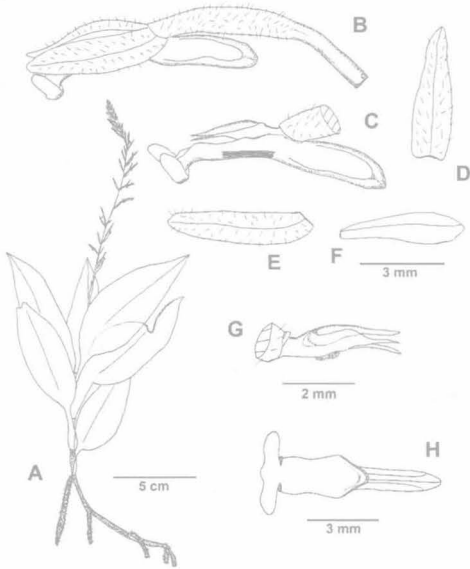


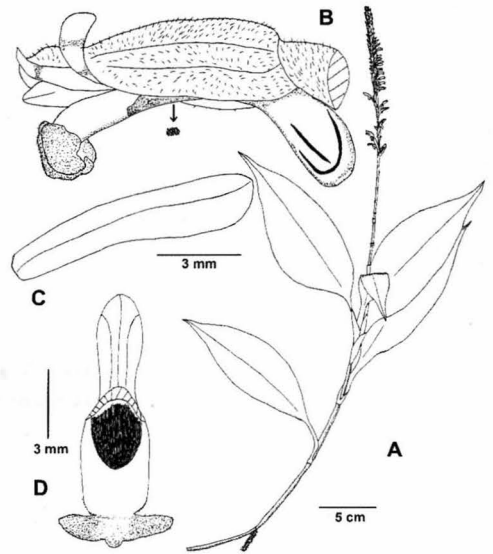
Microchilus maasii Ormerod, *sp. nov.* TYPE: COSTA RICA. Cartago: Rio Atirro, La Esperanza, 800 m, 8 October 1974, P.J.M. Maas 1171 (Holotype: F; Isotype: MO). Fig. 18 & 19.

Species nova subsimilis M. micayvallis Ormerod *sed petalis floribus latioribus (1.3–1.8 vs. 1 mm) et columna brevioribus (3.40–3.85 vs. 4 mm) differt.*

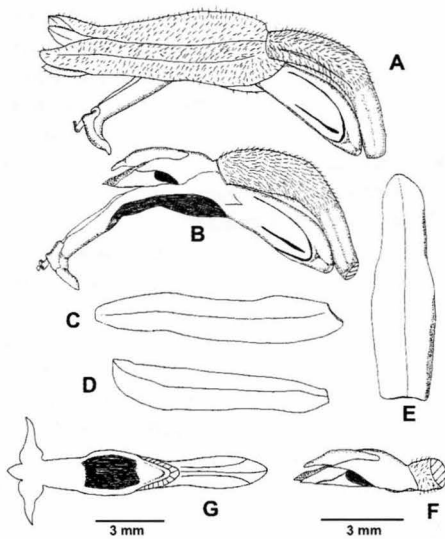
17



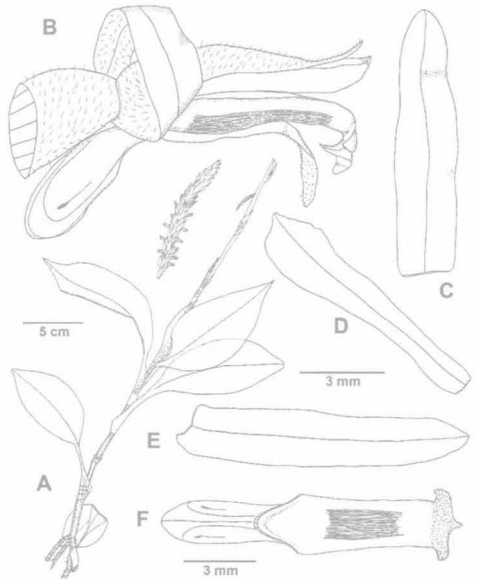
18



19



20



FIGURES 17–20. *Microchilus* species. **17.** *M. laegardii*. A, plant; B, flower; C, flower minus tepals; D, dorsal sepal; E, lateral sepal; F, petal; G, column; H, labellum and spur (drawn from holotype). **18.** *M. maasii*. A, plant; B, flower; C, petal; D, labellum and spur (drawn from holotype). **19.** *M. maasii*. A, flower; B, flower minus tepals; C, lateral sepal; D, petal; E, dorsal sepal; F, column; G, labellum and spur (drawn from *Bello 1048*, MO). **20.** *M. nugax*. A, plant; B, flower; C, dorsal sepal; D, petal; E, lateral sepal; F, labellum and spur (drawn from holotype).

