

# New Orchid Species from Costa Rica

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**ABSTRACT.** Five new orchid species from Costa Rica are described and illustrated from living or liquid-preserved material: *Encyclia ortizii*, *Malaxis monsviridis*, *M. talamancana*, *Sobralia dissimilis*, and *S. doremiliae*. The orthography of *Sobralia "corazoi"* is discussed, and *S. carazoi* is thought to be correct.

Costa Rica has a long tradition of resident naturalists and orchidophiles collecting and pressing plants for study. The orchid flora of Costa Rica is thus much better sampled than those of neighboring countries. Even so, the preparation of the orchid treatment for *Manual de la Flora de Costa Rica* continues to reveal unnamed species, especially among terrestrials and smaller-flowered epiphytes. Five of these are here named and described.

***Encyclia ortizii*** Dressler, sp. nov. TYPE: Costa Rica. Prov. Alajuela: Reserva San Ramón, aprox. 30 km NNO de San Ramón, 8, 9 dic. 1984, R. L. Dressler y *Biología* 350 no. 288 (holotype, USJ). Figure 1.

Pseudobulbi pyriforme-ovoidei unifoliati; folia oblanceolata-oblonga; sepala oblongo-oblancheolata acuta; petala anguste oblanceolata; labello unguiculato trilobato lobi laterales parvi oblongi lobo intermedio subquadrato-ovato callo alto trigono carinato ornato.

Epiphytic, caespitose; pseudobulbs unifoliate, narrowly pyriform-ovate, somewhat flattened, 3.7 × 0.8–1.2 cm; leaves oblanceolate-oblong, narrowed basally, obtuse to subacute, 8.2–10 × 2.3–2.6 cm; inflorescence racemose, 12–24 cm, bracts deltoid, acute, 3–4 × 1.8–2 mm; pedicel with ovary 10–12 mm; sepals oblong-oblancheolate, acute, 9 × 2.8–3 mm; petals narrowly oblanceolate, 8 × 2 mm; lip unguiculate, claw ca. 4 mm, basally adnate to column, blade 3-lobed, lateral lobes oblong, porrect, clasping column apex, 2 × 1.3 mm; midlobe at right angle to column, ovate, 4 × 3.8 mm, callus prominent, trigonous, 1.5 × 1.5 mm, with laminar keel ca. 1.3 mm high; column ca. 7 mm, dorsal profile concave, midtooth ovate-elliptic, 1.7 × 0.8 mm, surpassing anther and lateral teeth, lateral teeth deltoid, 0.8 × 0.6 mm.

*Encyclia ortizii* is a member of subgenus *Osomophyta* and is closely allied to *E. campylostalix* (Reichenbach f.) Schlechter, *E. fortunae* Dressler, and *E. glauca* (Knowles & Westcott) Dressler & Pollard. The relatively slender column resembles that of *E. campylostalix*, while the sharply defined, rounded lateral lobes of the lip resemble those of *E. glauca* and *E. fortunae*. It is quite distinctive in the high, keeled callus and the orientation of the lip. The epithet honors Rodolfo Ortiz, director of the San Ramón nature reserve, in whose company the type material was collected.

***Malaxis monsviridis*** Dressler, sp. nov. TYPE: Costa Rica. Puntarenas: Monteverde Reserve, near Alajuela boundary, Cerros Centinelas, elev. 1550–1600 m, 10°18'N, 84°47'W, 19 Aug. 1984, M. H. Grayum & P. Sleeper 3842 (holotype, MO). Figure 2A, B.

Herba perennis erecta; pseudobulbis epigaeis ovato-conicis; folia duo late ovata breviter acuminata; inflorescentia subumbellata; bractae deltoideo-lanceolatae; sepala oblongo-ovata obtusa; petala filiformia; labello subquadrato profunde hastato apice subquadrato trilobulato profunde excavato.

