

A NEW CASE OF PARABIOSIS AND THE "ANT GARDENS"
OF BRITISH GUIANA¹

WILLIAM MORTON WHEELER

Bussey Institution, Harvard University

The mutual hostility of ants belonging to colonies of different or even of the same species is so nearly universal, that it is surprising to find colonies belonging to different taxonomic subfamilies actually living in the same nest in a state of mutual toleration or even amity. Prof. Auguste Forel was the first to describe such an occurrence and to designate it as *parabiosis*, to distinguish it from those peculiar forms of social symbiosis, called "compound nests" and "mixed colonies," among certain Nearctic and Palearctic species. While on a trip to Colombia in 1896 he made the following observations (1898): "I often observed, for the first time in the neighborhood of Santa Martha, two species of ants belonging to different genera and even to different subfamilies, a *Dolichoderus* and a *Cremastogaster*, both of a shining black color, the former much the larger and especially broader than the latter, and of a very different form, running very generally in common files, both over the ground and on the undergrowth. The files were very long and dense, so that the ants met and elbowed one another continually.

"The two species were foraging on the bushes, the *Cremastogaster* seeking especially the plant-lice or scale insects, the *Dolichoderus* especially the juices of plants. Hence towards their terminations the files divided, each species proceeding to its own feeding ground. I finally succeeded in discovering on the trunk of a mango a large termite nest which had been appropriated by the two species of ants in question and was serving them as a habitation of a character hitherto unknown. The time for observation was unusually propitious, as each species had its sexual phases and its pupae in the nest. The latter was inhabited just as it had been abandoned by the termites, without any alterations or additions. In no part of it were the two species of ants actually mixed. Some of the corners were still occupied by the termites.

"The chambers and galleries were nearly everywhere occupied either by the *Cremastogaster* with their females, males and pupae or by the *Dolichoderus* with their females, males and pupae. Each species, therefore, had its own separate *ménage*, unlike the conditions seen in the mixed formicaries of our *Polyergus* and *Formica*, which carry on their households in common.

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