

**NOTES ON THE GENERA *GORYPHUS* HOLMGREN 1868
AND *ANCARIA* CAM. 1902 (HYM.: ICHN. CRYPT.)**
(Notes on Indo-Malayan Ichneumonids IV)

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A. INTRODUCTION.

The present paper is a study of some groups of *Goryphus*- and *Ancaria* species, based upon material from the following sources.

The „Instituut voor Plantenziekten” at Buitenzorg, by courtesy of Dr. P. v. D. GOOT, Dr. L. G. E. KALSHOVEN and Dr. J. v. D. VECHT, sent me some *Goryphus* species, which were bred from cocoons of the injurious coconut Zygaenid *Artona catoxantha* (HAMPS.).

Besides the material in my own collection I had an opportunity to study the collection of the Research Station Central and East Java (Proefstation Midden en Oost Java, P.M.O.J.) containing many specimens which have been bred from injurious insects by Prof. Dr. W. ROEPKE in the years 1913 till 1918.

The Director of the Zoological Museum at Buitenzorg, Mr. M. A. LIEFTINCK, kindly sent me a number of specimens, part of which had been named by Miss E. CHEESMAN in the year 1937.

Through the kindness of the curator of the museum at Budapest, Dr. I. SZABO-PATAY, the typical specimen of *Gambrus inferus* could be studied. Finally I included some notes on typical specimens, made in the collections of the Museum for Natural History at Leiden and the Zoological Institute of the University of Halle.

The task to identify these specimens proved to be rather difficult, because the descriptions of the species of the genus *Goryphus* and those of the related genus *Ancaria* are scattered in various genera. The only way to find out whether a species had been described or not, existed in the construction of keys to the *Cryptini* already described (in which I include also the *Mesostenini*). In these almost only colour characters could be used. Parts of these keys are included in this publications, so that the species known to me can be discriminated from other similarly coloured Cryptids.

Dr. J. v. D. VECHT kindly read the manuscript. He allowed to include in this publication his important notes on the biology and geographical distribution of some of the species.

Figure 1 gives an explanation of the most important technical terms used in the descriptions.

B. BIOLOGY.

Up to the present very little was known about the life history of *Goryphus*. Only AUSTIN, GATER and lately also TJOA give some data.

AUSTIN mentions that *Goryphus varibalteatus* (CAM. 1905) is a parasite of the tea nettle grub, *Natada nararia* (Tea Quart. Jr.; Tea Res. Inst. Ceylon, IV, p. 71 - 87, 1931).

According to GATER, *Goryphus maculipennis* (CAM.) and *Goryphus maculiceps* (CAM.) are parasites of *Artona catoxantha* (Malayan Agr. Jrnl. XIII, p. 100, 1926). To me it is not sure which species are meant. According to the original description (Jrnl. Str. Br. R. As. Soc. 39, p. 149, 1903) *Melcha macu-*

lipennis has only the propodeum red and not also the mesopleura, as is mentioned by GATER. Also the original description of *Melcha maculiceps* (Ann. Mag. Nat. Hist. (7) 16, p. 167) does not fit to the remarks of GATER. According to him this species has a red propodeum and dark markings on the wing, the

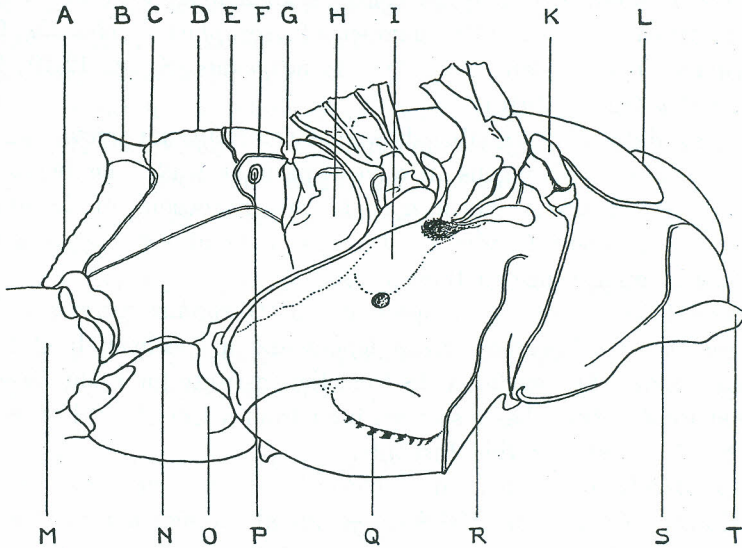


Fig. 1. Thorax of *Ancaria djampangensis*.

A. Declivous part of propodeum; B. Spina; C. Posterior or second cross carina of propodeum; D. Horizontal part of propodeum; E. Anterior cross carina of propodeum; F. Carina above spiraculum of propodeum; G. Groove between metanotum and propodeum; H. Frenum behind hind wings; I. Speculum on mesopleurum; K. Tegula; L. Notaulus; M. Coxa III; N. Metapleurum; O. Coxa II; P. spiraculum propodeum; Q. Sternaulus; R. Epicnemialia; S. Epomia; T. Collum.

descriptions however mention a black propodeum with white spot(s) and wings which are entirely hyaline.

TJOA (Archief v. d. Theecultuur 12, p. 2-20) mentions that he bred *Goryphus* (*Cryptus*) *oxymorus* and *Goryphus javanicus* from the Cochlicopid *Setora nitens*.

The study of the collection of the research station Central and East Java (P.M.O.J.) disclosed the fact that some of the parasites of the cacao fruit moth (*Acrocercops cramerella*), studied by Prof. Dr. W. ROEPKE already fully twenty years ago, partly belong to the present genus. At that time the insects could not be identified. The most common parasite was named by him: *Mesostenus* spec., parasite species C, which was now proved to be *Goryphus javanicus* ROMAN 1907. Later on he mentioned this species also as a parasite of the Zygaenid *Artona catoxantha* and of egg-nests of spiders. ROEPKE (1914, p. 48) also bred this species as a hyperparasite of *Setora nitens*. It was parasitizing a Braconid (?*Spinaria* spec.) (Compare also TJOA).

The same collection also contains males of *Goryphus inferus* (SZEPL. 1916), probably obtained from egg nests of spiders and of *Goryphus fasciatipennis*

(SZEPL. 1910). The last mentioned species has been bred from *Acrocercops cramerella* and probably also from egg nests of spiders.

From Dr. J. v. D. VECHT of the Institute for Plant Disease I received a long series of *Goryphus* specimens bred from *Artona catoxantha* by Dr. S. LEEFMANS, R. AWIBOWO and himself. The material consisted of a long series of *Goryphus inferus* (SZEPL. 1916) and a smaller number of *Goryphus rufobasalis* BETR., *Goryphus javanicus* ROMAN 1907, *Goryphus fasciatipennis* (SZEPL. 1910), *Goryphus bituberculatus* (SZEPL. 1910).

The biological data now available show that *Goryphus javanicus* and some of its nearest allies are polyhagous in a very peculiar way. The females are attracted by flat spun layers which may be either cocoons of *Lepidoptera* belonging to quite different families or the egg nests of some spiders which are very similar in appearance to these cocoons.

Furthermore I have seen many specimens of *Goryphus oxymorus* (TOSQ. 1903) bred from the Cochlicopid *Parasa lepida* and a specimen bred from a Cochlicopid on coconut (Limacodid N. 18 from the Institute for Plant Diseases). *Goryphus oxymoroides* BETR. has also been bred from a Cochlicopid on coconut (Limacodid N. 17 (n. 18)) by this Institute.

The genus *Melcha* is a synonym of *Goryphus* as will be shown later on. The biological data of the genus *Melcha* are thus also important for the genus *Goryphus*. It is possible, however, that some of the species mentioned here belong to other genera.

CAMERON mentions that ***Goryphus cameroni*** BETR. n. nom. (= *Melcha reticulata* CAM. 1905, Spol. Zeyl. III, p. 109), has been bred from *Psyche subteralbata* in Ceylon.

Melcha maculiceps CAM. 1905 has been bred from cocoons of a Chrysomelid beetle (Spol. Zeyl. III, p. 110). *Melcha lemae* SONAN 1930 has been bred from *Lema melanopla* L. and *Lema oryzae* (Tr. Nat. Hist. Soc. Formosa, XXX, p. 355 - 360, 1930; Jrn. Fac. Agric. Hokkaido Imp. Univ. XXXIII, p. 1 - 132, 1932).

Furthermore *Melcha nursei* CAM. 1907 has been bred from *Earias* spec. on cotton in the Punjab (Rep. 5th Ent. Meet. Pusa, Febr. 23, p. 34 - 52; Ann. Rep. Gov. Ent. Punjab for the years 1930 and 1925).

No biological data could be found in the literature about the genus *Ancaria*.

C. KEYS.

Key of the colour-groups.

- 1a. Thorax partly red or entirely red or yellow. 2
- b. Thorax black, mostly with white ¹⁾ markings. 3
- 2a. Only propodeum red, at most also a spot on the mesopleura above coxae II and metapleura red. Key A
- b. Mesosternum red, mostly also mesopleura red, sometimes body entirely red or yellow. Not included in the present paper

¹⁾ White = yellowish white to yellow.

- 3a. One or more yellow spots on the mesopleura and (or) mesonotum. Not included
 b. Mesopleura black, often however tubercles white. 4
- 4a. Thorax and propodeum entirely black, at most tegulae, pronotum, scutellar keels and (or) spines of propodeum white. Not included
 b. Thorax with more extensive markings. 5
- 5a. Abdomen more or less red or reddish. Not included
 b. Abdomen black and white or yellow, at most tergite 2(1) red. 6
- 6a. Basal tergites entirely black, rarely only tergite 2(1) black, often only apical tergites white, sometimes tergite 2(1) red or reddish. Key B
 b. At least basal two tergites with white posterior margins or with white markings. 7
- 7a. At least five basal tergites with white margins, usually all tergites with white margins. Key C
 b. One or more of the central tergites entirely black. 8
- 8a. Head entirely black, at most the clypeus, labrum, palpi and mandibles partly white. Not included
 b. Head with distinct white markings. Key D

KEY A.

Body black, red and white. Red are at most the propodeum, the metanotum, the metapleura, the scutellum and a small mark on the mesopleura above the coxae III. The basal tergites of the abdomen have a white hind margin. Also the apical tergites are more or less marked with white, one or more of the central tergites are entirely black.

- 1a. ♂♂, flagellum entirely black; in the typical *Goryphus* species postpetiolus quadrate. 2
 b. ♀♀, flagellum with white band, in the typical *Goryphus* species the postpetiolus is distinctly broader than long. 7
- 2a. Scutellum black. 3
 b. Scutellum white 4
- 3a. Legs for the larger part black; red are: petiolus, coxae II and III for the larger part, femora III and base of antennae; white are: legs I (base of coxae black), tibiae II, joint 2 - 4 of tarsi II and III black. Also are white: palpi, hind margin of tergite 2(1) and 3(2) and the last tergite. Propodeum and petiolus red. Centre of the wings and apex darker. ♂, 8 mm. Singapore (Ann. Mus. Nat. Hung. XIV, p. 295).

Neomesostenus bicingulatus SZEPL. 1916

- b. Legs for the larger part red; white are: coxae and trochanters I and II, basal band on tibiae III, apex of metatarsi III, joints 2, 3 and 4 of tarsi III. Apices of the tergites 2(1), 3(2) and 4(3) white. Propodeum, metapleura and petiolus red. Wings hyaline. ♂, 7 mm. Borneo (Jrn. Str. Br. Roy. As. Soc. 41, p. 148). *Melcha reticulata* CAM. 1905

4a. Face and pronotum entirely black. White are: palpi, vertical orbits, tegulae, tubercles, scutellum, apices of the tergites 2(1), 3(2), 4(3) and 8(7), coxae and trochanters I and II, joints 2, 3, 4 of tarsi III. Propodeum, petiolus and legs red. Trochanters III, apex of femora III, tibiae III for the larger part and tarsi III black. Centre and apex of the wings darker. ♂, 10 mm. Singapore (Ann. Mus. Nat. Hung. XIV, p. 295).

Neomesostenus alboscutellaris SZEPL. 1916

b. Face and pronotum with white markings. 5

5a. Praescutellar keels white. White are also: palpi, base of the mandibles, genae, clypeus, face for the larger part, orbitae subverticales and verticales, anterior margin of pronotum broadly, stripes on the posterior margin of the pronotum before the tegulae, tubercles, tegulae, scutellum and frena. The hind margins of tergites 2(1), 3(2) 4(3) are white, tergite 8(7) is entirely white. Light red are: propodeum, metapleura, tergite 2(1), underside of scapus. Legs reddish yellow; yellowish white are: coxae and trochanters I and II; basal half of the tibiae III and tarsi III for the larger part chalk white. Black are trochanters III, extreme apex of femora III, extreme base and apex of tibiae III broadly, the basal half of metatarsi III, the apical half of joint 5 of tarsi III, joint 5 of tarsi I. Tarsi II black, base of the joints brighter. Wings hyaline, apex somewhat clouded. ♂, 7 mm. Java. *Goryphus rufobasalis* nov. spec.

b. Praescutellar keels black. 6

6a. Wings entirely hyaline. Joints 2, 3 and 4 of tarsi III white. Sometimes tarsi III entirely black. White are also: palpi, base of mandibles, clypeus, centre of the face, orbitae subverticales and verticales for the larger part, anterior margin of pronotum, two stripes before tegulae, tubercles, tegulae, sometimes a white stripe on the mesoscutum next to the tegulae, scutellum, frena, sometimes centre of metanotum, hind margin of the tergites 2(1) - 5(4), sometimes sides of tergites 6(5), tergite 8(7). Red are: propodeum, metapleura, base of petiolus and tergite 2(1) entirely. Legs red and yellowish red. White are: coxae and trochanters I and II; black are tarsi II, trochanters I and II; black are: tarsi II, trochanters III for the larger part, extreme apex of femora III, extreme base of tibiae III, apex of tibiae III broadly, joints 1 and 5 of tarsi III; scapus yellowish red. ♂, 7 mm. Java. *Goryphus javanicus* ROMAN 1907

b. Wings with dark cross band and apex. Clypeus probably not white. Tarsi III entirely black; white are: palpi, base of mandibles, quadrate mark on the face, vertical orbits, pronotum anteriorly, stripes on the hind margin of the pronotum before the tegulae, scutellum, hind margin of tergite 2(1), 3(2) and 4(3), tergite 8(7), hind margin of tergite 5(4) reddish white. Yellowish red are: scapus, propodeum and the legs. Coxae and trochanters I and II white; black are: trochanters III, apex of the femora III, apical half of the tibiae III. ♂, 6 mm. Singapore (Ann. Mus. Nat. Hung. XIV, p. 295). *Neomesostenus pulcher* SZEPL. 1916

