ON SOME MACHAEROTINAE FROM SOUTH-EASTERN ASIA *(HOMOPTERA)* [1]

by

T. MAA (MAA TSING-CHAO)

(Taipeh, Taiwan)

The following fragmentary notes were chiefly derived from three small lots of Malaysian and Tonkinese Machaerotids received from the Zoölogisch Museum en Laboratorium (Buitenzorg) and Musée Heude (Shanghai) through the courtesies of Mr M. A. LIEFTINCK and the Rev. Père A. DE COOMAN, respectively. In addition to the descriptions of new species, redescriptions of and synonymical notes on certain genera and species are also appended. The figures in the text were made under supervision by Mr K. S. LIN. They are not all in the same magnification, but each organ is enlarged to the same scale for all the species involved. The measurements of tarsomeres (in dorsal aspect), and anal segment and anal style (both in lateral aspect) are taken along the median line.

Genus HINDOLOIDES DIST., 1915.

Hindoloides sparsuta JAC., 1944.

This species was not included in the writer's revision of Chinese *Machaerotidae* (MAA, 1947) and was described from a single ♀ collected in Shaowu, Fukien. Because of the World War II, JACOBI's paper was not recorded in the 1944-45 issues of the Zoological Record and unknown to the writer until very recently.

Genus HINDOLA KIRK., 1900.

Hindola geisha (SCHUM.), 1915.

= *H. robusta* JAC., 1944. (**syn. nov.**).

JACOBI's species was based upon one unique ♀ from Kuatun, Fukien, and was stated to be "Im Bau nicht von *H. geisha* (SCHUM.) verschieden". The writer's Fukien specimens (2♀♀) are from Ta-Chu-Lan, which is only 3 miles from Kuatun and the ecological factors there are practically the same as in the latter place. These two ♀♀ from Ta-Chu-Lan have been compared with the original description of *robusta* point by point and

[1] Contribution No 11 from the Division of Systematic Entomology, Department of Economic Zoology, Taiwan Agricultural Research Institute, published with the approval of the Director of the Institute.

were found to be identical. Furthermore, a comparative study of 4♂♂ and 6♀♀ from Formosa, Fukien, Kirin and Chosen disclosed that the color pattern of this species is very variable both among sexes and individuals. Therefore *robusta* must be added to the long list of synonyms of *geisha*.

Through the courtesy of Dr SICIEN H. CHEN, one ♀ from Suifenho, Kirin, 5.viii.1937 was received from the Academia Sinica. This marks the northernmost record (*ca.* 44° 20′ N.) of this interesting family.

Genus EUMACHAEROTA SCHMT., 1928.

= *Asimachaerota* MATSUM., 1940, p. 39 (**syn. nov.**).
= *Asichaerota* MATSUM., 1940, pp. 40, 81 (**syn. nov.**).

The exact systematic position of the genus *Asimachaerota* has long been problematical because of the difficulty in mastering its brief and misleading description (*cf.* MAA, 1947). It was originally proposed for the reception of *Asimach. taiheisana* MATSUM. (genotype) and *Mach. takeuchii* KATO. The "*middle*" cell on tegmen was stated to be not surrounded by the "forked" vein and the claval veins to be united into one near the apex [2]). No illustration nor any actual specimens of *taiheisana* are available to subsequent authors. As far as shown in KATO's (1931, 1938) and ESAKI's (1932) figures for *takeuchii*, the venational scheme represented was inseparable from that of *siebersi* SCHMT. (genotype of *Eumachaerota*) or *foveata* m. Besides venational characters, *Asimachaerota* was said to be closely allied to *Grypomachaerota* SCHMT. This is probably because of the anterior margin of head being "distinctly upturned" instead of the tibia III being armed with a preapical spine, as the head of *takeuchii* in profile is anteriorly slightly but distinctly more upturned than in typical *Machaerota*, sen. lat. and the tibia III is unarmed. It thus leaves no evidence for any of its true affinities towards *Grypomachaerota* and leads to the conclusion that MATSUMURA's genus must be suppressed as a synonym of *Eumachaerota*.

It may be interesting to note that the synoptic key for Machaerotid genera given by MATSUMURA in 1942 is essentially the same as that of 1940, except that *Asimachaerota* was omitted and substituted by *Conmachaerota* SCHMT. Although not so indicated, it is plain that *Asimachaerota* was then considered by its author to be synonymous with the latter genus.

Eumachaerota foveata, sp. nov. (fig. 1).

♀. Dirty yellow. Brownish on the broad median band of clypeus, median line (anterior half) of anteclypeus, rostrum, antennal pits, posterior tentorial pits, and on the four longitudinal impressions situated near anterior pronotal margin. Brownish black on basal portion of antennae, humeral angles of pronotum, posterior margin of scutellum (in lateral

[2]) The claval veins of *Machaerota* BURM. were stated by MATSUMURA (1940, 1942) in his keys to be not united into one near the apex. This statement is very perplexing and probably erroneous.

aspect), scutellar spine (except the roundish discal spot near base), tarsal claws I-II, legs III, metanotum, anal segment (apical and inferior portions in profile), anal style and on terebra. Tegmina yellowish hyaline, costal and anal margins except their extreme apical portions brownish black, veins yellow. Wings clear hyaline, veins brownish. Femora III with the exterior and ventral surfaces and inferior area of the interior surface yellow. Tibiae III with the basal four-fifths yellow. Basitarsi III basally reddish brown. Ultimate tarsomeres III (except claws) yellow.

