

Sobralia lentiginosa (Orchidaceae: Sobralieae)

by Robert L. Dressler¹⁻³ and Franco Pupulin¹⁻⁴

An Attractive New Species from Costa Rica



[1] Photo of a flower from the plant that served as the holotype, taken by Franco Pupulin at Lankester Botanical Garden on February 28, 2013.

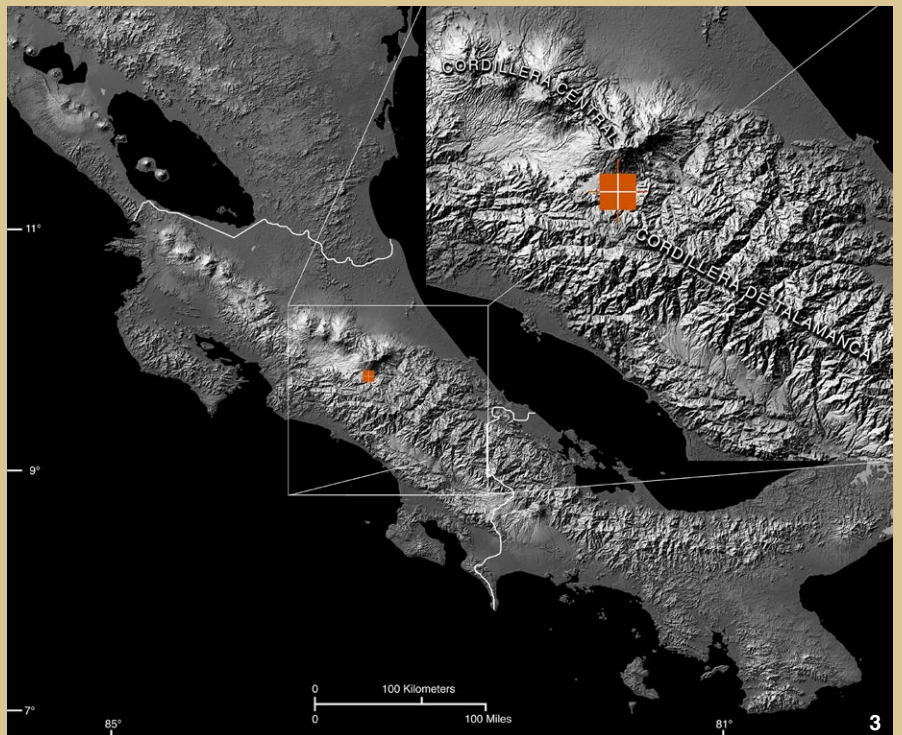
Abstract *Sobralia lentiginosa*, from the Caribbean slopes of the Cordillera de Talamanca in Costa Rica, is described and digitally illustrated. It is similar to *S. macrantha*, but it has stems covered with dark spots, the leaves are much broader, and the flowers are short lived, with the lip proportionately smaller and the throat yellowish white or ebony rather than clear white.

Keywords Orchidaceae, Sobralieae, *Sobralia lentiginosa*, Costa Rica, new species

IN MARCH 2005, Jorge Warner, our boss at the Lankester Botanical Garden, invited one of us (RLD) to join him on a field trip. Somewhere near Navarro, we found a very attractive *Sobralia* on a steep slope above the road. Navarro was not shown on the maps that we had at hand, and in fact it is not much of a town. Anyway, there were no signs of a town near where we found the *Sobralia*. Jorge climbed up and removed a division of the plant that had a very attractive flower, but the flowers of *Sobralia* are very delicate. We had neither a plant press nor a camera, so we left the flower in peace (the alternative being to bring it back in pieces), and we brought the division back to the botanical garden. While Jorge was removing a division of the plant, we also picked up several smaller plants that grew beneath the large plant, hoping to get more of the same species that was in flower.

As far as we know, the large plant (Dressler 6500) did not flower for several years, but with about 550 *Sobralia* plants in the greenhouse, it might well have flowered when hidden beneath other plants. In any case, the plant produced several flowers during January and February of 2013. At first, the large plant seemed determined to flower only on Sundays. In one case, we found three withered flowers on Monday morning. We can't really believe that the plant carries a calendar, but it certainly insisted on flowering only on Sundays for a while, so that the senior author (who lives near the garden) was in charge to check the plant every Friday or Saturday. Finally, we had two flowers that opened on a Saturday (the plant still seemed to prefer weekends). We have had a few flowers also on one of the smaller plants that we found beneath Dressler 6500, and they agree well with those of the large plant.

