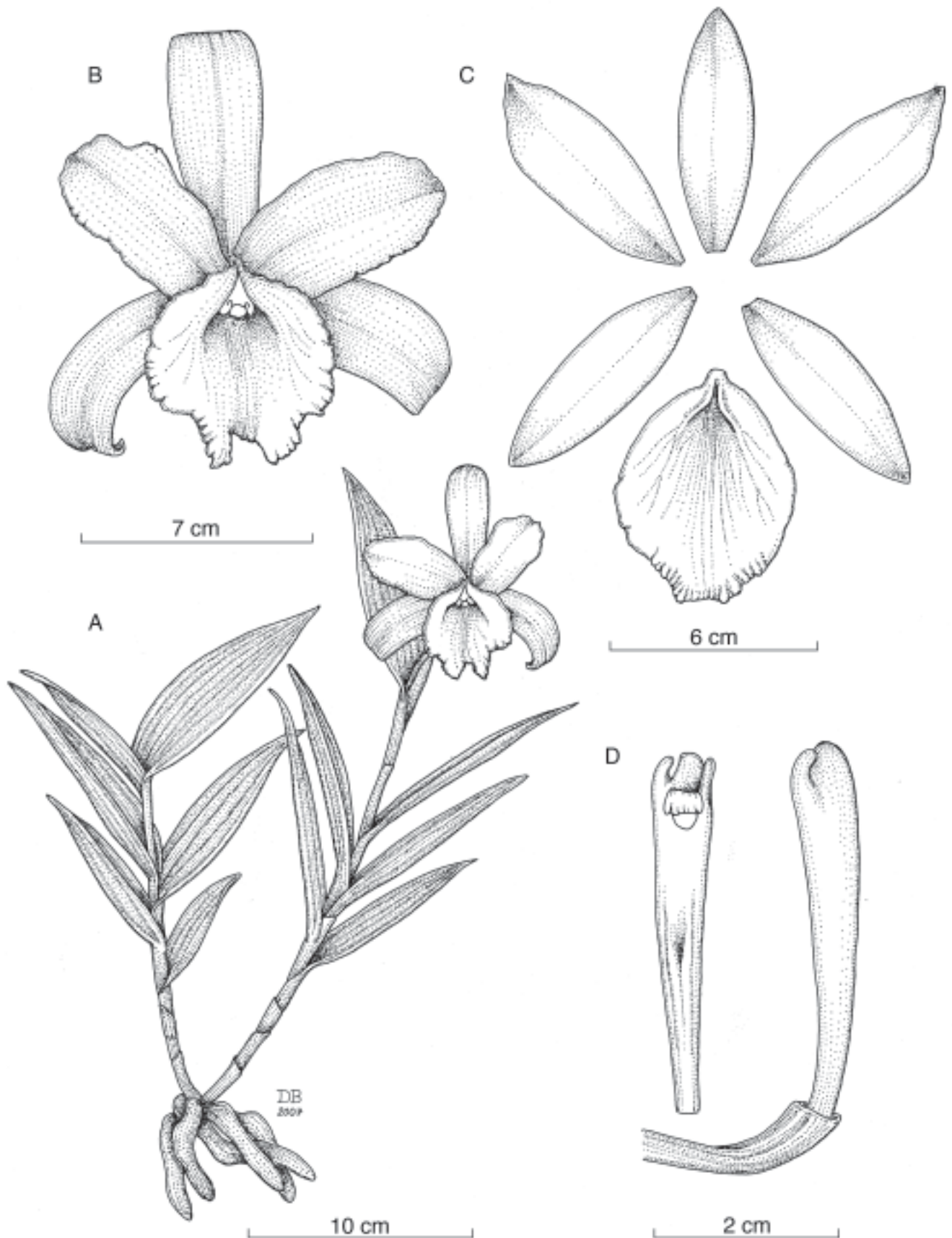


Fig. 8. *Sobralia mireyae*. A. Habit. B. Flower in natural position. C. Sepals, petals and lip, flattened. D. Column, ventral and lateral views. Illustration by Diego Bogarin.