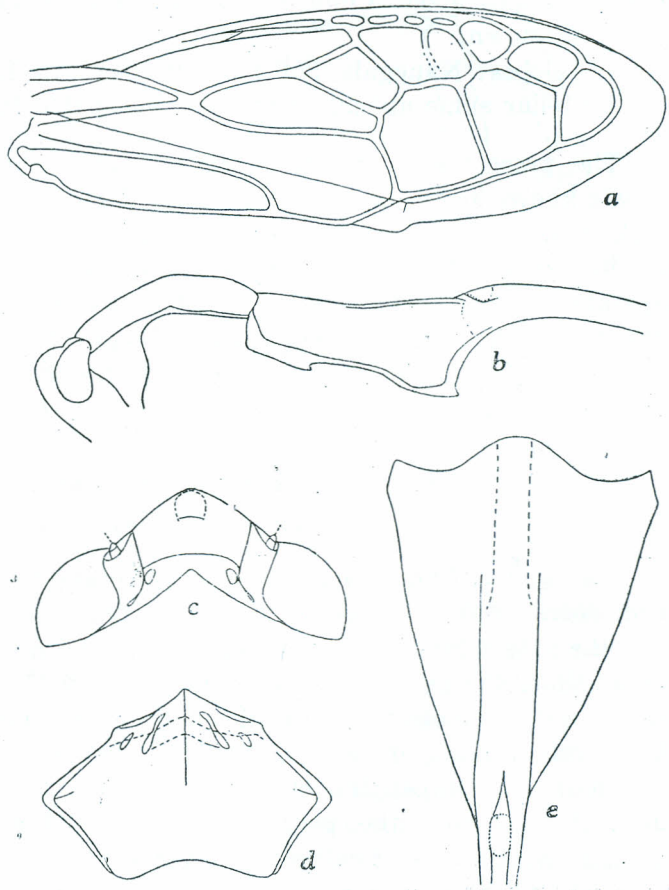


Fig. 1. *Eumachaerota foveata*, sp. nov. ♀ (Holotype). (*a*) Tegmen. (*b*) Head and thorax in profile. (*c*) Head, (*d*) Pronotum and (*e*) Scutellum proper in dorsal aspect.

Robust. Head in dorsal aspect finely confluently punctate. Anteclypeus and clypeus scarcely keeled; the lateral, transverse, pubescent impressions of the latter indistinct. Tylus anteriorly with two obscure, sub-parallel, longitudinal impressions; discally with a distinct, short, transverse foveation; and posteriorly with an obscure, roundish impression. Vertex antero-laterally and medially weakly raised, but postero-laterally slightly depressed. Pronotum coarsely reticulato-punctate; the median line (anterior half) strongly carinated; lateral margins entirely very sharply marked-off, and distinctly recurved (excluding the extreme anterior portion); humeral angle sharp, entally each with a short, oblique ridge; anterior area with two transverse foveations; antero-lateral areas very strongly depressed; discal area with a poorly defined, ring-like impression. Scutellum deeply, densely punctate (not reticulated); the median furrow very broad and deep, with the anterior third slightly shallowed and laterally not sharply margined, whereas the posterior two-thirds very coarsely, shallowly,

transversely striato-punctate. Tegmina as figured, but the venation being not absolutely symmetrical especially for the shape, size and number of costal marginal cells. Femora I-II and tibiae III weakly sulcated, femora III strongly so. Basitarsi III subequal in length to the two following tarsomeres together. Abdominal sternite I simple. Anal segment in profile shorter than the anal style, and apically slightly raised. Length of body to abdominal apex about 5 mm, to tegminal apex 9 mm.

♂ unknown.

S. Celebes: Nanggala, 900 m, Rantepao, viii. 1938 (native collector), 1 ♀, scutellar spine apically mutilated; deposited in the Leiden Museum.

The present species can be easily distinguished from all *Machaerotinae* known to the writer by its long, deep, broad median furrow and black (instead of whitish) posterior margin (in lateral aspect, situated inferior to the base of spine) of scutellum. It can be immediately separated from *Eumach. siebersi* SCHMT. (Kei Island) by the unicolorous pronotum, yellowish tegmina, black (instead of brown) legs III, yellow (instead of black) abdomen; and from *Eumach. taiheisana* MATSUM. (Formosa) and *Eum. takeuchii* (KATO) (Japan) by much paler pattern.

Genus MACHAEROTA BURM., 1835.

= *Conmachaerota* SCHMT., 1918 (syn. nov.).

