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FIVE NEW GENERA OF TERMITES FROM SOUTH AMERICA AND MADAGASCAR (ISOPTERA, RHINOTERMITIDAE, TERMITIDAE)

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We must now assume that a high proportion of the existing genera of termites are known. A few based upon described species are named in a catalogue of the termites of the world by T. E. Snyder (1949, Smithsonian Misc. Coll., no. 112). Those described below are founded upon new species that accumulated as the result of several expeditions. The author is indebted to Karl P. Schmidt and E. R. Blake of the Chicago Natural History Museum, to Neal A. Weber of Swarthmore College, and to Harold Kirby of the University of California for most of these specimens.

Some of the new species here described have been studied by Dr. Muzaffer Ahmad and incorporated into a forthcoming comprehensive analysis of termite phylogeny. Nine additional new genera from a collection made in 1948 by the author in the Belgian Congo await future description.

Including all of these undescribed genera, the order of living Isoptera is now divided into five families, 153 genera, and three additional subgenera. The Mastotermitidae has a single genus and species. The Kalotermitidae has 11 described genera, and a few more will doubtless be added when the family is more thoroughly studied. The Hodotermitidae has eight genera, the Rhinotermitidae has 13, and the Termitidae has 120. The average number of species included in a genus is about 11, but of

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course there is a wide range in the size of a genus from over a hundred species to many monotypic genera.

The monotypic genus has been stigmatized as an absurdity, but the author believes that the concept has objective reality. The separations of the higher taxonomic categories are best made between living groups that are phylogenetically sharply divided, usually as the result of the extinction of intermediate forms. A genus with many species may thus be distinct from an allied genus with a single surviving species. Monotypic genera are often the surviving relicts of genera that presumably had more species in the past. They are of special interest to the student of phylogeny and often afford data enabling interpretations of geographical, ecological, geological, and evolutionary interest. A few remarks concerning these matters are included in the discussion of the following new genera.

Holotypes are deposited in the collection of the American Museum of Natural History now in the custody of the author. Paratypes are deposited in the Chicago Natural History Museum, the United States National Museum, and the Museum of Comparative Zoölogy at Harvard University.

Financial aid during the course of the studies has been received from the Dr. Wallace C. and Clara A. Abbott Memorial Fund of the University of Chicago.

Glossotermes oculatus, new genus, new species

SOLDIER (FIG. 1): Head, pronotum, and tergites brownish yellow. Labrum with a wide, light, transverse band in the middle. Head with a few scattered bristles; postmentum with a few minute hairs; pronotum with a few bristles and minute hairs around the edges; tergites with a few bristles and minute hairs on the lateral portions; tip of labrum with two bristles near the edge. Head quadrangular, somewhat flat, with somewhat convex parallel sides; a distinct eye spot behind the antennal socket on each side, a little smaller than the antennal socket and with reduced facettes barely distinguishable; a minute light gland opening visible in the middle well behind the level of the eye spots; two light spots that may be reduced ocelli a little more than the length of the eye spot above the eyes. Postmentum wide in front and narrowed in the posterior portion, about one-fourth to one-fifth its length from the rear middle margin of the head; in profile somewhat convex with a little ridge near the neck mem-

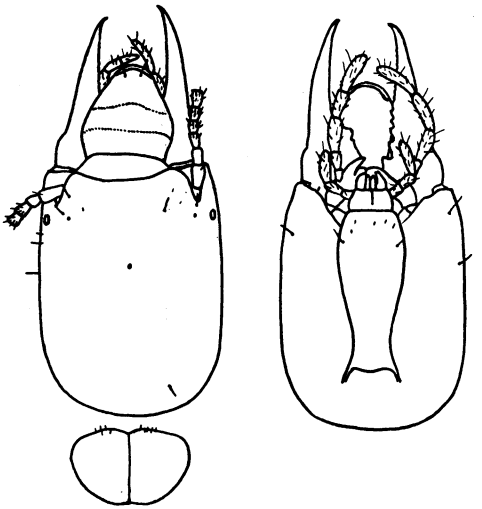

FIG. 1. *Glossotermes oculatus*, new genus, new species. Head and pronotum of soldier from above, and head of soldier from below.

