

Termites from Thailand*

By

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Summary : The present paper deals with the termites of Thailand collected in June, 1965, in connection with the Japan - U. S. Cooperative Science Programme. Forty-eight species are enumerated, of which four are new to science and thirteen are new to the fauna of Thailand. New species are : *Glyptotermes thailandis*, *Nasutitermes brachynasutus*, *Termes major* and *Hospitalitermes asahinai*.

The present paper deals with the termites of Thailand. Survey was carried out in June, 1965, in connection with the Japan - U. S. Cooperative Science Programme. A small collection made by Mr. Y. WATANABE, of Kyoto University, has also been incorporated in this study.

Termites of Thailand had been very poorly investigated until the excellent monograph made by AHMAD (1965). HOLMGREN (1913) first recorded five species from Thailand and SNYDER (1949) listed six species in his catalogue of the termites of the world. AHMAD's monograph contains 74 species and 19 species were enumerated by HARRIS (1968). The present paper deals with 48 species, of which four are new to science and 13 are new to the fauna of Thailand. Altogether, 90 species of termites have been recorded from Thailand up to the present.

The survey described herein was carried out by Dr. S. ASAHINA, of the National Institute of Health, Mr. Y. MIYATAKE, of Osaka Municipal Museum of Natural History, Dr. P. ASHLOCK, of the Bernice P. Bishop Museum, and the author, with the cooperation of Mr. APHIRAT Arunin and the staff of Department of Entomology and Plant Quarantine, Ministry of Agriculture, Thailand. To these entomologists the author wishes to express his deep gratitude. He owes a particular debt to Mr. CHOTO Suvipakit for his assistance extended to us during our stay in Thailand.

His thanks are also extended to Dr. V. HARRIS and Dr. W. A. SANDS, of Termite Research Unit, Commonwealth Institute of Entomology, for their kindness during his study in London, where the author identified most of the termites treated in this paper.

His thanks also go to Dr. K. Ito and Mr. K. Oda, of the Government Forest Experiment Station, for their kindness in the course of the present study.

Holotype specimens are in the collection of the Entomological Laboratory, Faculty of Agriculture, Kyushu University, and paratypes will be deposited in the collections of the Bernice P. Bishop Museum, British Museum (Natural History) and the American Museum of Natural History.

All the measurements in this paper are in millimetres.

* Studies on the xylophagous insects. 2.

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Family Kalotermitidae

1. *Cryptotermes bengalensis* SNYDER

Kalotermes (Cryptotermes) bengalensis SNYDER, Indian Forest Rec. 20 (11) : 4, 1934 (Lower Bengal : Sundarbans).

Cryptotermes bengalensis : SNYDER, Smithson. Misc. Coll. 112 : 38, 1949.

Measurements of two soldiers of *Cryptotermes bengalensis*, together with Comorphotype in British Museum (N. H.).

			Comorphotype
Length of head with mandibles	1.60	1.50	1.50
Length of head to tip of labrum	1.35	1.22	1.32
Length of head to side base of mandible	1.16	1.13	1.12
Width of head	1.10	1.07	1.10
Length of pronotum at the middle	0.50	0.50	0.60
Maximum length of pronotum	0.67	0.69	0.77
Width of pronotum	1.00	0.70	1.12
Length of eye	0.10	0.087	0.10
Width of eye	0.025	0.05	0.05
Antennal segments	11	11	left 9 right 10 (with long 3rd)

Measurements of dealate imagoes of *Cryptotermes bengalensis*, together with Cotype in British Museum (N. H.).

	♂	♀	Cotype
Length of head to tip of labrum	1.17	1.18	1.07
Length of head to side base of mandible	0.85	0.90	0.85
Maximum width of head with eyes	0.90	0.91	0.83
Maximum diameter of eye with sclerite	0.30	0.30	0.30
Minimum diameter of eye with sclerite	0.25	0.23	0.25
Minimum eye-ocellus distance	0	0	0
Maximum length of pronotum	0.65	0.60	0.60
Mesial length of pronotum	0.55	0.53	0.51
Width of pronotum	0.83	0.90	0.87

Locality : Song Khula, 28. VI. 1965, ♂ ♀, two soldiers and workers, in the dead twig of *Ficus* sp.

Distribution : India (Assam : Jokai Reserve Forest; Lower Bengal : Sundarbans), Bangladesh (Dacca), Thailand-new record.

Remarks : Soldiers taken from Song Khula differ slightly from Comorphotype in the shape of pronotum as illustrated in fig. 1 and 2.

2. *Glyptotermes thailandis* sp. nov. (fig. 3)

Soldier : Head reddish brown, slightly darker near postclypeus and paler behind; labrum yellowish brown; mandibles dark brown in the distal halves and reddish brown at bases; pronotum yellowish brown; abdominal tergites brownish; legs and abdominal sternites pale

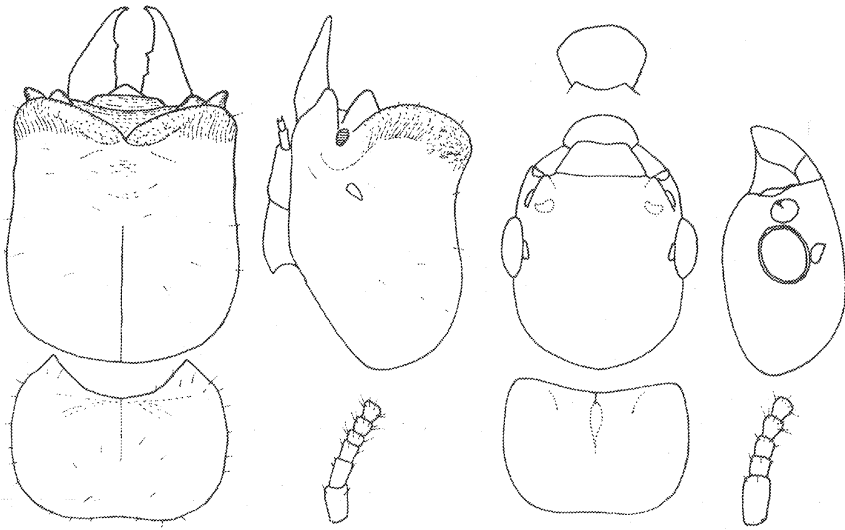


Fig. 1. *Cryptotermes bengalensis* SNYDER, from Songkhula.
Soldier (left) and imago (right)

Fig. 2. *Cryptotermes bengalensis* SNYDER,
comorphotype.
Pronotum of soldier

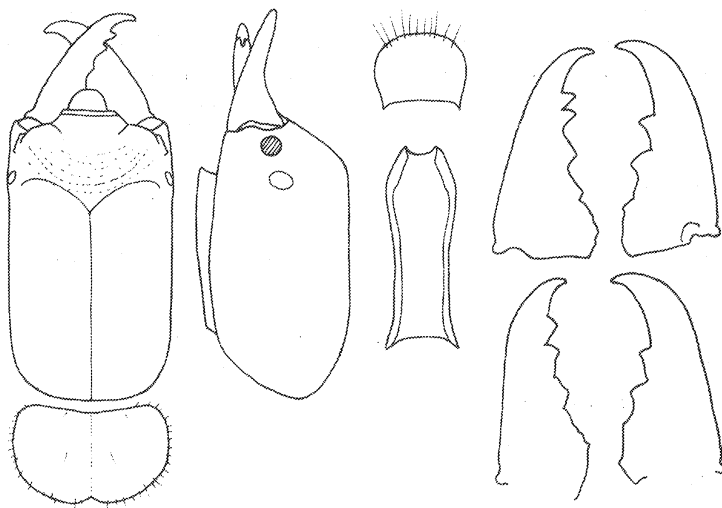
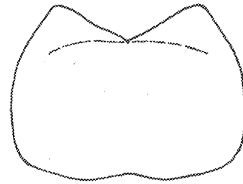


Fig. 3. *Glyptotermes thailandis* sp. nov.
Soldier : Head, pronotum, labrum, gula and mandibles.

yellowish brown.

Head parallel-sided, Y-suture present, but not distinct, antero-dorsal prominences slight; forehead in profil sloping at an angle of approximately 120 degrees. Eyes broad oval to narrow oval. Labrum short, much wider than long, extending up to one-fourth of mandible from the base. Mandibles nearly half as long head capsule; left mandible with three marginal teeth, first and second close together, variable in shape, subequal in length; right mandible with two marginal teeth. Postmentum elongate, flat, less than three as long as its maximum width, anterior margin concave. Antennae with 12~13 segments, in specimens with 12 segments the third slightly shorter than the fourth and $\frac{2}{3}$ times as long as the second, in specimens with 13 segments the third very short and half as long as the second and slightly shorter than the fourth. Pronotum slightly narrower than head; anterior margin shallowly concave; posterior margin weakly convex, with a triangular notch in the middle varying from large to minute and indistinct.