The genus *Conmachaerota* was differentiated by SCHMIDT (1918) from *Machaerota* in three points: (1) pronotum more strongly swollen, with the antero-lateral margin subequal in length to, instead of distinctly longer than, the postero-lateral margin, and with the median keel more distinct; (2) scutellum in profile posteriorly more highly raised; (3) claval vein apically forked, instead of simple. An examination of the text-figures accompanying the present paper will immediately disclose the fact that both the pronotum and scutellum are interspecifically variable within the so-called *Conmachaerota* (*lieftincki, subnasuta*) or *Machaerota* (*coomani, esakii, exaggerata*), both in SCHMIDT's sense. The claval vein appears to be intraspecifically variable and often asymmetrical. The vein *2A*, when not wel sclerotized, is often represented by a distinct ridge, or a short stub. Therefore none of these three points can be considered as of generic importance. A comparison of the various structural characters of *notoceras* and *ensifera*, types of these two "genera", does not suffice to prove that they are generically different and thus *Conmachaerota* cannot even be recognised a subgenus.

Machaerota notoceras SCHMT., 1907 (fig. 2).

Java: Semarang, teak-forest, 15. v. 1926 (L. G. E. KALSHOVEN, No. 355), 1 ♂; 27. vi. 1926 (L. G. E. KALSHOVEN, No. 452), 2 ♀♀. Sema-

rang, 40 m, 19.vii.1926 (Fr. A. Th. H. VERBEEK, No. 486 W.), 1 ♂ ; 27.vii. 1926 (Fr. A. TH. H. VERBEEK, No. 509 W.), 1 ♀ . Res. Cheribon, Tjideres, 100 m, 8.iv.1938 (F. C. DRESCHER), 1 ♂; vi.1941 (F. C. DRESCHER), 1 ♀.

METCALF and HORTON (1934) recorded this species from Hainan Island but suggested that their specimens might be specifically different from topotypical *notoceras* as they were unable to examine any of the latter. A comparison of their figures (♂ genitalia) with the Javanese material at the present writer's hand confirms this suggestion, as the anal segment is differently shaped, the genital plate is clearly separated from pygofer, and apically very deeply incised. Probably this Hainanese form deserves a new name.

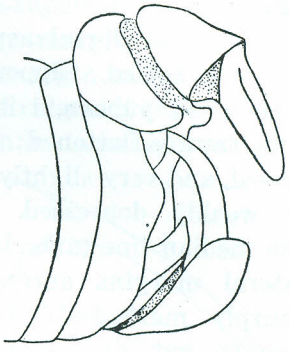


Fig. 2. *Machaerota notoceras* SCHMT. (Java), ♂, abdominal apex in lateral aspect.

Among the seven examples listed above, one of their tegmina is found with a simple claval vein, and three are each with a stubbed or very weakly sclerotized recurrent vein (rm_1).

Machaerota lieftincki, sp. nov. (fig. 3).

= *Mach.* sp., LIEFTINCK (bionomics).

♀ . Dirty greenish-yellow. Rostrum, clypeus (fine, transverse ridges), antennal pits, antennae (basal portions), posterior tentorial pits, pronotum (four roundish impressions near anterior margin), anal segment (basal portion), anal style and all tarsal claws brown. Scutellum with brown punctures; posterior third tinted with brownish; lateral ridges of the median furrow (in lateral aspect) with a few rather large, brown spots; lateral surfaces with the posterior and subposterior margins yellowish white and brownish respectively and the inferior margin brownish black, the pale antero-superior fleck very obscure. Scutellar spine with numerous, minute, brown spots. Metanotum shining, black. Abdominal tergites III (excluding median and lateral areas, sometimes entirely pale), IV-VI and IX brownish black. Tegmina almost clear hyaline, costal

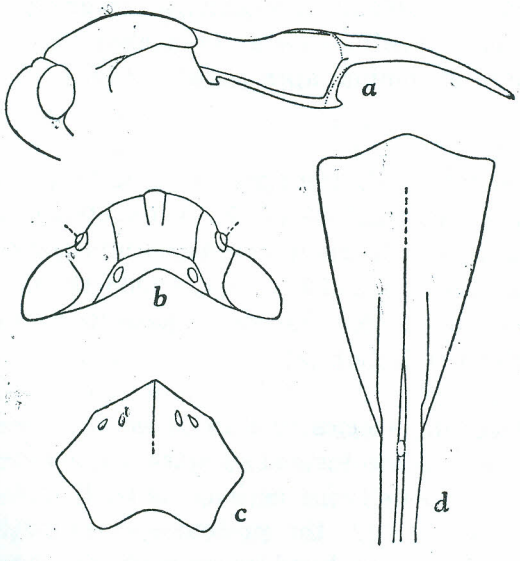


Fig. 3. *Machaerota lieftincki*, sp. nov. ♀ (Holotype). (*a*) Head and thorax in profile. (*b*) Head (*c*) Pronotum and (*d*) Scutellum proper in dorsal aspect.

(basally) and anal margins brownish; veins yellow, with fine, brownish spots. Wings clear hyaline, veins brownish. Femora II usually more or less stained with brown; tibiae and tarsi II usually reddish brown. Femora III (except ventral surface) brownish black; tibiae III bright yellow, with the extreme apex brown; tarsomeres III brownish, apically each more or less duller.