brane. Antenna with 13 articles, the apical article much narrower than the preceding one, the third about equal to the second, the fourth shorter than the third. Postclypeus distinct, about three times as wide as long. Labrum very wide, sides rounded; a thin hyalin lip at the tip. Mandibles wide at the base and tapering to a sharp tip that is only slightly hooked; outer edge of left mandible nearly straight; outer edge of right mandible slightly curved inward; both mandibles with a notch where the distinct basal portion joins the apical portion about two-ninths the length of the mandible from the basal end (condyle); inner edge of right mandible smooth with a tooth-like projection about one-third of the length of the mandible from the base (condyle); right mandible narrows rapidly beyond this projection; left mandible with a finely serrate inner edge behind the tip, becoming coarser near the lower portion of the base where a large groove receives the tooth-like projection of the right mandible; edge below the groove of the left mandible coarsely serrate and edge above the groove smooth. Pronotum flatly arched, front margin distinctly notched. All tibiae with two spurs each (2:2:2).

MEASUREMENTS (IN MM.): Length of head to side base of mandibles, 1.56; height of head, 0.82; width of head, 1.10; widest width of postmentum, 0.43; narrowest width of post-

mentum, 0.22; length of postclypeus, 0.19; width of postclypeus, 0.57; width of labrum, 0.57; length of left mandible, 1.09; length of pronotum about 0.47 (could not see posterior edge under the mesonotum); width of pronotum, 0.78; length of mesonotum, 0.41; length of hind tibia, 1.09.

Described from a single soldier (holotype), Itabu Creek (1°42′ N., 57°55′ W.), tributary of upper New River, Acary Mountains, British Guiana, near the border of Brazil, collected by E. R. Blake, (No. 1), X.1938, in the rain forest at about 2000 feet elevation.

COMPARISON WITH OTHER GENERA: The closest genus seems to be *Psammotermes* (Rhinotermitidae), but the relationship is rather remote. *Psammotermes hybostoma* (generitype) soldier has the following differences: head and body with many long hairs; mandibles more curved and both mandibles coarsely serrate in the middle; left mandible without the inner groove at the base, and basal portion of the mandible proportionately larger and apical portion smaller; suture of postclypeus and front not so distinct; labrum large and wide, without transverse light band, tip more pointed and without hyalin lip; postmentum proportionately wider in the narrowest region; eye spot not so conspicuous; antenna with more articles; pronotum without lobed front margin; femora thicker; tibial spurs 3:2:2.

The soldier of *Glossotermes* is more primitive with regard to the eye spot and the distinct postclypeus. The soldier of *Psammotermes* is more primitive with regard to the mandibles, antenna, and tibial spur formula. The linear order of genera has practically no meaning in this instance, but I am tentatively placing *Glossotermes* first. These two genera are considered the most primitive of the Rhinotermitidae and should be tentatively placed within the same subfamily (Psammotermitinae).

GEOGRAPHICAL AND ECOLOGICAL DISTRIBUTION: The common ancestral genus of these two genera possibly evolved in Mesozoic times, because certain more advanced Rhinotermitidae (*Coptotermes*) have a world-wide distribution in the tropics and are sometimes found in warm temperate regions. The family as a whole seems to have radiated and dispersed by mid-Mesozoic times. The existence of *Psammotermes* on Madagascar as well as the African continent indicates an early Tertiary or earlier origin of the genus. *Psammotermes* is a desert and arid country group, while the single specimen of *Glossotermes* was collected in a rain forest at about 2000 feet elevation. The Termitidae (derived

from the Rhinotermitidae) underwent much adaptive radiation before the dispersal of fairly advanced groups during the first half of the Cretaceous.

Genuotermes spinifer, new genus, new species

SOLDIER (FIG. 2): Head yellowish; body paler; mandibles red brown in outer two-thirds. Head with a few scattered bristles; pronotum with a few bristles; tergites with short hairs. Head elongate with straight parallel sides; hind margin somewhat curved; with a sharp conical projection in front pointed forward and the tip slightly upturned, tip above the level of the head and above the postclypeus; a sharp ridge above the base of each antenna. Postmentum slightly arched and not projecting below,

