

Megalomyrmex latreillei Emery, 1890: 47 (footnote), pl. 5, fig. 4. Holotype worker: Cumbase [probably San Antonio de Cumbasa, San Martín], Peru [MCSN] (not examined). Brandão, 1990: 436, description of male. Synonymy by Brandão, 2003: 152.

Measurements. Worker: HW 1.50–1.86, HL 1.80–2.13, SL 1.98–2.58, ML 2.28–3.09 (n=43, from Brandão, 1990).

Geographic range. Costa Rica south to Andean regions of Colombia, Ecuador, and northern Peru.

Biology. This species occurs in moist to wet forest habitats, in mature and second growth forest. It typically occurs in mountainous regions; in Costa Rica collections are from 100–1200 m elevation. Workers are large, conspicuous ants that may be found foraging on the ground or on low vegetation. They are attracted to extrafloral nectaries and will tend Hemiptera for honeydew.

In Central America, *M. foreli* is known from Costa Rica, where it is not common. I have collected *foreli* in the central cordilleras and on the Osa Peninsula. Workers can be found on the ground and low vegetation as diurnal or nocturnal foragers. Males come to lights. On the Osa, I encountered them in the hilly interior areas, and not in coastal areas. Workers can accumulate on sources of extrafloral nectar; I once observed 15 workers together on one *Costus* inflorescence.

I observed a colony at the El Ceibo site on the Barva Transect in Braulio Carrillo National Park. It was in the understory of mature wet forest at night. I saw active workers on a large liana stem and discovered that there were cavities in the stem. I saw two entrance holes in the liana, with workers visible inside, and another entrance hole in the ground at the side of the liana. The workers were aggressive, readily attacking my fingers when disturbed. One of the upper entrance holes was concealed by a small aroid with basket roots. There was carton construction around the aroid roots, possibly made by the *Megalomyrmex*. The aroid also covered two large Margarodidae being tended by workers. Penny Gullan identified them as immature females of the subfamily Monophlebinae, probably tribe Llaveiini.

Specimens from Colombia bear labels "Cacao - associated with membracids *Horiola picta* (Coquebert)," and "árboles de cacao" (reported in Brandão 1990). Jones *et al.* (1999) studied the venom alkaloids of *M. foreli* (= *M. latreillei*) workers collected in Ecuador.

Comments. Material I have examined from Costa Rica varies geographically in degree of development of propodeal tubercles and color. A specimen from Limón province is strongly tuberculate and red brown. Specimens from the San Vito area vary from strongly to weakly tuberculate and are orange brown. Specimens from the Osa Peninsula are not at all tuberculate and are red brown with strongly contrasting darker gaster. Specimens from the Osa also have the head narrower and the occipital carina more visible in face view. In contrast, specimens from the central ranges have a broader head with the occipital carina not or barely visible in face view.

Additional material examined. COSTA RICA: Alajuela: Laguna Poco Sol, 10°21'N, 084°40'W, 800 m, second growth wet forest, 10 Mar 2006 (J. Longino); Guanacaste: 9 km NE Sta. Elena, 10°23'N, 084°47'W, 650 m, moist forest, river edge, 2 Mar 1998 (J. Longino); Heredia: 10 km SE La Virgen, 10°20'N, 084°05'W, 500 m, wet forest, 10 Nov 2002 (J. Longino); 11 km SE La Virgen, 10°20'N, 084°04'W, 500 m, montane wet forest, 21 Mar 2003 (R. Vargas C.); Limón: Rio Segundo afl. Rio Banano, 09°50'N, 083°12'W, 500 m, 28 Apr 1985 (A. Solis); Puntarenas: Los Planes, Corcovado National Park, 08°38'N, 083°40'W, 100 m, 7 Jun 1982 (J. Longino); Llorona, Corcovado National Park, 08°35'N, 083°42'W, 5 m, 5 Dec 1981 (J. Longino); Rio Nino, Corcovado National Park, 08°33'N, 083°29'W, 300 m, 26 Feb 1981 (J. Longino); Cerro Rincon, Corcovado National Park, 08°33'N, 083°29'W, 700 m, 27 Feb 1981 (J. Longino); Wilson Botanical Garden, 4 km S San Vito, 08°47'N, 082°58'W, 1200 m, 28 Feb 1989 (J. Longino).

Megalomyrmex incisus Smith

(Figs 1D, 4A)

Megalomyrmex incisus Smith, M.R. 1947: 102. Holotype worker: Barro Colorado Island, Panama, Jul–Oct 1943 (Zetek) [USNM] (not examined). Brandão, 1990: 451, description of male. Brandão, 2003: 157, description of queen.

Measurements. Worker: HW 0.65–0.87, HL 0.63–0.86, SL 0.63–0.78, ML 0.98–1.18 (n=20, from Brandão, 1990).

Geographic range. Southern Mexico south to central Brazil and Peru, absent in Costa Rica.

Biology. This species occurs in moist to wet forest habitats, from sea level to 1000 m elevation. It is most often