Head in dorsal aspect densely, rather finely punctate. Anteclypeus scarcely keeled. Clypeus medially rather prominently raised; lateral, transverse, pubescent impressions distinct. Tylus weakly convex, discally very faintly flattened; median line (anterior half) weakly, rather broadly raised, and very slightly protruding cephalad. Vertex flattened, sublaterally weakly depressed. Pronotum reticulato-punctate, discally convex; the median line (anterior third to full length) weakly carinated; antero-lateral margins anteriorly almost rounded-off, posteriorly somewhat sharply marked-off, but not recurved; postero-lateral margins very weakly but distinctly recurved; antero-lateral areas practically not depressed; humeral angles rather blunt, without ental, oblique ridges. Scutellum reticulato-punctate in brown, except for the pale, antero-lateral flecks, which are finely, confluently and concolorous punctate, and for the median line (anterior half), which is more coarsely and sparsely punctate (not reticulated) in brownish; median furrow shallow, moderately narrow, weakly keeled, shallowly, transversely striato-punctate. Scutellar spine in profile, apically almost extending to the same extent as the tegminal apex. Femora I-II compressed bilaterally, scarcely sulcated; femora III strongly sulcated; basitarsi III subequal in length to the two following tarsomeres together. Abdominal sternite I weakly, transversely raised near the middle. Anal segment in profile shorter than anal style, and apically simple. Length of body to abdominal apex about 4.0-4.5 mm, to tegminal apex 5-6 mm.

♂ unknown.

Java: Buitenzorg, 250 m, 1.viii.1923 (H. DOCTERS VAN LEEUWEN), 1 ♀ (det. KARNY as *Machaerota notoceras*!); xi.1939 (C. N. A. DE VOOGD), ex *Hibiscus rosa-sinensis* LINN. (*Malvaceae*), 1 ♀ (holotype), numerous nymphal calcareous tubes. Preanger, Bandung, 750 m, 3-10.i.1938 (F. C. DRESCHER), 2 ♀♀. Holotype deposited in Leiden Museum, paratypes in Buitenzorg Museum and in the writer's collection.

In BAKER's (1927) key, this interesting species runs to *Conm. mindanaensis* BKR., but body dirty greenish yellow instead of dark chocolate brown, scutellum including spine only about twice as long as head and thorax together. From *Mach. notoceras* SCHMT., the present species can be immediately separated by the black median band on clypeus, by the anterior angulation of head in dorsal aspect, and by the relative curvature of scutellar spine.

Machaerota subnasuta, sp. nov. (fig. 4).

♀. Light brownish yellow. Rostrum, clypeus (transverse ridges), antennal pits, posterior tentorial pits and pronotum (four oblong impressions near anterior margin) all brownish. Scutellum chestnut brown except the dorsal surface and antero-superior, oblique fasciae (in lateral aspect), which are concolorous with pronotum, the antero-superior corners (in lateral aspect), which are brownish, the posterior margin (in lateral aspect), which is yellowish white, and the inferior margin which is narrowly black (the extreme apex yellowish); the lateral ridges of the median furrow with some rather big, black spots, visible both in dorsal and lateral aspects. Scutellar spine with some fine, brownish spots. Metanotum shining, black. Mesosternum medially black. Metasternum with a black, transverse stria at each side. Abdominal tergite IV and its following ones laterally and anal style brownish black. Anal segment apically brown. Tegmina almost clear hyaline, evenly stained with pale yellowish; costal (basally) and anal margins brownish black; veins yellow, with a few exceedingly minute, brownish spots. Wings clear hyaline; veins brownish. Femora II-III (basally), tarsomeres III (apically) and all tarsal claws more or less brown.

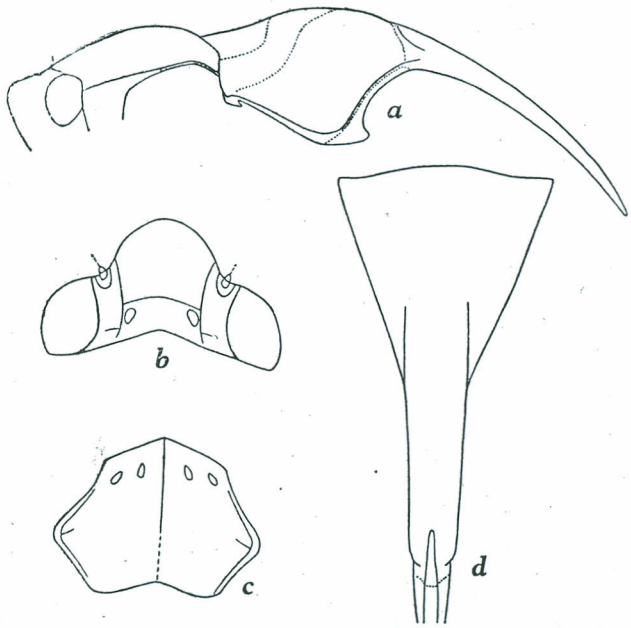


Fig. 4. *Machaerota subnasuta,* sp. nov. ♀ (Holotype). (*a*) Head and thorax in profile. (*b*) Head (*c*) Pronotum and (*d*) Scutellum proper in dorsal aspect.