We have tried to identify the plant, but so far, we cannot match it with any of the species known from Costa Rica or neighboring countries. One of the most distinctive features is that the stems are distinctly "freckled" with dark spots, very much like those of *Sobralia chrysostoma*. Thus, we have chosen the epithet *lentiginosa*, or "freckled," for the species. The flowers are somewhat reminiscent of *Sobralia macrantha* of Mexico and northern Central America, but the throat of the flower is yellowish white



[2] Another view of the flower. Note the freckles on the stem. Photograph by Franco Pupulin.
[3] *Sobralia lentiginosa* is only known from the northern end of the Cordillera de Talamanca in Costa Rica.

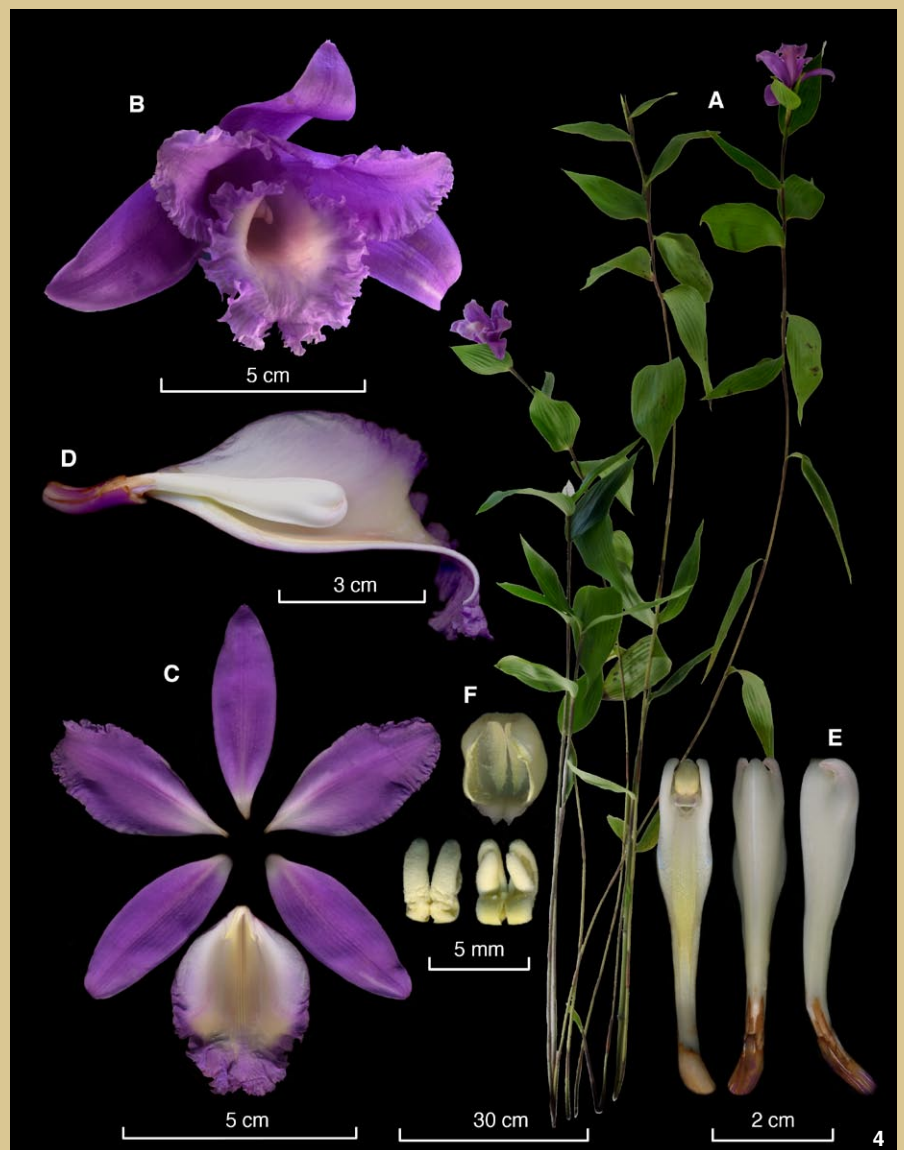
or ebony (rather than clear white), and the leaves are very much wider than those of *S. macrantha*. The shiny, purple flower buds with green apices are nearly as attractive as the open flowers, and they last somewhat longer than the open flowers. Whilst the flowers of *S. macrantha* last for 3–4 days, the flowers of *Sobralia lentiginosa* are definitively “one-day” flowers.