Pseudobulbs above ground, 1.5–3 × 0.6–1.2 cm, approximate or up to 3.5 cm apart on rhizome. Leaves 2, petioles 5–6 cm, blades broadly ovate, short-acuminate, 5–7.5 × 3.2–5 cm. Inflorescence subumbellate, scape 10–15 cm, floral bracts deltoid-lanceolate, to 1.5 mm; pedicel with ovary 6.5–10 mm; sepals oblong-ovate, obtuse, dorsal sepal 3–3.5 × 1.3–1.6 mm, lateral sepals 2.7–3 × 2 mm; petals filiform, 2–3 mm; lip hastate, subquadrate, 2.5–3 × 2–2.6 mm, basal auricles subdeltoid, retrorse, prominent; cavities 2, about half length of blade, cavity apically projecting under blade of lip; apex of lip 3-lobulate, lobules subequal, lateral lobes rounded, midlobule rounded or deltoid; column about 1 mm long; color: pale green or lip brownish green. Flowering July through September.

*Malaxis monsviridis* may be recognized by the prominently hastate lip with short, deep cavities and wide, trilobulate apex. Both *M. carpintera* (Schlechter) Ames and *M. hastilabia* (Reichenbach



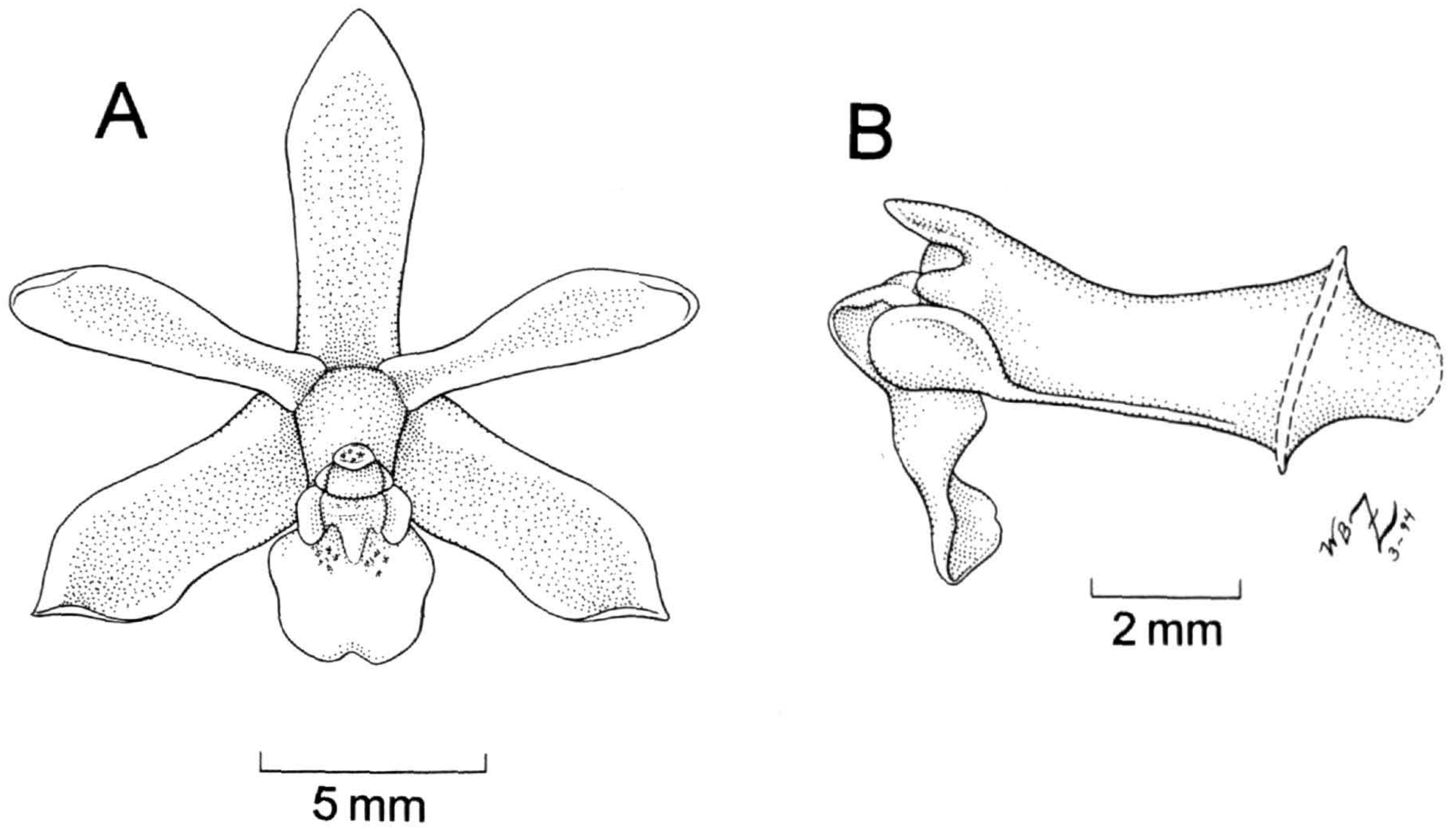


Figure 1. *Encyclia ortizii* Dressler (*Dressler y Biología* 350 no. 288). —A. Flower. —B. Column and lip, lateral view.