Anteclypeus and clypeus not noticeably keeled, the transverse, pubescent impressions of the latter distinct, some of them being even visible in dorsal aspect. Tylus faintly punctate; the anterior margin slightly raised, median line broadly and very shallowly depressed. Vertex weakly depressed sublaterally. Pronotum densely (not reticulated) punctate in brown; antero-lateral margins anteriorly very weakly marked-off, posteriorly sharply so and slightly recurved; postero-lateral margins also slightly recurved; humeral angles each entally with a short, oblique ridge; antero- and postero-lateral submarginal areas depressed; median line (anterior two-thirds) weakly ridged. Scutellum dorsally densely punctate in brown (not so densely as on pronotum); median furrow deep, modera-

tely broad, with the median line very deeply impressed, except for the extreme apex, where it is feebly carinated; lateral surfaces more densely punctate in black (as densely as on pronotum), except for the antero-superior areas which are punctate in the same density as on the dorsum. Scutellar spine in profile apically extending about to the same extent as the tegminal apex. Femora I not sulcated, very slightly compressed bilaterally, the II-III much more strongly compressed and distinctly sulcated; basitarsi III subequal in length to the ultimate tarsomere. Anal segment in profile subequal in length to anal style and apically very slightly raised. Length of body to abdominal apex about 4.5 mm, to tegminal apex 6 mm.

♂ unknown.

Java: Semarang, teak-forest, 30.v.1925 (L. G. E. KALSHOVEN, No 276 *a*), 1 ♀, rather poorly preserved; deposited in Leiden Museum.

This elegant species is chiefly characterized by its head, which is weakly angulated in profile, and by its tricolorous and bipunctate scutellum. It stands very near *Mach. philippinensis* BKR. (Luzon), but the colour-pattern is quite different.

Machaerota sp. nov. non descripta.

Java: Res. Cheribon, Tjideres, 100 m, 8.iv.1938 (F. C. DRESCHER), 1 ex., abdomen and legs III entirely mutilated.

Doubtless representing an undescribed species.

Very similar to *Mach. confirtissima* m., but the keel extending along the full length of pronotum; claval vein simple; legs I-II reddish brown, the femur dorsally irregularly marked with yellow. Owing to the poor condition of the unique specimen, the writer refrains from proposing a specific name.

Machaerota coomani LALLEM., 1942 (figs. 5-6).

= *Mach. tonkinensis* LIU, in litt. (syn. nov.).

The following notes may be supplemented to LALLEMAND's brief description, which is most probably referring to the female as indicated by the coloration and measurements.

♂. Thoracic sterna all brownish, but presternum medially black. Abdominal tergites I-II entirely yellowish brown (the II sometimes laterally black-flecked), the III-VIII medially yellowish brown, laterally black (anterior margin of the III sometimes entirely yellowish brown); anal segment, anal style and pygofer brownish black. Abdominal sternites yellow, more or less tinted with brown. Connexivae black. Veins of tegmina yellow, with minute, brownish spots. Wings hyaline, anal areas

fuscous. Legs I-II reddish, but coxae, trochanters and femora (ventrally) yellow, femora II (excluding ventral surfaces) reddish brown. Legs III reddish brown; but femora duller, tibiae (excluding both extremities) yellow.

Clypeus not keeled, with distinct, lateral, transverse, pubescent impressions, some of which even visible in dorsal aspect. Tylus very weakly convex, finely, confluently punctate; the anterior margin not raised; median line slightly depressed. Vertex keeled. Pronotum reticulato-punctate; the antero-lateral margins anteriorly very slightly incurved and almost rounded-off, posteriorly strongly marked-off and feebly recurved; postero-lateral margin also recurved; humeral angles each entally with a short, oblique ridge; median line carinated along the full length or almost so; lateral marginal areas slightly depressed. Scutellum also reticulato-punctate, weakly keeled; the median furrow deep, obscurely, coarsely, transversely striato-punctate. Scutellar spine in profile apically extending to the same extent as the tegminal apex. Femora sulcated, the III more strongly so; basitarsi III slightly shorter than the ultimate tarsomere. Abdominal sternite I medially convex. Abdominal apex as illustrated. Length of body to abdominal apex about 4.5 mm, to tegminal apex 6.0-6.25 mm.