Measurements of five soldiers of *Glyptotermes thailandis* sp. nov.

	Holotype	Range	Mean
Length of head with mandibles	2.64	2.58 ~ 2.86	2.69
Length of head to side base of mandible	1.87	1.81 ~ 1.95	1.90
Length of head to tip of labrum	2.05	0.01 ~ 2.16	2.10
Width of head	1.10	1.10 ~ 1.22	1.14
Height of head	0.98	0.98 ~ 1.16	1.05
Length of left mandible	1.00	0.99 ~ 1.01	1.00
First marginal tooth from tip of apical tooth	0.20	0.20 ~ 0.22	0.21
Mesial length of postmentum	1.22	1.16 ~ 1.22	1.20
Maximum width of postmentum	0.45	0.42 ~ 0.48	0.44
Minimum width of postmentum	0.21	0.20 ~ 0.25	0.23
Maximum length of pronotum	0.70	0.65 ~ 0.70	0.67
Mesial length of pronotum	0.57	0.57 ~ 0.60	0.59
Width of pronotum	1.00	1.00 ~ 1.12	1.04

Comparisons : *Glyptotermes thailandis* sp. nov. comes close to *G. dilatatus* BUGNION et POPOFF and *montanus* KEMNER. It can be separable from them by its smaller head.

Holotype : Soldier; 4 paratype : soldiers; and nymphs, Khao Yai 6. VI. 1965, in a stem.

3. *Glyptotermes* sp.

Locality : Doi Suthep, 18. VI. 1965, in a stump.

This is apparently an undescribed species. I obtained one soldier and several nymphs.

Family Rhinotermitidae

4. *Coptotermes curvignathus* HOLMGREN

Coptotermes curvignathus HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 77, 1913 (Singapore, Sarawak, Burma)

Measurements of five soldiers of *Coptotermes curvignathus* taken at Khao Chong.

	Range	Mean
Length of head with mandibles	2.12 ~ 2.37	2.25
Length of head to tip of labrum	1.77 ~ 1.90	1.82
Length of head to side base of mandible	1.47 ~ 1.50	1.48
Maximum width of head	1.27 ~ 1.30	1.29
Width of head at side base of mandibles	0.76 ~ 0.77	0.77
Length of left mandible	0.95 ~ 1.02	0.97
Height of head	0.80 ~ 0.87	0.84
Width of pronotum	0.85 ~ 0.91	0.90
Length of pronotum	0.47 ~ 0.50	0.49

Locality : Doi Suthep, 10. VI. 1965; Khao Yai, 6. VI. 1965; Khao Chong, 23~26. VI. 1965.

Distribution : Sumatra, Borneo, Malaya, Thailand, Burma, Cambodia, Vietnam, China.

Remarks : Soldiers of two colonies taken at Khao Chong are smaller than typical *curvignathus*. (fig. 4)

5. *Coptotermes gestroi* WASMANN

Termes gestroi WASMANN, Ann. Mus. Civ. Stor. Nat. Genova, ser 2, XVI (XXXVI) : 628, 1896 (Burma)

Coptotermes gestroi : HOLMGREN, K. svensk. Vetensk. -Akad. Handl. 46 : 73, 1911.

Locality : Fang, 14. VI. 1965; Bangken, Bangkok, 3. VI. 1965; Khao Chong, 27. VI. 1965.

Distribution : India, Burma, Thailand, Malaya, Borneo, Sumatra.

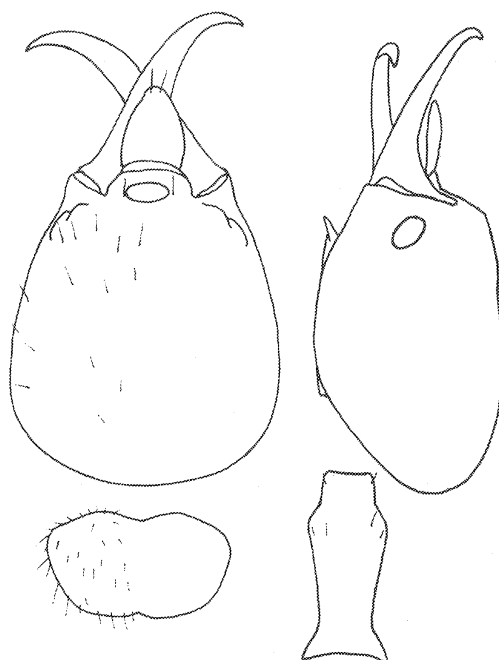


Fig. 4. *Coptotermes curvignathus* HOLMGREN, from Khao Chong.

Soldier : Head, pronotum and gula.

6. *Coptotermes havilandi* HOLMGREN

Coptotermes havilandi HOLMGREN, in ESCHERICH, Termitenleben auf Ceylon : 192, 1911 (Hinterindien)

Locality : Mae Klang Waterfall, 26. VI. 1965.

Distribution : Thailand, Malaya, Java, Mauritius (introduced), West Indies (introduced).

7. *Schedorhinotermes medioobscurus* HOLMGREN

Rhinotermes (*Schedorhinotermes*) *brevialatus* f. *medioobscurus* HOLMGREN, Zool. Jb. Abt. Syst. 36 : 241, 1914 (Malacca)

Schedorhinotermes medioobscurus : SNYDER, Smithson. Misc. Coll. 112 : 94, 1949 (Synonymy)

Locality : Doi Suthep, 12. VI. 1965; Khao Yai, 5. VI. 1965; Khao Chong, 23. VI. 1965.

Distribution : Malaya, Thailand, Cambodia, Vietnam.

8. *Schedorhinotermes rectangularis* AHMAD

Schedorhinotermes rectangularis AHMAD, Bull. Amer. Mus. Nat. Hist. 131 : 27, 1965 (Thailand)

Locality : Kor Hong Rubber Exp. Sta., 23. VI. 1965.

Distribution : Thailand.

9. *Schedorhinotermes sarawakensis* HOLMGREN

Rhinotermes (Schedorhinotermes) sarawakensis HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 87, 1913 (Sarawak)

Schedorhinotermes sarawakensis : SNYDER, Smithson. Misc. Coll. 112 : 95, 1949 (Synonymy)

Locality : Doi Suthep, 10 & 18. VI. 1965.

Distribution : Borneo, Sumatra, Malaya, Thailand, Burma, Cambodia, Vietnam.

Family Termitidae

10. *Globitermes sulphureus* HAVILAND

Termes sulphureus HAVILAND, J. Linn. Soc. Zool. 26 : 405, 1898 (Malay peninsula)

Hamitermes (Globitermes) sulphureus : HOLMGREN, K. svenska Vetensk. -Akad. Handl. 48 : 87, 1912.

Globitermes sulphureus : SNYDER, Smithson. Misc. Coll. 112 : 130, 1949 (Synonymy)

Locality : Fang, 14. VI. 1965; Doi Suthep, 8. VI. 1965; Chiang Mai (Zoo), 16. VI. 1965; Kor Hong Rubber Exp. Sta. 23. VI. 1965; Khao Chong, 23. VI. 1965; Song Khula, 22. VI. 1965.

Distribution : Malaya, Thailand, Cambodia, Vietnam.

11. *Speculitermes rongrensis* ROONWAL & CHHOTANI, status nov. (fig. 5)

Speculitermes cyclops rongrensis ROONWAL & CHHOTANI, Proc. Nat. Soc. India 28 B (4) : 314, pl. XIX, 1966 (Worker; Assam : Rongrengiri; Key to species and subspecies of *Speculitermes* by worker)

Imago : Head dark reddish brown, postclypeus slightly lighter than head, labrum and antennae yellowish brown, mid-dorsal spot yellowish with fuscous centre; pronotum dark brown, slightly lighter than head; legs yellowish brown. Head, postclypeus, labrum and pronotum with numerous short hairs and scattered long bristles.

Head broader than length without mandibles; mid-dorsal spot circular or ovate; Y-suture absent in general, rarely with a short suture discernible behind mid-dorsal spot. Eyes rather strongly prominent, almost circular. Ocellus oblong, 1.5 times as long as wide, separated from eye by less than its long diameter. Postclypeus shorter than half the width. Antennae 15-segmented, the second 1.5 times as long as the third and a little longer than the fourth, the fourth and fifth subequal in length and much shorter than the sixth. Pronotum subtrapezoidal, slightly convex on each side, posterior margin shallowly concave. Tarsi 4-segmented, each of the first to third segments has a row of bristles and the distal part produced ventrally as a hyaline lobe.

