

According to Forel (1912), Christophersen has also observed the parabiosis of *D. parabioticus* and *C. parabiotica* in Panama.

In my paper on the Central American Acacia ants (1913) I described another case as one of parabiosis, namely, that of *Camponotus planatus* Roger and *Pseudomyrma belti* Emery var. *fulvescens* Emery, which often live on the same tree. They forage on the nectaries of the same leaves and though not friendly are certainly not hostile to one another. In Wasmann's opinion (1915, p. 129) this is not to be regarded as a case of parabiosis "except in a broad sense, since the two species do not inhabit the same nest but different nests (thorns) on the same trees or branches." I would point out, however, that the cavity of a single pair of thorns is properly to be regarded not as a complete nest but merely as one of the chambers of a poly-cladic nest represented by the whole number of thorn cavities on the tree. From this point of view I believe I was justified not only in calling the association of *planatus* and *fulvescens* parabiotic but also the cases of the ants which I found many years ago nesting in Tillandsias in Mexico, Florida and the Bahamas (1901). I admit, of course, that we have here an approach to what I called the cases of "plebiobiosis," such as are exhibited by two or more hostile or indifferent species of ants when they occupy separate though intertwined galleries in the same log or under the same stone.<sup>3</sup>

In 1912 Mann described two very interesting cases of parabiosis which he observed in Brazil. The first was represented by *Dolichoderus* (*Monacis*) *bispinosus* Olivier and a small black *Crematogaster*, which, he informs me, was evidently *parabiotica*. Near Pará the *Dolichoderus* "lives in carton nests, built on the branches of trees, though often a colony is found in a deserted termitarium." Large nests contain this species alone, but "in young trees along the trails there were numerous small nests, four or five inches in diameter, and several of these were opened. Each contained, besides the *Dolichoderus*, a colony of small black *Crematogaster*. The smaller ants were not scattered throughout the nest, but were grouped in certain of the chambers." From the fact that the *Dolichoderus* is a fierce and pugnacious ant, Mann infers that all the advantage of the association would be on the side of the *Crematogaster* "since it shares the nest built by the other and is well protected, without apparently contributing anything in return."

The other case was observed in Matto Grosso and is described as follows: "In August, while collecting along a trail near Camp No. 41 on the Madeira-Mamore Railroad in the State of Matto Grosso, my attention was attracted to a number of small red *Dolichoderus*. They were moving excitedly about, holding the abdomen up and a little to one side, so that they

<sup>3</sup> In his paper of 1915 Wasmann describes a *Pseudomyrma* from thorns of *Acacia sphaerocephala* collected by Brakhoven at Tampico, Mexico, as *Ps. canescens* sp. nov. As this name is preoccupied by *Ps. canescens* Fred. Smith of Brazil (Trans. Ent. Soc. London, 1877), I suggest that the Mexican species be known as *Ps. wasmanni* nom. nov.