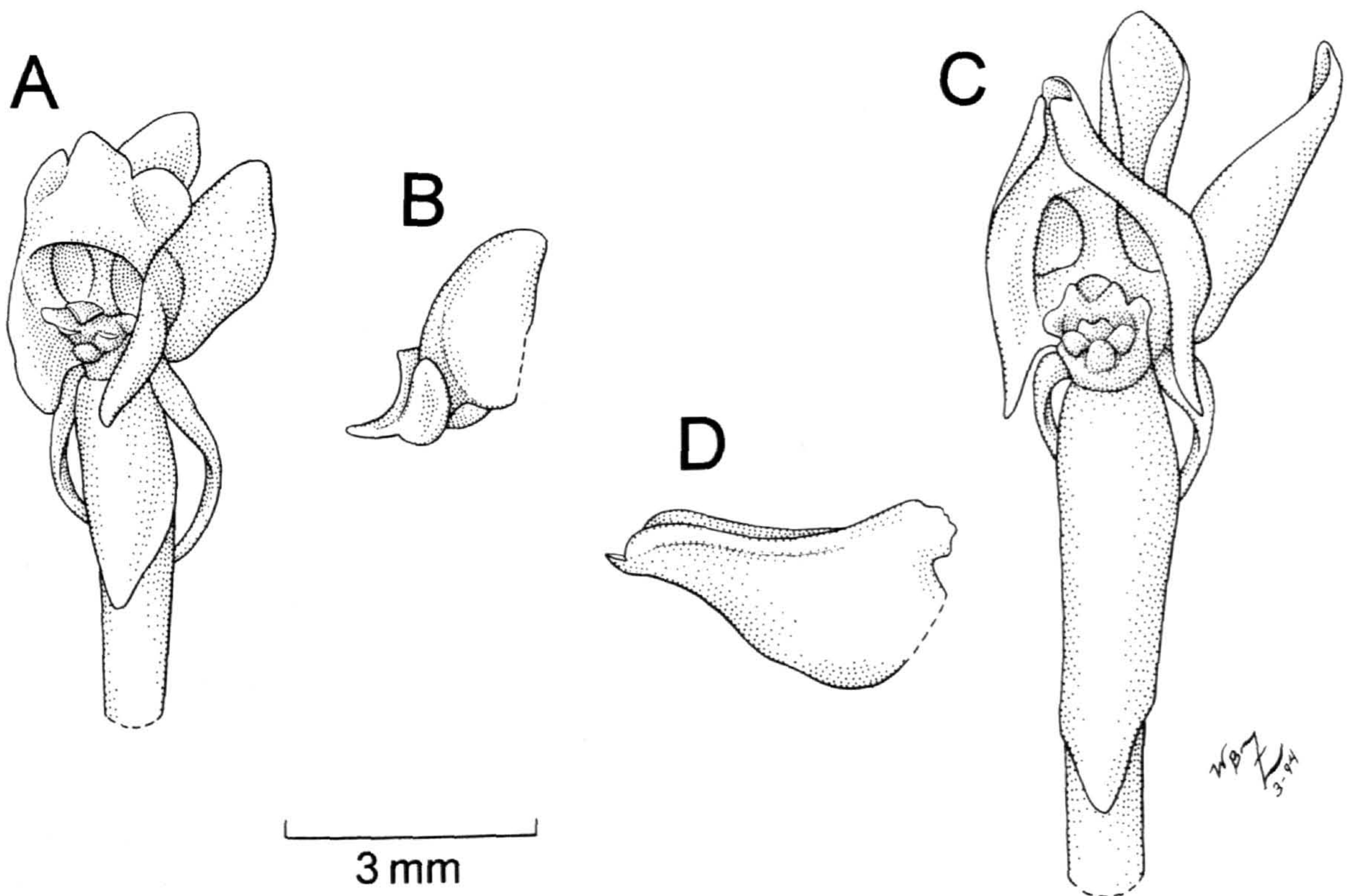


Figure 2. A, B. *Malaxis monsviridis* Dressler (A, B, *Atwood* 89-319). —A. Flower, dorsal view. —B. Lip, lateral view. C, D. *Malaxis talamancana* Dressler (C, D, *Dressler & Mora* s.n.). —C. Flower, dorsal view. —D. Lip, lateral view.



f.) Kuntze have lips with retrorse lobules and trilobulate apices, but the apices are much narrower and the cavity either narrower or longer.

*Paratypes.* COSTA RICA. **All from the area of Monteverde:** *J. T. Atwood 89-319* (SEL), *K. Barringer, E. Christenson & B. Pérez 4168* (F), *V. J. Dryer 699* (F), *W. A. Haber & E. Bello C. 2423* (MO), *W. Haber & W. Zuchowski 9315* (MO), *R. O. Lawton 1329* (F).

**Malaxis talamancana** Dressler, sp. nov. TYPE: Costa Rica. San José: Villa Mills, Cordillera de Talamanca, ca. 3000 m, 28 mar. 1993, *R. L. Dressler & D. E. Mora s.n.* (holotype, USJ). Figure 2C, D.

Herba perennis, erecta; pseudobulbis epigaeis, conicis; folia duo deltoideo-ovata cuneata vel subcordata breviter acuminata; inflorescentia subumbellata; bracteae deltoideo-lanceolatae; sepala ovata vel elliptica obtusa; petala sublinearia; labello deltoideo-ovato hastato ad apicem minute tridentato auricula retrorsa deltoidea vel denticulata.

Terrestrial, pseudobulbs above ground, conic, 2–4.5 × 0.8–2 cm, to 2.5 cm apart on rhizome. Leaves 2, petioles 5–7 cm; blades deltoid-ovate, cuneate to subcordate, apices short-acuminate, 5.5–8 × 3–4.2 cm. Inflorescence subumbellate, scape 15–20 cm, bracts deltoid-lanceolate, ca. 2 × 1 mm, ovary with pedicel 17–21 mm; sepals ovate to elliptic, narrowly obtuse, 3–6 × 1.5–2.3 mm; petals sublinear, 3–4 × 0.6 mm; lip 3–5 × 2–2.5 mm (in natural position), hastate, deltoid-ovate, apex minutely 3-dentate, lateral lobules folded upward, auricles retrorse, rounded, deltoid or denticulate, 0.8–1 × 0.8 mm; basal cavity deep, 1.5–2 mm, with rounded median keel, distal margin emergent.

*Malaxis talamancana* may be recognized by the deltoid-ovate, hastate lip minutely 3-dentate apically. Superficially, the flowers are similar to those of *M. brachyrrhynchos* (Reichenbach f.) Ames, but that species has subterranean corms and the details of the lip are quite distinct.

