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NEW TERMITES FROM THE INDO-MALAYAN AND PAPUAN REGIONS

By MUZAFFER AHMAD¹

The present study, based upon specimens in the collection of Dr. Alfred E. Emerson, deals with six new species. *Hospitalitermes moluccanus* and *H. papuanus* are of particular interest in that the distribution of *Hospitalitermes*, hitherto known only from the Indo-Malayan region, is extended into the Papuan region, as shown in the accompanying map (fig. 2), which was prepared by Miss Laura Churchill under the direction of Dr. Emerson. The type specimens are deposited in the collection of the American Museum of Natural History now in the custody of Dr. Emerson. Paratypes are in the author's collection and also in the United States National Museum, Washington, D. C.

I am greatly indebted to Dr. Emerson for checking my identifications and for suggestions during the preparation of this paper.

Odontotermes (Cyclotermes) paradenticulatus, new species

Figure 1

SOLDIER: Head light brown; labrum brown; mandibles dark reddish brown; rest of the body creamy white. A few scattered bristles on the head; tip of labrum with long bristles; tergites moderately hairy. Head ovoid, slightly narrowed in front. Left mandible with a small, sharply pointed tooth midway between the center and the tip. Antennae with 16 to 17 articles, the third article shortest. Postmentum broad with more or less parallel sides. Pronotum saddle-shaped, anterior margin emarginate; posterior margin more broadly emarginate; anterolateral sides broadly rounded.

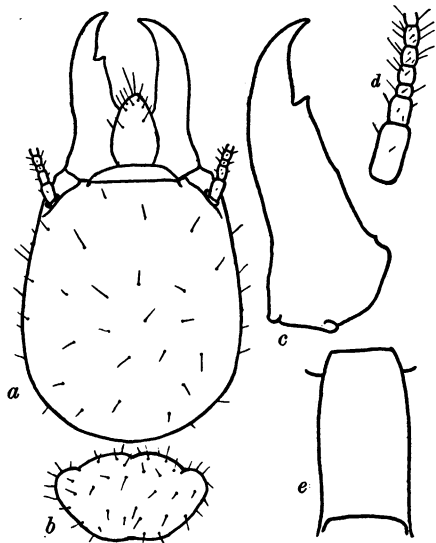


Fig. 1. *Odontotermes (Cyclotermes) paradenticulatus*, new species. A, Dorsal view of head; B, pronotum; C, left mandible; D, base of antenna; E, postmentum.

COMPARISONS: Agrees with *C. denticulatus* from Sumatra in size, shape, and coloration but can be distinguished from it by the relative position of the tooth on the left mandible (in *denticulatus* the tooth is nearer to the middle than in *paradenticulatus*). *C. formosanus*, a widely distributed species in the Indo-Malayan region, differs in having much more slender mandibles and a very minute marginal tooth on the right mandible.

TYPE LOCALITY: East shore of Lake Bito, west of Tarragona, Leyte, Philippines (124° 55' E. longitude and 10° 40' N. latitude), August 21, 1945, several soldiers, workers, and nymphs (C. L. Remington). "In honeycomb-like nest under a large boulder."

¹ Department of Zoology, the University of Chicago.