- 7a. Inner orbits white; also white are: palpi, spines of the propodeum, apices of the tergites 2(1), 3(2), 8(7) and 9(8). Tegulae and scutellum reddish. Red are: apex of the propodeum, metapleura, frena. Legs red. Coxae I yellow. Black: apex of femora III, apex and base of tibiae III, tarsi III. Wings hyaline. ♀, 12 mm. Formosa (Ann. Mus. Nat. Hung. XIV, p. 333; UCHIDA, Jrn. Fac. Agric. Hokkaido Imp. Univ. XXX, p. 184, 186; UCHIDA, idem XXXIII, p. 173). *Mesostenus albosignatus* SZEPL. 1916
- b. Inner orbits black. 8
- 8a. Scutellum and metanotum red, tegulae not white. 9
- b. Scutellum white, tegulae white. 10
- 9a. Nervus parallelus above the middle, postpetiolus almost quadrate. White are: palpi, scapus above, hind margin of tergite 3(2), tergites 8(7) and 9(8). Red are: scutellum, propodeum, postpetiolus. Legs red, white are: coxae and trochanters I and II, tibiae III and tarsi III almost entirely dark. Centre and apex of the wings infumated. 0,8 mm. India (Ann. Mus. Nat. Hung. XIV, p. 334, *Mesostenus quadratus* SZEPL. 1916 nec SZEPL. 1908).
Mesostenus szepligetii nov. nom.
- b. Nervus parallelus in or beneath the middle. White are: hind margin of tergite 2(1) and 3(2), mostly apex of tergite 7(6) narrowly in the middle, apex of tergite 8(7) broadly in the middle. Mandibles, tegulae and tergite 9(8) entirely black. Legs red. Whitish is the inner side of tibiae I. Black are: coxae and trochanters I, outside of all tibiae and tarsi entirely. Red are: propodeum, metathorax, scutellum, mark above the coxae II, base of petiolus. ♀. Java. *Goryphus kalshoveni* nov. spec.
- 10a. Wings almost entirely hyaline. Nervus parallelus above the middle. White are: palpi, base of the mandibles, clypeus, tegulae, tubercles, scutellum, apices of the tergite 2(1) and 3(2), the tergites 8(7) and 9(8). Propodeum red. Legs red; coxae and trochanters I and II for the larger part red; hind tibiae and tarsi almost entirely black. ♀, 12 mm. Lombok (Ann. Mus. Nat. Hung. XIV, p. 334). *Mesostenus hyalinus* SZEPL. 1916
- b. Wings with distinct dark cross band or dark quadratic spot. 11
- 11a. Some joints of the tarsi III white. 12
- b. Tarsi III entirely black. 14
- 12a. Femora and trochanters III dark, also base of tibia III? and base and apex of tarsi III black, coxae III red. White are: tegulae, scutellum, postpetiolus, apical third of tergite 3(2) and "the whole of the apical two" tergites. Propodeum red. Legs rufo-testaceous, coxae I and II white, the centre of tarsi I and II white. ♀, 9 mm, terebra 2 mm. Borneo (Jrn. Str. Br. Roy. As. Soc. 39, p. 149). *Goryphus maculipennis* (CAM. 1903)
- b. Femora III and trochanters III red, only apex of femora III dark ... 13
- 13a. Tibiae III black. Praescutellar keels black. White are: palpi, base of mandibles, tegulae p.p., tubercles, scutellum, metanotum, apices of the tergites 2(1), 3(2), tergite 8(7). Legs red, coxae and trochanters I, II and III for the larger part white. Black are: the tarsi, apex of femora III and tibiae

- III. Propodeum red, short, broader than long postpetiolus short and broad. ♀, 9 mm. China (Resa Eugenies p. 399; ROMAN, Zool. Studier Tullberg 1907, p. 75, 78, fig. 3, Pl. f. 5, 6). *Goryphus detritus* HOLMGREN 1868
- b. Tibiae III chalk white, base narrowly black, apex broadly black, tarsi III white, base and apex black, coxae III red. Also propodeum and metanotum red. Orbitae verticales narrowly reddish white, sometimes also orbitae subverticales and clypeus thus coloured. White are: base of mandibulae, tubercles, tegulae, praescutellar keels, scutellum, apex of the tergites 2(1) and 3(2), apex of tergites 7(6) in the middle, tergites 8(7) and 9(8). Apex of tergite 4(3) sometimes narrowly whitish in the middle. Leg I and II yellowish red. Coxae and trochanters I and II white. Scapus and base of flagellum reddish. ♀. Java. *Goryphus rufobasalis* nov. spec.
- 14a. Anterior margin of the pronotum white. Tergite 8(7) broadly white. Tergite 9(8) almost entirely black, only the extreme apex white. Anterior wings with quadrate blackish blot beneath the stigma. Radial cell not black. White are: scutellum, middle of metanotum, tegulae, mark under the fore wings, flagellum in the centre, apices of the tergites 2(1) and 3(2), the apical segments as indicated above. Legs red or reddish yellow; trochanters I and II, coxae I and II partly white. Apex of the tibiae III and the tarsi III almost entirely black or dark brown. Petiolus black. ♀. Java.
Ancaria adornatus (TOSQ. 1903)
- b. Anterior margin of the pronotum black. Tergites 8(7) and 9(8) both broadly marked with white. Fore wings with a blackish cross band beneath the the stigma. Radial cell basally also dark. White are: scutellum, tegulae, stripe under the fore wings, apex of the tergites 2(1) and 3(2). 15
- 15a. Coxae I dark, coxae II red, coxae III red with black apex. Femora III dark. ♀. Sumatra, Borneo. *Goryphus mesoxanthus* (BRULLÉ 1846)
- b. Coxae I white, at most with some blackish markings, coxae II often with white spot, coxae III red, femora III red, apex black, at most upper side dark. Postpetiolus often red. ♀. Java. *Goryphus javanicus* ROMAN 1907

KEY B.

- Only apical tergites marked with white; at most some or one of the basal tergites red or with a reddish margin, sometimes tergite 3(2) with light margin, tergite 2(1), however, always entirely dark apically.
- 1a. Propodeum behind the basal carina with distinct transverse striae. Propodeum often with a white spot shaped as a reversed T. Areola with parallel sides; nervus recurrens secundus in the centre. 2
- b. Propodeum mostly reticulated behind the basal carina. Spines often present. 5
- 2a. On the head are white: face, clypeus and base of mandibles; also are white: sides of the scutellum, frena behind the posterior wings, apex of propodeum, apical tergites. Legs I and II red, femora II in the centre dark, tarsi II dark; legs III black, coxae III red, tarsi III for the larger

part white. ♂, 16 mm. Borneo (Jrn. Str. Br. Roy. As. Soc. 44, p. 136).

Lactolus maculiscutis CAM. 1905

- b. Head black. Scutellum entirely black. Metanotum white. 3
- 3a. Frena black, apex of propodeum white. Legs I and II red. Legs III black, coxae red, tarsi III for the larger part white. ♀, 13 mm. Pulu Laut, Borneo (Mem. Soc. Ent. Belg. X, p. 202). *Cryptus lepidus* Tosq. 1903
- b. Frena white; propodeum with white spot shaped as a reversed T. Legs III otherwise coloured. 4
- 4a. Trochanters III, apex of femora III, tibiae III and base of tarsi III black, otherwise legs brownish yellow. ♀, 4 - 10 mm (Jrn. Str. Br. R. As. Soc. 37, p. 64). *Lactolus ruficoxis* CAM. 1902
- b. Trochanters III, femora III above, tibiae III and base of tarsi III black. Legs III otherwise red. ♂, 9 mm. Borneo (Jrn. Str. Br. Roy. As. Soc. 44, p. 133). *Friona ruficoxis* CAM. 1905
- 5a. Areola wider than long, nervus recurrens secundus close to the apex. Petiolus becoming gradually wider towards the apex; spiracles nearer to each other than to the apex. Propodeum with stout spines; spiracula three times longer than broad. Lower tooth of mandibles small. Black; white are: sides of scutellum, spines of propodeum and tergites 7(6) and 8(7) of abdomen. Legs black, coxae III red, tibiae and femora I more or less testaceous. Tarsi III for the larger part white. ♀, 21 mm. Borneo (Jrn. Str. Br. Roy. As. Soc. 37, p. 66). *Buodias ruficoxis* CAM. 1902
- b. Nervus recurrens secundus in the centre. 6
- 6a. Wings dark brown, their tips white. White are: clypeus, spot on face, apex of scutellum and apical segment of abdomen. Legs ferruginous, posterior coxae fuscous. Opaque, tergite 2(1) shining. ♀, 5 ¼ line, 11 mm. Makassar (Jrn. Pr. Linn. Soc. V, p. 60) *Cryptus opacus* SMITH 1860
- b. Wings hyaline, at most a quadratic dark spot before the areola. 7
- 7a. Coxae III and throchanters III black, otherwise legs III red, except for the black, apical half of tibiae III and the tarsi III which are white with apex and base black. White are: face, clypeus, labrum, mandibles, internal orbits in the middle, base of tegulae, scutellum for the larger part, metanotum. Propodeum next to the indistinct carina somewhat fulvous. Legs I and II red. Coxae I and II white, black posteriorly. Propodeum densely pilose as also the entire thorax. Abdomen with the three basal segments broadly rufous at the apex. ♂, 14 mm. Khasia Hills (A.M.N.H. (7) 9, p. 210).

Dayro pilosus CAM. 1902

- b. Legs III otherwise coloured. Face at most with a central white spot. Propodeum with distinct spines. Metanotum black. 8

- 8a. A faint cloud at the apex of the first submarginal cell. Only apex of spines and of abdomen and the centre of the flagellum white. Legs yellow, tibiae III, tarsi I and segment 5 of tarsi II and III black. Tarsi III white. ♀, 10 mm. Sarawak, Borneo (Jrn. Proc. Linn. Soc. II, p. 119).

Cryptus croceipes SMITH 1867

- b. Wings entirely hyaline. 9
- 9a. Hind margin of mesosternum only in the centre distinct but not higher than the mesosternum. Areola small and square. Discocubital vein not distinctly broken and thickened in the centre Nervellus broken a little below the centre. Epicnemiae above ending in the hind margin of the shining, high fore margin of the mesopleura, epicnemiae seem to reach the tubercles. Above the spiracula of the propodeum no carina but a plica. Second carina on propodeum between the spinae distinct. Sculpture fine. 10
- b. Hind margin of mesosternum very high behind the mesosulcus, toothlike. Areola moderately large, square. Discocubital vein broken and thickened in the centre. Nervellus broken far below the centre. Epicnemiae above distinctly abbreviated, the smooth anterior margin of mesopleura above narrow, not reaching till the epicnemiae. Above the spiracula of the propodeum a distinct carina. Second carina there distinct or absent. Sculpture of mesopleura and subvertex coarse. 11
- 10a. Legs entirely yellowish red; at most knees of legs III and tarsi I and II blackish. Scutellum entirely black. Scrobi not striated above, smooth. Subvertex alutaceous without striae, longitudinal carina distinct. Lower half of mesopleura finely punctured, upper part striated in the centre. ♀. West Java. *Ancaria tjibodas* nov. spec.
- b. Legs yellowish red, black are: knee of legs III, apex of tibiae III, basis of metatarsi III, tarsi III partly white. Apex and sides of scutellum white. Scrobi distinctly transversely striated above. Subvertex near the central carina more or less striated. Mesopleura with coarse sculpture, lower part almost reticulated. ♀. West Java. *Ancaria lieftincki* CHEESMAN in litt.
- 11a. Legs black, white are: trochanters I and II and underside of trochanters III, apical half of segment 1, segments 2 and 3 of tarsi III. Also are white a spot in the centre of the face, palpi, tubercles, base of wings, large spot on frena, narrow line shaped as a horse shoe round the apical slope of mediansegment inclusive the spines and tergite 8(7) broadly in the centre. ♀. East Borneo. *Ancaria nigripes* nov. spec.
- b. Legs red; black are: apex of femora III, base and apex of tibiae III. Tarsi III white, base of metatarsi dark, also segment 5 dark. Tarsi I and II black. White are: palpi, a spot in the centre of the face, rarely a spot on the vertex beneath the eye, tubercles, praescutellar lists, sides of scutellum for the larger part, small spot on frena, sides of apical slope of propodeum and apical two tergites in the centre broadly. Sometimes, however, the propodeum is almost entirely black, only the spines are white. ♀. Java. *Ancaria djampangensis* nov. spec.

KEY C.

Thorax and propodeum not red. Mesoscutum and mesopleura entirely black, at the utmost spines of propodeum white. All or at least the five basal tergites at the apex white. Head with white spots.

- 1a. Propodeum behind the basal carina distinctly, mostly finely transversely striated. Propodeum mostly with a spot shaped as a reversed T.

Friona species diversae

(conf. also *Opisoxyestus nigriceps* SZEPL. 1908 and *Etha striatifrons* CAM. 1903).