*Paratypes.* COSTA RICA. **San José:** trail from Canaán to Cerro Chirripó, between 2000 and 3000 m elev., 20 & 25 Aug. 1971, *W. C. Burger & L. Gómez P. 8358* (F). **Limón:** Cordillera de Talamanca, Atlantic slope, between Río Terbí and the Río Siní, elev. 2400–2750 m, 13 Sep. 1984, *G. Davidse, G. Herrera Ch. & M. H. Grayum 29048* (MO).

**Sobralia dissimilis** Dressler, sp. nov. TYPE: Costa Rica. Puntarenas: Monteverde Reserve, TV towers at 1750 m elev., 26 June 1989, *J. T. Atwood 89-243* (holotype, MO; isotypes, CR, FLAS, SEL). Figure 3.

Herba epiphytica; folia elliptica; flores e bracteis erectis imbricantibus nonnullis erumpentibus; sepala ovato-oblonga obtusa mucronata; petala ovato-oblonga; labellum ovatum margine fortiter undulatum; discus carinis biformis undecim ornatus.

Epiphytic, caespitose, stems stout, 35–75 cm; sheaths glabrous, verruculose. Leaves several, elliptic, acuminate, 13–15 × 4.5–5.2 cm, thin, not markedly corrugated. Inflorescence bract cluster ellipsoid, 5–6 cm, loose, glabrous, with 2 flowers at once; sepals ovate-oblong, obtuse, mucronate, 3.1–3.3 × 1.4 cm, lateral sepals basally connate for 6–7 mm; petals oblong-ovate, 3.1 × 1.3 cm; lip ovate, about 3 × 2.3 cm, tube about 1 cm, then flaring, exposing column, with 2 fleshy calli about 8 mm from base, with 11 keels from near center, outer 6 keels high, curved, not undulate, outermost short, next intermediate, then reaching to within 5 mm of apex, inner 5 keels strongly undulate, reaching 2–5 mm from apex; column 2.5 cm, basally slender, column wings narrowly deltoid, 4.5 × 3 mm, antrorse.

The epithet *dissimilis*, or different, refers both to the fact that the species is strikingly distinct from all others and to the two different types of keel on the lip. *Sobralia dissimilis* is clearly a close ally of *S. undatocarinata* C. Schweinfurth, of which there is an excellent photograph in *Orquídea* 5: 209, 1975 (as *S. mucronata* Ames & C. Schweinfurth; Horich, 1975). *Sobralia dissimilis* is quite distinct in the shorter, rounded limb of the lip (not pandurate or deeply bifid), in the wider, antrorse column wings, and in the two sharply different types of keel on the lip.

**Sobralia doremiliae** Dressler, sp. nov. TYPE: Costa Rica. Cartago: slopes and steep roadside banks along the Río Grande de Orosi about 11 km SSE of bridge at Tapantí, elev. about 1500 m, 10 July 1977, *R. L. Wilbur, F. Almeda & T. Daniel 22470* (holotype, DUKE). Figure 4.

Herba epiphytica; folia elliptica; flores e bracteis brevissimis nonnullis erumpente; sepala oblanceolata mucronata; petala oblongo-elliptica obtusa; labellum subquadrato-obovatum retusum; discus basi carinis humilis quindecim ornatus.

