

AN UNUSUAL CASE OF MOUND CONSTRUCTION BY THE
TERMITE *ODONTOTERMES FEA*E (WASMANN)

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INTRODUCTION

The termite *Odontotermes feae* was first described from Burma (Wasmann 1896). Later it was reported from India (Holmgren and Holmgren 1917 ; Annandale 1923 ; Silvestri 1923 ; Roonwal and Chhotani 1962, 1966 ; Bose 1984 and several others), Bhutan (Roonwal and Chhotani 1977), Bangladesh (Chaudhury et. al. 1972 ; Akhtar 1975) and Thailand (Ahmad 1965 ; Morimoto 1973).

In the Indian subregion it is a very common species and its nests, generally found underground in soil, are large and massive, covering an area of 1.5-2.5 m in diameter. It is not a mound-building termite in the strict sense of the term. Only very rarely mounds of this species have been reported, Roonwal and Chhotani (1962, 1966) from Barkuda Island, Chilka Lake (Orissa) and by Chaudhury et. al. (1972) from Bangladesh.

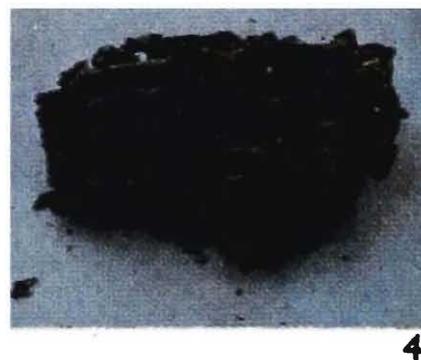
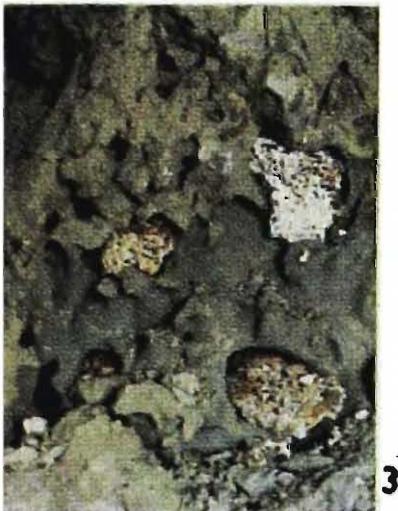
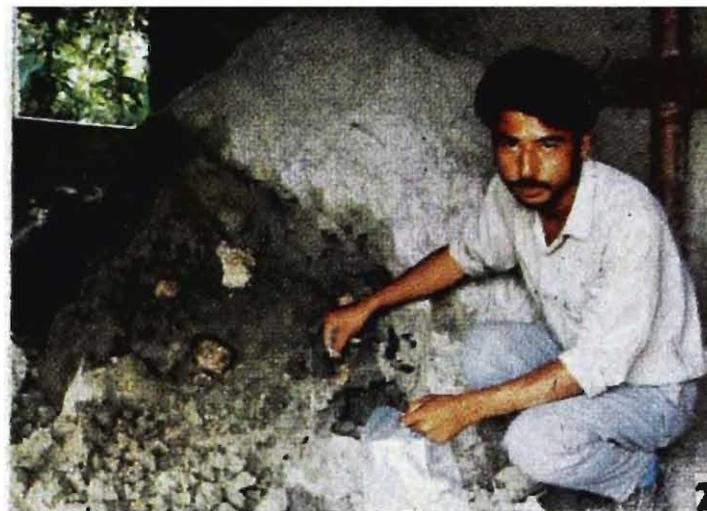
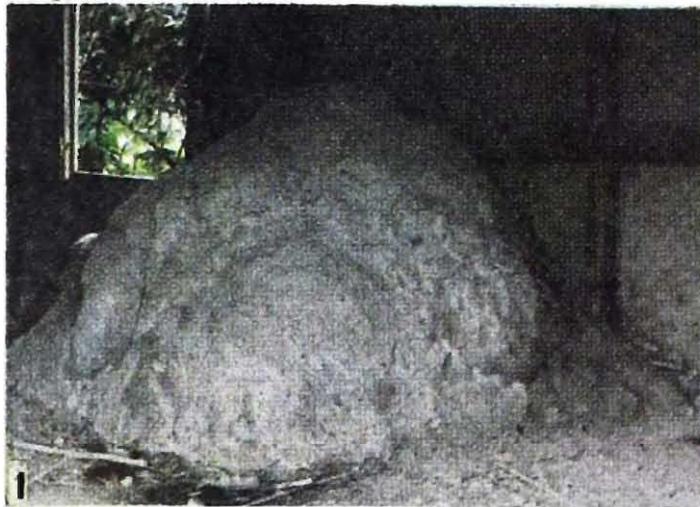
The author here reports mounds of this species from two unusual sites in Manipur come across during her survey of North-eastern India, during May-June 1990.