Measurements of three imagoes of *Speculitermes rongrensis*.

	♀	♀	♀
Total body length with wings (approximate)	16.0	16.2	15.6
Total body length without wings (approximate)	9.2	9.7	9.3
Length of head to tip of labrum	1.7	1.8	1.7
Length of head to lateral base of mandible	1.0	1.0	1.0
Maximum width of head with eyes	1.45	1.50	1.49
Height of head	0.55	0.67	0.57
Length of mid-dorsal spot on head	0.175	0.150	0.178
Width of mid-dorsal spot on head	0.173	0.200	0.191
Length of postclypeus	0.30	0.275	0.275
Width of postclypeus	0.68	0.65	0.624
Maximum diameter of eye with sclerite	0.35	0.36	0.35
Minimum diameter of eye with sclerite	0.35	0.35	0.35
Maximum diameter of ocellus	0.148	0.152	0.150
Minimum diameter of ocellus	0.098	0.10	0.10
Minimum eye-ocellus distance	0.135	0.10	0.10
Minimum eye-antennal distance	0.075	0.10	0.08
Maximum length of pronotum	0.80	0.70	0.70
Width of pronotum	1.27	1.32	1.30
Length of fore wing with scale	14.1	14.5	13.7
Maximum width of fore wing	3.2	3.2	3.2

Key to species of *Speculitermes* by imagoes

- 1 : Y-suture present on head. Ocelli separated from eyes by more than their long diameter *macrodentatus* AHMAD
- 1' : Y-suture absent. Ocelli separated from eyes by less than their long diameter.....2
- 2 : Maximum diameter of mid-dorsal spot on head 0.25. Maximum diameter of eye 0.40. Pronotum with sides roundly sloping posteriorly.....*cyclops cyclops* WASMANN
- 2' : Maximum diameter of mid-dorsal spot on head 0.17~0.20. Maximum diameter of eye 0.35~0.363. Pronotum rapidly narrowing posteriorly, the sides almost straight *rongrensis* ROONWAL & CHHOTANI

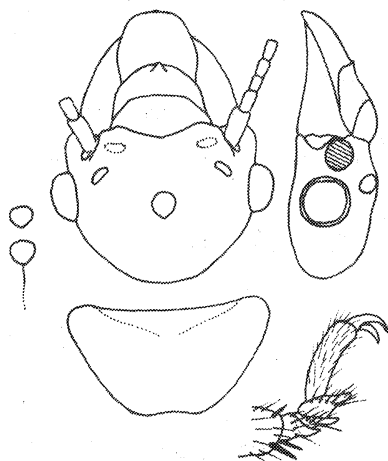


Fig. 5. *Speculitermes rongrensis*
ROONWAL & CHHOTANI.

Imago : Head, pronotum, mid-dorsal spot of head showing variation, and tarsus.

Locality : Fang, 15. VI. 1965; Chieng Dao, 15. VI. 1965; Mae Klang Waterfall, 11. VI. 1965.
Distribution : India (Assam), Thailand-new record.

12. *Microcerotermes annandalei* SILVESTRI

Microcerotermes annandalei SILVESTRI, Rec. Indian Mus. 25 (2) : 225, 1923 (Imago, soldier;
India : Barkuda Isl.)

Locality : Fang, 14. VI. 1965; Doi Suthep, 8 & 10, VI. 1965; Muak Lek, 5. VI. 1965.

Distribution : India, Thailand.

13. *Microcerotermes crassus* SNYDER

Microcerotermes crassus SNYDER, Indian Forest Rec. 20 : 22, 1934 (Soldier; Burma)

Locality : Doi Suthep, 8. VI. 1965; Chieng Mai, 16. VI. 1965; Muak Lek, 5. VI. 1965; Khao
Yai, 5. VI. 1965; Kor Hong Rubber Exp. Sta. 23. VI. 1965.

Distribution : Burma, Thailand, Vietnam, China (Hainan)

14. *Microcerotermes paracelebensis* AHMAD

Microcerotermes paracelebensis AHMAD, Bull. Amer. Mus. Nat. Hist. 131 : 66, 1965 (Imago,
soldier; Thailand)

Locality : Khao Chong, 26. VI. 1965; Ratapoom, 27. VI. 1965.

Distribution : Thailand.

15. *Microcerotermes distans* HAVILAND (fig. 6)

Termes distans HAVILAND, J. Linn. Soc. Zool. 26 : 401, 1898 (Soldier; Borneo)

Microcerotermes distans : HOLMGREN, K. svensk. Vetensk. -Akad. Handl. 48 : 21, 1912.

Locality : Khao Chong, 25. VI. 1965.

Distribution : Borneo, Sulu Islands, Malaya, Thailand-new record.

16. *Termes propinquus* HOLMGREN

Mirotermes propinquus HOLMGREN, Zool. Jb. Abt. Syst. 36 : 274, 1914 (Soldier; Sumatra)

Termes propinquus : SNYDER, Smithson. Misc. Coll. 112 : 185, 1949 (Synonymy)

Locality : Kor Hong Rubber Exp. Sta. 23. VI. 1965; Khao Chong, 23. VI. 1965.

Distribution : Sumatra, Malaya, Thailand.

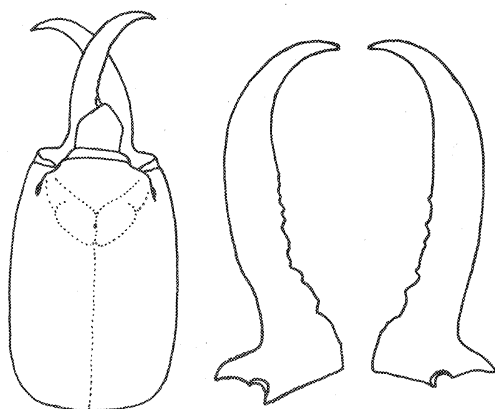
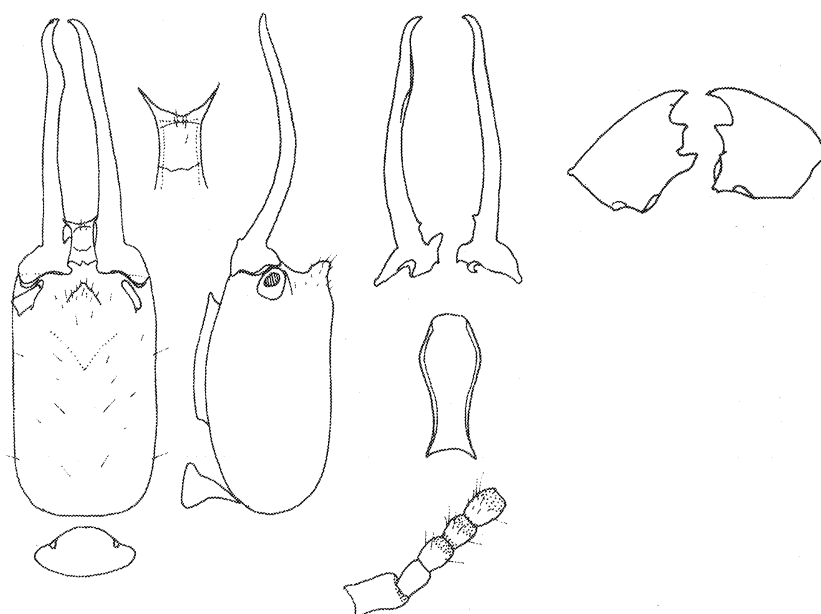


Fig. 6. *Microcerotermes distans*
HAVILAND, from Khao Chong.
Soldier : Head and mandibles.

Fig. 7. *Termes major* sp. nov.

Soldier : Head, pronotum, labrum, mandibles, gula and basal segments of antenna.
Worker : mandibles.

17. *Termes major* sp. nov. (fig. 7)

Soldier : Head yellow, anterior margin brown, labrum brownish yellow with hyaline margins, mandibles blackish brown, antennae light brown, thorax, legs and abdomen pale. Head sparsely hairy, frontal projection with several hairs, labrum with a few short hairs in anterior half, pronotum sparsely hairy.

