

MESOAMERICAN ORCHID NOVELTIES 4, *MALAXIS*

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ABSTRACT. Four new species of *Malaxis* have appeared during preparation of the Flora Mesoamericana and are described and illustrated. *Malaxis brevis* is a small-flowered species collected several times in western Panama. It resembles *M. hastilabia*, but the much smaller flowers have a very short lip with short cavities. *Malaxis insperata*, from Nicaragua, superficially resembles *M. brachyrrhynchos*, with an entire, obtuse lip, but has conic-ovoid pseudobulbs, rather than globose subterranean corms. *Malaxis rostratula* is quite small-flowered, and known only from Cerro Colorado, in Panama. Its diminutive lip has a very short, 3-lobed beak. *Malaxis triangularis* ranges from Mexico to El Salvador and has been misidentified as *M. corymbosa* (S.Wats.) Kuntze, a northern species with wider, deeply concave lips.

Key words: taxonomy, Mesoamerica, Orchidaceae, new species, *Malaxis*

INTRODUCTION

Malaxis Swartz is made up of small, usually terrestrial plants with green flowers. The only worldwide revision is somewhat out of date (Ridley 1888). *Malaxis* has been considered nearly cosmopolitan, but more critical work may divide the older version into several genera. The type species, *Malaxis spicata* Sw., is a species of the West Indies and the eastern United States, so we may expect *Malaxis sensu stricto* to be an American group, at least in part.

Most species of *Malaxis* are similar vegetatively. In tropical America, many species, including *M. spicata*, have conic-ovoid pseudobulbs that are usually exposed, with thin, papery sheaths. In contrast, most unifoliate species and a few bifoliate species have globose, subterranean corms with thick, fibrous sheaths. Aside from these features, most species are monotonously similar, and specimens without flowers are generally very difficult to identify. Because of the superficial similarity in both plant and flower, mixed collections are frequent, and some seeming isotypes are quite unlike the species described.

Williams (1938) assigned a remarkable range of variation to *Malaxis excavata* (Lindl.) Kuntze, and this name often appears on specimens from Mexico to southern South America. Although *M. excavata* is a plant of Mexico to Nicaragua, most plants of Costa Rica and Panama are referable to *M. hastilabia* (Rehb.f.) Kuntze. I find *Malaxis lepanthiflora* (Schltr.) Ames and *M. maxonii* Ames to be inseparable from *M. excavata*, though Williams made no mention of them in his 1938 paper.

In the preparation of *Malaxis* for the Flora Mesoamericana, four new species have appeared and are described here. Fragmentary material of

other new species has been seen, and careful collection will surely add additional new species to the Mesoamerican flora.

***Malaxis brevis* Dressler, sp. nov.** Holotype: Panama. Chiriquí: w. slopes of Cerro Respingo, n.e. of Cerro Punta Village, approx. 82°34'W, 8°52'N, 8000–8500 ft, flowers yellowish green, 15 June 1971, G.L. Webster & G. Bracken 16599, MO

Plant terrestrial. **Roots** 0.2–1 mm in diameter; pseudobulb 2–3.5 × 0.4–1.2 cm, ovoid-ellipsoid, approximate or to 1.5 cm apart. **Leaves** 2, petiole tubular, 3–9 cm, with sheaths 1.5–6 cm without, blade 3–10.5 × 1.5–4.7 cm, ovate, acute to acuminate. **Peduncle** 7–20 cm, raceme to 1.5 cm, subumbellate, floral bracts 1–1.5 × 0.8–1 mm, triangular or uncinata, acute to acuminate; flowers pale green or yellowish green; pedicel ca. 8 mm; dorsal sepal 3–3.3 × 1.2–1.7 mm, oblong or ovate, obtuse or subacute; lateral sepals ca. 3 × 1–1.2 mm, oblong-ovate, obtuse or subacute; petals ca. 2.5 mm, lance-linear, obtuse, parallel with dorsal sepal; lip 2.8–3 × 2 mm, hastate, the auricles 1–1.3 × 0.8 mm, triangular, retrorse, the blade 1.8–2.7 mm, ovate, with 2 deep cavities separated by wide ridge, apex minutely trilobulate; column 0.5–0.6 mm.

This species resembles tiny *Malaxis hastilabia*, with the basal auricles varying from deltoid to uncinata. When the auricles are uncinata (as in *M. hastilabia*), the flowers may be distinguished from those of *M. hastilabia* both by their small size and by the very short cavities, with respect to the surface distal to the cavities. The epithet *brevis*, or short, refers to the short lip as compared to *M. hastilabia* and most other species.

Paratypes. Panama. Chiriquí: Boquete dist., Volcán de Chiriquí, 3200 ft, 16 July 1938, E.

