

Reprinted from ANNALS OF THE ENTOMOLOGICAL SOCIETY OF AMERICA,
Vol. XXXIX, No. 1, March, 1946

DIMORPHISM IN THE AFRICAN OECOPHYLLA WORKER AND AN ANOMALY (HYM.: FORMICIDAE)

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The genus *Oecophylla* comprises the species of ants whose larvae produce silk and are used by the workers as shuttles in weaving their nests (fig. 1). Two species are recognized, *longinoda* (Latreille) of the Ethiopian Region and *smaragdina* (Fabricius) of the Indomalayan and Papuan Regions. Each has several described varieties and subspecies. The worker is formally characterized as slightly polymorphic.

While examining workers of a nest which I had collected in the Anglo-Egyptian Sudan I was impressed by their variation in size and had measured one hundred workers taken at random from each of three colonies (figs. 7-8). Two measurements were made of each, the total length, which is difficult to make precisely because of the variability in extension of the gastric segments, etc., and the thoracic length. Inasmuch as the coefficient of correlation between the body length and the thorax length was $+0.90$, only the body length was used for the graphs since graphs of thorax lengths were essentially duplicates.

The results of the measurements indicated a surprising dimorphism which has gone completely unrecognized and suggest that other ants which are "polymorphic" may prove to fall into several castes when examined statistically. The physiologic implications are significant. When the extremes of workers are obvious, as in the maxima and minima *Atta*, the rôle of each is similarly obvious. Perhaps there is a similar division of labor in *Oecophylla*, the smaller workers caring for the brood, the larger workers holding leaves together in nest making, defending the nest, etc.

The African species nests in trees and is polydomous. A tree with a large colony may be completely dominated by the ants, which are aggressive and swarm over an intruder, biting viciously. The African species and its forms were described and the literature summarized by Wheeler (1922). While known from numerous localities in tropical Africa, there were no records from the Anglo-Egyptian Sudan in this study or in later papers on the African fauna. Sudan records were briefly summarized recently (Weber, 1943) and, with other unpublished records, are given below:

At Kagelu, Equatoria, A.-E. Sudan, the late Dr. J. G. Myers took them March, 1939 (Nos. 10593, 10601, 10628) and I took them July 17 and August 12, 1939. I found them in gallery forest running on vines at four feet above the ground, tending coccids on leaves, and nesting at a height of six feet. Two leaves of a vine were closed with silk and on the upper surface of one leaf the ants were tending coccids. The ant brood was inside the leaves.

At Torit, Equatoria, A.-E. Sudan I found them nesting abundantly on mango trees July 21 and August 6, 1939. They were examined on