Epiphytic or on steep slopes, caespitose, stems 10–25 cm; sheaths glabrous or slightly verruculose and scurfy. Leaves elliptic or ovate-elliptic, short-acuminate, 4.5–9.5 × 1.7–3.4 cm. Inflorescence subtended by short, wide, divergent bracts, the floral bracts wide, retuse, scarcely emergent from the inflorescence bracts; flowers subcampanulate, white



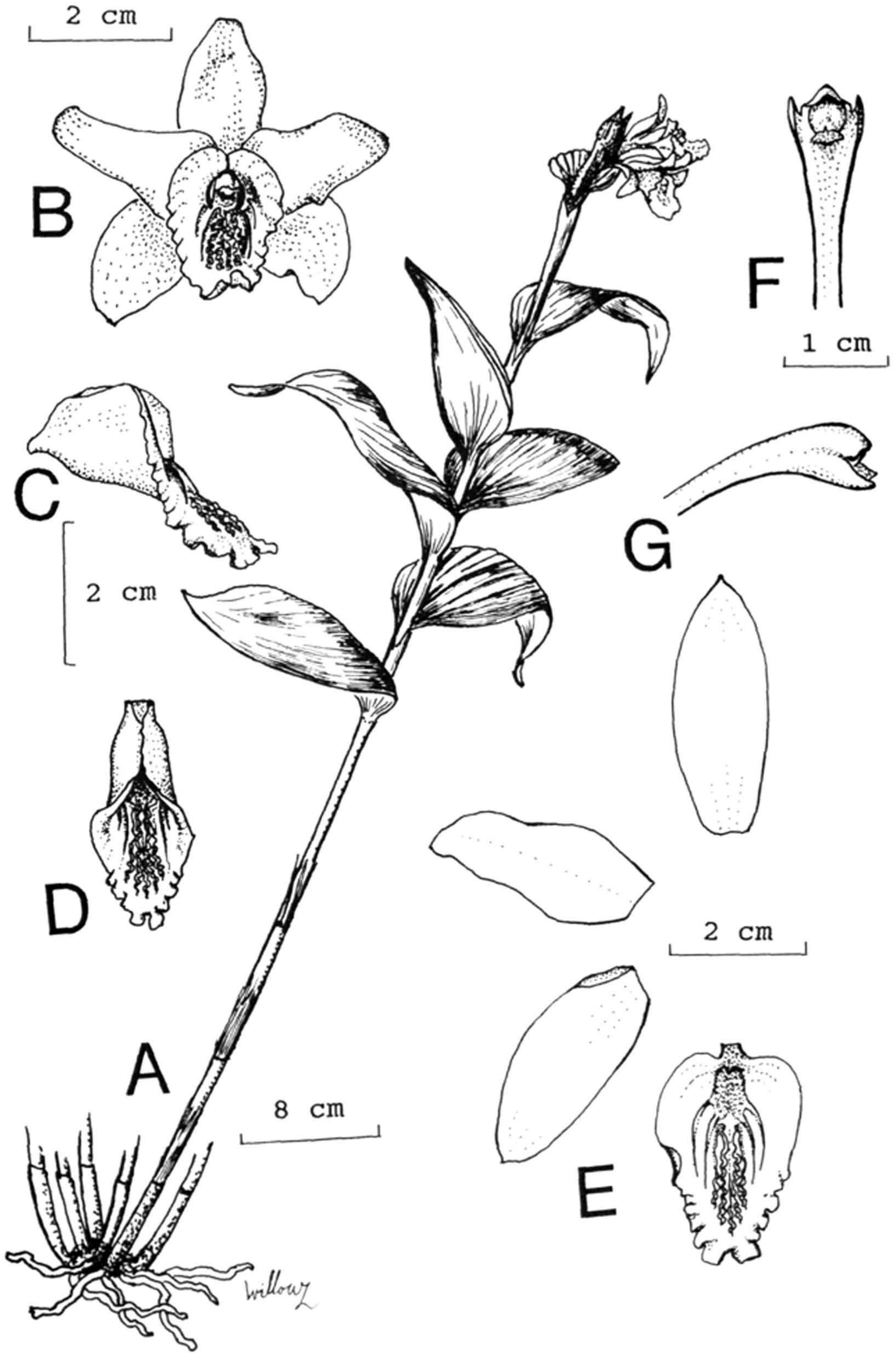


Figure 3. *Sobralia dissimilis* Dressler (Atwood 89-243). —A. Habit. —B. Flower. —C. Lip, lateral view. —D. Lip, natural position. —E. Perianth, flattened. —F. Column, ventral view. —G. Column, lateral view.