- b. Propodeum reticulated behind the basal carina; when striated the striae coarse; never a spot shaped as a reversed T on the propodeum. 2
- 2a. All coxae trochanters black. 3
- b. Coxae and trochanters I and II not black. 4
- 3a. Head except apex of clypeus, palpi and labrum entirely black. White are also: apex of scutellum, metanotum, mark on the top of the apical slope of propodeum, apices of tergites 2(1) - 5(4), sides (? of apex) of tergite 6(5). Legs white. Black are: all coxae and trochanters, femora III, apex and base narrowly of tibiae III, segment 4 and 5 of tarsi I and II, segment 5 of tarsi III. Femora I and II dark. ♀, 12 mm. Borneo (Jr. Str. Br. R. As. Soc. 44, p. 150). *Hadrocryptus striatus* CAM. 1905
- b. White are: clypeus and face for the larger part, labrum, spot on genae, orbitae subverticales and verticales, line on posterior margin of pronotum before the tegulae, tegulae, praescutellar keels, scutellum, central part of metanotum, frena behind the hind wings, sides and base of apex of propodeum, and apices of tergites. Besides all coxae are also black: apical half of femora, apex of tibiae III, base of tarsi III; rest of legs fulvous. Mandibles entirely black. Wings hyaline, apex smoky, areola "a little longer than wide", a little narrowed at the top; nervus recurrens secundus a little beyond the middle. Nervellus broken at the middle. Clypeus elongated, not separated from the face, labrum large, projecting, upper tooth of the slender mandibles the longer one. Tergite 2(1) long and slender. ♀, ♂, 16 mm, terebra 6 mm. Ceylon (Entomologist XXXV, p. 182; Spolia Zeyl. III, prt. X, p. 97, 1095). *Linoceras* (= ? *Acroricnus*) *peronatus* CAM. 1902
- 4a. Frena behind the hind wings black. 5
- b. Frena behind the hind wings white. 17
- 5a. Praescutellar keels white. 6
- b. Praescutellar keels black. 8
- 6a. On propodeum only the spines white. Clypeus with two white markings; white spots in the centre of the face not contiguous with the white inner orbits; metanotum white. White are also: the inner orbits, apex of labrum, "an irregular line on the base of the pronotum", tegulae, tubercles, praescutellar keels, the apices of the tergites. Legs I and II yellow, femora I and II more or less fulvous, tarsi I and II fuscous. Legs III fulvous. Black are apical third of femora III, apical half of tibiae III. Tarsi III white. Areola square, nervulus postfurcal. Scutellum with lateral keels to near the apex. Subvertex irregular, transversely striated. ♀, 12 mm, terebra 2 mm. Sikkim (Ann. Mag. Nat. Hist. (7) 20, p. 22).

Mesostenoides cariniscutis CAM. 1907

- b. A triangular large mark on the sides of declivous part of propodeum white. 7
- 7a. Lower edge of mesopleura reticulated, not smooth. Coxae III nearly always black with two white spots, apically sometimes yellowish brown, rarely for the larger part yellowish brown. Tergite 2(1) black, only apically white. Clypeus almost entirely white, spot in the centre of the face confluent with the white inner orbits. Metanotum black. White are: bases of mandibles, labrum, spots on the genae, the anterior margin of pronotum large spots on the posterior margin of the pronotum before the tegulae, tubercles, praescutellar keels, scutellum, the apices of the tergites. Legs fulvous till red. White are: Coxae and trochanters I and II, a spot on the upper- and underside of the coxae III, trochanters III, apex of femora III, base, apex and outside of tibiae III, all the tarsi; centre of the tarsi III more or less white, base of metatarsi always black, rarely almost entirely black, tarsi II sometimes somewhat whitish. In the male the tarsi I yellowish red. Scutellum smooth, without lateral keels. Subvertex not transversely striated, reticulated. ♀, ♂, 12 mm, terebra 3 mm. (*Syn. Cratocyptus annulitarsis* CAM.) Java, Sumatra, Sikkim. *Goryphus oxymorus* (Tosq. 1903). Compare also *Goryphus robustus* UCH. 1932 Jr. Fac. Agric., Hokkaido Imp. Univ. 33, p. 172.
- b. Lower edge of mesopleura smooth and shining. The space before the anterior carina on the propodeum smooth and shining, the lobes of the mesoscutum almost smooth. Tergite 2(1) red, apically white; coxae III with small whitish spot above. Tarsi III white, except base and apex. ♂, 6.5 mm. Java. *Goryphus oxymoroides* nov. spec.
- 8a. Coxae III entirely red or fulvous. 9
Compare *Hadrocyptus striatus* CAM. 1905. Compare also the species from Formosa *Caenocyptus taihorinus* UCH. 1932 Jr. Fac. Agric. Hokkaido Imp. Univ. 33, p. 171; *Goryphus tuberculatus* UCH. 1932 l.c. p. 176 and *Cryptus horishanus* UCH. 1931 l.c. 30, p. 170, ill.
- b. Coxae III more or less black. 10
- 9a. Basal part of outer orbits and inner orbits entirely yellow. Metanotum yellow. Also yellow are: base of the mandibles, clypeus, oval mark in the centre of the face, basal half of scutellum, the spines and keel on the propodeum, the apices of the tergites. Legs red, tarsi III black, apex of joint 2 and joints 3 and 4 white. Red are scapus beneath and the petiolus. ♀, 17 mm, terebra 5 mm. Khasia (Tr. Ent. Soc. 1904, p. 105).
Cryptus rufopetiolus CAM. 1904
- b. Outer orbits black, metanotum black. Yellow are: base of the mandibles, clypeus, mark in the centre of the face, tegulae, tubercles, scutellum, apical slope of propodeum and the apices of the tergites. Legs rufous. Coxae and trochanters I and II yellow, apical segment of tarsi black. ♀, Ceylon (*Spolia Zeylandica* III, Prt. X, p. 110). *Goryphus (Melcha) maculiceps* (CAM. 1905
- 10a. Edges of pronotum with distinct tooth. Propodeum with distinct spines (Edges of tergites 3(2), 4(3) and 5(4) projecting in spines). Postpetiolus

- clearly defined, spiracles nearer to each other than to the apex. Tergite 2(1) with lateral spines at the base. Areolet large; nervus recurrens secundus received at the apical fourth or shortly beyond the centre. Mesonotum distinctly reticulated on apical half. 11
- b. Pronotum and tergites normal. 12
- 11a. Clypeus yellow, penultimate abdominal segment entirely yellow. Spines of propodeum as long as they are wide at the base. White are: underside of scapus, clypeus, mandibles, palpi, pronotal teeth, base of tegulae, apex of scutellum, metanotum, teeth of propodeum and the surrounding areas, tubercles and apices of tergites. Legs lemon-yellow. Black are: femora I above, innerside of tibiae I on the innerside, spot on trochanters II, segment 5 of tarsi II, knees II narrowly, outside of coxae III, trochanters III, apical third of femora III, base and apex of tibiae III. ♀, 12 mm. Borneo (Deutsch. Ent. Zeitschr., 1909, p. 531).
Vagenatha spinicollis CAM. 1909
- b. Clypeus black, penultimate abdominal segment black in the centre. Spines of propodeum four times as long as they are thick at the base. White are: underside of scapus, mandibles, palpi, propodeum, apices of six basal tergites. Legs lemon yellow. Black are: segment 5 of tarsi I, apex of coxae II behind, coxae III except at the base above, trochanters III, apex of femora III broadly, base and apex of tibiae III, ♀, 11 mm. Borneo (Deutsch. Ent. Ztschr., 1909, p. 531). *Vagenatha acutispina* CAM. 1909
- 12a. Face entirely white. Areola large, quadrangular, the transverse cubital nerves parallel, the recurrent nervure received in the centre. Two transverse carinae on the propodeum. 13
- b. Face not entirely white, at most a central spot which is separated from the white facial orbits. Areola otherwise. 14
- 13a. Subvertex smooth and shining. White are: palpi, mandibles, labrum, clypeus, face, large mark on the orbits above, spot on the genae, scutellum for the larger part, postscutellum behind, ?apex of propodeum which bears two distinct spines, and apices of all segments. Tarsi III white. Legs fulvous, coxae I and II paler. Coxae III black except the base above. Black are also: femora III above, apex of tibiae III, base of tarsi III. ♀, 15 mm. Khasia (Mem. Manch. Lit. Phil. Soc. 47, n. 14, p. 19).
Etha laevifrons CAM. 1905
- b. Subvertex striated. White are: palpi?, mandibles, labrum, spot on genae, clypeus, face, upper inner orbits, lines on pronotum, tubercles, tegulae, scutellum at the end (sometimes), two small lines on mesoscutum, marks on the sides of propodeum at the base, declivous part of propodeum, apices of all segments. Legs I and II pale fulvous, yellow. Legs III darker. Coxae III broadly black on the outer side. Trochanters III dark above, femora III apically dark, apex of tibiae III black, tarsi III white, basally and apically black. ♀ 15 mm, Khasia (Mem. Manch. Lit. Phil. Soc. 47, n. 14, p.p. 20). *Etha striatifrons* CAM. 1903

Compare also: *Cryptus tuberculatus* UCH. 1932 Jr. Fac. Agric. Hokkaido Imp. Univ. 33, p. 168.

- 14a. Head entirely black, white are only the apex of the scutellum and spines of propodeum. All tergites with white margins Abdomen also with rufous marks ("rufo-balteata"). Legs yellow. Black are: coxae III except basal two third above, trochanters III, apex of femora III, base and apex of tibiae III. Sides of petiolus near the middle on the lower side projecting into a stout triangular tooth. Propodeum without carinae, coarsely reticulated. ♀, 12 mm. Borneo (Jr. Str. Br. R. As. Soc. 37, p. 55).

Acleasa albispina CAM. 1902

- b. Head with distinct white markings. 15
15a. Legs III entirely black. White are: sides of clypeus, inner orbits above, lines before tegulae, tegulae, tubercles, scutellum, hind margins of tergites, coxae I and II, outside of tibiae I and II. Femora I and II brown. Areola broader than high, nervus recurrens secundus almost at the end. ♀, 9 mm. Java, Semarang. *Stenaraeus punctatus* SZEPL. 1908

- b. Coxae III more or less light. 16
16a. Coxae III black; yellow on the upperside. Coxae and throchanters I and II yellow. Stigma black. Yellow are also: clypeus, base of mandibles, inner orbits, spot in the centre of the face, lines on the propodeum, tegulae, scutellum, metanotum, the large spines on the propodeum, the apices of the tergites. Legs reddish fulvous. Black are, except the coxae III, apex of femora III and base of tibiae III. Second recurrent nervure at apex of areola. ♀, 11 mm. Borneo (Jrn. Str. Br. R. As. Soc. 48, p. 17).

Mesostenoides angulicollis CAM. 1907

- b. Legs fulvous. Coxae III below and apex of tibia III and femora III black. Stigma testaceous. Yellow are: base of mandibles, clypeus, inner orbits, lines on pronotum, tegulae, scutellum, metanotum, sides of the apical slope of the propodeum and the apices of the tergites. ♀, 15 - 16 mm. Khasia (Tr. Ent. Soc. 1904, p. 116). *Mesostenus reticulatus* CAM. 1904
17a. Praescutellar keels black. 18
b. Praescutellar keels white. 19

Compare also the male of *Goryphus bituberculatus*.

- 18a. Head with only a broad mark on the face and a spot on the vertical orbits yellow; yellow are also: tegulae, tubercles, scutellum, metanotum, frena behind the hind wings, sides of propodeum, a line along the top of the declivous part of propodeum and the apices of the tergites. Legs yellow. Black are: trochanters III, apex of femora III, apex of tibia III. Tarsi I and II black. Subvertex with oblique irregular keels. Mesonotum aciculated, transversely striated along the notauli. Petiolous smooth. ♀, 13 mm, terebra 3 mm. Borneo (Jr. Str. Br. R. As. Soc. 39, p. 146).

Skeatia flavipes CAM. 1903

- b. White are on the head: base of mandibles, clypeus, face, the upper inner orbits broadly, a small spot on the genae; also are white: the anterior

- margin of the pronotum, a broad line on the pronotum before tegulae, tubercles, tegulae, scutellum, metanotum, frena behind the hind wings, a horse shoe shaped mark on the apical slope of the propodeum, large mark on the metapleura, (two almost obsolete lines on the mesonotum), apices of the tergites. Legs rufous, yellowish white are: coxae and trochanters I and II, an obsolete mark on the upperside of the coxae III, lines on the legs I, tarsi III except joint 5 which is black. Black are also: base of trochanters III, apex of femora III, base and apex of tibia III, joint 5 of all, tarsi I and II somewhat fuscous. Scutellar groove almost without distinct lists. Subvertex finely reticulated, with distinct keel in de centre. Tapos, West-Java. ♀, 7 mm. Terebra 3 mm. *Goryphus albofrenata* nov. spec.
- 19a. Metanotum black. Coxae III entirely yellowish red, above with white mark or lighter. Joints 4 - 11 of flagellum white. Subvertex striated. White are: Palpi, clypeus, face, base of mandibles, genae and lower part of tempora, orbitae subverticales and verticales, anterior margin of pronotum, a broad stripe before tegulae, tubercles, tegulae, frena, praescutellar lists, scutellum, two large triangular marks on the sides of the declivous part of the propodeum, apices of all tergites. Legs yellowish red, dark are: base of trochanters III, extreme apex of femora III, base and apex of tibiae III, outside of basal two third of metatarsi III, joint 3 of tarsi III. Coxae and trochanters I and II white. ♀, 7 mm. Java.

Goryphus ochropus (BRULLÉ 1846)

- b. Metanotum yellow. Coxae III yellowish red, apex black with a white mark above. Joints 4 - 17 of the flagellum above white. Subvertex smooth and shining. Coloured like *G. ochropus* but differs as follows: mark on genae and tempora smaller, gastrocoeli white; in ♂ also sides of tergite 3(2) white, metanotum white, on the propodeum around the declivous part a horseshoe shaped mark. On the legs III are black: apex of trochanters, base and apex of femora, base and apex of tibiae, joints 5 of tarsi III. Rest of tarsi III white. ♀, 7 mm. Java. *Goryphus nigrocoxatus* nov. spec.

KEY D.