Head parallel-sided, median suture not visible, dorsum slightly depressed in middle, with another depression behind the tip of frontal projection; frontal projection cone shaped, slightly upturned, anterior margin seen laterally curved. Labrum longer than wide, anterolateral corners produced into long processes, anterior margin concave. Mandibles slightly asymmetrical, longer than head capsule, left mandible slightly hooked at tip, right mandible slightly less curved than the left. Postmentum narrowest behind the middle, anterior twice as broad as

	Holotype	Range	Mean
Length of head with mandibles	3.40	3.38 ~ 3.42	3.40
Length of head to tip of frontal projection	1.70	1.64 ~ 1.72	1.70
Length of head to side base of mandible	1.61	1.60 ~ 1.68	1.63
Width of head	0.99	0.96 ~ 0.99	0.98
Height of head	0.90	0.83 ~ 0.90	0.86
Length of left mandible	1.73	1.72 ~ 1.80	1.77
Length of postmentum	0.89	0.89 ~ 0.91	0.90
Maximum width of postmentum	0.39	0.36 ~ 0.40	0.38
Minimum width of postmentum	0.19	0.19 ~ 0.20	0.20
Length of pronotum	0.30	0.30 ~ 0.36	0.32
Width of pronotum	0.64	0.62 ~ 0.69	0.65

posterior. Antennae with 14 segments, second distinctly longer than the third, fourth the shortest, fifth as long as wide, the remaining segments longer than wide. Pronotum small, not emarginate either anteriorly and posteriorly.

Measurements of five soldiers of *Termes major*.

Comparisons : This new species is the largest among the species of the genus *Termes* of Indo-Malayan region. Head length with mandibles of all the known species from that region is less than 3.1 mm. This new species is also unique in having the labrum with deeply concave anterior margin and long processes anterolaterally.

Holotype : Soldier; Four paratypes : Soldier; and workers, Khao Chong, 26. VI. 1965, from a nest on living tree trunk about one meter above ground.

18. *Dicuspiditermes makhamensis* AHMAD

Dicuspiditermes makhamensis AHMAD, Bull. Amer. Mus. Nat. Hist. 131 : 100, 1965 (Queen, soldier : Thailand)

Locality : Hing Hong, 5. VI. 1965.

Distribution : Thailand.

19. *Pericapritermes latignathus* HOLMGREN

Capritermes latignathus HOLMGREN, Zool. Jb. Abt. Syst. 36 : 280, 1914 (Soldier; Java)

Pericapritermes latignathus : AHMAD, Bull. Amer. Mus. Nat. Hist. 131 : 98, 1965.

Locality : Paktongchai, 24. XI. 1963, D. Even (Watanabe's collection)

Distribution : Java, Thailand, Cambodia, Vietnam.

20. *Pericapritermes semarangi* HOLMGREN

Capritermes semarangi HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 247 (Imago, soldier; Java)

Pericapritermes semarangi : KRISHNA, Amer. Mus. Novit. 2210 : 15, 1965.

Locality : Paktongchai, 24. XI. 1963, D. Evan (Watanabe's collection)

Distribution : Java, Sumatra, Thailand, Burma.

21. *Macrotermes annandalei* SILVESTRI

Termes annandalei SILVESTRI, Rec. Indian Mus. 8 (5) : 427, 1914 (Soldier; Burma)

Macrotermes annandalei : SNYDER, Smithsonian. Misc. Coll. 112 : 208, 1949 (Synonymy)

Locality : Fang, 14. VI. 1965; Khao Yai, 6. VI. 1965.

Distribution : Burma, Thailand, China (Yunnan, Kwangshi).

22. *Macrotermes carbonarius* HAGEN

Termes carbonarius HAGEN, Linn. Entom. 12 : 130, 1858 (Imago, soldier; Borneo)

Termes (Macrotermes) carbonarius : HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 93, 1913.

Macrotermes carbonarius : JOHN, Treubia. 6 : 385, 1925.

Locality : Khao Chong, 23~25. VI. 1965; Song Khula, 28. VI. 1965.

Distribution : Borneo, Malaya, Thailand, Cambodia, Vietnam.

23. *Macrotermes gilvus* HAGEN

Termes gilvus HAGEN, Linn. Entom. 12 : 148, 1858 (Imago, soldier; Java)

Termes (Macrotermes) gilvus : HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 98, 1913.

Macrotermes gilvus : JOHN, Treubia. 6 : 385, 1925.

Locality : Chiang Dao, 16. VI. 1965; Doi Suthep, 10. VI. 1965; Khao Chong, 23~25. VI. 1965.

Distribution : Java, Borneo, Sumatra, Philippines, Celebes, Malaya, Thailand, Cambodia, Vietnam, Burma.

24. *Macrotermes malaccensis* HAVILAND

Termes malaccensis HAVILAND, J. Linn. Soc. Zool. 26 : 381, 1898 (Soldier : Malacca)

Termes (Macrotermes) malaccensis : HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 96 1913.

Macrotermes malaccensis : JOHN, Treubia 6 : 23, 1925.

Locality : Khao Chong, 23 & 26. VI. 1965.

Distribution : Sumatra, Malaya, Thailand, Cambodia, Vietnam.

25. *Odontotermes proformosanus* AHMAD (fig. 8)

Odontotermes proformosanus AHMAD, Bull. Amer. Mus. Nat. Hist. 131 : 46, 1965 (Imago, soldier; Thailand)

Locality : Doi Suthep, 18. VI. 1965.

Distribution : Thailand, Cambodia, Vietnam.

26. *Odontotermes* sp. close to *proformosanus* AHMAD and *giriensis* ROONWAL & CHHOTANI (fig. 9).

Shape of postmentum of this species is close to *giriensis*, but the coloration of antennae and dentation of mandibles are to *proformosanus*.

Locality : Doi Suthep, 12. VI. 1965.

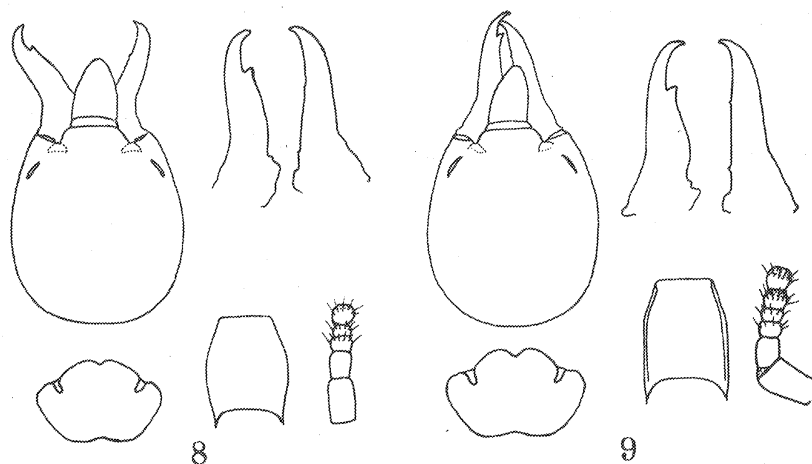
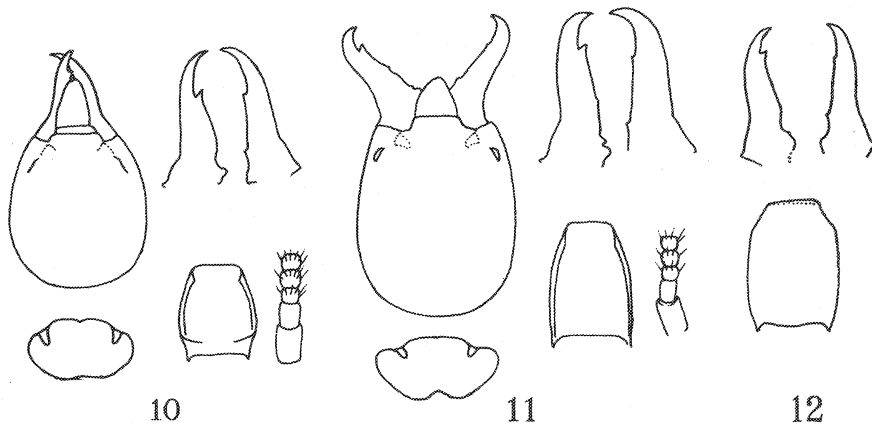


Fig. 8. *Odontotermes proformosanus* AHMAD.

Fig. 9. *Odontotermes* sp. close to *proformosanus*.

Soldier : head, pronotum, mandibles, gula, and basal part of antenna.

Fig. 10. *Odontotermes hainanensis* LIGHT.Fig. 11. *Odontotermes sarawakensis* HOLMGREN.Fig. 12. *Odontotermes giriensis* ROONWAL and CHHOTANI.
(from original description)

Soldier : head, pronotum, mandibles, gula, and basal part of antenna.