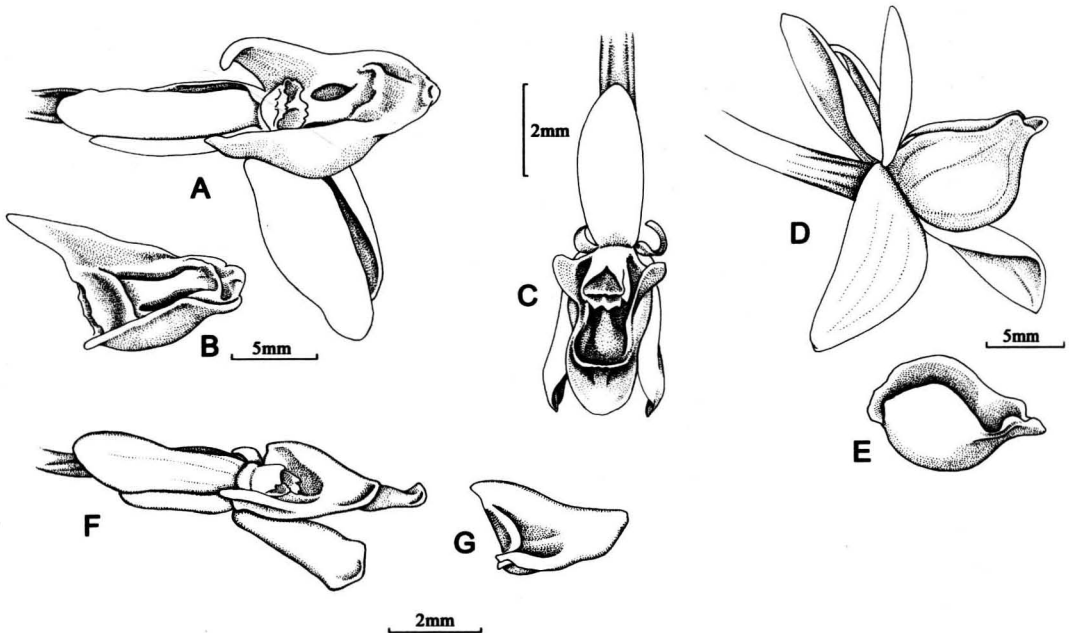


FIGURE 1. Floral details of new *Malaxis* species. **A., B.** *M. brevis*. **A.** Flower, lateral view from above. **B.** Lip. **C.** *M. insperata*, dorsal view. **D., E.** *M. rostratula*. **D.** Flower, lateral view. **E.** Lip, lateral view. **F., G.** *M. triangularis*. **F.** Flower, upper-lateral view. **G.** Lip. All drawn from holotypes.

Davidson 1002 (AMES, US); border of Chiriquí and Bocas del Toro provinces, Cerro Colorado, 11.2 km along ridge road from main road to Escopeta, 1700 m, 16 August 1977, *J.P. Folsom 4866* (MO); Parque La Amistad, Cerro Las Brujas, 3100 m, 24 August 2002, *A. Maduro & E. Olmos 220a* (MO); Parque La Amistad, Las Nubes, 2200 m, 24 August 2002, *A. Maduro & E. Olmos 220b* (PMA); Cerro Pando, on the continental divide and the Panama-Costa Rica border, ca. 16 km n.w. of El Hato del Volcán, 2000–2482 m, 21 July 1975, *S. Mori & A. Bolton 7324* (MO); Valley of the upper Río Chiriquí Viejo, vicinity of Monte Lirio, 1300–1900 m, 27 June–13 July 1935, *R.J. Seibert 175* (AMES); Casita Alta—Cerro Copete, 2300–3300 m, 10 July 1940, *R.E. Woodson & R.W. Schery 368* (MO); Potrero Muleto to summit, Volcán de Chiriquí, 3500–4000 m, *R. E. Woodson & R. W. Schery 461* (MO, AMES).

Malaxis insperata Dressler, sp. nov. Holotype, Nicaragua, Isla Ometepe, Volcán Maderos, localidad de la Laguna, Bosque húmedo, terreno cubierto de gramínea, 11°26'N 85°30'W, ca. 1200 m, 3 June 1985, Epífita, flores verdes, *Robleto 2014*, MO!

Plant epiphytic. **Roots** 0.6–1.2 mm in diameter; pseudobulb conic-ovoid, exposed, 2–2.5 × ca. 1 cm, up to 3 cm apart on rhizome. **Leaves**

2, petiole tubular, 5–12 cm, with tubular sheaths ca. 4 cm without, blade 6–12 × 2.5–5 cm, ovate, acuminate. **Peduncle** 8–20 cm; raceme subumbellate, to 1.8 cm, floral bracts 1 × 1–2 mm, triangular-ovate, acute or acuminate. **Flowers** green; pedicel 6–12 mm; dorsal sepal 3.2 × 2 mm, triangular-ovate, lateral sepals 3.8 × 1.7 mm, triangular-ovate; petals to 2.5 mm, linear; lip 3.4 × 2.5 mm (basally), auricles triangular, acute or subobtuse, retrorse, 1 × 0.6 mm, the blade ovate, abruptly subacute, with cavity ending ca. 1 mm from apex; column 0.5 mm.

This species is vegetatively similar to *Malaxis hastilabia* with conic-ovoid pseudobulbs, but the flowers are superficially more like those of *M. brachyrrhynchos*, with the lip entire and obtuse, rather than three-lobed. The epithet, *insperata*, means unexpected or surprising. I thought I had finished with Mesoamerican *Malaxis*, when I requested additional Nicaraguan material, to see if *M. excavata* actually occurred in Nicaragua. Not only is *M. excavata* present in Nicaragua, but one of the specimens so identified proved to be this unexpected new species.