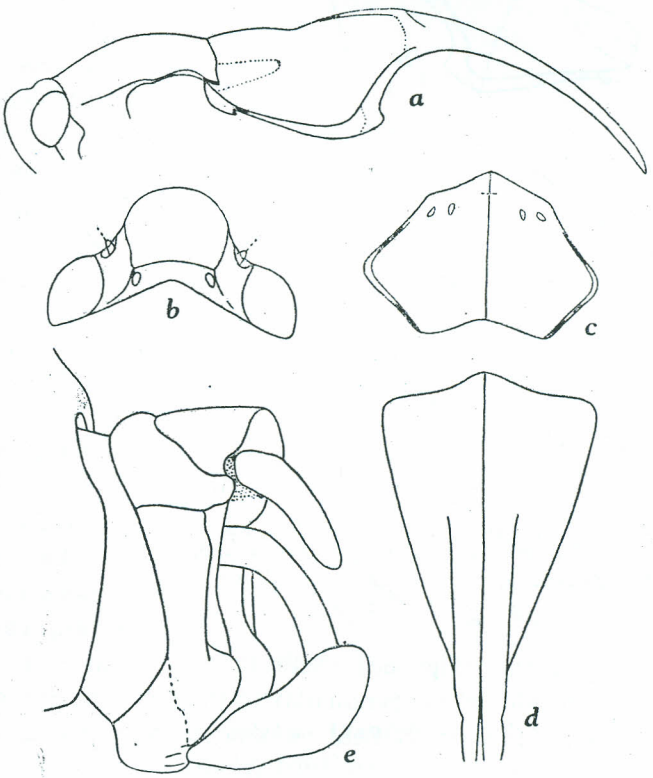
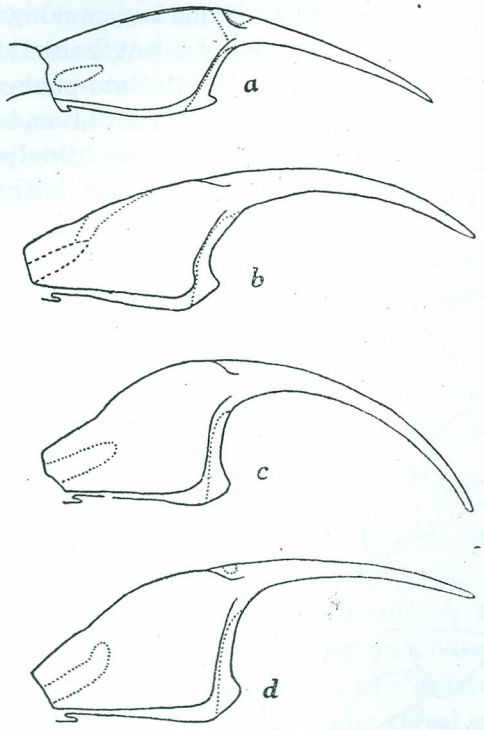


Fig. 5. *Machaerota coomani* LALLEM. (a) Head and therax in profile. (*b*) Head, (*c*) Pronotum and (*d*) Scutellum proper in dorsal aspect. (*e*) ♂ abdominal apex in lateral aspect.

♀. Paler. Prosternum medially reddish brown. Abdomen usually laterally dull brown instead of black; the tergite II always not black-flecked; anterior margins of the III-IV sometimes entirely yellowish brown. Anal segment sometimes apically reddish yellow. Terebra reddish brown to brownish black. Length of body excluding tegmina about 5 mm, including tegmina 7.0-7.5 mm.

Tonkin: Hoa-Binh, iii.1937 & vii.1939 (A. DE COOMAN), 10 ♀♀, 8 ♂♂ (1 ♂ det. GAINES LIU as *Mach. tonkinensis* LIU) (Musée Heude).

Variation: The female of this species seems to be rather variable in certain respects, and among the 8 specimens at hand, 4 abnormal formae were recognized, each being represented by a single individual only.



Fif. 6. *Machaerota coomani* LALLEM., ♀, variation of scutellum and scutellar spine. (*a*) Forma α, (*b*) Forma β, (*c*) Forma γ and (*d*) Forma δ.

Forma α (fig. 6*a*). Much duller; clypeus shining black, only with a few (about 5-6) narrow, lateral, transverse striae. Tylus, vertex, pronotum and scutellum brownish black, scarcely pale marked. Abdominal tergites III-VIII medially narrowly yellow. Legs also brownish black, except for all knees, and dorsal surfaces of femora I and of tibiae III which are yellow. Scutellum in profile with superior margin almost straight, posteriorly less strongly raised, and without the "neck" region near the mid-point. Scutellar spine in profile almost straight, apically less strongly bent ventrad. Claval veins of both tegmina apically forked.

Forma β (fig. 6*b*). Scutellum in profile similar to forma α. Scutellar spine also similar to forma α but more strongly curved, apically very weakly bent ventrad.

Forma γ (fig. 6*c*). Scutellum in profile very thick, the posterior margins almost perpendicular to the inferior. Scutellar spine very strongly curved, and apically bent ventrad to the same level of the inferior scutellar margin.

Forma δ (fig. 6*d*). Scutellum in profile similar to forma γ, but without any trace of the "neck" region near the middle.

Furthermore, the short, sub-basal, transverse impression on pronotum of this species is often not traceable. The lateral margins of the median furrow of scutellum are usually subparallel to each other, but often slightly narrowed sub-basally; in the forma α, they are more unusually widely separated, and weakly divergent anteriorly. Among the 18 specimens at hand, 1 ♂ (right-hand tegmen), 1 ♂ (left-hand tegmen), 1 ♀ (both tegmina) (forma α) and 1 ♀ (left-hand tegmen) are with the claval vein apically forked, as in typical *Conmachaerota*.