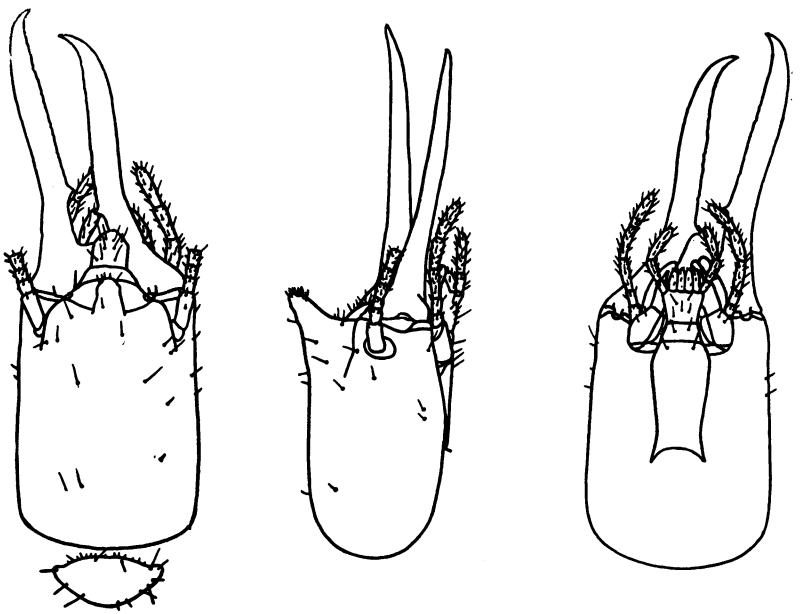

FIG. 2. *Genuotermes spinifer*, new genus, new species. Head and pronotum of soldier from above, and head of soldier from the side and from below.

proportionately fairly wide and narrowed somewhat in the middle. Antenna with 15 articles, the third a little shorter than the fourth, the fourth about as long as the second. Labrum with a convexly curved front margin and a slight angle at the junction with the straight parallel sides. Mandibles with basal third turned some-

what inward, outer two-thirds straight beyond the outward bent elbow; a tooth on the inner edge at the elbow; tips somewhat turned inward. Mandibles resemble those of *Orthognathotermes* and may function for both biting and snapping as in that genus. Pronotum profile with angle greater than a right angle between the posterior and anterior portion; front margin slightly indented.

MEASUREMENTS (IN MM.): Length of head to side base of mandible, 1.74; length of head to tip of frontal projection, 1.85; width of head, 1.26; length of postmentum, 0.65; widest width of postmentum, 0.40; narrowest width of postmentum, 0.29; length of left mandible, 1.92; width of pronotum, 0.76; length of hind tibia, 1.06.

Described from a single soldier (holotype), Urucum de Corumba (19°00′ S., 57° 43′ W.), Matto Grosso, Brazil, collected by Karl P. Schmidt, 14.VIII.1926, under log.

COMPARISON WITH OTHER GENERA: Closest to *Orthognathotermes* (Termitidae, Termitinae), but *Genuotermes* has more distinct mandibular teeth in the soldier, a frontal projection (resembling that of *Termes*), and lacks the bulbous projection above the base of the antenna; the postmentum is proportionately wider and shorter; the pronotum in profile does not have so sharp an angle between the anterior and posterior portions. *Genuotermes* is best placed before *Orthognathotermes* in linear order and probably represents an ancestral type that gave rise to *Orthognathotermes* in the Neotropical region.

Spicotermes brevicarinatus, new genus, new species

QUEEN (FIG. 3): Head and pronotum brown, a little darker between the eyes. Head with a few long scattered hairs and no short hairs; pronotum with many long hairs; membranous sides of abdomen with numerous short hairs. Head round; portion between the ocelli slightly convex with the upper edge of the ocelli about on the level with the middle of the head. Fontanelle plate oval, in a shallow depression. Eyes fairly prominent and of medium size. Ocellus about its width from the eye, larger than the fontanelle plate and smaller than the antennal socket. Antennae broken in the specimen, the third article slightly smaller than the fourth, the fourth distinctly smaller than the second. Postclypeus prominent, arched, about twice as wide as long; with a median line; elevated above the level of the head and form-