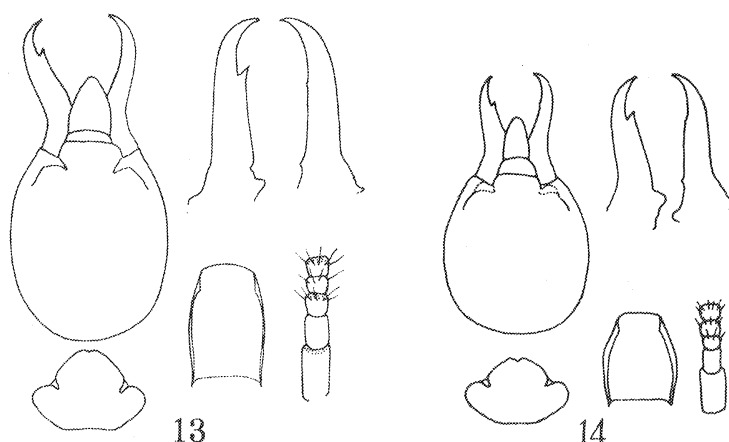
27. *Odontotermes hainanensis* LIGHT (fig. 10)*Termes hainanensis* LIGHT, China J. Sci. Arts, 2 : 25; 1924 (Soldier; Hainan).*Odontotermes hainanensis* : SNYDER, Smithson. Misc. Coll. 112 : 229, 1949 (Synonymy)

Locality : Kor Hong Rubber Exp. Sta., 23. VI. 1965; Khao Chong, 27. VI. 1965.

Distribution : Thailand-new record, Burma, Cambodia, Vietnam, China.

Key to the *hainanensis-proformosanus* group of the genus *Odontotermes*.

- 1 : Head wider anteriorly, lateral sides somewhat parallel in the middle. Head length with mandibles 1.86, width 1.03.....*sarawakensis* HOLMGREN (fig. 11)
- 1' : Head oval, distinctly narrowed anteriorly.....2
- 2 : Distal segments of antennae darker than the proximal segments.....3
- 2' : Distal segments of antennae not darker than the proximal segments.....6
- 3 : Larger, head length to side base of mandibles 1.58, maximum width of head 1.38.....*kapuri* ROONWAL & CHHOTANI
- 3' : Smaller, head length to side base of mandible up to 1.35, maximum width of head up to 1.20.....4
- 4 : Tooth of left mandible far in front in the distal third. Postmentum parallel-sided and abruptly and strongly narrowing in front of distal one-fourth. Head length to side base of mandible 1.18~1.35, maximum width of head 1.00~1.20.....*giriensis* ROONWAL & CHHOTANI (fig. 12)
- 4' : Tooth of left mandible approximately in the base of the distal third.....5
- 5 : Postmentum broadest at the middle, gradually and weakly narrowing anteriorly and posteriorly. Head length to side base of mandible 1.20~1.28, maximum width of head 1.02~1.10.....*obesus* RAMBUR (fig. 13)
- 5' : Postmentum parallel-sided and abruptly narrowing anteriorly in front of distal one-fourth. Head length to side base of mandible 0.89~1.17, maximum width of head 0.98~1.10.....*redemanni* WASMANN

Fig. 13. *Odontotermes obesus* RAMBURFig. 14. *Odontotermes escherichi* HOLMGREN.

Soldier : Head, pronotum, mandibles, gula and basal part of antenna.

- 6 : Pronotum not notched posteriorly. Postmentum slightly longer than wide. Head length to side base of mandible 0.98~1.17, maximum width of head 0.98~1.10.....
escherichi HOLMGREN (fig. 14)
- 6' : Pronotum notched posteriorly.....7
- 7 : Tooth of left mandible triangular, somewhat anteriorly directed. Postmentum a little longer than wide, without depression near the base.....8
- 7' : Tooth of left mandible acute, anteriorly directed. Postmentum nearly as long as wide, with depression near the base.....*hainanensis* LIGHT (fig. 10)
- 8 : Postmentum arched.....*proformosanus* AHMAD (fig. 8)
- 8' : Postmentum parallel-sided.....undetermined species from Doi Suthep (fig. 9)

28. *Odontotermes formosanus* SHIRAKI

Termes formosana SHIRAKI, Trans. ent. Soc. Japan, 2 : 234, 1909 (Imago, soldier; Formosa)
Odontotermes (*Cyclotermes*) *formosanus* : Holmgren, K. svenska Vetensk. -Akad. Handl. 48 :
 38, 1912.

Locality : Khao Yai, 5. VI. 1965.

Distribution : Burma, Thailand, Vietnam, China, Taiwan, Ryukyus.

29. *Odontotermes paraoblongatus* AHMAD

Odontotermes paraoblongatus AHMAD, Bull. Amer. Mus. Nat. Hist. 131 : 49, 1965 (Soldier;
 Thailand)

Locality : Chiang Mai, 16. VI. 1965.

Distribution : Thailand.

30. *Odontotermes javanicus* HOLMGREN

Odontotermes (*Odontotermes*) *javanicus* HOLMGREN, K. svenska Vetensk. -Akad. Handl. 48 : 36,
 1912 (Soldier mandibles; Java)

Locality : Khao Chong, 25~26. VI. 1965.

Distribution : Java, Sumatra, Malaya, Thailand-new record.

31. *Odontotermes feae* WASMANN

Termes feae WASMANN, Ann. Mus. Civ. Stor. Nat. Genova, 16 : 625, 1896 (Soldier; Burma)

Odontotermes (Odontotermes) Feae : HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 129, 1913.

Locality : Fang, 15. VI. 1965; Khao Chong, 26. VI. 1965.

Distribution : India, Burma, Thailand.

32. *Odontotermes longignathus* HOLMGREN

Odontotermes (Odontotermes) longignathus HOLMGREN, Zool. Jb. Abt. Syst. 36 : 244, 1914 (Soldier; Malacca).

Locality : Khao Chong, 26. VI. 1965.

Distribution : Malaya, Thailand.

33. *Hypotermes xenotermitis* WASMANN

Termes xenotermitis WASMANN, Ann. Mus. Civ. Stor. Nat. Genova, 2, 16 : 628, 1896 (Soldier; Burma)

Hypotermes xenotermitis : ROONWAL & CHHOTANI, Proc. Natl. Inst. Sci. India, 28 B : 362, 1962.

Locality : Fang, 15. VI. 1965; Doi Suthep, 10. VI. 1965; Chiang Mai, 16. VI. 1965; Muak Lek, 6. VI. 1965; Khao Chong, 25. VI. 1965.

Distribution : India, Burma, Thailand.

Remarks : Postmentum of soldiers is variable in shape within a colony, most of soldiers have parallel-sided postmentum or the postmentum slightly widening posteriorly, but a few specimens have the postmentum with arched sides similar to that of *makhmensis* AHMAD. Molar plate of right mandible is always angulate in *xenotermitis*.

34. *Microtermes pakistanicus* AHMAD

Termes pallidus RAMBUR, Histoire nat. Ins. Névroptères : 303, 1842.

Microtermes pakistanicus AHMAD, Biologia I : 25, 1955 (Soldier; Pakistan)

Locality : Fang, 13~14. VI. 1965; Doi Suthep, 10~17. VI. 1965; Chiang Mai, 16. VI. 1965; Kor Hong Rubber Exp. Sta., 23. VI. 1965; Khao Chong, 23~26. VI. 1965.

Distribution : Bangladesh, Burma, Thailand, Malaya, Java.

35. *Microtermes obesi* HOLMGREN

Microtermes obesi HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 150, 1913 (Imago; Bombay)

Locality : Chiang Mai, 16. VI. 1965; Muak Lek, 5. VI. 1965; Songkhula, 22. VI. 1965.

Distribution : India, Burma, Thailand, Cambodia, Vietnam.

36. *Nasutitermes brachynasutus* sp. nov. (fig. 15)

Imago : Head dark chestnut brown; postclypeus, labrum and mandibles yellowish brown; antennae brown; pronotum and abdominal tergites chestnut brown; tibiae and abdominal sternites pale brown; femora yellowish brown. Head with numerous short hairs and scattered long bristles. Pronotum as densely hairy as head.

Head almost circular; fontanelle distinct, yellowish brown, slit-like. Ocelli separated from eyes by a distance much less than their short diameter. Postclypeus $1/3$ times as long as wide. Antennae with 15 segments, the third smallest, $3/4$ times as long as the second and slightly shorter than the fourth. Wings smoky brown. Pronotum much narrower than head, anterior margin convex on each side, posterior margin slightly emarginate, disk with a T-shaped paler mark.

Measurements of three imagoes of *Nasutitermes brachynasutus*.

