

**The social parasitic ant, *Solenopsis*
(=*Labauchena*) *daguerrei*
(Hymenoptera: Formicidae) in São
Paulo, Brazil**

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Social parasitism among ants is rarely registered in tropical ant faunas (Hölldobler and Wilson 1990), which may be due to the geographic aggregation of Myrmecologists in Europe and North America, than due to the biogeographic occurrence of this highly derived mode of life (Wilson 1971). Here we report a new geographic record for the parasitic ant, *Solenopsis* (= *Labauchena*) *daguerrei* (Santschi 1930), a social parasite of the fire ants *Solenopsis* of the *geminata* complex (Trager 1991). Because of its apparently devastating effects on local populations of fire ants (Silveira-Guido *et al.* 1973), this social parasite has long been considered a possible candidate for the introduction into areas in which fire ants have been accidentally introduced and have reached population densities sufficient to be considered as pests (Porter *et al.* 1992, 1997).

Two colonies of *Solenopsis saevissima* (Fr. Smith) were collected in January, 1996, in Rio Claro, São Paulo, Brazil (22.5° S, 47.5° W), infested with *S. daguerrei*. This record extends the range of *S. daguerrei* more than 1000 km, as previous records are from the Brazilian pantanal ecosystem (the Paraguay-Paraná River basins), and from Argentina and Uruguay (Kempf 1972, Brandão 1991).

However, during the last eight year, 5,378 nests of *S. saevissima* were examined within the region of Rio Claro, and only one of these were previously found infested with *S. daguerrei*, which was a nest located within the yard of a urban environment. Comparison with specimens provided by Dr. D.F. Williams from Dourados, Mato Grosso do Sul, Brazil (20.5° S, 54.5° W) were identical with these specimens, as were specimens, as were specimens collected further north (15.5° S, 56.0° W) and further south (35.0° S, 56.0° W), with slight modifications of the post-petiole similar to the synonymized taxa *S. (L.) acuminata* (Borgmeier 1949, 1959). Voucher specimens are deposited in the collection of H.G.F. This record is the first out of the Paraná-Paraguay River system, but is well within the documented range of its known host species, *Solenopsis invicta* Buren. This is the first record of parasitism of *S. saevissima* by *S. daguerrei*, which also is known to parasitize *S. richteri* (Forel), and may also parasitize other species of this complex of ants.

Specimens are deposited in the collection of H.G.F. Colonies were maintained in the laboratory for approximately 4 weeks. Brood production during this period was entirely by *S. daguerrei*, with each colony producing several hundred social parasites, in apparently equal proportions of males and females. However, we are unable to transfer *S. daguerrei* to other colonies of *S. invicta* or *S. saevissima*, and posterior searches in the same area have failed to reveal additional parasitized colonies. In spite of this, this range extension provides additional support for efforts for the introduction of natural enemies into exotic populations of fire ants, and frees to hitherto known distribution of *S. daguerrei* from the biogeographic boundaries of the Paraguay-Paraná River system, and may be one of the natural enemies necessary to favor competitive displacement of fire ants in exotic areas by the native ant fauna (Porter *et al.* 1997).

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