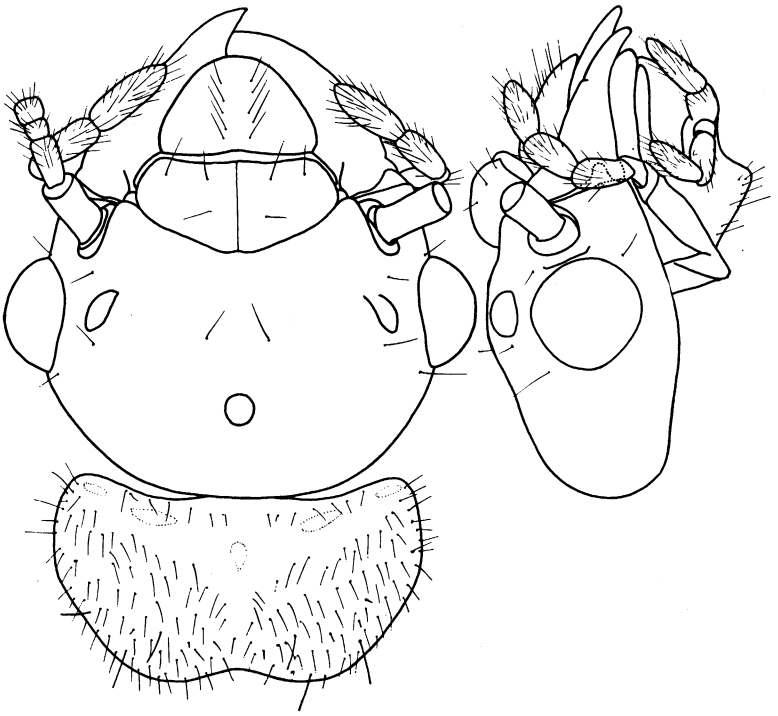

FIG. 3. *Spicotermes brevicarinatus*, new genus, new species. Head and pronotum of imago (queen) from above, and head of imago (queen) from the side.

ing a sharp angle with the front. Mandibles close to those of *Promirotermes*, but with the third marginal tooth of the left mandible not separated from the fused first and second marginal tooth by so deep a notch; second marginal tooth of right mandible distinct and separated from the first marginal tooth by an angle slightly greater than a right angle; apical teeth of both mandibles somewhat larger than the marginal teeth. *Termes* has a shorter cutting edge of the fused first and second marginal teeth of the left mandible, and the second marginal tooth of the right mandible is more reduced. Pronotum of *Spicotermes brevicarinatus* flatly saddle shaped; front margin somewhat elevated; sides rounded; hind margin emarginate. Hind margins of mesonotum and metanotum widely concave with somewhat roundly pointed posterior angles. Front tibia with three apical spurs and middle tibia with two apical spurs; hind leg

broken in specimen. Third tarsal joint of middle leg prolonged below and tip dark.

MEASUREMENTS (IN MM.): Width of head, 1.29; width of fontanelle plate, 0.06; length of fontanelle plate, 0.08; width of eye, 0.29; eye from ocellus, 0.09; length of ocellus, 0.13; width of ocellus, 0.10; length of postclypeus, 0.25; width of postclypeus, 0.53; length of pronotum, 0.50; width of pronotum, 0.96.

SOLDIER (FIG. 4): Head medium brown, darker than the rest of the body. Head nearly bare of bristles or hairs but with occasional scattered, fairly long hairs; pronotum and abdomen hairy. Head from above widest behind and sides somewhat converging towards the front; with a conical blunt vertical spike at the

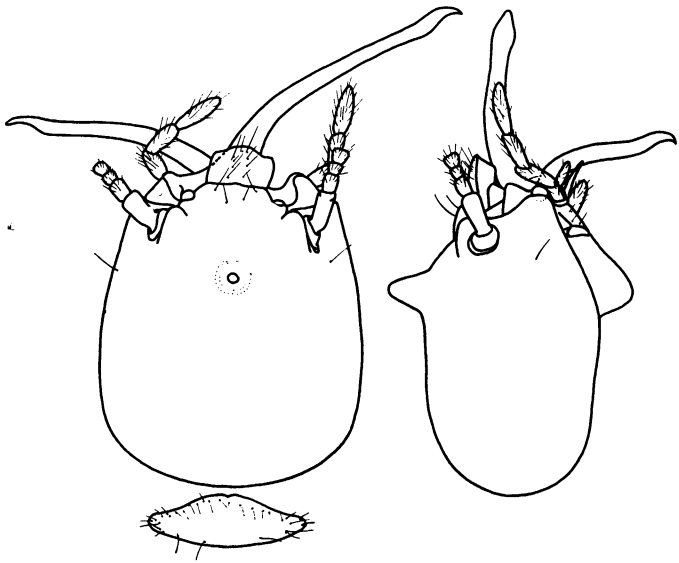

FIG. 4. *Spicotermes brevicarinatus*, new genus, new species. Head and pronotum of soldier from above, and head of soldier from the side.