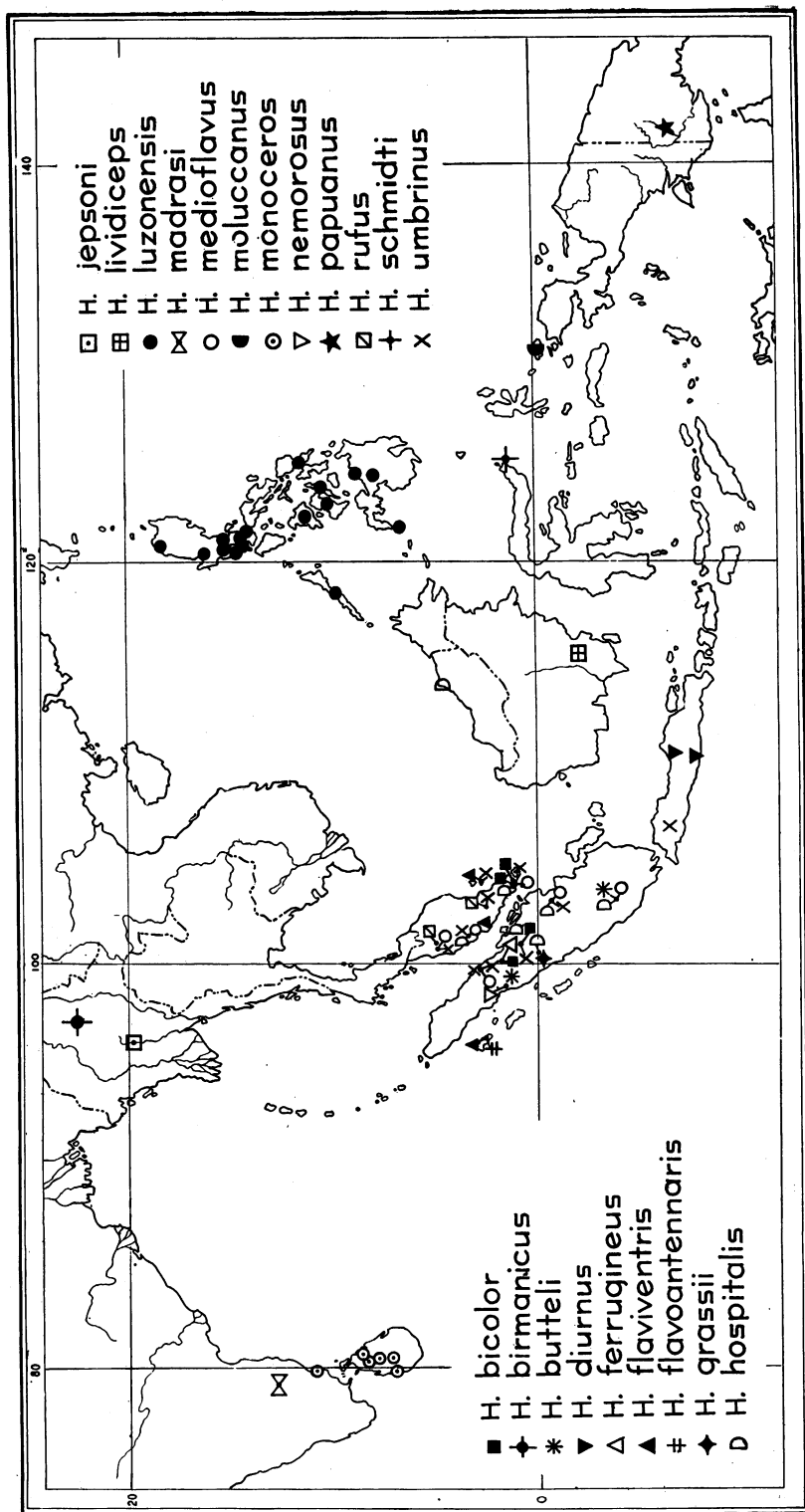


Fig. 2. Geographical distribution of the genus *Hospitalitermes* Holmgren.

MEASUREMENTS (IN MM.)

	No.	RANGE	MEAN
Length of head with mandibles	8	2.22-2.34	2.29
Length of head to side base of mandibles	9	1.35-1.47	1.41
Width of head	9	1.16-1.26	1.20
Length of left mandible	8	0.77-0.82	0.80
Length of postmentum	9	0.86-0.90	0.88
Width of postmentum	9	0.54-0.56	0.54
Length of pronotum	9	0.48-0.53	0.51
Width of pronotum	9	0.79-0.83	0.82

Hospitalitermes schmidti, new species

Figure 3

SOLDIER: Head, except vertex, reddish brown; vertex, genae, and area around rostral hump slightly less dark; antennae, coxae, and femora brown; sternites, tibiae, and tarsi light brown; tergites dark brown. A pair of bristles on the vertex, another pair just behind the rostrum, and one or two on the rostrum; anterior margin of

pronotum fringed with very short bristles; tergites with short scattered bristles; sternites with long bristles. Head shaped as in the figure; profile moderately concave with indication of rostral hump; rostrum rather short. Antennae with 14 articles, second half as long as the third, the latter slightly longer than the fourth. Pronotum nearly twice as wide as long; anterior margin moderately convex.