OBSERVATIONS

During a survey of North-eastern India, the author collected this species from a large number of localities in Mizoram, Assam, Nagaland, Manipur and Meghalaya. It has also been identified from several localities from Arunachal Pradesh from the collections recently studied by the author and from Tripura by Chhotani (1976), and Sen-Sarma and Thakur (1979), showing that it is very common and widely distributed in this part of the country. So far there has been no report of this species having been collected from mounds from this region and the author also collected the same mostly from logs of wood, bamboos lying on ground, under cowdung, debris, fallen leaves and in galleries and layers of earth on tree trunks and logs. In Manipur, the author came across the strange phenomenon of this species building mounds, not in open areas but in covered and enclosed spaces. At Imphal near Mahabali temple, a huge mound of the following structure and dimensions was come across inside a recently abandoned hut. So far the very rare cases of mounds of this species reported from elsewhere have always been from open and forested areas and never from inhabited covered places.

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PLATE I



Mound of *Odontotermes feae* (Wasmann) inside a hut at Imphal
(Manipur, India)

- Fig. 1. Mound as a whole. 2. Mound with a portion of it exposed to show arrangement of fungus combs.
3. An exposed portion of mound-enlarged.
4. Fungus comb.

The present mound was built in the centre of the hut occupying almost half of the area and was like a small, dome-shaped hillock. Its outer surface was without any openings (Pl. I, fig. 1). It was made up of hard dried caked earth forming a thick crust. The outer surface was raised at places forming small to large swellings, and along with this the surface was so layered, that it gave an impression of being uneven and almost corrugated.

The height of the mound was c 105 cm and diameter at base c 160 cms. The mound was found to be of multilocular-type and inside a large number of rounded or irregular vaults, of the size of 10-30 cms, containing fungus combs were found. These vaults are interconnected by galleries for communication. The fungus combs are fragile, soft, brownish and sponge-like mottled with black and a large number of soldiers, workers and young ones were collected from these. The royal chamber could not be traced because of certain local religious taboos, which prevented the excavation, leading to destruction of the mound and so only a portion of the same could be examined. It was due to this taboo, which inferred that some calamity may befall if the mound was removed, that it was allowed to grow to this size, and for the same reason the owner abandoned the hut and built a dwelling elsewhere, this hut being now used partly as a cowshed.

At Loktak (Hydel Project) quite a distance away from Imphal, this termite was found again making small mini sized mounds under a show case in a shop. Here, however, the owner cleared away the soil collected by the termites every morning, but again the next morning it was seen that the insects had formed small pinnacles of excavated piled up earth. Had it not been for the cleaning up of this excavated earth every day, a mound of good size like that of at Mahabali would probably have sprung up.

DISCUSSION

The mound of this species described by Roonwal and Chhotani 1966 from Barkuda Island was reported to be a low sprawling structure, made up of soft reddish earth with several low prominences and with a large number of round holes, but the one found at Imphal was very much larger in size and the outer surface was made up of hard caked mud plastered over and with no openings at all. The inside structure, however, was similar, that is, it was multilocular in both cases and as also found in the case of some other species such as *Odontotermes redemanni*, *Odontotermes microdentatus*, *Macrotermes gilvus* and others. The mounds of this species were also reported by Chaudhury et. al. 1972 from Madhupur Forest, Bangladesh but were found only in the open forested area. This strange phenomenon of mounds being found in huts and houses that is, in inhabited covered areas seemed to be confined only to Imphal and its surroundings in Manipur State, for the author did not come across any mounds in the

open or rather no mounds at all anywhere in Mizoram, Nagaland or Meghalaya during her survey in the region. This strange occurrence of mounds in covered areas is perhaps due to extremely heavy rains in that region and consequent water logging and flooding and the protection afforded by the covered area allows the termite to build its mound undisturbed.

SUMMARY

An unusual occurrence of mounds of *Odontotermes feae* (Wasm.) in covered areas has been reported here from Manipur, India. The mound is described in some detail and photographs given.

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