junction of the front and vertex; frontal gland opening probably at the tip of the cone but minute and inconspicuous. Postmentum short, strongly arched, very prominently protruding just in front of the posterior middle portion. Antenna with 15 articles, the third shorter than the fourth, the fourth shorter than the second. Labrum wide with a slight indication of three lobes at the anterior edge. Mandibles adapted for snapping, slender,

symmetrical; bowed outward in the basal third and slightly curved inward in the outer two-thirds; tips with distinct, slightly curved hooks; molar plates each with a tooth-like projection at the base. Front margin of the pronotum somewhat emarginate; anterior portion rising sharply and forming an angle of about 90° with the posterior portion in profile. Tibial spurs 2:2:2.

MEASUREMENTS (IN MM.): Length of head to side base of mandible, 1.71–1.76; height of head from tip of spike to the tip of the postmentum, 1.35–1.50; width of head, 1.47–1.65; width of labrum, 0.35–0.39; length of left mandible, 1.91–2.12; width of pronotum, 0.88–0.96; length of hind tibia, 1.19–1.29.

Described from one queen (morphotype), many soldiers (holotype, paratypes) and workers, Oronoque River (2°42′ N., 57° 25′ W.), British Guiana, collected by Neal Weber, No. 584, 22.VII.1936; many soldiers (paratypes) and workers, Itabu Creek (1°42′ N., 57°55′ W.), tributary of upper New River, Acary Mountains, British Guiana, collected by E. R. Blake, X.1938, in rain forest at an elevation of about 2000 feet.

COMPARISON WITH OTHER GENERA: *Dentispicotermes* [description taken from an undescribed species of a new genus named in Snyder's catalogue of termites, 1949, *loc. cit.*, with *D. globicephalus* (Silvestri) the generitype] soldier mandible with a short but conspicuous tooth near the middle; spike on the head more blunt; labrum with flatly convex front margin without the tendency to form three lobes as in *Spicotermes*. The general characters of color, pilosity, shape of head, shape of mandibles, shape of postmentum, and shape of pronotum are similar to those of *Spicotermes*. *Dentispicotermes* (Termitidae, Termitinae) is clearly a closely related genus possessing the more primitive character of toothed mandibles in the soldier and should be placed immediately in front of *Spicotermes* in the linear order. *Dentispicotermes* is probably a phylogenetically slightly older type in the Neotropical region.

The imago of *Promirotermes holmgreni* (Silvestri) of Africa has a proportionately longer pronotum than *Spicotermes* and a proportionately wider pronotum than *Termes fatalis* Linnaeus of Surinam and British Guiana; the fontanelle is slit shaped and long; the postclypeus is arched but is not elevated much above the level of the head. The soldier of *Promirotermes holmgreni* has a rounded front with the opening of the frontal gland below and in front of the tip; the postmentum is not prominently pro-

jected below; the antenna has 14 articles, the third longer than the second or fourth; the front margin of the labrum is concave with sharp lateral points; the mandibles are not bowed outward, but are slightly curved inward, and the tips are not so conspicuously hooked; the edge of contact with the opposite mandible near the tip is longer than in *Spicotermes*.

The imago of *Termes fatalis* Linnaeus (described by Emerson in 1925 from British Guiana under the name of *Mirotermes acutinasus*) has a proportionately longer pronotum than that of *Spicotermes* and lacks a posterior emargination; the fontanelle opening consists of a long slit; the postclypeus is not so arched and is not raised much above the level of the head. The imago of *T. fatalis* appears to be closer to *Promirotermes* than to *Spicotermes*. The soldier of *T. fatalis* has a forward-pointed frontal projection with the glandular opening close to the tip; the postmentum is long and narrow in the middle and is not projecting below; the labrum is narrow and the front margin is concave with sharp lateral points; the antenna has 14 articles, the third and fourth about equal, the second longer than the third; the mandibles are long and slender and slightly curved inward, the points slightly hooked with a fairly long edge of contact between the mandibles, the hooked tip not so distinct as in *Spicotermes;* the profile of the pronotum is without so sharp an angle between the anterior and posterior portions as in *Spicotermes*.

