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THE PANAMANIAN ATTA SPECIES

(HYMENOPTERA: FORMICIDAE)

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Three species of *Atta* are known from the Republic of Panama, including the Panama Canal Zone area (Weber, 1956). The present note illustrates these for the first time. One has become of particular interest in view of the biochemical studies of Martin *et al.* (1967 and manuscript) and all have been used by me in various published and unpublished biological studies. All have been maintained in my laboratory and 1966 colonies of two are currently thriving.

Of the three, *Atta sexdens* (L.) is widespread in South America and extends into Costa Rica. The common *Atta cephalotes* (L.) of South America is represented in Panama by the subspecies *isthmicola* Weber, and perhaps undescribed subspecies are found in Costa Rica and elsewhere in Central America. The distribution of *sexdens* and *cephalotes* in South America is figured in Weber, 1966. A narrow, isolated coastal strip in the state of Bahia, Brasil, that was inadvertently omitted from the *cephalotes* map was kindly called to my attention by Dr. Pedrito Silva. The distribution of the third, *Atta colombica tonsipes* Santschi, is Panamanian only, so far as known. The identification is based on the Santschi type material, which I have studied (Weber, 1958). It comes from two Panamanian localities where this ant still occurs.

The three may be distinguished from one another as follows:

1. Head of soldier relatively smooth and shiny on the occiput; workers smooth and shiny, clearly bi-colored, the thorax darker than the head ..... **cephalotes isthmicola** Weber
   Head of soldier matte; workers uniformly colored 2
2. No pre-occipital spine or tubercle in soldier or worker; mostly a species of forest ..... **colombica tonsipes** Santschi
   Pre-occipital spine or tubercle in soldier and worker; grasslands or grassland-forest margin ecotone ..... **sexdens** (L.)

Of the three, *sexdens* has the smallest male but all have large females. The weights in life of representative soldiers were 67–103 milligrams (mature *isthmicola* colony), 27–35 mg (*tonsipes* of 1½ year colony) and 23–64 mg (young *sexdens* colony). It appears that it takes more than two or three years to produce the largest soldier in *tonsipes* and a shorter period in the other two. Small soldiers are produced in all three in the second half of the first year of colony life. In young colonies the species may be easily distinguished by the smooth and shiny workers in *isthmicola* contrasted with the matte workers of the other two and the pre-occipital tubercle in *sexdens* being absent in *tonsipes*.

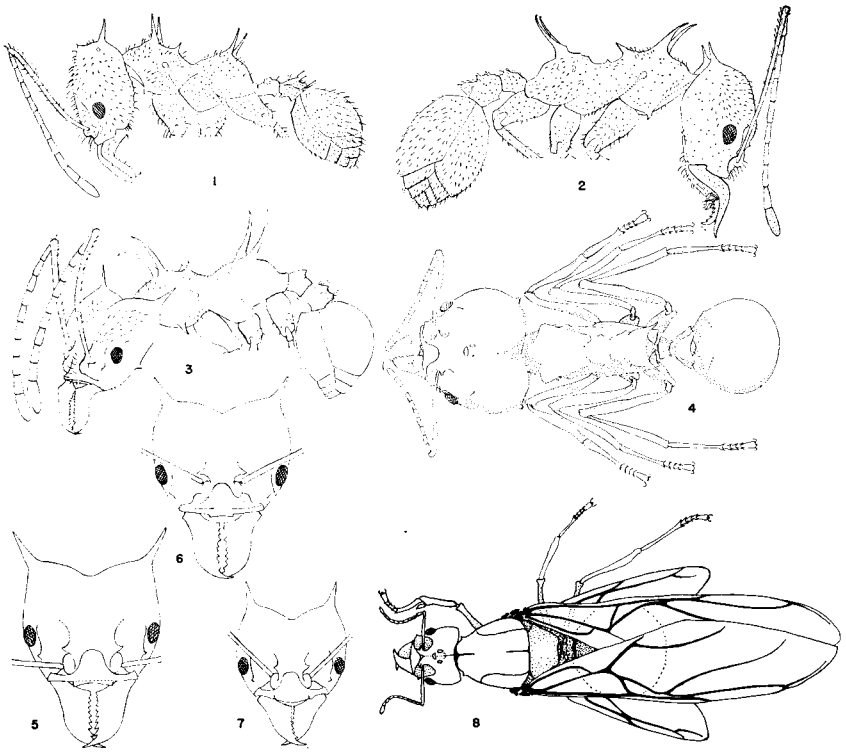

Fig. 1, *Atta sexdens* (L.) worker, Panama. Figs. 2, 5–8, *A. colombica tonsipes* Santschi: 2, thorax length 2.70 mm, width of head 2.18 mm; 5, worker head width 2.25 mm, back of eyes, 1.80 mm from clypeal margin to mid-occipital impression; 6, worker head width 3.40 mm and length as above 2.40 mm; 7, worker head 1.60 mm and 1.50 mm; 8, alate female from above. Figs. 3 and 4, *A. cephalotes isthmicola* Weber: 3, cotype worker, thorax 2.70 mm, width of head 2.18 mm, ant size identical to *tonsipes* above, Canal Zone; 4, soldier, dorsal view, Canal Zone.

Acknowledgments

David Klingener kindly determined the distribution of *tonsipes* in the Canal Zone for me in 1957 and Suzanne Tubby (now Dr. S. T. Batra) made the drawings. Aided by NSF Grant GB5346.

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