

ing the condition by figures and graphs I speculated "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."

As biologist to the Central African Expedition of the American Museum of Natural History, led by Dr. James L. Clark, I had an opportunity to revisit Africa in 1948 and test this speculation. The division of labor correlated with the dimorphic condition was strikingly verified. To summarize, it was determined that only the maxima foraged from the nest while the minima stayed within it, caring for the brood and not leaving the nest unless it itself was disturbed.

The distribution in Africa of *Oecophylla* lies largely between 15 degrees North Latitude and 15 degrees South Latitude with an extension southward along the Indian Ocean coast. The records obtained on the expedition were largely from the central part of this range and are probably representative of the situation in Africa. One species, *longinoda* Latreille, with several subspecies or "varieties" represents the genus in Africa. Prior to Wheeler's great work on Congo ants ('22) the large workers were known to most people as the subspecies or race *longinoda*, the smaller workers as the subspecies or race *brevinodis* André. This long-time failure to recognize the conspecificity of the different sizes was responsible for such suspicious listings as that of Stitz's (1916) of both "races" from the same locality. Wheeler himself, though aware that the two were the same species, was unaware of the implications of these variations in size. All of the chief describers of African ants erected new forms on color alone, Santschi ('28) being the latest, calling them variously, varieties, races or subspecies. These are not correlated with dimorphism and more careful study in the field will be necessary to determine whether they are valid or not and what rank they deserve. Some, at least, are merely normal color variations within the species. The only myrmecologist speculating at all on the variations appears to be Santschi ('35, p. 279) who records the species from the Belgian Congo with the note "Le tube ne contenait que des ♀ de petite taille: serait-ce une variété ou un nid commençant?" The specimens were doubtless neither a "variety" nor the workers of the first brood but the normal minima caste and his restraint this time was fortunate.

#### RECORDS AND OBSERVATIONS

The following specific records and observations are arranged by localities starting with

Kenya and proceeding west. All are in 1948.

Mombasa, Kenya, February 11. At the height of the long dry season in mid-afternoon, when very few ants or other insects were to be observed, workers were taken thirteen miles north of this ancient Indian Ocean seaport. No intensive search for the nest could be made in the limited time available. Only the maxima caste was seen and this consisted of workers crawling slowly in the shade, over the dry and dusty leaves beneath two large mango trees and on the trunks themselves. The ants doubtless nested beyond reach in the trees.

Juba, Anglo-Egyptian Sudan, March 20. Also at the height of the dry season. Maxima workers only were out, at 4:30-5:00 P.M., foraging up and down mango trees at the edge of the Nile River and on the shaded ground beneath. The ants did not forage over the sunny, dry soil where the surface temperature at 3:45 P.M. was 119° F, the shade air temperature being 99° F. The relative humidity in the shade over the soil surface was 19%. The previous Sudan records (Weber, '43) were also in part from mango trees and described insect prey (grasshopper, beetle, bee, ponerine ant) and myrmecophiles. When the nests were disturbed a rattling sound like dry peas dropping on a plate was made by them striking their bodies against the leaves and nests. The body vibrated up and down between their stationary, wide-spread legs.

Dungu, Belgian Congo, February 29. On various trees and foraging on the ground in mid-day. Only the maxima caste out. These were carrying prey consisting of other insects in the direction of the tree crowns. Several had a captive *Camponotus* ant spread-eagled on a tree trunk, grasping it by opposite legs.

Niangara, Belgian Congo, February 29-March 1. The *Oecophylla* were undoubtedly the dominant arboreal ants in this wooded town and may well have been the dominant insects since they were found wherever looked for. They nested abundantly in mango trees. Scores of nests were scattered over individual crowns and since adjacent crowns usually interbranched the limits of a single colony would be difficult to determine. The ants foraged freely over the ground. Since the weather was mild, and rain had fallen several days before, their activities were not particularly influenced by meteorological conditions. A heavy rain 3-5 P.M. March 1 naturally caused a suspension of activity outside the nests for a time. Since they were active long after dark and before dawn they were nocturnal here as they were found to be elsewhere.

Every one of the thousands of workers seen foraging on the trees and ground from numerous nests was a maxima. The minima caste was only found by actually collecting sample