

ANOTHER NEW SPECIES OF *STELLILABIUM* FROM MONTEVERDE, COSTA RICA

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ABSTRACT. A new species of *Stellilabium*, *S. barbozae* J.T.Atwood & R.L.Dressler, is described from a cloud forest in Monteverde bringing a total of five recently described congeners from this area. Although these minute orchids may have been overlooked by collectors elsewhere, the narrow range known for these species suggests that rapid speciation has occurred among these orchids in the Monteverde area, a phenomenon suggested for other areas of the tropics.

Large, attractive orchids are relatively well known, but the wealth of species yet to be discovered is in the smaller species. Notably the genus *Lepanthes* has tripled in the last ten years (C. Luer, pers. comm.), the new species having been overlooked on account of their small size. So it is with *Stellilabium*, a genus of micro-orchids with minute insect-like flowers held on inconspicuous inflorescences resembling snippets of telephone wire.

Monteverde, Costa Rica has yielded many minute orchids including four new species of *Stellilabium* already described (Atwood 1989), three of them from a single host tree less than a kilometer away from the type locality of the species described here. This species was discovered only recently by resident Gabriel Barboza V., an expert of its orchids, despite collecting intensity by numerous botanists. It is a member of a group lacking stellate bristles associated with the column and is not easily confused. It is most closely related to *S. monteverdense* J.T.Atwood and *S. campbellorum* J.T.Atwood, but differs from the former in the larger plant with less carinate inflorescence bracts and in the larger flowers that are translucent purple rather than yellow-green with central area of maroon. From *S. campbellorum* it differs in the larger flower with falcate-lanceolate petals rather than deflexed oblong-ob-lanceolate petals.

Although many more plants undoubtedly exist, only two plants were discovered and the species is known in collections only from a single plant preserved as the holotype. The darker center to the flower and apparent rarity suggest that this might be a natural hybrid between *S. campbellorum* and *S. monteverdense*. The larger floral size might be accounted for by heterosis, but the ratio of column to labellum length is much smaller than that of either hypothetical parent arguing against an interpretation as a natural hybrid. In order to document the orchid in several regional floras, we accept it as a species.

It is unclear why so many species of *Stellilabium* have been discovered in Monteverde. Perhaps the inconspicuous plants occur elsewhere but remain undiscovered owing to less intense collection activity. Indeed, the occurrence of a very similar (if not the same) species as *S. campbellorum* by one of us (RLD) in Chiriqui, Panama suggests the possibility. However, rapid local speciation as suggested for the genus *Scelochilus* by Gentry and Dodson (1987) might also account for the diversity observed. These minute orchids, never occurring in large clumps, are often seen flowering on twigs suggesting rapid maturity and high turn-over rates. The species is described below.

Stellilabium barbozae J.T.Atwood & Dressler,
sp. nov. FIGURE 1.

TYPE: COSTA RICA. Prov. Puntarenas: Monteverde Cloud Forest Reserve near information office, lower montane rain forest, ca. 1550 m, 23 Mar 1995, J. T. Atwood, R. L. Dressler, K. Dressler & G. Barboza V. 5051 (Holotype: CR).

Species affinis *Stellilabio campbellorum* sed floribus grandioribus et petalis falcato-lanceolatis differt; affinis *Stellilabio monteverdense* sed inflorescentibus floribusque grandioribus, petalis falcato-lanceolatis differt, et color florum translucido-purpurascens est.

Plant about 8 cm tall. Stems nearly absent, roots spreading, to nearly 2 mm in diameter. **Leaves** present but apparently ephemeral, 2 per shoot, elliptic-lanceolate, 10–15 × 2–3 mm, acute. **Inflorescence** wiry, 8 cm long including the scape; scape bracts with broadened sheaths concealing the scape, not much reduced towards the base or apex, with blades reduced to apicules about 1 mm long; ovary forming a right angle with the inflorescence axis, about 4 mm long. **Flowers** several near the inflorescence apex, translucent purple, darker centrally, tepals in-