Sobralia lentiginosa Dressler & Pupulin, sp. nov.

TYPE Costa Rica. Cartago: Paraíso, Navarro, ca. 9°49'N, 83°53'W; 1,100–1,150 m; premontane wet forest, terrestrial on steep slope; stems 2.5 m long; flower deep purple with blue tones; March 13, 2005; *R. L. Dressler 6500 & J. Warner*. The type prepared from a plant cultivated at Lankester Botanical Garden, accession no. JBL-11807; flowered February 28, 2013 (holotype, CR; isotypes, JBL [D3862], USJ, CR; Figs. 1–4).

DIAGNOSIS A species similar to *S. macrantha* Lindley, but with the stems covered with dark spots, the leaves much broader, the flowers short-lived (one day vs. 3–4 days) and the lip proportionately smaller with the throat yellowish white or ebony rather than clear white.

Stems 0.5–2.5 m long, strongly marked with dark spots. *Leaves* ovate, acuminate, 12–27 × 6.3–8.2 cm. *Flowers* produced from a “cone” about 10 mm in diameter, 6–7 cm long, with a lateral leaflet 3.7–4.3 × 7.5–10.5 cm; sepals purple, lip pink-purple with pale center. *Sepals* purple, the base flushed white, narrowly elliptic, acute to subobtuse, minutely mucronate, 4.5–4.7 × 1.3–1.7 cm. *Petals* purple, the base flushed white, elliptic from a narrow cuneate base, rounded, the distal margins distinctly ruffled, 4.4–4.7 × 1.9–2.2 cm. *Lip* white at the base; the lateral margins and the apex rose-purple; the disc and the apex of the lateral lobes pale yellow, 4.2–4.4 × 2.9–3.2 cm, ovate, obscurely three-lobed, retuse, the distal margins strongly ruffled; the base with two low, divergent, yellow calli; the disc with three raised veins running from the base to the insertion of the midlobe and two less distinct lateral veins running from the base up to the middle part of the lip. *Column* hemiterete–subclavate, the apex provided with two dentiform, upcurved arms, 4.3–4.8 cm long, 7–10 mm wide, the free portion of the lateral arms ca. 5 mm long. *Anther cap* elliptic–ovate, cucullate, two-celled. *Pollinia* eight, pale yellow, in four pairs of different size.



[4] *Sobralia lentiginosa*, a Lankester composite digital plate prepared from the plant that served as the holotype. A, habit. B, flower. C, dissected perianth. D, lateral view of the column and lip, the lip longitudinally dissected. E, column (ventral, dorsal and lateral views). F, anther cap and pollinarium (in dorsal and ventral views).

Distribution: known only from Costa Rica (Map 1).

Habitat and ecology: the plants were found growing in the ground in shaded, steep sloped areas, in the premontane wet forests south of Cartago.

Etymology: from the Latin *lentiginosus*, meaning freckled (the Latin *lentigo* is a lentil), in reference to the stems covered with dark purple spots or freckles.

Additional specimen examined (paratype): Costa Rica. Cartago: Paraíso, Navarro, ca. 9°49'N, 83°53'W; 1,100–1,150 m; premontane wet forest; March 13, 2005; *R. L. Dressler 6501 & J. Warner*. Prepared from a plant cultivated at Lankester Botanical Garden, accession no. JBL-11047, flowered March 4, 2013 (CR).

Author Contact Information:

¹ Lankester Botanical Garden, University of Costa Rica, P.O. Box 302-7050, Cartago, Costa Rica

² Harvard University Herbaria, Cambridge, Massachusetts, USA

³ Marie Selby Botanical Gardens, Sarasota, FL, USA

⁴ Author for correspondence: franco.pupulin@ucr.ac.cr.