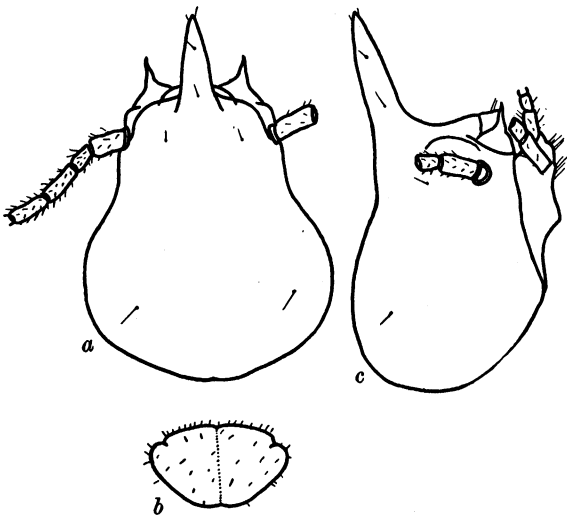


Fig. 3. *Hospitalitermes schmidti*, new species. A, Dorsal view of head; B, pronotum; C, lateral view of head.

MEASUREMENTS (IN MM.)

	No.	RANGE	MEAN
Length of head including rostrum	10	1.62-1.82	1.76
Width of head	10	1.09-1.19	1.15
Length of rostrum (from the tip to the innermost point below the base measured along the axis of the rostrum)	10	0.50-0.58	0.55
Length of pronotum	10	0.31-0.36	0.34
Width of pronotum	10	0.63-0.67	0.64

COMPARISONS: Close to *H. rufus* from Malay from which it can be distinguished by its thicker rostrum, relative length of third and fourth antennal articles (in *rufus* third article is equal to fourth), and slightly less convex margin of pronotum.

Hospitalitermes monoceros from Ceylon is quite close but differs in coloration and length of antennal articles.

TYPE LOCALITY: Lembeh Island, north Celebes, June 22, 1929, several soldiers and workers (K. P. Schmidt).

***Hospitalitermes papuanus*, new species**

Figure 4

SOLDIER: Head, except the vertex, dark brown; vertex, antennae, palpi, and tho-

racic and abdominal tergites, and legs brown; tip of rostrum, venter of abdomen, trochanter, and tibial joints light brown. A few bristles on the head, two on the vertex, two at the base of the rostrum and one or two on the rostrum. Tergites with minute and scattered bristles; sternites with long bristles, especially on the posterior side. Head broadly oval behind; profile moderately concave with a slight rostral hump. Antennae with 14 articles, third slightly shorter than the fourth. Mandibles sharply pointed. Pronotum nearly one and a half times as wide as long with a lightly colored streak running lengthwise in the middle and continued onto the mesonotum and metanotum; pronotal angles rounded.

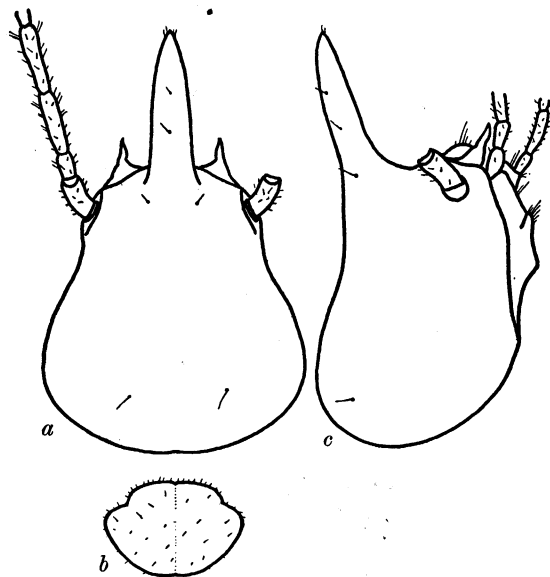


Fig. 4. *Hospitalitermes papuanus*, new species. A, Dorsal view of head; B, pronotum; C, lateral view of head.

MEASUREMENTS (IN MM.)

