

and gaster smooth and shining, petiole and postpetiole with a few transverse posterodorsal carinulae; ventral keel of petiole in the form of a low translucent flange, forming a short angular tooth anteriorly, splitting and becoming two small subparallel carinulae posteriorly; posterolateral petiole with longitudinal carina, delimiting posteroventral concavity between lateral carina and ventral keel; ventral margin of postpetiole with short tooth; femora, tibiae, scapes, and dorsal surface of mandible covered with abundant subdecumbent setae; face, dorsal mesosoma, dorsal petiole and postpetiole with moderately abundant suberect coarse setae; dorsal gaster with dense suberect coarse setae; general body and appendage color orange, gaster darker, dorsal setae amber.

Queen. Measurements (n=3): HW 0.939–1.023, HL 0.929–0.950, SL 0.905–0.945, EL 0.336–0.341, ML 1.529–1.578, CI 101–108, SI 92–96.

Palp formula 3,2 or 4,3, with variable or partial fusion of terminal segments; general shape, sculpture, and pilosity characters, including mandibular dentition and sculpture, similar to worker; parapsidal lines barely visible; wing venation as in Fig. 7H.

Male. Measurements (n=1): HW 0.898, HL 0.891, SL 0.759, EL 0.525, ML 1.643, CI 101, SI 85.

Palp formula 4,3; mandible with 5 distinct teeth, apical largest, diminishing in size basally; dorsal surface of mandible striate; antenna with third segment bent, creating a kink; clypeus and face with longitudinal carinulae; head capsule with concavity around compound eye, like worker; fused notaulae present anteromedially, parapsidal lines distinct; wing venation similar to queen; ventral margin of petiole a more delicate version of condition in worker and queen; abundant coarse suberect setae on dorsal head, mesosoma, and metasoma; color orange with darker gaster, lighter appendages, antennal segments 2–4 nearly white.

Biology. *Megalomyrmex adamsae* is a specialized predator of Attini, like its close relative *M. symmetochus*. Colonies cohabit nests with their attine hosts as "agro-predators," feeding on fungal mycelia and perhaps attine brood. *Megalomyrmex adamsae* and *M. symmetochus* differ in host preference: *M. adamsae* is typically found in *Trachymyrmex* Forel nests, *M. symmetochus* in *Sericomyrmex* Mayr nests (Adams, pers. comm.).

Etymology. This species is named for Rachelle Adams, whose extensive field and laboratory work has greatly advanced our understanding of the genus *Megalomyrmex*.

Comments. *Megalomyrmex adamsae* and *M. symmetochus* are very similar species. There is molecular evidence that the two are probably sister taxa (Adams, pers. comm.). The characters differentiating them in the diagnosis are consistent in Central America and the concordant molecular, morphological, and behavioral characters strongly support the existence of two sympatric species in central Panama.

I examined three collections from near Manaus, Brazil, and one collection from Peru that are in the *symmetochus* complex but do not cleanly fall into either *adamsae* or *symmetochus*. They vary in coarseness of pilosity and are somewhat in between the states of *adamsae* and *symmetochus*, the scape is long like *symmetochus*, the ventral petiolar keel is more like *adamsae* than *symmetochus*, they nest with *Trachymyrmex*. Molecular evidence weakly alligns them with *adamsae* (Adams, pers. comm.).

Other South American examples of the *symmetochus* complex have been reported. Brown observed a colony from near Manaus, Brazil (reported as *silvestrii* in Kempf & Brown 1968; reidentified as *symmetochus* by Brandão 1990). He reported "The colony ... was found in a small rotten log in rain forest on 26.VIII.1962, in a small chamber with a small species of *Trachymyrmex*. The ants of both species were found throughout the fungus garden of the chamber, but off to one side in a small chamber was found a group of the *Trachymyrmex* clustered with a small piece of fungus garden unoccupied by *Megalomyrmex*. ... the situation suggested that the *M. silvestrii* colony had successfully attacked and moved into the attine nest, and was in the process of plundering it." Brandão (1990) reported a collection from Belem, PA, Brazil, from a nest of an unidentified *Trachymyrmex*.

Additional material examined. All collections of *adamsae* have been from Pipeline Road in Panama, near Barro Colorado Island, all from *Trachymyrmex* nests, from 1999 to 2005. Additional collections are those by A. M. Green (AMG031210–02) and R. Adams (RMMA050727–06, RMMA050801–08, RMMA050818–05, RMMA990930–03, RMMA990930–19).

Collections of *adamsae*-like material from South America are BRASIL: Amazonia: Manaus, Headquarters of Empresa Brasileira de Pesquisa Agropecuaria (EMBRAPA)–Amazonia Occidental, located at kilometer 28 of highway AM010, 02°52'48"S, 059°58'48"W, 50 m, primary rainforest, 20 Jun 2003 (C. Rabeling); Dimona, 02°20'19"S, 060°06'10"W, 85 m, forest, 16 Jan 2009 (S. E. Solomon); Reserva Campina, EEST Km 44, 18 Aug 1992 (T.R. Schultz & J. D'Arc); PERU: Manú: Huacaria, 12°54'10"S, 071°25'25"W, 600 m, wet forest, 29 May 2004 (C. Rabeling).