Quasitermes caprinus, new genus, new species

QUEEN (HEADLESS): Hind margin of pronotum straight, front margin slightly indented, and sides rounded and converging towards the rear. Hind margin of mesonotum widely and concavely emarginate with a very slight indication of an angle. Front legs broken off in specimen. Middle leg with two apical spurs and two thin spines on the outer edge of the tibia. Hind leg with two apical spurs on the tibia.

MEASUREMENTS (IN MM.): Length of pronotum, 0.53; width of pronotum, 0.86; length of hind tibia, 1.18.

SOLDIER (FIG. 5): Color of head yellow; body pale. Head with a few scattered hairs; pronotum hairy; abdominal tergites with short hairs, shorter than those on the head and shorter than the longest ones on the pronotum. Head elongate, quadrangular, sides parallel and slightly convex; frontal projection pointed forward, not very acute, reaching the level of the front margin

of the antennal socket from the side; frontal gland opening seems to be in a depression below the tip of the projection. Postmentum narrowed in the middle, in profile somewhat convex from the front to the rear. Antenna with 14 articles, the second and third about equal, the fourth shorter or about equal to the third. Labrum hardly asymmetrical, longer than wide, tip shallowly and slightly concave or angulate in the middle (turned up in figure and shows the under side), sometimes with a weak lobe between the lateral point and the middle; lateral points sharp but short. Mandibles asymmetrical and adapted for snapping; left mandible somewhat sinuate; right mandible somewhat bowed outward;

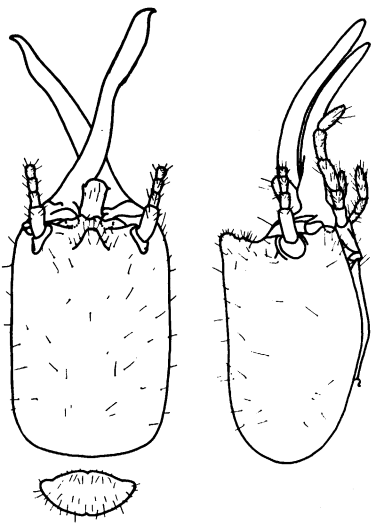

FIG. 5. *Quasitermes caprinus*, new genus, new species. Head and pronotum of soldier from above, and head of soldier from the side.

each mandible with a distinct hook at the tip. Front margin of pronotum indented; profile forming an angle a little greater than a right angle between the anterior and posterior portion. Tibial spurs 3:2:2. Middle tibia with two or three thin spines thicker than the hairs and thinner than the spurs.

MEASUREMENTS (IN MM.): Length of head to side base of mandible, 1.77–1.91; length of head to tip of projection, 1.76–1.83; height of head, 1.02–1.06; width of head, 1.18–1.22; widest width of postmentum, 0.39–0.41; narrowest width of post-

mentum, 0.21–0.23; length of left mandible, 1.94–1.95; width of pronotum, 0.75; length of hind tibia, 0.97–1.12.

Described from one headless queen (morphotype), numerous soldiers (holotype, paratypes) and workers, Manantantely (24°50′ S., 46°50′ E.), near Fort Dauphin, Madagascar, collected by Harold Kirby (No. T-4463), 17.VI.1935, in forest; numerous soldiers (paratypes) and workers from the above type locality, collected by Harold Kirby (No. T-4444), 15.VI.1935; numerous soldiers (paratypes) and workers, collected by Harold Kirby (No. T-4510), 3.VII.1935, near Ivoloina, 12 kilometers from Tamatave (about 18°10′ S., 49°25′ E.), Madagascar. Kirby's field notes under No. 4510 state: "Large mound associated with small roots of a tree at top of road cut. Estimate of size, 18 inches deep, 15 inches across, 10 inches from ground to top. Nest permeated by fine roots. Black-headed nasutes [*Nasutitermes nigrita* (Wasmann)] in lower part of nest."