Terrestrial or occasionally epiphytic herb. Rhizome terete, rooting at nodes, 9.2–11.7 × 0.10–0.35 cm; internodes 1–3 cm long. Stem erect, sometimes lower half decumbent, 4–10-leaved, terete, 13–27 × 0.3–0.5 cm; internodes 1.0–7.2 cm long. Leaves obliquely oblong-elliptic, ovate-elliptic to broadly elliptic, acute to subacuminate, 6.3–15.6 × 2.30–6.25 cm; petiole and sheath 2.2–4.8 cm long. Inflorescence pubescent, 17.8–40.1 cm long; peduncle 8.2–20.7 cm long; sheathing bracts 4–6(–13), lax, 1.4–4.6 cm long; rachis subdensely to densely many-flowered, 5.5–23.0 cm long; floral bracts ovate-lanceolate, acute, greenish, cream-brown to reddish-brown, 1.10–1.65 × 0.35–0.50 cm. Pedicellate ovary subcylindric-clavate, pubescent, 5.5–6.0 mm long; capsules subcylindric-obovoid, 8 × 3.0–3.5 mm, pedicels 2.0–2.5 mm long. Flowers externally pubescent, white, dirty white, yellow-brown, reddish-brown or green with brown-purple, lip and spur white, pollinia yellow. Dorsal sepal oblong to oblong-lanceolate, obtuse to subacute, 6.0–8.5 × 1.8–2.5 mm. Lateral sepals obliquely oblong to oblong-lanceolate, obtuse, 6.0–8.5 × 1.3–1.9 mm. Petals ligulate-oblancheolate, lower subapical margin minutely erose to ciliate, acute to subacute, 5.8–8.0 × 1.3–1.8 mm. Labellum spurred, trilobed, joined to column for 1.1–2.0 mm; spur narrowly obovoid-oblongoid, obtuse, 3.8–4.2 mm long; hypochile rectangular to ovate-cuneate, fleshy in basal half, 3.4–4.8 mm long, basal half 1.9–3.0 mm wide, apical half 1.3–2.9 mm wide; epichile transversely ligulate to subrhombic, papillose-pubescent, 1.0–1.5 × 3.3–5.0 mm, midlobule 0.5–0.9 mm long, lobules oblong-ovate to triangular, 0.75–1.00 mm wide basally. Column 3.40–3.85 mm long.

Distribution: Costa Rica; Panama.

Habitat: in forest (*Bello 214, 1048; Fuentes 392*); disturbed primary forest (*Liesner & Judziewicz 14740*); near forest edge in well-drained soil (*Penneys 585*); forest remnants near rocky riverbank (holotype); 600–1200 m (–1705 m?).

Specimens examined: COSTA RICA. Alajuela: Canton de San Ramon, Cordillera de Guanacaste, Monteverde, San Gerardo Biological Station, 600 m E of station, 1150 m, 3 July 1995, *D. Penneys 585* (MO × 2); Reserva Biologica Monteverde, Rio Penas

Blancas, Laguna de Poco Sol, 750 m, 5 August 1989, *E. Bello 1048* (MO); 15 km NNW of San Ramon by road, 2.5 km N of Balsa on road to San Lorenzo, 1050–1100 m, 24 April 1983, *R. Liesner & E. Judziewicz 14740* (MO); Atlantic slope, Reserva Monteverde, Rio Penas Blancas, path to the Jesus Novo farm, 950 m, 24 July 1987, *W. Haber 7360 & E. Bello* (MO); Reserva Biologica Monteverde, Rio Penas Blancas, Eladio's Station, 820 m, 24 June 1991, *E. Bello 2809 & E. Cruz* (MO); same area, Finca de Eladio Cruz, 850 m, 28 June 1989, *E. Bello 1526* (MO). Puntarenas: Reserva Biologica Monteverde, Valle Penas Blancas, Campamento 4, 900 m, 1 August 1988, *E. Bello 214* (MO); Cordillera de Tilaran, San Luis, Buen Amigo farm, Trapiche, Reserva Biologica Monteverde, 1200 m, 4 August 1993, *Z. Fuentes 421 & E. Fuentes* (MO); same area, waterfall on the Rio San Luis, 1100 m, 29 June 1993, *Z. Fuentes 392* (MO). PANAMA. Cocle: El Valle area, 600–1000 m, 8 December 1938, *P.H. Allen 1201* (MO). Panama: Cerro Campana, 800 m, 29 March 1977, *W.G. D'Arcy 11129* (MO); Cerro Campo, 500–1000 m, 14 February 1981, *W.G. D'Arcy & K. Sysma 14638* (MO). Veraguas: 14 km NW of Santa Fe, on road to Calovebora, Panama Highway 35, 4 August 1975, *S. Mori & A. Bolten 7649* (MO); W of Alto de Piedras, W of Santa Fe, 975–1705 m, 8 September 1978, *B. Hammel 4593* (MO).

The larger forms (holotype included) of this species are very similar to the Colombian *M. micayvallis* Ormerod but differ from that taxon in having a slightly shorter pedicellate ovary (5.5–6.0 vs. 7 mm), broader petals (1.4–1.8 vs 1 mm) and a shorter column (3.40–3.85 vs. 4 mm). The measurement of 3.85 mm for column length was made from the specimen *D'Arcy 11129* and includes the 0.15 mm long exposed tip of the pollinia. Thus it could be argued that the column of *M. maasii* is at the most 3.7 mm long and thus 0.3 mm shorter than the column of *M. micayvallis*.

Some forms of *M. maasii* from Costa Rica (e.g. *Bello 1048, 2809; Haber 7360*) have almost triangular epichile lobules. These are however connected to the typical form by intermediate plants (e.g. *Fuentes 421*) which have ovate-lanceolate epichile lobules. I have therefore provided two illustrations of *M. maasii* to show the extremes in variation.