	Holotype ♂	♂	♀
Length of head to tip of labrum	1.27	1.20	1.33
Length of head to side base of mandible	0.85	0.83	0.97
Width of head with eyes	1.10	1.13	1.12
Long diameter of eye	0.375	0.350	0.375
Short diameter of eye	0.350	0.326	0.325
Length of ocellus	0.127	0.125	0.132
Width of ocellus	0.100	0.080	0.100
Ocellus from eye	0.058	0.0475	0.070
Length of fontanelle	0.125	0.126	0.125
Length of pronotum	0.60	0.61	0.60
Width of pronotum	0.88	0.88	0.93
Length of forewing with scale	10.5	—	11.1
Maximum width of forewing	2.6	—	2.8
Eye from the lower margin of head	0.070	0.055	0.073

Soldier: Head orange to brownish yellow, nasus brown; antennae same colour as head, thorax pale brown, abdominal tergite brown, legs whitish. Head nearly as long as wide without nasus, the sides angulately rounded at the broadest points, posterior margin weakly concave; nasus short, conical; mandibles with apical processes. Antennae 13-segmented, the third 1.5 times as long as the second and twice as long as the fourth, the latter shortest. Pronotum without emarginations either anteriorly and posteriorly.

Measurements of five soldiers of *Nasutitermes brachynasutus*.

	Range	Mean
Length of head to tip of nasus	1.30 ~ 1.38	1.344
Length of nasus	0.34 ~ 0.43	0.40
Length of head to base of postclypeus	0.95 ~ 1.00	0.97
Length of head to side base of mandible	0.87 ~ 0.95	0.91
Height of head	0.53 ~ 0.63	0.59
Width of head	0.85 ~ 0.88	0.864
Width of pronotum	0.42 ~ 0.45	0.44
Length of pronotum	0.15 ~ 0.16	0.15

Comparisons: Imago of this new species comes close to *ceylonicus* HOLMGREN and *acutus* HOLMGREN, but differ from the former by the longer wings, and from the latter by the ocelli which are much separated from eyes and the postclypeus shorter.

Soldier of this new species comes close to *javanicus* HOLMGREN and *culasiensis* OSHIMA, but differs from the former by the larger size and the straight dorsal profil of head, and from the

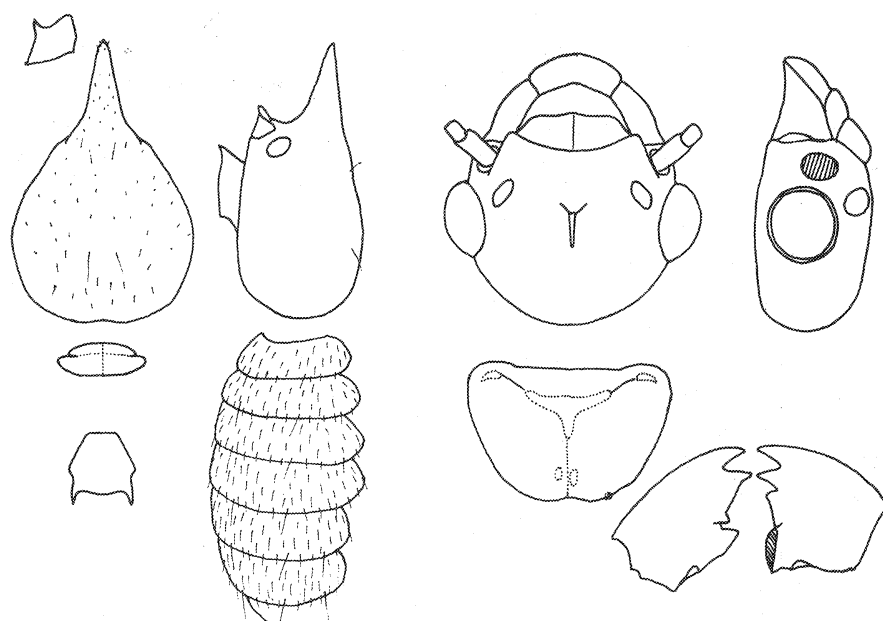


Fig. 15. *Natutitermes brachynasutus* sp. nov.

Soldier (left) : head, right mandible, pronotum, gula, and tergites showing setal arrangement from dorso-lateral aspect.

Imago (right) : head, pronotum and mandibles.

latter by the smaller size.

Holotype : Imago (Male); Paratypes : Imagoes and soldiers; and workers, Khao Yai, 5. VI. 1965, from a dead tree.

37. *Nasutitermes dimorphus* AHMAD

Nasutitermes dimorphus AHMAD, Bull. Amer. Mus. Nat. Hist. 131 : 80, 1965 (Major and minor soldiers; Thailand)

Locality : Bangken, 3. VI. 1965.

Distribution : Thailand.

38. *Nasutitermes havilandi* DESNEUX

Termes latifrons HAVILAND, J. Linn. Soc. Zool., 26 : 428, 1898 (Imago, soldier; Sarawak)

Termes Havilandi DESNEUX, Ann. Soc. ent. Belg., 48 : 151, 1904

Nasutitermes havilandi : SNYDER, Smithson. Misc. Coll., 112 : 279, 1949 (Synonymy)

Locality : Song Khula, 28. VI. 1965; Khao Chong, 23. VI. 1965.

Distribution : Borneo, Sumatra, Malaya, Thailand-new record.

39. *Nasutitermes matangensis* HAVILAND

Termes matangensis HAVILAND, J. Linn. Soc. Zool., 26 : 427, 1898 (Imago, soldier; Sarawak)

Nasutitermes matangensis : SNYDER, Smithson. Misc. Coll., 112 : 287, 1949 (Synonymy)

Locality : Fang, 13. VI. 1965; Doi Suthep, 10. VI. 1965.

Distribution : Borneo, Java, Sumatra, Malaya, Thailand-new record.

40. *Nasutitermes perparvus* AHMAD

Nasutitermes perparvus AHMAD, Bull. Amer. Mus. Nat. Hist., 131 : 81, 1965 (Soldier; Thailand)

Locality : Bangken, 3. VI. 1965.

Distribution : Thailand, Vietnam.

41. *Havilanditermes proatripennis* AHMAD

Havilanditermes proatripennis AHMAD, Bull. Amer. Mus. Nat. Hist., 131 : 74, 1965 (Imago, soldier; Thailand)

Locality : Khao Chong, 26. VI. 1965.

Distribution : Thailand.

42. *Bulbitermes deltocephalus* TSAI and CHEN

Nasutitermes deltocephalus TSAI and CHEN, Acta Ent. Sinica, 12 : 185, 1963 (Imago, soldier; China)

Bulbitermes deltocephalus : AHMAD, Bull. Amer. Mus. Nat. Hist., 131 : 88, 1965.

Locality : Khao Yai, 6. VI. 1965.

Distribution : China (Fukien, Yunnan, Hainan), Thailand-new record.

43. *Bulbitermes germanus* HAVILAND (fig. 16, 17)

Termes germanus HAVILAND, J. Linn. Soc. Zool., 26 : 430, 1898 (Imago, soldier; Singapore)

Bulbitermes germanus : SNYDER, Smithson. Misc. Coll., 112 : 308, 1949 (Synonymy)

Locality : Khao Chong, 23. VI. 1965.

Distribution : Malaya, Thailand-new record.

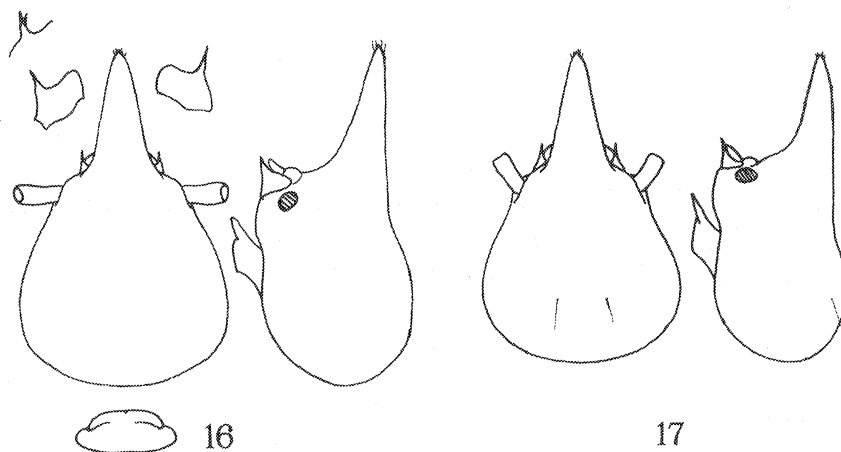


Fig. 16 and 17. *Bulbitermes germanus* HAVILAND.
(16 : from Khao Chong, 17 : from Malacca)

Key to *germanus*-allied species of the genus *Bulbitermes*.