- 1a. A white crescent mark on the frena behind the hind wings. 2
 b. Frena behind the hind wings black. 25
 2a. Praescutellar lists white. 3
 b. Praescutellar lists black. 10
 3a. Males. The flagellum entirely black, face entirely white. 4
 b. Females. The flagellum with white band. 8
 4a. Centre of uppert part of mesopleura striated. Tarsi III for the larger part white; white are also: mandibles for the larger part, genae, face, clypeus, orbita subverticales and verticales, pronotum anteriorly and posteriorly, scutellum, scutellar keels, frena behind hind wings, declivous part of propodeum. Legs I and II whitish yellow; coxae III whitish yellow, black above; trochanters III black; femora III red, extreme apex black; tibiae

- black, with white subbasal band. Wings hyaline. ♂. 7,5 mm. Ceylon (Spol. Zeyl. III, p. 107, n. 9). *Melcha cincitipes* CAM. 1905 (The description mentions "The metapleura white". This is interpreted by me as: "frena behind hind wings white". When this should prove to be a mistake the species has to stand under an other number.)
- b. Mesopleura above smooth or almost smooth or almost entirely reticulated and striated. 5
- 5a. Tarsi III for the larger part white. Mesopleura smooth. Coloured as *M. cincitipes*, however: scapus beneath fulvous, legs I and II except coxae and trochanters yellowish red; coxae III yellowish red, apically dark, trochanters III for the larger part dark; femora apically and also somewhat basally narrowly dark; tibiae III black with a broad subbasal white band. Subvertex and vertex smooth and shining. ♂, Malang, Java.
Goryphus albotarsata nov. spec.
- b. Tarsi III black or only segment 3 and 4 white. 6
- 6a. Mesopleura smooth. Coxae III yellowish red, only apically black; Trochanters III and apex of tibiae III and tarsi III black. Legs III otherwise yellowish red. Head impunctate, shining, ♂. Bred from *Psyche subteralbata*. 7 mm. Ceylon (Spol. Zeyl. III (10) p. 109, *Melcha reticulata* CAM. Oct. 1905 nec July 1905). *Goryphus cameroni* nov. nom.
- b. Mesopleura reticulated to transversely striated punctated, speculum smooth, sometimes before and beneath speculum also more or less smooth. 7
- 7a. Coxae III entirely yellowish red. Metanotum white. Scapus entirely black. No or very small black spot on propodeum above the insertion of the abdomen. Compare 24 b. *Goryphus bituberculatus* (SZEPL. 1910) var.
- b. Coxae III above or almost entirely black, underside of scapus reddish yellow to brown, always a distinct black spot on the propodeum above the abdomen. Trochanters mostly entirely black; femora III apically and mostly also basally narrowly black; tibiae III basally narrowly, apically broadly black; tarsi III black, very rarely segments 3 and 4 white. Subvertex smooth till finely alutaceous, sometimes with some punctures. ♂, 6 mm. Java
Goryphus inferus (SZEPL. 1916)
- 8a. Central part of the face black, only the facial orbits white. Genae with spot. Tergite 2(1) and 3(2) with white margin. Tergite 6(5) and the following tergites white. Sides of pronotum anteriorly and posterior margin of pronotum before the tegulae white. Four front legs, the coxae III, trochanters III and femora III of a deeper red colour, tibiae III and tarsi III paler. Black are the apex of tibiae III and the last segment of tarsi III. ♀, 8 mm, terebra 2 mm. Borneo (Jrn. Str. Br. Roy. As. Soc. 44, p. 142)
Cratocryptus maculiceps CAM. 1905
- b. The centre of the face also marked white. 9
- 9a. Apex of coxae III, trochanters III and apex of femora III black, also the apex and base of tibiae III black. White spot on the face not separated from the white facial orbits. No white spot on the genae? Anterior margin

of pronotum not white? Apex of tergites 2(1), 3(2) 4(3) white, also the apical tergite. "The sides of the middle of the mesonotum at the basis and the outer sides of the furrow striated". Mesopleura coarsely aciculated. ♀, 15 mm, terebra 4 mm. Khasia Hills (Trans. Ent. Soc. 1904, p. 118).

Mesostenus versatilis CAM. 1904

- b. Coxae III, trochanters III almost always entirely red; femora III only on extreme apex dark; tibiae III lighter, basis and apex dark, tarsi III dark, segments 1, 2, 3 and 4 white. Coxae and trochanters I and II white. White spot on the face always separated from the white facial orbits. Large white spot on genae. Anterior margin of pronotum also white. Apex of the tergites 2(1), 3(2) and rarely also of 4(3) narrowly white. Tergites 7(6), 8(7) and 9(8) largely white. Mesoscutum not striated. Mesopleura reticulated, only somewhat striated beneath the speculum. ♀, 8-6 mm, terebra 2-3 mm. Java. *Goryphus inferus* (SZEPL. 1916)
- 10a. Coxae III black, often with white spot above. 11
- b. Coxae III light, at most apically black or with black spots. 18
- 11a. Propodeum behind basal carina with transverse striae, apical slope indistinct or very short, sometimes bordered by a crest. Subvertex depressed. Mesonotum almost smooth. Areola not small, nervus recurrens in the centre, sides parallel.

Genera *Lactolus* and *Friona*

(Compare also: *Cryptus sensus* Tosq. 1903, ♂, p. 198; *Cryptus diffidens* Tosq. 1903 p. 187).

- b. Propodeum behind the basal carina without fine transverse striae, slope more distinct. Mesonotum distinctly punctured. 12
- 12a. Face entirely black or only in the centre with white spot. 13
- b. Face at the sides white or entirely white. 15
- 13a. Wings without dark cross band, hyaline. 14
- b. Wings with an incomplete cross band. In the females vertex at the sides white. White are also: palpi, centre of clypeus sometimes, tegulae, tubercles, scutellum, frena behind hind wings, sides of the slope of the propodeum, hind margin of tergite 2(1) and 3(2); tergite 6(5), 7(6) and 8(7) entirely white. Legs black, white are: apex of coxae I and extreme apex of coxae II, trochanters I and II, subbasal ring on tibiae III. Tarsi III entirely black. In the males sometimes also centre of face, clypeus, base of mandibles, apex of propodeum white. Only tergite 8(7) of the apical tergites white. Legs I and II more brown and light. Coxae I almost entirely white, also tibiae II often with white band. Segment 2 and 3 of tarsi III for the larger part white. Sometimes sides of apex of tergite 4(3) white. Java, Sumatra. *Ancaria sundaica* nov. spec.
- 14a. Scutellum black, a reddish spot in the centre of the face, tubercles white, also frena behind the hind wings. Propodeum with a white circular mark round the slope. Tergites 3(2) and 4(3) at the sides with white elongated spots. Tergite 7(6) white. Legs I and II brown and white. Legs III black,

- tibiae III with white band, also tarsi III with white band. ♀, Java. (Hist. Nat. Ins. Hym. IV, p. 233). *Mesostenus annulipes* BRULLÉ 1846.
- b. Scutellum white. Also white are: palpi, base of mandibles, clypeus for the larger part, centre of the face, two spots on the vertical orbits, collum, tegulae, tubercles, centre of metanotum, spot beneath the hind wings, upper part of the frena behind the hind wings, declivous part of the propodeum, apices of the tergites 2(1), 3(2) and 4(3), centre of tergites 8(7) and 9(8) above. Legs I and II reddish yellow. Legs I brighter than legs II. Coxae I white, behind often brown, trochanters I white. Coxae II brown and white, trochanters white, trochantellus red. Coxae III black with white spot above, trochanters III for the larger part white, trochantelli black. Tarsi III white, base of metatarsi black, also segment 6(5) black. ♀, Java, Sumatra (for the ♂ compare n. 16a). *Ancaria sumatrensis* nov. spec.
- 15a. Face entirely white. 16
- b. Face only at the sides white. 17
- 16a. Male. Flagellum with 33 segments, segments 10 - 18 white; white are also: base of the mandibles, clypeus, face, triangular spots on vertical orbits, anterior margin of pronotum, tegulae, tubercles, spots beneath the hind wings, upper part of the frena behind the hind wings, scutellum, metanotum in the centre, declivous part of propodeum, apices of tergites 2(1), 3(2), 4(3) and 5(4), tergite 8(7) entirely and the clasps. Legs coloured as in the female, however, legs I and II lighter. ♂. (Compare for the female 14b).
Ancaria sumatrensis nov. spec.
- b. White are: face entirely, clypeus, palpi, orbitae subverticales, anterior margin of pronotum, lines on scapula, tubercles, scutellum, metanotum, frena, spot on metapleura, spot on propodeum shaped as a horseshoe, coxae and trochanters I and II, spot on coxae III, tarsi III for the larger part, hind margin of all tergites except for tergite 6(5). Tibiae and femora I and II yellowish red; tibiae III in the centre white; legs III otherwise black. Java, 1 ♀, Batavia, specimen named by SZEPLIGETI in Museum at Leiden. Probably an other species as the type! (Notes Leyden Museum XXIX, p. 245). *Gambrus variegatus* SZEPL. 1908
- 17a. Legs III entirely black, only base of tibiae somewhat lighter. Sides of face and subvertex with broad white spot, collum white as also: tegulae, tubercles, scutellum, metanotum, frena, the large teeth of the propodeum, narrow bands on the tergite 2(1) - 4(3), centre of tergite 8(7) broadly. Tergite 9(8) black. Coxae I anteriorly white, posteriorly black. Coxae II black with white spot. Rest of the legs I and II reddish brown and black; tibiae I with yellowish stripe. Areola large, subvertex excavated before ocelli. ♀, 10 mm. Java. *Ancaria javana* (SZEPL. 1908)
- b. Almost identical, however, coxae I and II and trochanters I and II white, coxae I posteriorly black, coxae III with white spot, femora III basally red, tibiae III with white band. ♀, 11 mm. North Celebes (Mem. Soc. Ent. Belg. X, p. 195). *Cryptus evagatus* Tosq. 1903

- 18a. Hind margin of tergite 5(4) and the following tergites white. At the sides and in the centre are the bands more or less interrupted. Tergite 4(3) entirely black. Hind margins of tergite 2(1) and 3(2) white. White are also: base of mandibles, spot on genae, clypeus, face, orbitae subverticales, orbitae verticales, anterior and posterior margin of pronotum before wings, tegulae, tubercles, scutellum, metanotum, frena and two lateral spot on propodeum. Wings hyaline. 8, ♀ mm. Java. *Goryphus bituberculatus* (SZEPL. 1910)
- b. Tergite 5(4) entirely black, the apical tergites in the centre not black ... 19
- 19a. Wings with small square cloud before areola. Tibiae III with white basal band. 20
- b. Wings entirely hyaline. 21
- 20a. White are: palpi, mark in the centre of the face, upper inner orbits, line on pronotum, tubercles, tegulae, scutellum, metanotum, frena near the hind wings, mark on sides of propodeum, apex of tergites 2(1) and 3(2), the last two tergites, coxae and trochanters I and II, band on the base of the tibiae III, tarsi III for the larger part. Legs red, black are: base and apex of tarsi III, apex of femora III, tibiae III except white basal band. ♀, 9 mm, terebra 2 mm. Borneo. (Deutsch. Ent. Zeitschr. 1909, p. 532).
- Buodias annulipes* CAM. 1909
- b. Face and pronotum entirely black. White are: palpi, labrum, two triangular spots on vertex next to the eyes, tegulae, tubercles, scutellum, frena next to hind wings, apical slope of propodeum, stripe in the centre blackish. On the abdomen are white: apex of the tergites 2(1) and 3(2), tergite 7(6), 8(7) and 9(8) broadly, sides black. Legs I and II yellowish red, coxae and trochanters I and II white, tarsi blackish. Legs III red, trochanters III somewhat brown, tibiae III black with white subbasal band, tarsi III white, segment 5 black. Tergite 2(1) basally red. Scrobi small. Postpetiolus quadrate. Declivous part of vertex very long; occipital carina near occipital foramen. ♀. Java. *Ancaria anomala* nov. spec.
- 21a. Females. 22
- b. Males. 23
- 22a. No white stripe before tegulae. Face in the centre black. White are: orbitae verticales broadly, sides of face, clypeus, mandibles except apices, collum, tegulae, scutellum, metanotum, frena, spines, hind margin of tergites 2(1) - 4(3) and tergite 8(7). Legs and palpi red. Tarsi III dark. Areola large. Spines very large. ♀. Formosa (Jrnl. Fac. Agr. Hokkaido Imp. Univ. XXX, p. 189). *Takastenus longidentatus* UCH. 1931
- b. White stripe before the tegulae. Face entirely white. Genae black. White are also: palpi, clypeus, mandibles except the apices, orbitae superiores, anterior margin of pronotum at the sides, tegulae, tubercles, scutellum, frena, sides of declivous part of propodeum, apex of tergites 2(1), 3(2) and tergite 5(4) or 6(5) and following in the centre broadly. Tergite 2(1) red. Legs III red, trochanters brownish, femora III narrowly black at the apex; tibiae

- dark, in the centre somewhat lighter, tarsi III black, segments 1 and 2 and 3 white. ♀. Java. *Goryphus mulleri* nov. spec.
- 23a. Mesonotum smooth. Metapleura strongly obliquely striated. Tergite 3(2) and 4(3) aciculated. Tarsi III for the larger part white. White are: palpi, mandibles except apices, clypeus, face, inner upper orbits, base and apex of pronotum, tubercles, tegulae, scutellum, metanotum, frena, apex of propodeum, apices of tergites 2(1), 3(2) and 4(3), tergite 8(7) entirely. Legs I and II pale, tarsi II black. Basal half of coxae III red, apex black, apical half of femora III black. Tibiae III yellow, apex broadly, base narrowly black. ♀, 11 mm. Sikkim (Tijdschr. v. Entom. 50, p. 85).
- Mesostenus interceptus* CAM. 1907
- b. Mesonotum distinctly punctated. Metapleura not obliquely striated. Tergite 3(2) and 4(3) not aciculated. Tarsi III black. 24
- 24a. White are: Palpi, clypeus, centre of the face, rarely also facial orbits in the centre, inner upper orbits, base and apex of pronotum; tubercles, tegulae, scutellum, metanotum, frena, apical half of propodeum, apical margins of tergites 2(1), 3(2), 4(3) and sometimes also 5(4), tergite 8(7) above broadly. Legs I and II yellowish. Coxae and trochanters I and II white, tarsi II dark. Legs III red; black are: apex of coxae III, trochanters III, apex of femora III, base narrowly, apex of tibiae III broadly, tarsi III. Tergite 2(1) and underside of scapus reddish. ♂, 6 mm. Java.
- Goryphus fasciatipennis* (SZEPL. 1910)
- b. White are: palpi, genae broadly, mandibles, face entirely, inner upper orbits, base and apex of pronotum, tegulae, tubercles, scutellum, metanotum, frena, apical half of propodeum, apical margins of tergite 2(1), 3(2), 4(3) and rarely also of 5(4) and 6(5), upper part of tergite 7(6) and 8(7). Legs I and II yellowish, coxae and trochanters I and II white, tarsi II light. Legs III red, black are: trochanters III, apex of femora III, base and apex of tibiae III, tarsi III. Centre of tibiae III yellow. Coxae III entirely red. 6 mm. ♂. Java. *Goryphus bituberculatus* (SZEPL. 1910)
- 25a. Praescutellar lists white, wings hyaline 26
- b. Praescutellar lists black, wings with more or less dark cloud beneath the stigma. Facial orbits black (always?) 28
- 26a. Central part of face black; white are: base of mandibles, clypeus, inner orbits for the larger part, "a line on the pronotum", tegulae, tubercles, praescutellar lists, scutellum, sides of propodeum, apex of tergites 2(1) and 3(2), apex of tergite 5(4) and "the whole of the apical two". Legs fulvous red; coxae and trochanters I and II white; black are: base and apex of tibiae III and apex of tarsi. ♀. 8 mm, terebra 1 mm. Borneo. (Ann. Mag. Nat. Hist. (7) 16, p. 167). *Loiada maculiceps* CAM. 1905
- b. Face at least in the centre white 27
- 27a. Metanotum not white. White are: mandibles except apices, clypeus, genae, face, orbitae subverticales, tegulae, tubercles, praescutellar keels, scutellum for the larger part, apical slope of propodeum, apical margins of tergites

2(1) - 4(3) and apical tergite, Legs I and II yellowish brown, coxae III black, basally above and apically beneath testaceous, tarsi III and tibiae III more or less light. ♂, 15 mm. Sikkim. (Tijdschr. v. Ent. 50, p. 89).

