

Isoptera

By C. A. GIBSON-HILL

During his visit in 1897-98 C. W. Andrews found one species of termite on the island. He referred to it as abundant everywhere and obtained a number of specimens. These were examined by W. F. Kirby, who listed them as allied to *Termes sarawakensis* Hav., but did not attempt a further description. No additional collections appear to have been made by subsequent investigators.

In 1939-40 there were at least three species on the island, all very plentiful in certain areas. A number of specimens have been deposited in the Kuala Lumpur Museum, and Mr. N. C. E. Miller has made a preliminary report, covering the first two species.

It is most unlikely that the two species not mentioned in the Monograph were overlooked by Andrews as both are particularly numerous in the neighbourhood of Flying Fish Cove, and it seems probable that they have been introduced since 1898. At present most of the supplies reach the island from Singapore, but in the past they have also been brought from Sumatra, Java and Western Australia. The mail-boat also makes about three trips a year to the Cocos-Keeling Islands where there is a species of *Coptotermes*; this was recorded as early as 1907, when Dr. F. Wood-Jones described it as very abundant in the wood-work of dwelling-houses.

Eutermes sp.

This species, which is very plentiful, occurs all over the island, but it is much more numerous on the plateau than on the shore terrace. The nests, which are most conspicuous, are made of a dark chocolate-coloured, papier mâché like material. They are usually three to four feet high and about a foot across. Rarely they may be situated on the earth or on dead stumps, but normally they are plastered against the side of a large, apparently living, tree between four and fourteen feet from the ground. A number of covered passages, of the same papier mâché like substance, radiate from the nest, some running down the surface of the trunk to the earth and others passing up the tree towards the larger branches.

This is almost certainly the species referred to in the Monograph. Mr. Miller's report on the specimens which he examined was,

"Larvae, large and small workers, immature winged forms and soldiers of *Eutermes* sp. This species is apparently allied to *E. sarawakensis* Hav., but differs, (soldiers) in colour, shape of head and in having setae on abdominal tergites. I have compared it with the description of *E. matangensiformis* f. *obscurus* Holmg. recorded from the same locality, but it is not that species."

Coptotermes sp.

This species is confined almost entirely to the shore terrae, and is most plentiful in the immediate neighbourhood of the settlement at Flying Fish Cove. It attacks houses and similar structures and, more rarely, small, dead trees. It produces the minimum of external passage-way and often this is confined to the roofing of narrow cracks or slits. In the case of small trees the termite may work entirely from within, the trunk itself being partially hollowed out, and there may thus be little or no outward sign of its presence. The nests usually contain a certain amount of mud lining. In some, which may be early examples, splinters of wood remain running the full length of the grain. In others a whole plank is hollowed out, so that only a shell, no thicker than a postcard, is left. The cavity thus formed is filled with an elaborate trabecular structure of mud and wood-pulp. This takes its colour from the kind of timber which has been attacked, being a reddish clay-brown in the case of the red seraya, *Shorea* sp., and a grey biscuit shade from the pine.

According to Mr. Miller this species was not previously represented in the collection of the Department of Entomology.

Unidentified

This species, which is fairly plentiful, seems to occur all round the shore terrace. Specimens were collected at the angle of Smithson Bight, above Greta Beach and in the neighbourhood of Dorothy Beach, as well as along the north coast. It appears to restrict its attentions to the cabbage tree, *Gyrocarpus americanus*, auctt., the nest being hollowed out of the dead branches of otherwise living trees. There are no external runways, passages passing down under the bark of the trunk, and the nests do not contain any mud lining. All the colonies that were examined showed a peculiar shortage of soldiers.

Unfortunately the specimens were sent up after those of the previous two species, and no report was made on them.