Machaerota esakii KATO, 1939 (fig. 7).

= *Mach. ensifera* ESAKI, 1932 (*encifera*, err. typ.!) nec BURMEISTER, 1835.

♀. Reddish brown. Head duller, clypeus antero-medially black, laterally with brownish, transverse fasciae. Lateral surfaces of scutellum with the antero-superior streak and posterior margin yellowish white, the inferior margin narrowly black. Scutellar spine basally with a yellowish, semi-transparent spot. Mesosternum medially black. Metanotum shining, black. Abdominal tergites I-VIII black, with the median line broadly yellow, and lateral areas each with an obscure, transverse, brown fleck; the IX entirely and anal segment apically yellowish brown. Abdominal sternites brownish black, the basal ones slightly paler. Tegmina hyaline, apically tinted with yellow, costal (basally) and anal margins brownish black; veins deep yellow, with minute, brownish spots. Wings hyaline, veins brown. Femora III dull chestnut brown, dorsally paler; tibiae III (excluding apices) yellowish brown.

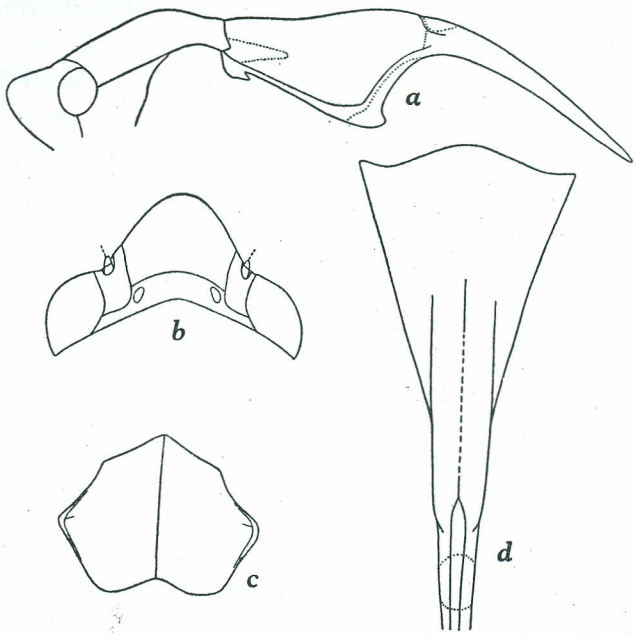


Fig. 7. *Machaerota esakii* KATO, ♀. (*a*) Head and thorax in profile. (*b*) Head, (*c*) Pronotum and (*d*) Scutellum proper in dorsal aspect.

Clypeus distinctly keeled, with distinct, lateral, transverse, pubescent impressions. Tylus very weakly convex, finely, confluently punctate; the anterior margin slightly raised, median line subanteriorly with a roundish depression, posteriorly weakly ridged. Vertex weakly raised on the interspace of antennal pit and tylus, and along the median line and posterior margin. Pronotum reticulato-punctate; the antero-lateral margins anteriorly slightly incurved and almost rounded-off, posteriorly strongly marked-off and feebly recurved; postero-lateral margins also feebly recurved; humeral angles each entally with a short, oblique ridge; median line (anterior four-fifths) weakly carinated; lateral submarginal areas depressed. Scutellum also reticulato-punctate, not keeled; the median furrow rather shallow, obscurely, transversely striato-punctate, medially

feebly keeled. Scutellar spine in profile apically extending to the same extent as tegmina. Femora I not sulcated, but the II-III strongly so; basitarsi III subequal in length to the ultimate tarsomere. Abdominal sternite I medially with a very weak, semicircular tumescence. Anal segment in profile a little longer than anal style and apically slightly raised. Length of body to abdominal apex about 5 mm, to tegminal apex 6 mm.

Formosa: Koshun, 5.iv.1940 (R. MATSUDA), 1 ♀, received from Taiwan Provincial College of Agriculture.

In ESAKI's (1932) description (in Japanese), for the furrowed "anterior half" of scutellum should be read "posterior half", and for the dominantly yellowish brown "tibiae" should be read "tibiae III". The same author gave the measurement of body including tegmina 5-7 mm, thus presumably his description was based upon both sexes. In his figure for the lateral view, the anterior tumescence of head and the thickness of scutellum including spine were exaggerated and should be corrected.

Machaerota exaggerata, sp. nov. (fig. 8).