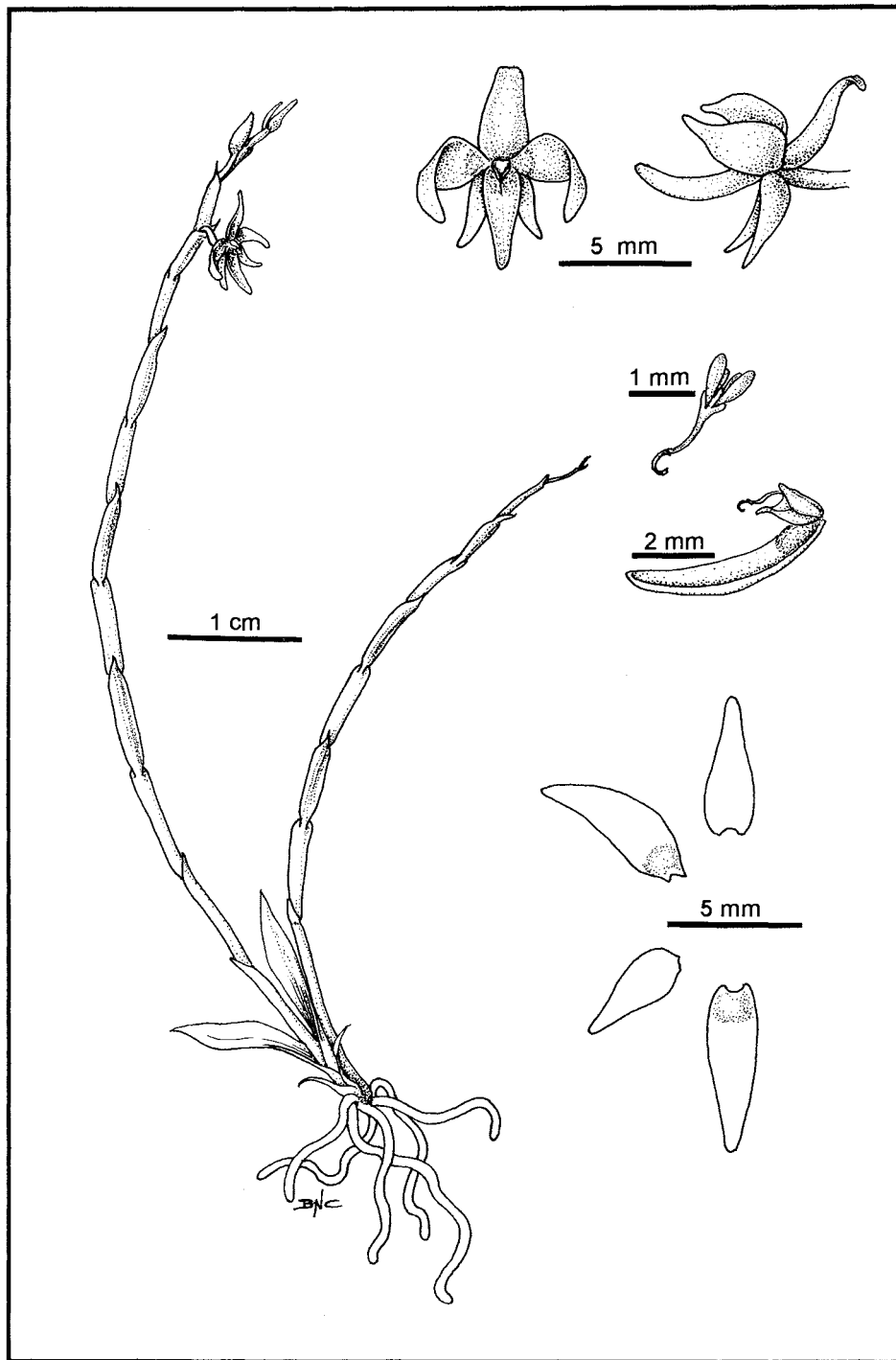


FIGURE 1. *Stellilabium barbozae* J.T.Atwood & Dressler. Illustration: B. N. Culbertson based on spirit preserved holotype.

cluding lip somewhat concave. **Sepals** similar, the dorsal slightly larger, lanceolate $4.5\text{--}5.5 \times 2$ mm, bluntly acute. **Petals** falcate-lanceolate, 6×2 mm, somewhat thickened at the base. **Lip** similar to the petals, lanceolate, 6.5×2 mm, thickened at the base. **Column** stout, about 1 mm long excluding the exerted stipe and viscidium; anther dorsal, pollinia 4 supported on a stipe and uncinata viscidium about 1.25 mm long. **Fruit** unknown.

ETYMOLOGY. The name commemorates the collector, Gabriel Barboza Villalobos, an orchid expert of the Monteverde area.

As with all species of *Stellilabium*, the ecology is poorly known. The holotype was collected from a host branch about 10 cm in diameter.

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