- 1 : Sides of head in dorsal view not forming an arch, but straight for a short distance from the broadest points, hump at the base of nasus slightly indicated.....
..... *singaporensis* HAVILAND (fig. 18)
- 1' : Sides of head in dorsal view forming a continuous arch.....2

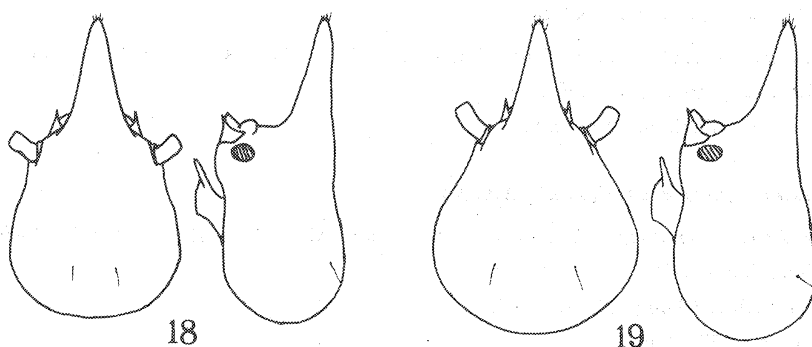


Fig. 18. *Bulbitermes singaporensis* HAVILAND.

Fig. 19. *Bulbitermes sarawakensis* HOLMGREN.

2 : Nasus rather conical, dorsal profil slightly depressed.....*sarawakensis* HAVILAND (fig. 19)

2' : Nasus less conical, dorsal profil concave.....*germanus* HAVILAND (fig. 16, 17)

44. *Bulbitermes laticephalus* AHMAD

Bulbitermes laticephalus AHMAD, Bull. Amer. Mus. Nat. Hist., 131 : 87, 1965 (Imago, soldier; Thailand)

Locality : Doi Suthep, 12. VI. 1965; Khao Yai, 6. VI. 1965.

Distribution : Thailand, Vietnam.

45. *Bulbitermes parapusillus* AHMAD

Bulbitermes parapusillus AHMAD, Bull. Amer. Mus. Nat. Hist., 131 : 85, 1965 (Imago, soldier; Thailand)

Locality : Fang, 14. VI. 1965; Khao Chong, 25~26. VI. 1965.

Distribution : Thailand.

46. *Hospitalitermes medioflavus* HOLMGREN

Eutermes (Hospitalitermes) hospitalis f. *medioflavus* HOLMGREN, K. svenska Vetensk. -Akad. Handl. 50 : 213, 1913 (Soldier; Malay)

Hospitalitermes medioflavus : KEMNER, Tijdschr. Ent., 73 : 317, 1930

Locality : Song Khula, 28. VI. 1965.

Distribution : Sumatra, Malaya, Thailand-new record.

47. *Hospitalitermes birmanicus* SNYDER

Nasutitermes (Hospitalitermes) birmanicus SNYDER, Indian Forest Rec. 20 : 1934 (Soldier; Burma)

Hospitalitermes birmanicus : SNYDER, Smithson. Misc. Coll., 112 : 319, 1949 (Synonymy)

Locality : Fang, 14. VI. 1965; Doi Suthep, 8 & 18. VI. 1965.

Distribution : Burma, Thailand-new record.

48. *Hospitalitermes asahinai* sp. nov. (fig. 20)

? *Hospitalitermes jepsoni* AHMAD (nec SNYDER), Biologia 4 : 142, 1958.

? *Hospitalitermes jepsoni* AHMAD (nec SNYDER), Bull. Amer. Mus. Nat. Hist., 131 : 88, 1965.

Soldier : Head dark reddish brown, basal part of nasus the darkest; antennae dark brown, uniformly coloured; thorax and abdominal tergites brown; femora a little darker than thorax, tibiae pale brown. Head with two pairs of setae, anterior pair close to the base of nasus minute, tip of nasus with four hairs; pronotum with short hairs along the anterior margin; abdominal tergite with several short hairs along the posterior margin; abdominal sternite with two pairs of very long and a few long setae.

Head pear-shaped, markedly constricted behind antennae, vertex raised up; dorsal profile concave; nasus cylindrical, as long as or slightly longer than half the head width. Mandibles with long apical points. Antennae with 14 segments, third segment* 1.68~2.0 times as long as the second* and subequal to the fourth*. Pronotum longer than half the width.

Measurements of ten soldiers of *Hospitalitermes asahinai*.

	Holotype	Range	Mean
Length of head with nasus	1.80	1.56 ~ 1.82	1.69
Length of head to side base of mandible	1.20	1.10 ~ 1.20	1.16
Length of nasus	0.62	0.55 ~ 0.62	0.59
Width of head	1.10	1.00 ~ 1.20	1.06
Length pronotum	0.41	0.40 ~ 0.43	0.42
Width of pronotum	0.67	0.62 ~ 0.67	0.65
Length of metatibia	2.62	2.60 ~ 2.80	2.64
Ratio of antennal III/II	1.78	1.68 ~ 2.00	1.84
Ratio of antennal IV/III	0.99	0.90 ~ 1.01	0.96

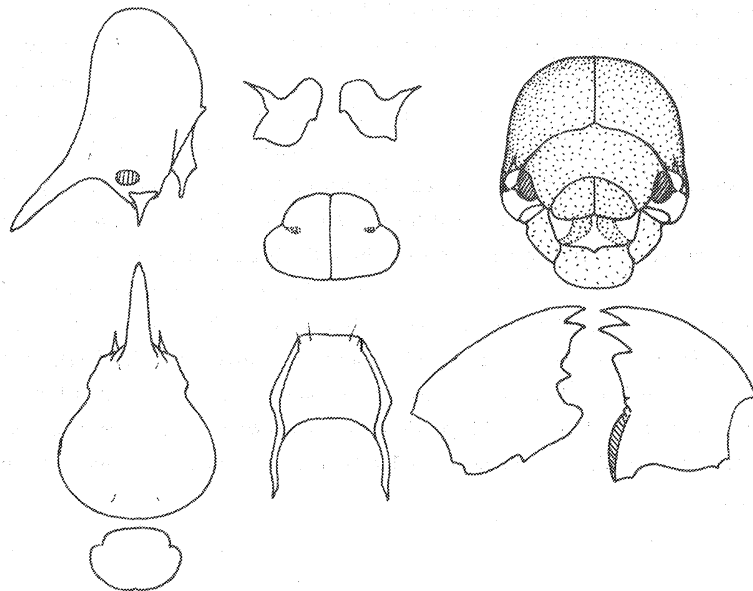


Fig. 20. *Hospitalitermes asahinai* sp. nov.

Soldier (left) : head, pronotum, mandibles and gula.
Worker (right) : head and mandibles.

* Sclerotized part only, not including membranous tip.

Holotype : Soldier; Paratype : Soldiers; workers, Khao Chong, 25. VI. 1965.

Comparisons : Interesting termites of the genus *Hospitalitermes* have often been separated into species by the colorations of antennae and head. These characters are, however, unstable and gradually fade into paler and more yellowish in alcohol.

Species of the *Hospitalitermes* known to the author are separable by the key given below.

- 1 : Abdomen yellowish, much paler than thorax and head.....
.....*flaviventris* HOLMGREN and *medioflavus* HOLMGREN
- 1' : Abdomen more or less brownish, same colour as or darker than thorax.....2
- 2 : Abdomen much darker than thorax.....3
- 2' : Abdomen same colour as thorax.....5
- 3 : Maximum width of head 0.99~1.09.....*diurnus* KEMNR
- 3' : Maximum width of head more than 1.10.....4
- 4 : Pronotum as long as or shorter than half the width.....*bicolor* HAVILAND
- 4' : Pronotum much longer than half the width.....*ataramensis* PRASHAD and SEN-SARMA
- 5 : Length of head to tip of nasus 1.9~2.05, third segment of antennae as long as the fourth
.....*butteli* HOLMGREN
.....*nemorosus* GHIDINI, syn. nov.
- 5' : Head length to tip of nasus up to 19.1.....6
- 6 : Antennae with the third segment less than twice as long as the second and nearly as
long as the fourth.....7
- 6' : Antennae with the third segment more than twice as long as the second and much longer
than the fourth.....9
- 7 : Pronotum shorter, half as long as wide.....*rufus* HAVILAND
- 7' : Pronotum longer, the length more than half the width.....8
- 8 : Head profil strongly depressed.....*monoceros* KOENIG
- 8' : Head profil slightly concave.....*asahinai* MORIMOTO
- 9 : Larger species, width of head 1.2~1.3, length of head to tip of nasus 1.7~1.95.....
.....*madrasi* SNYDER and *birmanicus* SNYDER
- 9' : Smaller species. width of head 1.0~1.2, length of head to tip of nasus 1.5~1.79.....10
- 10 : Nasus longer than half the head width.....*ferrugineus* JOHN and *umbrinus* HAVILAND
- 10' : Nasus as long as or slightly shorter than half the head width.....
.....*jepsoni* SNYDER and *hospitalis* HAVILAND

H. asahinai may be also close to *luzonensis* OSHIMA, *schmidtii* AHMAD, *papuanus* AHMAD and *moluccanus* AHMAD in having the antennae with similar relative length of segments, but the first three species have basal humps of nasus, and *moluccanus* is larger. Chinese species of *Hospitalitermes* recorded by Tsai and Chen, 1964, as *luzonensis* may be *jepsoni* SNYDER.