♀. Head black; rostrum reddish at extreme base; anteclypeus sometimes brownish black; clypeus more or less dull brown at the extreme lateral margin; antennal segment I apically with a yellow ring; vertex with the interspace of antennal pit and tylus as well as the median area usually brownish yellow. Thorax and abdomen black to brownish black. Scutellum reddish brown to brownish black; the median furrow apically slightly duller; lateral surfaces with the antero-superior fleck and posterior margin yellowish white, superior margin (about apical two-fifths) irregularly black-marked, and inferior margin with a relatively broad, black band, which is preapically recurved. Scutellar spine chestnut brown, basally with a roundish, semi-transparent, yellowish spot, which is followed by an obscure, blackish, triangular marking. Metanotum shining. Metasternum brownish yellow. Abdominal tergites IV-VII or IV-VIII medially yellow. Anal style and terebra reddish brown. Tegmina hyaline, stained with yellow on claval appendix and rather broadly along the apical veins, costal (basally) and anal margins brownish black; veins on the basal two-thirds brownish black, with big, granulated, blackish spots, those on the apical third yellow, and with minute, brownish spots. Wings hyaline, brownish at the extreme base, and weakly infuscated on the anal area. Legs brownish black, with coxae I-III, tibiae I-II and ultimate tarsomeres I-III more or less paler.

Anteclypeus and clypeus distinctly keeled, the latter with distinct, lateral, pubescent, transverse impressions. Tylus finely, confluently punctate, discally more coarsely so, anteriorly with two short, obscure, longitudinal foveations, and slightly protruding cephalad. Vertex with

the median lobe anteriorly and laterally distinctly depressed. Pronotum reticulato-punctate; the antero-lateral margins anteriorly rounded-off, posteriorly weakly but distinctly recurved; postero-lateral margins also distinctly recurved, and submarginally rather deeply depressed; humeral angles entally each with a short, oblique ridge; median line keeled, anteriorly more strongly so. Scutellum also reticulato-punctate; the median furrow rather broad, deep, coarsely, shallowly, transversely striato-punctate, anteriorly slightly shallowed, and faintly keeled. Scutellar spine in profile apically extending about to the same level as tegmina. Femora I-II weakly sulcated, the III strongly so. Basitarsi III subequal in length to the two following tarsomeres taken together. Abdominal sternite I usually discally with an obscure dimplement, which is followed by a weak lunular tumescence. Anal segment in profile slightly longer than anal style and apically distinctly raised. Length of body excluding tegmina about 5.0-5.5 mm, including tegmina 6-7 mm.

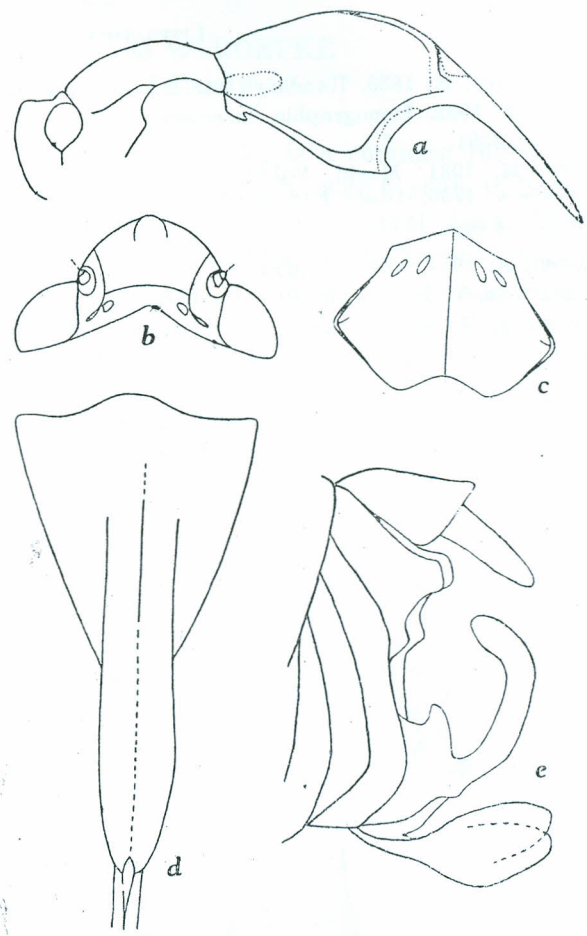


Fig. 8. *Machaerota exaggerata*, sp. nov. ♂ (Holotype). (*a*) Head and thorax in profile, (*b*) Head, (*c*) pronotum, (*d*) Scutellum proper in dorsal aspect and (*e*) Abdominal apex in lateral aspect.

♂. Duller, almost uniformly brownish black; pale antero-superior fleck on lateral surface of scutellum obscure; abdominal tergites without yellow markings. Tegmina with only the claval appendix and extreme apical margin (beyond enclosed cells) stained with yellow; veins almost uniformly brownish black, except for the extreme apical portion of ambient vein, which is brownish yellow. Scutellar spine relatively shorter. Abdominal apex as illustrated. Length of body to abdominal apex about 4 mm, to tegminal apex 5.5 mm.

Tonkin: Hoa-Binh, vii.1939 (A. DE COOMAN), 2 ♀♀; vii.1940 (A. DE COOMAN), 1 ♂ (Holotype), 1 ♀ (Allotype). Holotype and allotype deposited in Musée Heude, paratypes in the writer's collection.

This new species can be immediately separated from its congeners by the lateral aspect of head and scutellum, long scutellar furrow, brownish black veins. The writer is unaware of any of its true, close relatives.

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