Buodias annulitarsis CAM. 1907

b. Metanotum white. Spot in the centre of the face white in the ♀. White are also: base of mandibles, inner orbits, clypeus, collum, stripe on the hind margin of pronotum before the tegulae, tubercles, tegulae, praescutellar lists, scutellum, metanotum, sides of the propodeum, apex of tergite 2(1) and 3(2) and "the apex of the abdomen". Legs red; coxae and trochanters I and II white, also segments 2 and 3 of tarsi III. Black are: apex of femora III, basis and apex of tibiae III and tarsi III. In the ♂ is the face entirely white, tarsi III entirely black. Wings hyaline. ♀, ♂, 9 mm. Formosa. (Jrn. Fac. Agr. Hokkaido Univ. XXXIII, p. 173).

Goryphus horeiensis UCH. 1932

28a. Face entirely black, posterior margin of pronotum before tegulae white. White are also: base of mandibles, clypeus, anterior margin of pronotum, tegulae, tubercles, scutellum, metanotum, sides of propodeum, posterior margin of tergites 2(1), 3(2), 6(5), tergites 7(6) and 8(7) entirely. Legs red; coxae and trochanters I and II white. Black are: apex of femora III, base and apex of tibiae III; tarsi in the centre light. Wings hyaline, beneath the stigma brownish. ♀, 6 - 7 mm. Formosa. (Jrn. Fac. Agr. Hokkaido Univ. XXXIII, p. 175). *Goryphus tuberculatus* UCH. 1932

b. Face at least in the centre white. 29

29a. Metanotum white; only the thick spines of propodeum white. Central part of the face white; posterior margin of pronotum black or indistinctly white. White are also: base of mandibles, orbitae subverticales and verticales, anterior and sometimes also posterior margin of pronotum, tubercles, tegulae, scutellum, posterior margin of tergite 2(1) and 3(2), the posterior margin of tergite 6(5) (sides and the centre, however black), hind margin of tergite 7(6) and 8(7) (sides black). Tergite 9(8) black. Tergite 2(1) often reddish. Legs red, coxae and trochanters I and II white, also the apex of metatarsi III and segments 2, 3, 4 of the tarsi III. Tarsi I and II dark, lighter in the centre. Black are: apex of femora III, tibiae III subbasal band lighter, almost white, base and apex of tarsi III also black. Dark broad, transverse band beneath the stigma, small spot at the base of the basal vein. ♀, 10 - 12 mm, terebra 2 mm. Java (Notes Leyden Museum XXXII, p. 98).

Goryphus fasciatipennis (SZEPL. 1910)

b. Metanotum black. Apical half of propodeum except apically in the centre white. White are also: base of mandibles, central part of face, upper orbits, tegulae, tubercles, scutellum, apical margins of tergites 2(1) and 3(2), tergite 8(7) and 9(8) for the larger part. Coxae I and III probably black. Forewings with transverse dark band beneath the stigma. ♀, ± 10 mm. Java. (Hist. Nat. Ins. IV, p. 198). *Cryptus elegantulus* BRULLÉ 1846

C. THE GENUS *GORYPHUS* HOLMGREN 1868.

The genus *Goryphus* is one of the few tropical genera of the Cryptinae characterized already sufficiently. It is described and figured by HOLMGREN in the year 1868 in the somewhat rare publication on the zoological results of the round the world cruise of the Swedish ship "Eugenie". In the year 1907 ROMAN gave a very good redescription which is quite sufficient to recognise this genus.

CAMERON without doubt described some *Goryphus* species. It is, however, very difficult to recognise with certainty the species and genera that belong to *Goryphus* merely from his descriptions.

According to MORLEY (1913) and CHEESMAN (1936) who studied the genus *Melcha* (the genotype?) in the British Museum, *Melcha* is a synonym of *Goryphus*. Because the description of CAMERON of the genus *Melcha* does not contradict this, I have accepted this synonymy.

Probably the genera *Cratocryptus* CAM. 1905 and *Loiada* CAM. 1905 are synonyms of *Goryphus*. There are no characters mentioned in the description that do not agree with those of *Goryphus*. Already ROMAN (Ent. Tidskr. 1936) mentions that *Loiada* is a synonym of *Goryphus*. The name *Cratocryptus* is preoccupied, because THOMSON used it for another genus. SCHMIEDEKNECHT and SCHULZ, therefore, gave other names, which become superfluous if *Cratocryptus* is a synonym of *Goryphus*.

In the years 1908 and 1910 SZEPLIGETI described many species of our genus as *Gambrus* species, because *Goryphus* specimens run to this genus in the key of FÖRSTER (1868). Not all the species, however, described by him under this name belong to the genus *Goryphus*. According to typical specimens in the Museum at Leiden some of these species belong to *Ancaria*. In the year 1916 he placed most of the females, formerly described as *Gambrus*, in the genus *Mesostenus* he recorded, however, the males under the name *Neomesostenus*.

The following is a list of the systematic literature in which the genus *Goryphus* is mentioned.

1868. HOLMGREN. Eugenie Resa Omkring Jorden Vol. 1, Zoologi, Insekter, p. 398, *Goryphus genuinus*.
1902. CAMERON. Ann. Mag. N. H. (7) 9, p. 153, *Melcha*.
1905. CAMERON. Ann. Mag. N. H. (7) 16, p. 116, *Loiada*.
- ?1905. CAMERON. Jrn. Str. Br. Roy. As. Soc. 44, p. 141, *Cratocryptus* CAM. nec THOMS.
- ?1906. SCHULZ. Spolia Hymen. p. 123, *Cratocryptodes* nov. nom.
1907. ROMAN. Särtryck ur Zool. Stud. till Prof. Tullberg, p. 71—81, *Goryphus*.
- ?1908. SCHMIEDEKNECHT. Gen. Ins. fasc. 75, p. 62, *Cratocryptoides* nov. nom.
1908. SZEPLIGETI. Notes Leyden Mus. XXIX, p. 242, *Gambrus* p.p.
1910. ROMAN. Entom. Tidskr. p. 162, *Goryphus*.
1910. SZEPLIGETI. Notes Leyden Mus. XXXII, *Gambrus* p.p.
- *1913. MORLEY. Entom. XLVI, p. 132, *Melcha*.
1916. SZEPLIGETI. Ann. Mus. Nat. Hung. XIV, p. 325, 328, ♀♀, *Mesostenus* p.p.
1916. SZEPLIGETI. Ann. Mus. Nat. Hung. XIV, p. 263, 291, ♂♂, *Neomesostenus*.
1931. UCHIDA. Jrn. Fac. Agric. Hokkaido Imp. Univ. XXXIII, p. 184, *Mesostenus* p.p.

1932. UCHIDA. Jrn. Fac. Agric. Hokkaido Imp. Univ. XXXIII, p. 172—179, *Goryphus*.
1936. ROMAN. Entom. Tidskr. 57, p. 1—3, *Goryphus*.
1936. CHEESMAN. Nova. Guinea XVII, p. 355, *Goryphus*.

It is not easy to discriminate this genus from its allies. Therefore it becomes necessary to state the differences from the genera with which confusion may occur and wherein species of *Goryphus* have been included by previous authors.

The differences between *Ancaria* CAM. 1902 and *Goryphus* have been enumerated under the former genus.

In the key of CUSHMAN of the North American ichneumon flies of *Mesostenus* and related genera, the species of the genus *Goryphus* run to *Diapetimorpha* VIERECK 1913 (Proc. U. S. Nat. Mus. 74, art. 6, 1929). This genus, however, appears to differ by the medially impressed or flattened subvertex immediately before the anterior ocellus, and the upper tooth of the mandibles which is larger than the lower. Also the notauli obviously are not so deep as in *Goryphus*.

The genus **Gambroides** nov. gen. ¹⁾ differs by the rounded not flat tempora, the absence of distinct epomiae, the punctured sides of the pronotum, the shallow notauli, the absence of sternauli, the epicnemiae that only reach up to a fifth of the mesopleura, the small tubercles, the punctured speculum, the tergite 2(1) which is gradually broadened from base to apex. The post-petiolus is almost quadratic; the nervellus is broken above the middle, the mesosternum is long; the thorax is much longer, etc. The scrobi are deep and distinctly separated from the subvertex as in *Goryphus*.

The genus *Amauromorpha* ASHM. 1905 (= *Eripternimorpha* VIERECK 1913 ²⁾) is not at all related to *Goryphus*. It belongs to quite another group because the occipital carina is not sinuated and prominent behind the cheeks. (In *Goryphus*, *Gambroides* and allied genera this character is very distinct). This genus can be separated by the following characters. The scrobi are not deep, the epomiae are distinct, but do not reach to the hind margin of the pronotum and are not bent there; the notauli are very faint; there is no crenulated area on the mesoscutum; the scutellar groove has no carinae; the epicnemiae reach almost to the tubercles which are weakly developed; the sternauli are lacking; the speculum is lacking; the lateral parts of scutellum and metanotum without carinae; groove between metanotum and propodeum almost absent; the second

¹⁾ **Gambroides** nov. gen. is erected by me for the species: *Eripternimorpha javensis* ROHWER 1918, parasite of the sugarcane borer *Scirpophaga intacta*, *Eripternimorpha dammermani* ROHWER 1918, parasite of the sugarcane borer *Scirpophaga intacta*, *Eripternimorpha dammermani* ROHWER 1918, parasite of *Scirpophaga innotata* WLK. (= *sericea* SN.) the paddyborer, and *Gamburus rufithorax* UCH 1931 that must be a parasite of *Diatraea innotata* WLK. and *Chilo infuscatrellus* SN.

The genotype is: *Eripternimorpha javensis* ROHWER 1918.

Compare: ROHWER, Proc. U. S. Nat. Mus. 54, No. 2249, p. 564 - 565; UCHIDA, Jrnl. Fac. Agric. Hokkaido Imp. Univ. XXX, p. 172 - 173.

²⁾ To this genus belong: *Amauromorpha metathoracica* ASHMEAD 1905 from the Philippines; *Eripternimorpha scirpophagae* ROHWER 1918 from Java. These are parasites of various paddy borers (see SONAN, Trans. Nat. Hist. Soc. Formosa XIX, No. 104, p. 424, Oct. 1929).

cross carina of the propodeum is near to the margin and is not bent inwards in the middle; the spiracles are linear; the spiracles of the tergite 2(1) are situated near the centre of the tergite, the dorsal carinae are lacking before the spiracles, the postpetiolus is not separated, the sternite reaches far behind the spiracles; the structure is very fine; the areola of the wings is not very distinct.

The genus *Gambrus* FÖRSTER 1868 wherein SZEPLIGETI placed many of the species, is probably quite different. I only possess a specimen I named as *Gambrus ornatulus* THOMSON, it was collected near Barchem in the province Gelderland of the Netherlands. Its clypeus is pointed in the centre anteriorly, this point being very much tooth like. CEBALLOS (Trabajos del Museo Nac. de Ciencias Natur, ser. zool. num. 56, Madrid 1931, p. 164) is the only author, thus far known to me, who mentions this structure. It is impossible to come in FÖRSTER's key to this genus by this character, so that it is very improbable, that this is a *Gambrus* spec. sensu FÖRSTER. The genus *Gambrus* of FÖRSTER probably contains species of the genus *Stylocryptus* and allies, the last mentioned genus group differing from *Goryphus* i.a. by the lack of the prominence and the sinuation of the occipital carina behind the cheeks, the large areola in the wings, etc., etc. The genotype is *Gambrus incubator* (L. 1758) (= *Gambrus ornatus* GRAV. 1829 = *Gambrus maculatus* BRISCHKE 1888; compare: ROMAN: Ent. Tidskrift 1932, p. 7; SPEISER: Schr. d. N. G. XII, p. 32, 1908).

***Goryphus javanicus* ROMAN 1907.**

1907. Zool. Stud. Tullberg, p. 76 ♀, p. 79.
 1908. SZEPLIGETI. Notes Leyden Mus. XXIX, p. 243, ♀, *Gambrus fasciatus*.
 !1910. SZEPLIGETI. Notes Leyden Mus. XXXII, p. 98, *Gambrus adornatus*.
 !1912. ROEPKE. Meded. Proefst. Midden-Java 5, p. 19, „Parasiet” species C, Pl. fig. 3, ♀, ♂.
 !1913. ROEPKE. Meded. Proefst. Midden-Java 12, p. 1, 4, 9, 15, 17, *Mesostenus*, species C.
 !1913. ROEPKE. Meded. Proefst. Midden-Java 13, p. 14, *Mesostenus*, species C.
 !1914. ROEPKE. Meded. Proefst. Midden-Java 18, p. 15, *Mesostenus*, species C.
 !1914. ROEPKE. Verslag 2de Verg. Technisch Personeel der Proefstations, Aug. 1913, p. 39 - 49, „Parasiet” species C.
 ?1916. SZEPLIGETI. Ann. Mus. Nat. Hung. XIV, p. 329, 334, ♀, *Mesostenus hyalinus*.
 1916. SZEPLIGETI. Ann. Mus. Nat. Hung. XIV, p. 329, 335 p.p., *Mesostenus adornatus*.
 1922. ROEPKE. Cacao, Onze Koloniale Landbouw XI, p. 112, *Goryphus ornatipennis*.
 1917. GIRAULT. New Javanese Hymenoptera p. 7, *Mesostenus zarathae* ROEPKE (nomen nudum).