Name of this new species is dedicated to Dr. Syoziro ASAHINA, the leader of our collecting trip to Thailand.

List of termites hither to be recorded from Thailand

*: new to the fauna of Thailand

Family Kalotermitidae

1. *Postelectrotermes tongyaii* AHMAD, 1965
2. *Glyptotermes brevicaudatus* (HAVILAND, 1898)
3. *Glyptotermes kachongensis* AHMAD, 1965
4. *Glyptotermes pinangae* (HAVILAND, 1898)
- *5. *Glyptotermes thailandis* sp. nov.
- *6. *Glyptotermes* sp.
7. *Bifiditermes indicus* (HOLMGREN, 1913)
8. *Cryptotermes domesticus* (HAVILAND, 1898)
- *9. *Cryptotermes bengalensis* (SNYDER, 1934)
10. *Cryptotermes thailandis* AHMAD, 1965

Family Rhinotermitidae

11. *Coptotermes curvignathus* HOLMGREN, 1913
12. *Coptotermes gestroi* (WASMANN, 1896)
13. *Coptotermes havilandi* HOLMGREN, 1911
14. *Coptotermes kalshoveni* KEMNER, 1934
15. *Coptotermes premrasmii* AHMAD, 1965
16. *Prorhinotermes tibiaoensisiformis* AHMAD, 1965
17. *Schedorhinotermes medioobscurus* (HOLMGREN, 1914)
18. *Schedorhinotermes rectangularis* AHMAD, 1965
19. *Schedorhinotermes sarawakensis* (HOLMGREN, 1913)

Family Termitidae

Subfamily Amitermitinae

20. *Indotermes thailandis* AHMAD, 1963
21. *Speculitermes macrodentatus* AHMAD, 1965
- *22. *Speculitermes rongrensis* ROONWAL and CHHOTANI, 1966
23. *Euhamitermes hamatus* (HOLMGREN, 1912)
24. *Microcerotermes minutus* AHMAD, 1965
25. *Microcerotermes annandalei* SILVESTRI, 1923
26. *Microcerotermes crassus* SNYDER, 1934
27. *Microcerotermes paracelebensis* AHMAD, 1965
- *28. *Microcerotermes distans* (HAVILAND, 1898)
29. *Globitermes sulphureus* (HAVILAND, 1898)
30. *Amitermes longignathus* AHMAD, 1965
31. *Amitermes dentatus* (HAVILAND, 1898)

Subfamily Termitinae

32. *Termes comis* HAVILAND, 1898
- *33. *Termes major* sp. nov.
34. *Termes huayangensis* AHMAD, 1965

35. *Termes propinquus* (HOLMGREN, 1914)
36. *Microcapritermes connectens* HOLMGREN, 1914
37. *Microcapritermes latignathus* AHMAD, 1965
38. *Microcapritermes concaveus* AHMAD, 1965
39. *Microcapritermes prewensis* AHMAD, 1965
40. *Pericapritermes latignathus* (HOLMGREN, 1914)
41. *Pericapritermes semarangi* (HOLMGREN, 1913)
42. *Dicuspidermes makhamensis* AHMAD, 1965
43. *Capritermes nitobei* (SHIRAKI, 1909)
44. *Procapritermes prosetiger* (AHMAD, 1965)
45. *Procapritermes longignathus* AHMAD, 1965
46. *Pseudocapritermes parasilvaticus* AHMAD, 1965

Subfamily Macrotermittinae

47. *Macrotermes annandalei* (SILVESTRI, 1914)
48. *Macrotermes carbonarius* (HAGEN, 1858)
49. *Macrotermes chaiglomi* AHMAD, 1965
50. *Macrotermes maesodensis* AHMAD, 1965
51. *Macrotermes malaccensis* (HAVILAND, 1898)
52. *Macrotermes gilvus* (HAGEN, 1858)
53. *Odontotermes proformosanus* AHMAD, 1965
- *54. *Odontotermes* sp.
- *55. *Odontotermes hainanensis* (LIGHT, 1824)
56. *Odontotermes formosanus* (SHIRAKI, 1909)
57. *Odontotermes paraoblongatus* AHMAD, 1965
- *58. *Odontotermes javanicus* HOLMGREN, 1912
59. *Odontotermes feae* (WASMANN, 1896)
60. *Odontotermes longignathus* HOLMGREN, 1914
61. *Odontotermes maesodensis* AHMAD, 1965
62. *Odontotermes oblongatus* HOLMGREN, 1913
63. *Odontotermes sarawakensis* HOLMGREN, 1913
64. *Odontotermes takensis* AHMAD, 1965
65. *Hypotermes xenotermitis* (WASMANN, 1896)
66. *Hypotermes makhamensis* AHMAD, 1965
67. *Microtermes obesi* HOLMGREN, 1912
68. *Microtermes pakistanicus* AHMAD, 1955

Subfamily Nasutitermitinae

69. *Havilanditermes proatripennis* AHMAD, 1965
70. *Nasutitermes matangensisformis* (HOLMGREN, 1913)
- *71. *Nasutitermes matangensis* (HAVILAND, 1898)
72. *Nasutitermes tungsalangensis* AHMAD, 1965
73. *Nasutitermes fuscipennis* (HAVILAND, 1898)
74. *Nasutitermes dimorphus* AHMAD, 1965
75. *Nasutitermes perparvus* AHMAD, 1965
76. *Nasutitermes johricus* (JOHN, 1925)
- *77. *Nasutitermes brachynasutus* sp. nov.

- *78. *Nasutitermes havilandi* (DESNEUX)
- 79. *Bulbitermes prabhae* KRISHNA, 1965
- 80. *Bulbitermes makhamensis* AHMAD, 1965
- 81. *Bulbitermes parapusillus* AHMAD, 1965
- 82. *Bulbitermes laticephalus* AHMAD, 1965
- *83. *Bulbitermes deltocephalus* (TSAI and CHEN, 1963)
- *84. *Bulbitermes germanus* (HAVILAND, 1898)
- 85. *Hospitalitermes jepsoni* (SNYDER, 1934) ? - *asahinai* sp. nov.
- *86. *Hospitalitermes asahinai* sp. nov.
- 87. *Hospitalitermes ataramensis* PRASHAD and SEN-SARMA, 1960
- *88. *Hospitalitermes birmanicus* (SNYDER, 1934)
- *89. *Hospitalitermes medioflavus* (HOLMGREN, 1913)
- 90. *Aciculitermes maymyoensis* KRISHNA, 1965

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タイ国のシロアリ

(食材性昆虫の研究 第 2 報)

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摘 要

シロアリの大部分は、熱帯に分布している。日本とこれら地方との研究や経済面での結びつきが強くなるにつれて、シロアリについての問合せや同定依頼が多くなってきたが、比較標本の全くない日本では種名の同定はときに非常に困難であり、また文献だけでは被害についての実状を理解できないこともあった。幸い著者は 1965 年に日米科学協力研究の一つである「太平洋地域の昆虫類の地理的分布と生態」に参加してタイ国のシロア리를調べる機会をえた。また 1968 年に英連邦研究所の Termite Research Unit に留学した際、大英博物館に所蔵されている尨大な標本を比較しながら、タイ国で採集した標本も含めて東南アジアのシロアリについて分類学的研究を行なったので、この地方のシロアリについて概略の知識を得ることができた。この報告は、タイ国で採集したシロアリについての分類学的研究をまとめたもので、生態についての記録は別に報告する予定である。

タイ国のシロアリは、AHMAD (1965) が 74 種を記録し、HARRIS (1968) が 19 種の目録をつくって、73 種が記録されていた。

今回の報告は、1965 年 6 月 5 日から 28 日までの間に採集した標本に、京都大学渡辺弘之氏の採集した少数の標本を加えてまとめたもので 48 種を記録してある。このうち 4 種は新種として記載し、さらに 13 種をタイ国からはじめて記録した。また、近似種が多くて同定の困難であった小型の *Odontotermes* 属の種や、*Bulbitermes germanus* の近似種、および混乱のあった *Hospitalitermes* 属については検索表によって種の区別点を明らかにした。

最後に、現在までにタイ国から記録されているシロアリ 90 種の目録をつけた。