Malaxis rostratula Dressler, sp. nov. Holotype: Panama. San Félix: Cerro Colorado, about 50 km n. of San Félix, ca. 1400 m, 17 August 1975, cloud forest, flowers pale green, *R.L. Dressler 5102*, MO!

Plant terrestrial or epiphytic. **Roots** ca. 1 mm in diameter; pseudobulb ovoid-ellipsoid, ex-posed, ca. 2.5×1.2 cm. **Leaves** 2, petiole tubular, 3.5–8 cm, with sheaths 1.5–4 cm without, blade 4.5–8.5 \times 3–5.5 cm, broadly ovate, short-acuminate. **Peduncle** ca. 14 cm, raceme subumbellate, to 1.5 cm, floral bracts ca. $1 \times 1-1.3$ mm, ovate, acute. **Flowers** pale green; pedicel 5–8 mm; dorsal sepal 2–2.7 \times 0.8–1 mm, oblong, obtuse, revolute, lateral sepals 2–3 \times ca. 1 mm, oblong, obtuse; petals 1.8 mm, ligulate; lip 2–2.3 \times ca. 2 mm (if flattened), deeply concave, apically tridentate/trilobulate, beak ca. 0.5 mm, the three lobules subequal; column ca. 0.7 mm.

This species has very small flowers that are reminiscent of both *Malaxis aurea* and *M. simillima*, but the lip is shorter, proportionately deeper and more abruptly beaked. The beak is much shorter than that of *M. simillima*, with the mid-lobule only about 0.5 mm long. At present the species is known only from the region of Cerro Colorado, a mountain that is badly cut over and may yet become the site of a copper mine. The epithet *rostratula*, from *rostrata*, or beaked, with the diminutive suffix *ula*, refers to its small size and the abrupt beak at the apex of the lip.

Paratype. Panama. Chiriquí: San Félix, Cerro Colorado, on road, 31.6 km from Río San Félix bridge, 1690 m, 15 July 1976; epiphyte, flowers yellow, *G.A. Sullivan 348* (MO).

Malaxis triangularis Dressler, sp. nov. Holotype: Guatemala. Quezaltenango: near Quezaltenango, 8200 ft, 22 July 1934, *A.F. Skutch 972*, AMES.

Plant terrestrial. **Roots** 0.3–0.7 mm in diameter; corm globose-ovoid, subterranean, 0.7–1.5 cm. **Leaf** 1, petiole tubular, 6–13 cm, with a tubular sheath 3–9 cm without, blade 3–8 \times 1.8–5 cm, ovate, subcuneate to cordate, apiculate. **Peduncle** 15–28 cm, raceme subumbellate, to 2.5 cm, floral bracts 0.9–1 \times 0.8–1 mm, triangular, acute; flowers pale green; pedicel 6–10 mm; dorsal sepal 2–3 \times 1–1.8 mm, ovate or oblong-ovate, obtuse or acute, lateral sepals 2.4–4 \times 1.2–1.4 mm, ovate, subacute, apices thickened; petals ca. 2.4 mm, linear; lip 2–3 \times 1.4–

2 mm, subtruncate to shallowly hastate, narrowly triangular, acute, auricles 0.2–0.7 mm; column ca. 0.8 mm.

Central American plants of this species have been identified as *Malaxis corymbosa* (S.Wats.) Kuntze, but that species, of the USA and northern Mexico, has subcircular, apiculate lips. Some Guatemalan material has been identified as *M. brachystachys* Rchb.f., but that Mexican species has flowers about twice as large and with a proportionately broader lip. In *M. triangularis*, the lip is triangular (a bit too narrow to be called deltoid) and about half as large as in *M. brachystachys*.

Paratypes. Mexico. Veracruz: Cerros above Santiago, W. of Huayacocotla, 1900–2000 m; 23 July 1973, oak, pine, madroño, and juniper, flowers yellowish green, *R.L. Dressler 4437* (AMO); flowers translucent green, lip darker, *Dressler 4438* (AMO, MO); Chiapas: Km. 1220, Pan-American Highway, 4 June 1950, *J.T. Baldwin 14343* (LL). Guatemala. El Quiché: El Boquerón, 8000–8200 ft, 10 August 1964, *G.R. Proctor 25480* (LL); Valley of the Rio de las Violetas, n. of Nebaj, 25 June–17 August 1964, *G.R. Proctor 25300* (LL); Sacatepéquez: Antigua 6 July 1938, *J.R. Johnston 1248* (AMES). Honduras. Tegucigalpa: Cedros Abajo, 3000 ft, 18 September 1931, *J.B. Edwards 42* (AMES). El Salvador. V. San Salvador, Boquerón, interior, 1800 m, 1 September 1969, *F. Hamer 160* (MO); Finca El Pital, Cerro El Pital, 2450 m, 22 July 1975, *F. Hamer 496* (AMES).

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