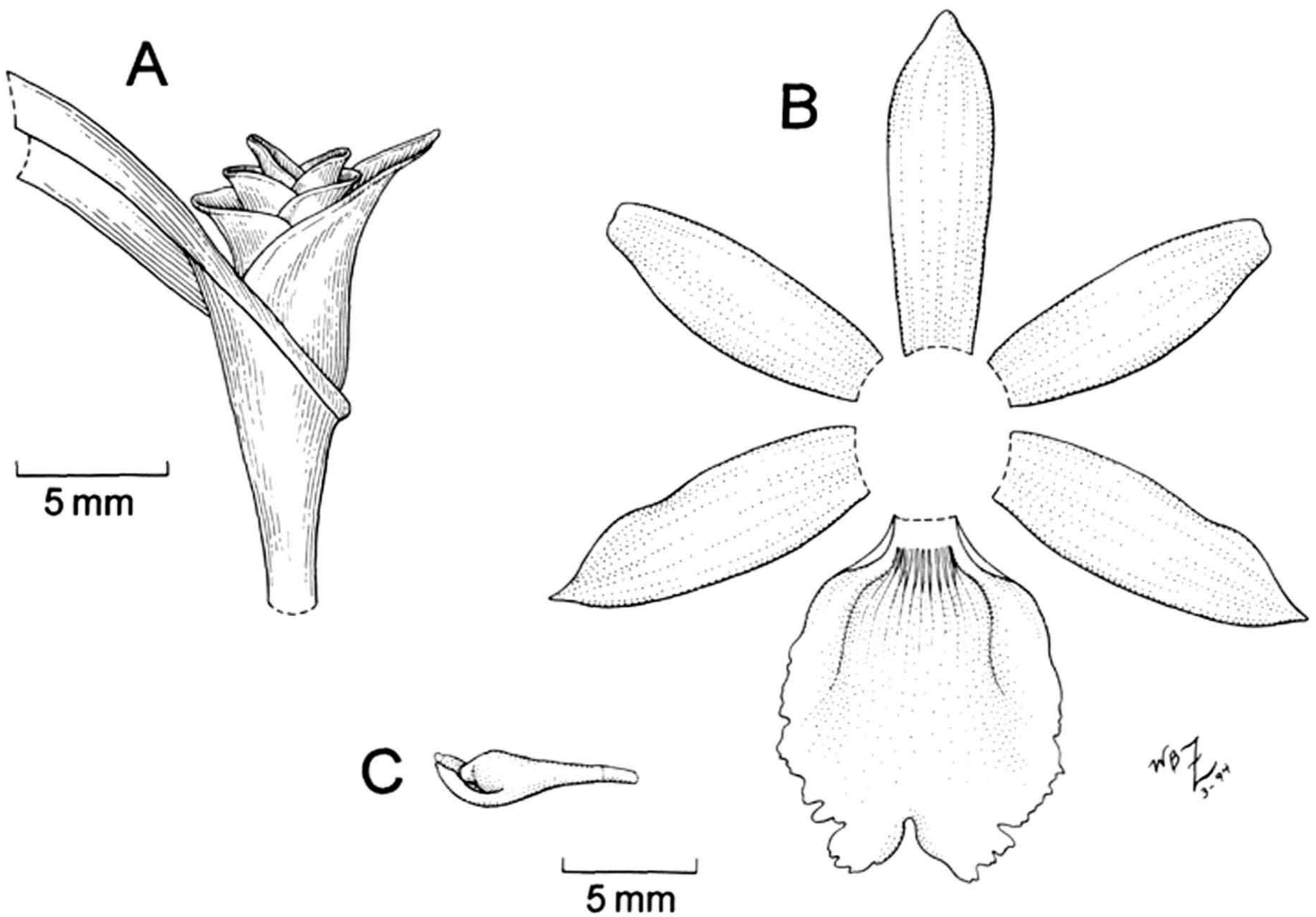


Figure 4. *Sobralia doremiliae* Dressler (Dressler & Mora s.n.). —A. Inflorescence, showing short bracts. —B. Perianth, flattened. —C. Column.