♀ Black. White are: palpi, mostly base of mandibles, sometimes clypeus in the centre, the upperside of the apex of joint 4, and the upperside of the joints 5 - 9 of the flagellum, tegulae, tubercles, base of wings, scutellum, centre of metanotum sometimes, apex of tergites 2(1) and 3(2), tergites 8(7) and 9(8), sides, however, black. Red are: propodeum, inferior part of the metapleura, centre of metanotum sometimes, frena behind hind wings more or less, extreme base of tergite 2(1) sometimes. On the mesopleurae above the coxae III a small red spot. Legs red, white are: coxae and trochanters I and II, coxae II some-

times more reddish, black are apex of femora III, base of tibiae II, tibiae III and all tarsi. Trochanters III sometimes blackish. Forewings with a black cross band.

Head. Clypeus almost smooth with a few fine punctures. Face finely, densely punctured. Scrobi deep, smooth and shining, distinctly separated from the subvertex. Sides of the latter alutaceous. Centre finely striated, striae somewhat radiating from the anterior ocellus.

Thorax. Sides of pronotum entirely, finely striated. Mesonotum somewhat shining, finely, densely punctured. Notauli deep, with fine cross carinae. Scutellum smooth. Mesopleura dull, finely reticulated. Speculum long, smooth, shining, beneath the speculum fine striae, also in the furrow before the speculum. Sternauli deep. Mesosternum somewhat shining, beneath the speculum fine striae, also in the furrow before the speculum. Sternauli deep. Mesosternum somewhat shining, finely, densely punctured. Lower part of metapleura finely reticulated as the propodeum.

Propodeum. Finely reticulated, before the anterior cross carina with finer structure. Area basalis distinct, anteriorly broader than posteriorly. Sulcus between metanotum and propodeum smooth. Area coxalis not separated. Costa pleuralis not very distinct. Spiracula oval. Second carina often indistinct, when distinct deeply bent forwards in the centre. At the sides of the declivous part it is very high and forms the spinae.

Abdomen. Tergite 2(1) smooth, petiolus gradually widening, postpetiolus not very distinctly separated, broader than long. The inferior carinae and lateral carinae distinct. Space between them with flat cross striae. Dorsal carinae distinct, reaching till the spiracula. Tergite 3(2) and 4(3) dull, deeply, densely punctured. The following tergites more finely punctured.

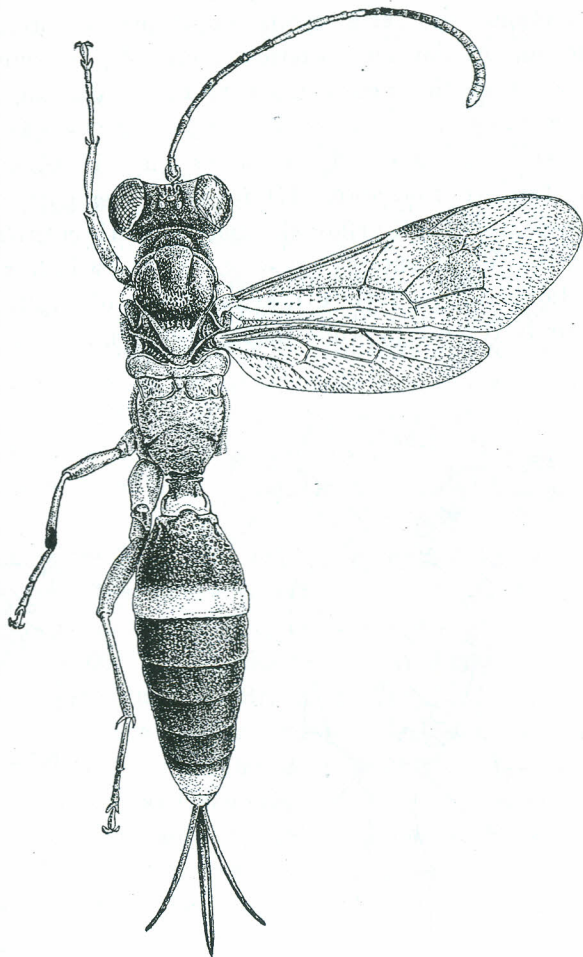


Fig. 2. *Goryphus javanicus* ROMAN 1907, ♀.

Tibiae III with fine spinae. Flagellum with 23-25 joints. (in plesiotype with 24 joints).

Length: 5-11 mm. In plesiotype length 7 mm; terebra 2 mm; length of fore wings 5 mm.

Plesiotype: Malang, IV.1933, Province East Java, Coll. BETREM.

♂. Black. White are: palpi, base of mandibles, clypeus, centre of the face, sometimes also facial orbits, upper part of orbitae subverticales, orbitae verticales, anterior and posterior margin of pronotum, tegulae, tubercles, sometimes a stripe on the mesonotum next to the tegulae, scutellum, frena, often centre of metanotum, apices of the tergites 2(1)—5(4), tergite 8(7). LEGS yellowish red till red. Coxae and trochanters I and II, tibiae I and tarsi I white. Blackish are tarsi II, trochanters III for the larger part, apex of femora III, tibiae III except a subbasal yellowish band, tarsi III, entirely, often, however, in the centre white. Wings entirely hyaline. Yellowish red are: scapus, propodeum, metapleura (frena white!), extreme base of tergite 2(1) and sometimes the latter entirely red except white posterior margin.

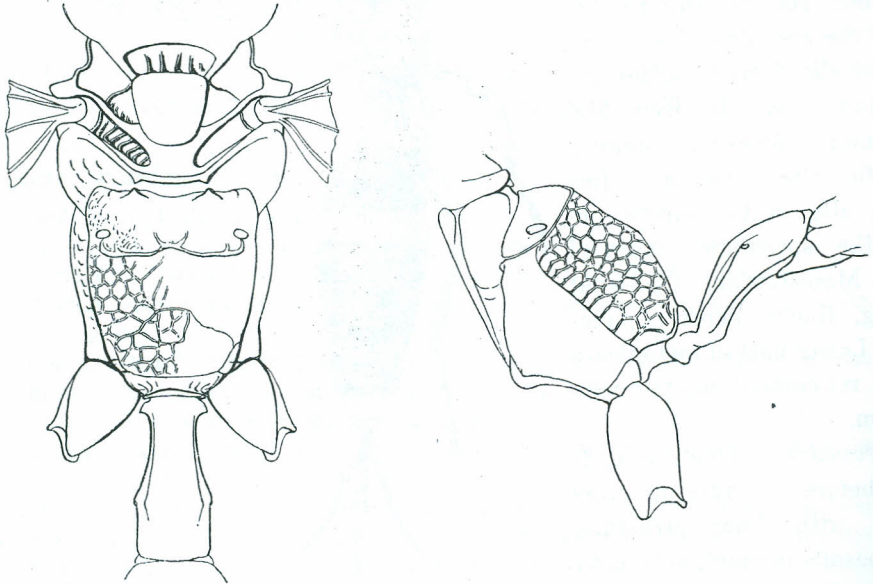


Fig. 3. *Goryphus javanicus* ROMAN 1907, ♂.

Head. Clypeus almost smooth. Face punctured. Scrobi smooth. Subvertex in the middle finely striated. Vertex smooth.

Thorax. Sides of pronotum striated, above smooth. Mesoscutum shining, finely punctured. Scutellum smooth. Mesopleura almost entirely punctured, speculum smooth. Metapleura punctured.

Propodeum. Part behind the anterior cross carina reticulated, anterior of the latter almost smooth. Areae coxales not separated, costa pleuralis not distinct. Second cross carina absent or indistinct.

Abdomen. Tergite 2(1) smooth, between the spiracula punctured. Inferior and lateral carinae distinct. Dorsal carinae reaching the spiracula, very near the lateral carinae. Postpetiolus almost quadratic, a little longer than broad. Tergite 2(1) deeply, densely punctured. Following tergites not so deep and not so densely punctured.

Length of allotype: 7 mm, length of fore wings 5 mm.

Allotype: Tapos, Mt. Gedeh, 700 m, Province West Java, IX.33, leg. KALSHOVEN, Coll. BETREM.

This is one of the most common Cryptids of Java. In my collection more than hundred specimens of this species are present. The males are caught much rarer than the females. ROEPKE (1913) who bred this species from the cacao fruit moth (*Acrocercops cramerella*), however, found 85 % ♂♂ against 15 % ♀♀. The specimens bred by him are very small, 5 mm, what is a great difference with the largest caught specimen of 11 mm. It seems not improbable to me that the large percentage of males is caused by the small quantity of food that *Acrocercops* provides. ROEPKE (1913) proved that this species also lives in "cocoon", egg-nests, of spiders. The specimens bred from these nests were much larger than those bred from the cacao fruit moth. In the laboratory ROEPKE succeeded to breed this species also on *Artona catoxantha*. He and the Institute for Plant Diseases bred, however, this species also from cocoons of this moth collected outdoors in the field.

Also *Goryphus javanicus* does not live only on insects of a distinct systematical group, but on arthropods that make structures that look like i.e. the cocoons of *Artona*. It is thus confined to a biological group.

ROEPKE (1914 p. 48) also mentions this species as hyperparasite of the Limacodid *Setora nitens*. It was parasitizing a Braconid (? *Spinaria* spec.). TJOA, however, mentions this species as a primary parasite of *Setora nitens*.

From the Zoological Museum I received by the courtesy of Mr. LIEFTINCK two specimens named by Miss CHEESMAN as *Goryphus mesoxanthus* var. *montanus* CHEESMAN in litt. and two specimens named by her *Goryphus maculipennis* var. *rubrus* CHEESM. in litt. The two first mentioned specimens belong to *Goryphus javanicus*; of the two last mentioned specimens one belongs to the same species and one to *Goryphus mesoxanthus*.

I can not find any difference between the two species of CHEESMAN. The var. *rubrus* is characterized by the entirely red frena and metanotum. So far as known, however, all intermediate colour nuances exist between black and red frena and white, black and red metanotum.

Geographical distribution. WEST JAVA: Res. Buitenzorg: 55 ♀♀, 8 ♂ Tapos, Mt. Gedeh, 800 m, VII-XI, 1933 coll. BETREM, coll. Mus. Btz.; 10 ♀♀ idem, II, VII, VIII, X, XI 1932 coll. KALSHOVEN, coll. v. D. VECHT; 3 ♀♀ Pondok Gedeh, VIII, V, 1932 coll. FRANSSEN; 1 ♀, 1 ♂ Mt. Gedeh 1000 m, XI, 1932 coll. KALSHOVEN; 1 ♀ Mt. Gedeh, Tjibodas, 1400 m, Mus. Buitenzorg, named by Miss CHEESMAN *G. mesoxanthus* var. *montanus*. 1 ♀, Tjampea, XI. '36, leg. LIEFTINCK Mus. Btz. (Buitenzorg), named by Miss

CHEESMAN *G. mesoxanthus* var. *montanus*; 17 ♀♀, 1 ♂ Soekaboemi, 500 à 600 m, 1933 leg. VERBEEK, coll. BETREM, coll. Mus. Btz.; 2 ♀ Mt. Bèsèr, IV, 1936, leg. WALSH, coll. BETREM; 1 ♀ Mt. Gonggang, Djampang Tengah, IX, 1935 leg. WALSH, coll. BETREM; 1 ♀ Djampang Tengah, II, 1935 leg. WALSH, coll. BETREM; 1 ♀, Mt. Pantjar, 23.VIII.31 leg. LIEFTINCK, Mus. Buitenzorg, named by Miss CHEESMAN *G. maculipensis* var. *rubrus*; 2 ♀ Genteng Bay, Tjikepoh, 2.VII.'39 200 m, leg. LIEFTINCK, Mus. Btz. Res. Priangan: Preanger (ROEPKE 1914, p. 48); 1 ♀ Mt. Pantjalikan near Radjamandala, 29.V.'36, 400 m, leg. DRESCHER, Mus. Btz.; 1 ♀, Bandoeng, 4.XII.'39, 750 m, leg. OLTHOF, Mus Btz. (this specimen has the coxae I partly black). Res. Batavia: 1 ♀ Batavia, IX, 1907 (*Gamburus adornatus* det. SZEPLIGETI) Mus. Leiden; 2 ♀♀ Batavia, IX, X, 1907, Mus. Leiden. CENTRAL JAVA: Res. Banjoemas: 1 ♀ Kalipeloes near Lengkong bred from pupa of *Artona catoxantha*, according to Dr. J. v. D. VECHT, coll. Institute for Plant diseases; Res. Semarang: 1 ♀ Teak forest, n. 15, n. 180, coll. Institute for Plant Diseases; 4 ♀♀, 2 ♂♂ bred from cacao-fruitmoth (*Acrocercops cramerella*) from cacao-estates in Central Java, coll. Research Station M. O. J., coll. Mus. Btz.; Res. Kedoe: 1 ♀ Kemiriamba, Kadjaran, Palaman, Magelang, bred from *Artona catoxantha*, coll. Inst. f. Plant Diseases. Res. Djapara-Rembang: 2 ♀ Tjolo, Mt. Moeria, 20-24.X.'39 800 m, leg. LIEFTINCK, coll. Mus. Btz. EAST JAVA: Res. Madioen: 2 ♀, 1 ♂ Watoekaroeng near Patjitan bred from *Artona catoxantha*, according to Dr. J. v. D. VECHT, coll. Institute for Plant Diseases; Res. Kediri: 1 ♀ Estate Ngrankah Pawon, Mt. Kloet, 475 m, VII, 1932 leg. MULLER, coll. Institute for Plant Diseases; Res. Malang: 45 ♀♀, 13 ♂♂, Malang, 450 m, III, IV, V, 1933, coll. BETREM; 1 ♀ Proefstation Malang, 3.VI.'26, coll. Research Station M. O. J.; 1 ♀, 1 ♂ Karang Plosso, V, 1933, coll. BETREM; 2 ♀♀ Mt. Baoeng near Lawang, XII, 1930, IV, 1931, coll. BETREM; 2 ♀♀ Nongkodjadjar, 1200 m, VIII, 1934, coll. BETREM; 1 ♀ Taman, near Nongkodjadjar, VIII, '34, coll. BETREM; Res. Besoeki: 2 ♀ Blawan, Idjen, 900 m, 27-29.VI.'39, leg. v. D. VECHT.