COMPARISON WITH OTHER GENERA: The combination of the asymmetrical mandibles and the pointed frontal projection of the soldier indicates a natural grouping of *Quasitermes* with *Paracapritermes*, *Mirocapritermes*, and *Cornicapritermes* within the large subfamily Termitinae of the Termitidae.

The *Paracapritermes* soldier has a somewhat more sinuate left mandible than *Quasitermes*, and the lateral points at the end of the labrum are not so distinct. The imago-worker mandibles of *Paracapritermes* are a little less specialized than those of *Quasitermes* as indicated by the fact that the second marginal tooth of the right mandible is a little more distinct and the apical tooth is proportionately somewhat smaller compared to the first marginal tooth.

The soldier of *Mirocapritermes* is about equally adapted for snapping, but the left mandible is slightly more curved near the base and the right mandible is a little straighter; the labrum is more asymmetrical and is more distinctly forked with longer and sharper lateral points; the frontal projection is somewhat smaller and not so pointed. The worker of *Mirocapritermes* has a proportionately longer cutting edge on the mandible behind the first marginal tooth.

The soldier of *Cornicapritermes* has more strongly asymmetrical mandibles, and the worker mandible has a less distinct second marginal tooth.

Of this group of related genera, *Paracapritermes* is the most

generalized, *Mirocapritermes* comes next in the linear order, *Quasitermes* should be placed after *Mirocapritermes*, and *Cornicapritermes* is the most specialized. However, it would appear that both *Quasitermes* and *Cornicapritermes* are more closely related to *Mirocapritermes* than they are to each other.

GEOGRAPHICAL AND ECOLOGICAL DISTRIBUTION: The discovery of a closely related group of genera with asymmetrical snapping mandibles in the soldier caste in so widely separated regions as Australia (*Paracapritermes*), Malaysia (*Mirocapritermes*), Madagascar (*Quasitermes*), and South America (*Cornicapritermes*) indicates a mid-Cretaceous or earlier origin of the common ancestor. Termites such as these lack vagility. The weak flight, the necessity for the male and female to find each other following the colonizing flight, the climatic and biotic barriers to dispersal, and the numerous geographical and phylogenetic parallels found among termites indicate that these insects are nearly always dispersed over land connections in tropical climates. There are a few exceptions to this rule that can be adequately interpreted without negating the general proposition. In many respects the most specialized soldiers found among termites are those with asymmetrical snapping mandibles in the subfamily Termitinae (Termitidae) and the nasute soldiers in the subfamily Nasutitermitinae (Termitidae). It is of interest to note that both of these rather remotely related specialized types arose independently and dispersed during Mesozoic times. No ancient fossils have been found, so that this conjecture rests upon the circumstantial evidence of phylogenetic relationships, geographical distribution, ecological adjustments, colonization, and behavior of these insects.

Cornicapritermes mucronatus, new genus, new species

SOLDIER (FIG. 6): Head yellow; body pale. Head covered with many fairly long hairs except on the extreme posterior portion; pronotum and abdomen hairy. Head thick and elongate with slightly curved sides; frontal conical projection pointed forward and extended well beyond the base of the mandibles, slightly upturned at the tip, with a small bump in front and below the tip that seems to be the opening of the frontal gland. Postmentum elongate, thin, gradually narrowed in the middle portion. Antenna with 14 articles, the second, third, and fourth about equal in length with some slight variations. Labrum

slightly asymmetrical, about twice as long as wide; tip shallowly forked with two lateral points each making an angle of about 60° and the angle between the points about 150°. Mandibles strongly asymmetrical, in general similar to *Capritermes* and *Neocapritermes* in structure and function; with a very short hook at the tip of the left mandible that may sometimes be broken off. Front margin of the pronotum slightly indented in the middle; profile concave;