or pale green, base of lip orange or orange-brown; sepals united for 3 mm, oblanceolate or elliptic-oblanceolate, mucronate, 17–20 × 5–6 mm; petals oblong-elliptic, obtuse, 16–18 × 4–5 mm; lip basally cuneate, subquadrate-obovate, retuse, 17–18 × 11–12 mm, margins lacerate-dentate above middle, base with about 15 keels, most shorter than column, central 4 subequal to column; column 8–9 mm, wings falcate, surpassing anther; capsule 4.5–5 × 0.8–1.1 mm.

The epithet *doremiliae* honors Dora Emilia Mora de Retana, director of the Lankester Garden, with whom we collected and photographed this species near the type locality. The specimen chosen as type includes much more flowering material than our own scanty material (at USJ). I have purposely omitted the “a” of Dora to avoid a seeming diphthong that could lead to mispronunciation (the alternative being hyphenation).

*Sobralia doremiliae* ranges at least from the San Ramón area of Costa Rica to Cerro Colorado in Panama. It may be recognized by the small, subcampanulate flower and the form of the inflorescence. It somewhat resembles *S. carazoi* Lankester & Ames (see note below); *Smith 1109* is a

mixture of these species. *Sobralia doremiliae*, however, is smaller in all parts, and the ornamentation of the lip is quite different, as are the bracts of the inflorescence. The floral bracts of *S. carazoi* are elliptic and densely scurfy.

The inflorescence of *S. doremiliae* resembles that of *S. lindleyana* Reichenbach f. and *S. macrophylla* Reichenbach f. in that the sheaths of the inflorescence bracts and the uppermost leaves are markedly infundibuliform, the bracts, themselves, are short and wide, and the floral bracts are quite short, remain green, and do not project as an ellipsoid bract cluster (Fig. 4A).

**Paratypes.** COSTA RICA. **Alajuela:** Los Angeles de San Ramón, 21 VII 1932, *A. M. Brenes 16124* (F), 2 VIII 1932, *A. M. Brenes 16246* (F); La Peña de Zarcero, alt. 1450 m, 22 Aug. 1938, *A. Smith 1109* (AMES, SEL). **Cartago:** weedy roadsides and steep heavily vegetated banks along the ICE road 9 km NW of the Tapantí Dam or 9 km SE of the Tapantí Bridge across the Río Grande de Orosi, alt. ca. 1300 m, *R. L. Wilbur 30765* (DUKE). **San José:** La Hondura de San José, alt. 1300–1700 m, 16, 19 Mar. 1924, *P. C. Standley 37718* (AMES), alt. 1300 m, 15 agosto 1933, *M. Valerio 798* (F). PANAMA. **Chiriquí:** Cerro Colorado, ca. 50 km N of San Félix, elev. ca. 1400 m, 17 Aug. 1975, *R. L. Dressler 5092* (FLAS), elev. 1400–1500 m, 20 Sep. 1977, *R. L. Dressler 5708* (FLAS, PMA).



ORTHOGRAPHY OF *SOBRALIA CARAZOI*

*Sobralia corazoi* was published by Lankester and Ames (Ames, 1924). The surname Corazo, if such exists, is not common in Costa Rica, but Carazo is well known. Rafael Lucas Rodríguez investigated this in some detail (letter to L. A. Garay, 22 Dec. 1978, Microfiche of Ames Herbarium, Inter Documentation Co.) and found that the person honored by the epithet was Enrique Carazo Quezada, concluding that the spelling "*corazoi*" was an error. That the error had been recognized at the Ames Orchid Herbarium is suggested by specimens clearly labeled as "*carazoi*" by Schweinfurth in 1938.

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