KRAKATAU ISLES: 1 ♀ Verlaten Eiland, V, 1908 (*Gamburus adornatus*, det. SZEPLIGETI), Mus. Leiden.

KANGEAN IS.: 1 ♀ Petapan, East Coast, forest, II.'36 leg. WALSH, coll. BETREM.

BALI: 1 ♀ Gitgit, 18.VI.'39, leg. v. D. VECHT, coll. BETREM.

Goryphus mesoxanthus (BRULLÉ 1846).

1846. Hist. Nat. Ins. Hym. IV, p. 196, ♀, *Cryptus mesoxanthus*.

1876. TASCHENBERG. Zeitschr. d. Ges. Naturw. XLVIII p. 69, ♀, *Cryptus trifasciatus*.

The description of BRULLÉ is sufficient to recognise with certainty the species under consideration, especially the description of the colours of the hind legs is characteristic. The type of TASCHENBERG I could study in the collection of the Zoological Institute of the University in Halle a. S. by the courtesy of Professor Dr. W. v. BUDDENBROCK. It is remarkable that both authors give as locality "Java". Till now I did not see any specimen from Java, all material

in my collection being from Sumatra and Borneo. Perhaps *Goryphus javanicus* is only a subspecies of *Goryphus mesoxanthus* as no structural characters distinguishing these two species could be found.

Geographical distribution. SUMATRA: East Coast Government: 14 ♀♀, Medan, Sumatra, coll. BETREM, coll. Mus. Btz. Res. Benkoelen: 1 ♀ Boekit Itam, VI.'35, leg. WALSH, coll. BETREM; 1 ♀, Tandjong Sakti, IV.'35, leg. WALSH, coll. BETREM; Res. Lampoeng: 5 ♀ GIESTING, Mt. Tanggamoos XII.'39, 500 m, leg. LIEFTINCK, coll. Mus. Btz., coll. BETREM. 1 ♀ Mt. Tanggamoos, GIESTING, leg. WALSH, coll. BETREM; Siberoet Islands: 1 ♀, IX.'24, leg. C. B. K. and N. S., coll. Mus. Btz. named by Miss CHEESMAN *G. maculipennis* var. *rubrus*; BORNEO: 1 ♀ Sangkoelirang, East Borneo, leg. WALSH, coll. BETREM; 1 ♀, Maloewi, East Borneo, leg. WALSH, coll. BETREM.

***Goryphus rufobasalis* nov. spec.**

1921. VAN HEURN. Entom. Ber. VI, n. 121, p. 26, *Mesostenus* spec.

♀. Black. Palpi and base of the mandibles white, reddish white are: mark on the clypeus sometimes, a very small mark on the face, the orbitae subverticales. Larger part of the orbitae verticales always light. Scapus and base of flagellum yellowish. Joints 4 - 13 of the flagellum white, underside, however, with a dark line. On thorax are white: tubercles, tegulae, base of wings, praescutellar lists, scutellum, centre of metanotum sometimes. Red are propodeum, metapleura, metanotum, collum obscurely, and sometimes small mark above the coxae III. On abdomen are white: hind margin of tergite 2(1) and 3(2) broadly, hind margin of tergite 4(3) in the centre very narrowly, hind margin of tergite 7(6) in the centre, tergites 8(7) and 9(8) for the larger part except at the sides. Tergite 2(1) entirely red except the white hind margin. Legs red to yellowish red. Coxae I and II white, also tibiae I at the innerside white; metatarsi I and joint 5 of tarsi I dark. Tibiae II blackish with subbasal white band, apex at the innerside yellowish; tarsi II whitish, base and apex dark. Tibiae III black with a subbasal, broad, chalk white band, extreme apex of femora III also dark, tarsi III white, joint 5 black. Wings with a dark cross band beneath the stigma.

This species is in structure very like *Goryphus javanicus*. There are however some striking differences. The punctuation of the face is much coarser, the subvertex next to the eyes is alutaceous and sparsely punctured, in *G. javanicus* these punctures are lacking. Upper part of the sides of the pronotum with coarser striae; next to the epomiae it is smooth; in *G. javanicus* it bears there fine striae. Apical slope of propodeum longer, transition of horizontal indeclivous part is rather sudden, not gradual as in *G. javanicus*. Dorsal carinae of the petiolus not very distinct. Flagellum with 25 joints.

Length 7 mm, length of terebra 1.5 mm, length of forewings 4.5 mm.

Holotype: Central Java, 1930, parasite No. II, bred from pupa of *Artona catoxantha* leg. LEEFMANS; named by CUSHMAN: *Goryphus* spec.; received from the Institute for Plant Diseases with the number 2001, coll. BETREM.

♂. Black. White are on head: palpi, base of mandibles, genae, clypeus, larger part of face, orbitae subverticales broadly above, orbitae verticales broadly, on thorax: propleura, anterior margin and hind margin of pronotum broadly, tegulae, tubercles, base of wings, praescutellar lists, scutellum, frena; on abdomen: hind margin of tergites 2(1), 3(2) and 4(3) broadly, tergite 8 (7) and claspers. Reddish yellow are: propodeum, metanotum, metapleura, tergite 2(1). Legs red; anterior pairs almost yellow; coxae and trochanters I and II white; tarsi II black with lighter rings. Black are: trochanters III, extreme apex of femora, tibiae III except very broad subbasal band. Tarsi III white, base and claw black. Scapus reddish, ase of flagellum reddish black. Wings entirely hyaline.

In structure very like *G. javanicus*. Mesopleura however almost entirely smooth, only above the sternauli finely punctured, some striae before the speculum and next to the epinemiae beneath the tubercles. Sides of pronotum smooth, only with a few striae in the furrows. Flagellum with 26 joints. Length: 7 mm; length of wings: 4.5 mm.

Allotype: Kali Bakoeng, 22.II.1938, south of Tegal, Province Central Java, bred from pupa of *Artona catoxantha*, parasite No. 2, leg. R. AWIBOWO, number 2001, received from the Institute for Plant Diseases, coll. BETREM.

Geographical distribution: WEST JAVA: Res. Buitenzorg: Estate Tjitespong near Oedjoeng Genteng. CENTRAL JAVA: Res. Banjoemas: Poerwokerto, Sempel and Karangnangka near Kranggan, according to the Institute f. Plant Diseases; 1 ♀, Rawoeng, Kali Poetih, parasite n. II, bred from *Artona catoxantha* paratype, coll. Institute f. Plant Diseases; Res. Pekalongan (v. HEURN 1921); Res. Kedoe: Ngadisono, Glagah near Tempoeran Mertojoeran Boroboedcer; according to the Institute f. Plant Diseases; 1 ♂ Pasoeroehan, Tegalredjo, Magelang, VII.'39, ex *Artona catoxantha*, leg. v. D. VECHT, coll. BETREM; 2 ♀, 4 ♂ Kemiriamba, Kadjaran, Salaman, Magelang, bred from *Artona catoxantha*, lists 497, 498, 499, coll. Inst. for Plant Diseases; 1 ♂ Pogodadi, Boeajan, Gombong, Keboemen, bred from *Artona catoxantha*, coll. Inst. f. Plant Diseases; Government Jogjakarta: Nogodarm near Mlati, VIII.'24 according to the Institute f. Plant Diseases.

Goryphus ochropus (BRULLÉ 1864).

1846. Hist. Nat. Ins. Hym. IV, p. 232, ♀, *Mesostenus ochropus*.

1903. KONINGSBERGER. Med. 's Lands Plantentuin LXIV, p. 80, Dl. III, p. 20, 21, ♀, *Mesostenus* spec.

♀. Black. Yellowish white are: palpi, clypeus, base of mandibles, face, inferior part of the tempora broadly, anterior margin of the pronotum, two broad lines on the hind margin of the pronotum before the tegulae, tubercles, tegulae,

base of the wings, praescutellar lists, scutellum, frena, two large triangular marks at the sides of the declivous part of the propodeum, hind margin of the tergites, that of 6 (5) sometimes interrupted in the centre and at the sides, that of tergites 7 (6) interrupted only at the sides. Legs yellowish red; white are: coxae and trochanters I and II, mark on coxae III above, innerside of tibiae I, apex of metatarsi III, joints 2, 3 and 4 of tarsi III. Brown to black are: trochanters III p.p., extreme apex of femora III, base and apex broadly of tibiae III, base of metatarsi, joint 5 of all tarsi. Dark are also outside of tibiae I, tarsi I and II more or less. Wings entirely hyaline, stigma black.

The structure resembles that of most *Goryphus* species. Scrobi deep, subvertex finely indistinctly striated with fine central carina. Hind margin of pronotum before the tegulae thickened, smooth. Epomiae distinct. Mesoscutum punctured. Notauli deep with cross carinae. Next to notauli mesoscutum finely cross striated. Scutellar groove with two distinct carinae. Scutellum smooth. Groove between propodum and metanotum smooth. Propodeum rather short, behind the anterior carina coarsely reticulated. Area basalis with convergent, sides, almost smooth. Anterior carina curved inwards. Second carina formed only at each side by a carina that is highest in the centre. Declivous part as long as horizontal part. Coxal area not separated. Spiracula oval. Petiolus flattened, smooth, basally with parallel sides; postpetiolus moderately long, smooth, dorsal carinae very near the lateral carinae. Flagellum with 27 - 26 joints. Length 8.5 mm; terebra 2 mm; length of forewings 7 mm.

Plesiotype: Buitenzorg, 4.VII.'32, bred from caterpillar on waringin (*Ficus* spec.) leg. INEM, n. 218, coll. BETREM, received from the Institute for Plant Diseases.

♂. Black. White are: palpi, mandibles except apices, clypeus except spot on anterior margin, large mark on the genae, face, orbitae verticales and subverticales, anterior margin of pronotum, stripes before the tegulae, tegulae, tubercles, scutellar lists, scutellum, frena behind the hind wings, two large marks on the declivous part of the propodeum, that are united above, hind margin of tergite 2(1) till 6(5) and tergite 8(7) broadly above. Legs I and II yellowish red, the coxae and trochanters I and II white, joint 5 of the tarsi black. Legs III red, coxae III above at the base with yellow mark; dark are: apical third of the coxae III, trochanters III, base and extreme apex of femora III; tibiae III, in the centre broadly yellowish, tarsi III joint 3 and 4 white, wings hyaline.

Head. Genal carina high. Clypeus punctured somewhat inflexed anteriorly. Face punctured. Scrobi moderately deep, distinct. Subvertex short, almost smooth. Vertex behind the ocelli not very long, moderately steep.

Thorax. Sides of pronotum smooth, below striated. Mesoscutum punctured, the notauli with cross striae. Scutellum smooth, with some punctures. Mesopleura with coarse punctures, beneath the tubercles and the smooth speculum striated.

Propodeum before the anterior carina almost smooth, next to the spiracula

reticulated; rest of propodeum and metapleura coarsely reticulated. Second carina distinct, angulated at the sides and in the centre.

Abdomen. Tergite 2 (1) almost smooth, only some punctures at the sides of the postpetiolus, postpetiolus broad quadratic, dorsal carine distinct, reaching far beyond the spiracula. Tergite 3(2) densely, coarsely punctured.

Length 9 mm; length of fore wings 6 mm.

Allotype: Buitenzorg 1922, bred from cocoons of *Ocinara dilectula* leg. LEEFMANS, coll. BETREM.

Geographical distribution: WEST JAVA: 4 ♀ Buitenzorg, 4.VII.'32, bred from caterpillar on waringin (*Bombyx waringi* = *Ocinara dilectula*), coll. Institute for Plant Disaeses. One of these specimens in named by CUSHMAN: *Mesostenus ochropus*. 1 ♀ Buitenzorg 1922, bred from cocoon of *Ocinara dilectula* leg. LEEFMANS, coll. BETREM. CENTRAL JAVA: 1 ♀ Getas, II.'15, leg. ROEPKE, bred from caterpillar (*Ocinara dilectula*) on waringin (Ficus), coll. Research Station Central and East Java (P.M.O.J.).

I have no doubt that this species is *Mesostenus ochropus* of BRULLÉ. There are, however, in the description some points, that disagree. Firstly he mentions: "Les ailes sont légèrement enfumées vers le bout", while our specimens have wings which are almost entirely clear, only the extreme margin is somewhat infumated; secondly the second part of the propodeum should bear "deux épines courtes", the propodeum does not bear two spines but two low keels; thirdly BRULLÉ is writing: "quelques unes des bordures"-of the tergites-"sont interrompues, celles des segments postérieurs en particulier". In our specimens only the "bordure" of tergite 6 (5) is interrupted.

Goryphus nigrocoxata nov. spec.

♀. Black. White are: palpi, mandibles except the apices, clypeus, genal mark, face, orbitae verticales and subverticales, anterior margin of pronotum, stripes before tegulae, tegulae, tubercles, scutellar keels, scutellum, metanotum, frena behind the hind wings, a broad horseshoe shaped mark on the declivous part of the propodeum, hind margin of tergites, that on tergite 3 (2) and the apical two very broadly. Also anterior edges of tergite 3 (2) yellowish white. Legs I and II reddish yellow, coxae and trochanters I and II white, also tibiae I and II for the larger part white, a dark stripe on the outer side; tarsi I and II dark; coxae III red, apex broadly black, above white; trochanters III white, trochantellus dark; femora III red, apex black; the outer side of tibiae III reddish till blackish, inner side white, base narrowly, apex broadly black, tarsi III white, joint 5 black. Scapus beneath yellowish brown, flagellum blackish with 27 joints; joints 11 - 17 above white. Wings hyaline, areola small with somewhat convergent sides, almost square; nervulus distinct anterfurcal; nervellus broken distinctly below the centre.

Head. Genal carina very high and thin, clypeus broader than high, almost smooth, swollen, anterior margin somewhat bent; face densely, coarsely punctured, below at the sides almost smooth; scrobi not very deep and very large;

subvertex smooth and shining, moderately long with a distinct longitudinal carina. Vertex behind the ocelli very short, not steep; occipital carina angular above.

Thorax. Sides of pronotum smooth, below striated, hind margin very thick, indistinctly striated, epomiae distinct, central lobe of mesoscutum distinctly punctured, shining; lateral lobes in the centre almost smooth; scutellum rounded, smooth and shining; mesopleura striated, reticulated, speculum smooth, below the latter mesopleura striated; epinemiae straight, almost reaching the tubercles.