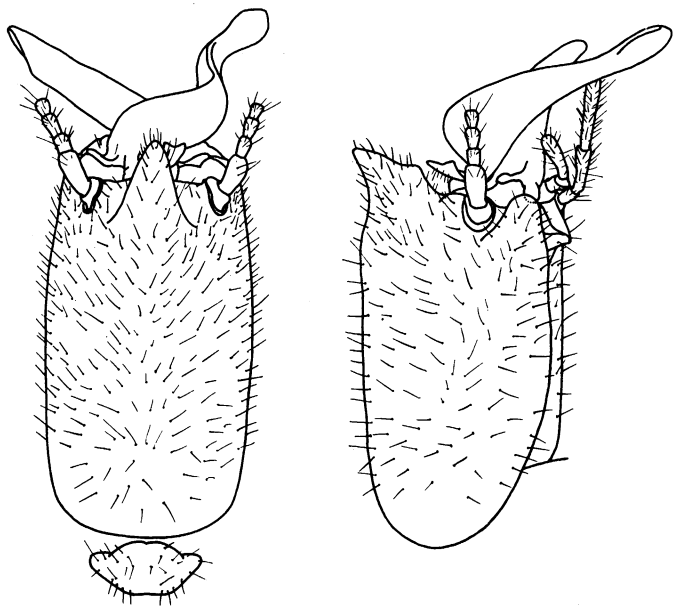

FIG. 6. *Cornicapritermes mucronatus*, new genus, new species. Head and pronotum of soldier from above, and head of soldier from the side.

angle between the anterior and posterior portions much greater than a right angle. Tibial spurs 3:2:2. Middle tibia with one or two distinct spines in the outer row. It is noteworthy to discover this character in such a specialized termite. An outer row of spines is usually considered to be a very primitive character. An outer row of spines is also characteristic of *Paracapritermes*, *Mirocapritermes*, and *Quasitermes*, but the spines are not so distinct and dark in these genera as in *Cornicapritermes*.

MEASUREMENTS (IN MM.): Length of head to tip of projection, 1.91–2.27; length of head to side base of mandible, 1.76–2.00; height of head, 0.88–1.05; width of head, 0.98–1.19; length of left

mandible, 1.24–1.40; length of pronotum, 0.29–0.31; width of pronotum, 0.59–0.70; length of hind tibia, 0.82–0.94.

WORKER: Mandibles with the apical tooth distinctly larger than the first marginal tooth; the right mandible with the second marginal tooth reduced or absent; the left mandible with the third marginal tooth separated from the fused first and second marginal teeth by a small indentation.

Described from three soldiers (holotype, paratypes) and workers, Penal Settlement (now a Forestry Station) (6°24′ N., 58° 39′ W.), lower Mazaruni River 3 miles from its junction with the Essequibo River, British Guiana, collected by A. E. Emerson, 22.IV.1924, under a log in second-growth forest at sea level, during an expedition of the Department of Tropical Research, New York Zoological Society; a few soldiers (paratypes) and workers, Itabu Creek (1°42′ N., 57°55′ W.), tributary of the upper New River, Acary Mountains, British Guiana, collected by E. R. Blake, X.1938, in the forest at about 2000 feet elevation.

COMPARISONS WITH OTHER GENERA: This genus is closest to *Paracornitermes*, *Quasitermes*, and *Mirocapritermes* in the subfamily Termitinae of the Termitidae. *Quasitermes* workers have a proportionately shorter cutting edge of the fused first and second marginal teeth of the left mandible compared to *Cornicapritermes*. *Paracapritermes*, *Quasitermes*, and *Mirocapritermes* have a distinct second marginal tooth in the right mandible.

The *Paracapritermes* soldier has a less strongly curved left mandible and a more distinct hook at the tip of each mandible, and the labrum is not forked at the tip. The soldier of *Mirocapritermes* has a less strongly curved left mandible, a more distinct hook at the tip of each mandible, and the labrum is more distinctly forked at the tip with larger and sharper lateral points. The soldier of *Quasitermes* has a less strongly curved left mandible, a more distinct hook at the tip of each mandible, and the tip of the labrum is not so distinctly forked but is shallowly forked with short sharp lateral points. As noted in the discussion under *Quasitermes*, these closely related genera give circumstantial evidence of having evolved from an ancestral group that was dispersed in Mesozoic times. Of the series, *Cornicapritermes* seems to be the most specialized.

As is stated in a paper by Dr. Muzaffer Ahmad, now in press, the asymmetrical mandibles of the soldiers of the *Neocapritermes* group and the *Capritermes* group represent a remarkable case of convergent evolution of the snapping function within the subfamily Termitinae.