

ony size small (worker = nanitics), despite presence of males!! Whole plant dissected; not an artifact; Sarawak, G. Mulu NP, 2/1978, JH; G. Mulu, light trap; Sarawak, Mt. Dulit, F. Mjoberg, MCZ; Sarawak, Lambir NP, Miri, 2/27/1992, Ulrich Maschwitz, 92-235, ex: *Drypetes longifolia*.

Cladomyrma maschwitzi Agosti

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Cladomyrma maschwitzi Agosti, 1991: 306. Holotype queen, WEST MALAYSIA, Selangor, Ulu Gombak, 1990, #3, ex *Crypteronia griffithii*, Joachim Moog, BNHM.

DIAGNOSIS: **Major worker.** AL 0.84–1.00, HL 0.81–0.98, HW 0.68–0.82, EL 0.15–0.20, SL 0.38–0.48, CI 83–85, EI 22–25, SI 53–59 (n = 8). Median part of clypeus coarsely sculptured; large, open metapleural gland orifice; whole body light yellow colored; few hairs on dorsum of mesonotum. **Minor worker.** AL 0.68–0.71, HL 0.62–0.65, HW 0.52–0.56, EL 0.12–0.14, SL 0.32–0.34, CI 84–87, EI 22–25, SI 57–63 (n = 8). Large, open metapleural gland orifice; whole body light yellow colored. **Queen.** AL 1.82–2.38, HL 1.22–1.41, HW 0.98–1.06, EL 0.44–0.48, SL 0.62–0.68, CI 74–80, EI 44–49, SI 63–66 (n = 6). Dense, subdecumbent pubescence on scape, occiput, and alitrunk; an- and katapisternum with few erect hairs, especially in the dorsal regions; large metapleural gland orifice; petiole low, dorsally truncated but slightly dorsally convex. HOLOTYPE: AL 1.82, HL 1.62, HW 0.92, SL 0.62, EL 0.44, CI 80.3, EI 55, SI 63.

COMMENTS: This species is easily recognized by its small, light yellow workers, the large metapleural gland orifice, and the uniform brown-colored queen with, at most, appendages and frontal part yellowish. The Sumatran specimens differ somewhat in the body coloration of the queens, which is of a dark brown color and they are larger (AL = 2.24–2.38), however, the workers are of the same yellowish appearance as the non-Sumatran specimens.

BIOLOGY AND DISTRIBUTION: This species is known only from *Crypteronia griffithii* (Crypteroniaceae) but may inhabit another *Crypteronia* species as well (see under *crypteroniae*). A detailed account of the protec-

tive function of *maschwitzi* to its host and colonization rates of different aged host trees are given in Moog et al. (1998). The ants patrol young foliage and deter or kill herbivores they encounter. In addition they clean the surface of young leaves from insect eggs.

Preliminary data suggest a competitive relationship of *maschwitzi* with *crypteroniae*, the sympatric second ant partner of *Crypteronia* in Borneo and Sumatra (unpubl. results). It appears that young *Crypteronia* saplings are occupied primarily by *maschwitzi*, due to the smaller twig diameter, giving the smaller *maschwitzi* queens priority of access to the host plant resource. However, a large percentage of older saplings has been subsequently colonized by *crypteroniae*. It will be interesting to study this phenomenon in detail, i.e. if the observed pattern is the consequence of direct or indirect (e.g. better performance of initial colonies) interactions between the two species. An alternative hypothesis—that the host plant is locally so abundant that founding queens do not compete for it—can be excluded both by a colonization rate of almost 100% and by the regular occurrence of multiple founding on individual host plants.

C. maschwitzi is the most widespread *Cladomyrma* species, occurring in Borneo, Peninsular Malaysia and in Sumatra (a distribution map is provided in Moog et al. (l.c.)). Mitochondrial DNA sequences of *maschwitzi* (and “*cryptata*” = *andrei*) are available through a molecular phylogenetic study of members of the tribe Myrmelachistini (inclusive *Cladomyrma*) by Chenuil and McKey (1996).

MATERIAL EXAMINED: W-MALAYSIA, Perak, Maxwell Hills (=Bukit Larut), 1/21/1988, Ulrich Maschwitz, 0947, ex: *Crypteronia griffithii*; Selangor, Ulu Gombak, 1990, Joachim Moog, 0002, ex: *Crypteronia griffithii*; E-MALAYSIA, Sarawak, Lambir NP, Miri, 2/28/1992, Brigitte Fiala, 92-247, ex *Crypteronia griffithii*; SUMATRA, Jambi Province, Muarabungo, Muar Buat, 3/18/1998, Joachim Moog, 98-044, ex: *Crypteronia griffithii*, alt.: ca. 180m; Jambi Province, Muarabungo, Muar Buat, 3/18/1998, Joachim Moog, 98-046, ex: *Crypteronia griffithii*, alt.: ca. 180 m.