	No.	RANGE	MEAN
Length of head with rostrum	10	1.80-1.98	1.93
Width of head	10	1.17-1.25	1.22
Length of rostrum	10	0.63-0.73	0.68
Length of pronotum	10	0.40-0.44	0.42
Width of pronotum	10	0.64-0.70	0.68

COMPARISONS: Comes closest to *H. luzonensis* from the Philippines from which it can be distinguished, however, by slightly thicker rostrum, less pronounced rostral hump, and broader head posteriorly.

TYPE LOCALITY: Strickland River, Papua, July 31, 1928, several soldiers and workers (C. E. Pemberton).

***Hospitalitermes moluccanus*, new species**

Figure 5

SOLDIER: Head dark reddish brown; tip of rostrum and area around antennal sockets less dark; basal half of antennae thoracic tergites, coxae, and femora reddish brown; abdominal sternites, trochanters, tibiae, and tarsi light brown. A pair of bristles on the vertex, another pair behind the rostrum and occasionally one or two on the rostrum; pronotum sparsely bristled, bristles very minute; abdominal tergites

with short and scattered bristles, except the last two which have long bristles. Head as in the figure; profile concave; rostrum rather long and slender. Antennae with 14 articles, third a little more than twice as long as second and equal to fourth. Pronotum a little more than one and a half times as wide as long; anterior margin convex; pronotal angles rounded.

COMPARISON: Close to *H. luzonensis* from which it can be distinguished by head being less elevated and less produced behind and having a slightly more slender rostrum. *H. papuanus* has a rostral hump, the head is less rounded behind, and the anterior margin of pronotum is more convex.

TYPE LOCALITY: Waigu Island, Dutch East Indies, June, 1929, two colonies consisting of many soldiers and workers (K. P. Schmidt). "Moving camp from tall tree

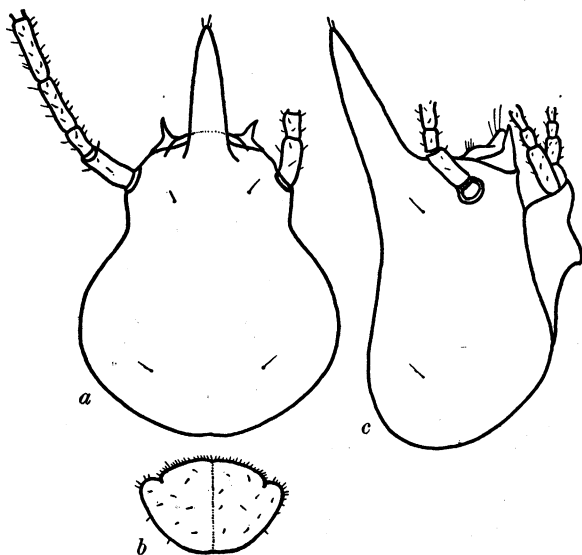


Fig. 5. *Hospitalitermes moluccanus*, new species. A, Dorsal view of head; B, pronotum; C, lateral view of head.

MEASUREMENTS (IN MM.)

	No.	RANGE	MEAN
Length of head with rostrum	10	1.71-1.89	1.84
Width of head	10	1.09-1.21	1.16
Length of rostrum	10	0.57-0.63	0.61
Length of pronotum	10	0.40-0.43	0.41
Width of pronotum	10	0.61-0.69	0.65

to rotten log. Column 60 yards long plus 30 yards on tree."

***Microcerotermes burmanicus*, new species**

Figure 6

SOLDIER: Head testaceous; mandibles dark brown; labrum, first antennal article, pronotum, and coxae brown; antennal articles lighter in coloration; rest of the

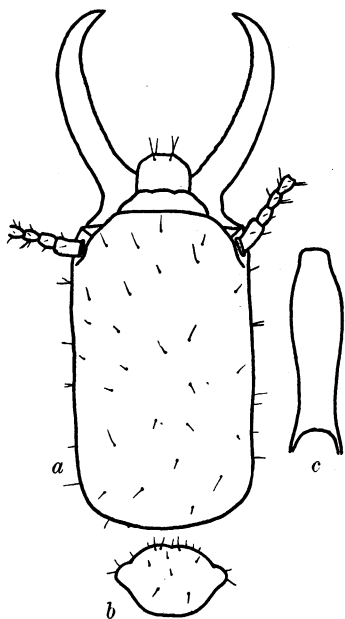


Fig. 6. *Microcerotermes burmanicus*, new species. A, Dorsal view of head; B, pronotum; C, postmentum.

body brownish white. Mandible stout, rather sharply curved at the tip, serration indistinct. Antennae with 13 articles, third a little smaller than fourth, first nearly one and a half times as long as second. Head rectangular, a little more than one and a half times as long as broad,

sides more or less parallel. Pronotum as in the figure.

COMPARISONS: Very close to *M. crassus* from Burma from which it can be distinguished by its smaller but stouter mandibles with tips slightly more sharply curved, and with broader postmentum. *M. championi* from Kumaon, northern India, differs in having shorter head and mandibles with distinct serration.

TYPE LOCALITY: Pagan Road, Rangoon, Burma, May 23, 1935, several soldiers and workers (F. J. Meggitt).

***Microcerotermes philippinensis*, new species**

Figure 7

SOLDIER: Head testaceous anteriorly, lighter posteriorly; mandibles dark brown; antennae, anterior margin of pronotum

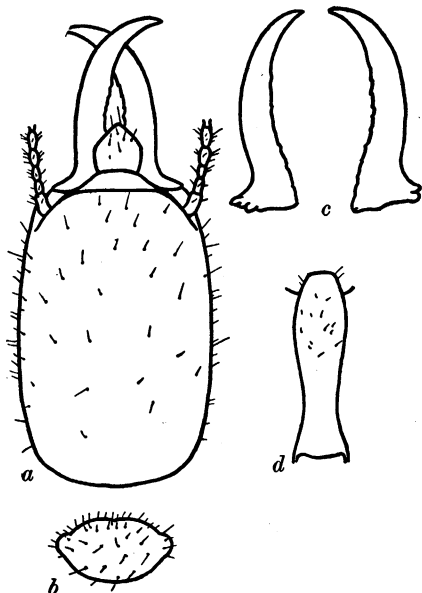


Fig. 7. *Microcerotermes philippinensis*, new species. A, Dorsal view of head; B, pronotum; C, mandibles; D, postmentum.

MEASUREMENTS (IN MM.) OF *MICROCEROTERMES BURMANICUS*

	No.	RANGE	MEAN
Length of head with mandibles	9	2.70-2.88	2.80
Length of head to side base of mandibles	10	1.62-1.71	1.67
Width of head	9	1.01-1.12	1.06
Length of postmentum	9	1.00-1.26	1.10
Width of postmentum	10	0.33-0.36	0.35
Length of pronotum	10	0.32-0.36	0.34
Width of pronotum	10	0.65-0.69	0.67

pale; rest of the body pale white. Pubescence on the head sparse; postmentum with minute hairs in the anterior half; anterior tergites and legs moderately hairy; posterior tergites with long bristles. Head more or less rectangular; mandibles saber-shaped, tips broadly curved, serrations indistinct except for a few notches in the pos-

COMPARISONS: Differs from *M. losbanosensis* from the Philippines in its considerably longer and broader head, less curved mandibles, and more pronounced lateral angles of pronotum. Quite close to *M. depokensis* from Java from which it can be distinguished by its broader anterior portion of the head, less distinct serrations of

MEASUREMENTS (IN MM.)

	NO.	RANGE	MEAN
Length of head with mandibles	9	2.79-2.97	2.29
Length of head to side base of mandibles	10	1.72-1.86	1.79
Width of head	10	1.17-1.26	1.22
Length of postmentum	10	1.16-1.26	1.20
Width of postmentum	10	0.31-0.36	0.35
Length of pronotum	10	0.34-0.37	0.36
Width of pronotum	10	0.68-0.72	0.70

terior half. Tip of labrum pointed, lateral angles indicated. Antennae with 13 articles, third shortest. Postmentum as shown in the figure. Pronotum nearly twice as wide as long, anterior margin convex, slightly emarginate in the middle, lateral angles rounded.

mandibles, and more pronounced pronotal angles.

TYPE LOCALITY: Tarragona, Leyte, Philippines (124° 55' E. longitude and 10° 40' N. latitude), September 15, 1945, several soldiers, workers and nymphs (C. L. Remington). "Basketball-sized nests on coconut trees."