Propodeum. Short, anterior to the basal carina indistinctly striated, above the small oval spiracula a carina. Propodeum behind the basal carina and the metapleura reticulated, second carina somewhat distinct; spinae very low, only a higher part of this carina.

Abdomen. Tergite 2(1) smooth, shining; postpetiolus much broader than long; dorsal carina very near lateral ones, reaching a little beyond the spiracula. Tergite 3 (2) densely punctured.

Length 8 mm. Length of wings 6 mm. Terebra 2 mm.

Holotype: Malang, prov. East Java, IV.1933, leg. BETREM, coll. BETREM.

Geographical distribution: WEST JAVA, 1 ♀, Djampang Tengah, II.'36, Res. Buitenzorg, leg. WALSH, coll. BETREM. This paratype has also the sides of tergite 3 (2) yellow, the base of femora III is somewhat blackish.

EAST JAVA: see holotype.

Goryphus albofrenata nov. spec.

♀. Black. Yellowish white are: palpi, base of mandibles, small mark on the genae, clypeus, face, subvertical and vertical orbits, joints 4 - 12 of the flagellum above, anterior margin of pronotum, stripes before the tegulae, tubercles, tegulae, base of wings, two very small almost obsolete lines on mesoscutum, scutellum, metanotum, frena, large marks on inferior part of metapleura, declivous part of propodeum with exception of a black mark above the insertion of the abdomen, apices of the tergites; band on tergite 6 (5) broadly interrupted. Legs red; yellowish white are: coxae and trochanters I and II, innerside of femora I and tibiae I, tarsi III, except segment 4 and 5; black or dark are: base of trochanters III, apex of femora III, apex and base of tibiae III, tarsi I and II. Outerside of tibiae II darker. Wings hyaline, with faint darker mark beneath the black stigma.

The structure is very like that of *Goryphus ochropus*. Mesoscutum punctured, no striation next to the notauli. Carinae in the scutellar groove somewhat indistinct. Anterior carina of propodeum almost not curved inwards. Second carina rather distinct, deeply curved inwards. Tergite 2 (1) flat and smooth, postpetiolus distinctly separated; postpetiolus not short, sides parallel; dorsal carinae not near the lateral carinae.

Length 8 mm; length of terebra 2½ mm; length of fore wings 7 mm.

Holotype: Tapos 800 m, Mt. Gedeh, I.'33, leg. KALSHOVEN, coll. BETREM.

Goryphus inferus (SZEPL. 1916).1916. Ann. Mus. Nat. Hung. XIV, p. 333, ♀, *Mesostenus inferus*.

♀. Black, yellowish white are on the head: palpi, mandibles with exception of the teeth, large spot on the genae, labrum, clypeus except the anterior margin and clypeal pits, square spot in the centre of the face, that is united with the white on the clypeus, facial orbits of the eyes broadly, orbits on subvertex and vertex; on the thorax: anterior margin of pronotum, broad line on scapulae, radices of wings, tegulae, tubercles under forewings, scutellar keels, scutellum, large mark behind wings on metathorax (frena); on the propodeum: two large rectangular marks on sides of slope including the spines; on the abdomen: apices of tergite 2(1) and 3(2), tergite 7(6) apical except the sides, hind margins of tergites 8 (7) and 9 (8) broadly in the centre. Hind margin of tergite 4 (3) somewhat reddish. Base of tergite 2 (1) reddish white. Antennae black, segments 4—10 or 11 (5—11 in the holotype) of flagellum that possesses 23 to 24 joints (24 in the holotype), white above and on the sides. Legs fulvous red, yellowish white are: coxae and trochanters I and II, joints 2,3 and 4 of tarsi III. Dark almost black are: extreme apex of femora III, base narrow and apex broadly of tibiae III, tarsi III, except the white segments, segment 5 of the tarsi II (not present in holotype); coxae III very rarely somewhat dark. Wings hyaline. Wing veins and stigma black. Areola pentangular, almost square, nervulus praefurcal, nervus parallelus in the centre. Outer angle of discocubital cell more than 90°. Nervellus broken for beneath the centre.

Head. Clypeus distinctly, not densely punctured, a little broader than high, behind not very distinctly separated from the face, clypeal pits deep. Face densely punctured, orbits almost smooth. Scrobi deep, smooth, distinctly separated from the subvertex, above striated in the holotype. Central part of subvertex short somewhat striated and punctured, not excavated between the eyes; from the anterior ocellus runs a longitudinal carina. Vertex smooth, steep behind the ocelli, not very long. Occipital carina on genae high.

Thorax. Broad and short. Sides of pronotum above somewhat reticulated in the holotype, beneath cross striated. Scapulae thickened above with punctures. Epomiae distinct, straight, bent rectangular above. Mesoscutum shining, punctured, beneath the notauli finely striated. Notauli deep, straight; before scutellum mesoscutum between notauli roughly sculptured. Scutellar groove with fine keels. Scutellum smooth. Central part of metanotum smooth. Mesopleura finely reticulated, not distinctly punctured, speculum smooth and shining, beneath this are mesopleura cross striated. Epicnemiae straight almost reaching tubercles. Sternauli distinct, apical third somewhat indistinct. Mesosternum at the sides almost smooth, in the centre punctured. Mesosulcus deep, not incising the anterior and posterior carina that is broadly interrupted before the coxae II. Metapleura not distinctly separated from propodeum, separating carina indistinct, with the same structure as the propodeum; juxtacoxal area and pleural area not distinctly separated by a carina.

Propodeum: Groove between propodeum and metanotum deep and smooth. Horizontal part shorter than declivous part, the latter straight and flat, not hollowed. Anterior carina bent forward in the middle; area basalis distinct. The part before the carina and the space between this one and the second carina, when present (in the holotype absent) have the same breadth. Spinae consisting only of a higher part of second carina. Propodeum behind anterior carina reticulated. Reticulation coarser on declivous part. Before the anterior carina structure very fine. Spiracula small, oval.

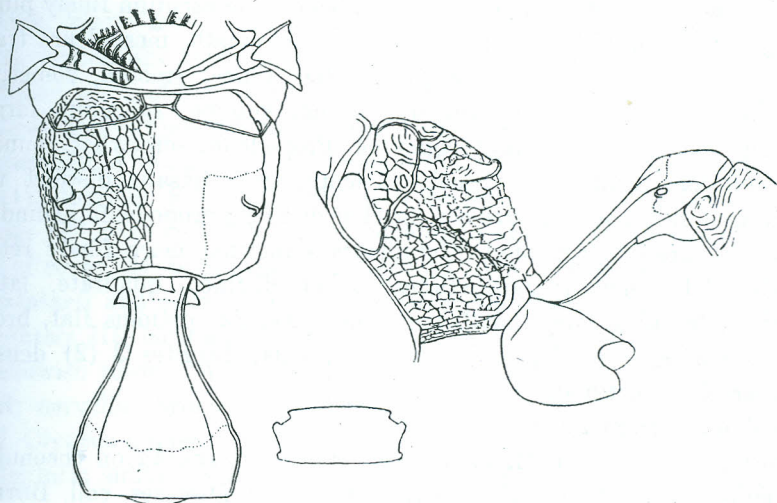


Fig. 4. *Goryphus inferus* (SZEPL. 1916), ♀.

Abdomen. Tergite 2 (1) smooth, between the spiracles and the sides of postpetiolus with some points. Petiolus very flat and broad, postpetiolus short and very broad. Sublateral carinae distinct very near lateral carinae, reaching as far as spiracles. Tergite 3 (2) to 7 (6) margined laterally. Tergite 3 (2) very densely, coarsely punctured, points excavated. Tergite 4 (3) with finer structure, following tergites with still finer structure, apical almost smooth.

Legs. Coxae III punctured, shining, tibiae III with some fine spinae. Length 9 mm, length of terebra 3 mm, length of wings 7 mm.

Holotype: Sindanglaia, Java, leg. XANTUS n. 4; on red label: 305, Magyar Nemzeti Muzeum at Budapest.

♂. Coloured as the ♀, the following differences can be mentioned. Face entirely white, scapus also whitish, flagellum entirely black with 25 or 26 joints, apical half of propodeum white, above insertion of abdomen a black spot. Also metapleura above the coxae III white. Abdomen black, white are: basis and apex of tergite 2 (1), apices of tergites 3 (2), 4 (3), and of 5 (4) sometimes. Tergite 8 (7) apical broadly white. Legs somewhat brighter than in the female. White are: coxae and trochanters I and II. Coxae III and tro-

chanters III for the larger part dark, coxae III sometimes only above dark, also black are: extreme apex of femora III, base of the tibiae III narrowly, apex of tibiae III broadly, tarsi III; central joints of tarsi III sometimes yellowish brown, sometimes whitish, the centre of tibiae III yellow.

Habitus slender, especially abdomen and propodeum longer than in the female.

Head. Clypeus almost smooth, face rather densely punctured, subvertex smooth, vertex behind the ocelli rather short, not very steep, occipital carina angular.

Thorax. Sides of pronotum smooth, striated below; mesoscutum finely punctured, shining; scutellum with some punctures, almost smooth; mesopleura transversely striated punctated to indistinctly striated almost smooth, sometimes almost smooth, sometimes almost reticulated, not shining, speculum largely smooth; epicnemiae straight, almost complete. Propodeum somewhat rounded, before the anterior carina in the centre smooth; area basalis distinct with strongly divergent sides; second carina somewhat distinct; propodeum behind the anterior carina coarsely reticulated. Metapleura somewhat more finely reticulated. Tergite 2(1) smooth; postpetiolus rather distinct, quadrate, lateral carinae distinct, reaching somewhat beyond the spiracula; petiolus flat, broad; sternite 2 (1) ending somewhat before the spiracula. Tergites 3 (2) densely, somewhat coarsely punctured.

Length 6 mm, length of wings 4.5 mm.

Allotype: Poerworedjo, I.'34, bred from *Artona catoxantha* on coconut by RADEN AWIBOWO, received from the Institute for Plant Diseases, coll. BETREM.

Geographical distribution. WEST JAVA: 1 ♀ Soekaboemi, 600 m, '33 leg. VERBEEK, coll. BETREM; Rawah Angké near Batavia according to Dr. J. v. D. VECHT; 1 ♀ Rawaeng near Batavia, coll. Inst. f. Plant Diseases. CENTRAL JAVA: Res. Banjoemas, 2 ♂ Salandaka, Soempioeh, Banjoemas, coll. BETREM: Res. Kedoe and Government Djokjakarta: Many specimens bred from cocoons of *Artona catoxantha* by LEEFMANS, AWIBOWO and v. D. VECHT, coll. Inst. f. Plant Diseases, coll. BETREM; 3 ♀, 4 ♂ Plena, Banjoemas, coll. Inst. f. Plant Diseases. Res. Semarang: 3 ♂, coll. Research Station for Central and East Java (P.M.O.J.). These three males are bred from spider eggs typus I and (or) II. Compare: Mededeelingen Proefst. Midden Java 5 and 12) by Prof. Dr. W. ROEPKE who named them: *Parasite species C. forma nigrescens*. EAST JAVA: 3 ♀, 1 ♂, Malang, 450 m, IV, V.-'33, coll. BETREM. The segments 3 and 4 of the tarsi III are in this male white. BALI: 1 ♀ Gitgit, 18.VI.39, 550 m, leg. v. D. VECHT.

The holotype and the specimens from Soekaboemi and Malang are larger than those bred from *Artona*. The latter are only \pm 6 mm. The structure of these small specimina is more smooth, the punctuation is less distinct. The clypeus and the subvertex and the sides of the pronotum are almost smooth. The second carina is variable; often it is absent except for the spines which sometimes may be rather large.

Mr. CUSHMAN of the Museum at Washington named this species for the Institution for Plant Diseases as *Mesostenus inferus* SZEPL. As the description appeared to contain some misprints and was rather incomplete I requested the Museum in Budapest (Magyar Nemzeti Muzeum) where SZEPLIGETI was a curator to give me some information about the type. Dr. I. SZABO-PATAY was so kind to send me the type, for which I am very grateful, because by his courtesy the name of the species could now be definitely established.

Goryphus albotarsatus nov. spec.

♂. Black. White are: palpi, mandibles except the apices, labrum, clypeus, genae, face, vertical and subvertical orbits broadly, anterior margin of pronotum, tegulae, tubercles, scutellar keels, scutellum, metanotum, frena behind hind wings, apical half of propodeum except a dark mark above the insertion of the abdomen. Hind margin of the tergites 2(1) - 5(4), sides of apical half of tergite 2(1), tergites 8(7) and 9(8) entirely except the sides. Genital clasps brown. Legs yellowish red. White are: coxae and trochanters I and II, spot on upperside of coxae III, broad subbasal band on tibiae III, tarsi III except basal half of metatarsi and apex of segment 5. Black or blackish are: apex of coxae III, trochanters III, base and apex of femora III, tibiae III. Flagellum black; scapus yellowish brown. Wings hyaline, stigma black, areola square, nervulus interstitial; nervellus broken far below the centre.

Head. Clypeus almost smooth, above somewhat punctured. Face punctured; scrobi indistinct; subvertex and vertex shining and smooth, longitudinal carina indistinct.

Thorax. Sides of pronotum smooth, only groove striated. Central lobe of mesoscutum finely punctured; lateral lobes almost smooth. Scutellum almost smooth. Mesopleura smooth. Epicnemiae reaching the tubercles. Sternauli incomplete. Mesosternum smooth.

Propodeum. Basal carina bent a little forwards in the centre. Areola basalis distinct. Propodeum anteriorly of the basal carina smooth, posteriorly of the latter coarsely reticulated. Apical carina present, far behind, no spinae. Meta-pleura more finely reticulated.

Abdomen. Tergite 2(1) smooth; postpetiolus somewhat longer as broad; lateral carinae distinct. Following tergites distinctly densely punctured.

Length 7 mm; length of wings 6 mm.

Holotype: Malang, III.'33, coll. BETREM.

Goryphus bituberculatus (SZEPL. 1910).

1910. Notes Leyden Museum XXXII, p. 99, ♀, *Gambrus bituberculatus*.

1916. SZEPLIGETI. Ann. Mus. Nat. Hung. XIV, p. 329, *Mesostenus bituberculatus*.

♀. Coloration almost identical with that of *Goryphus inferus*. The following differences may be mentioned. The three white spots on the face are confluent, the face is almost entirely white. Central part of metanotum white. White spots on sides of propodeum quadrangular. Praescutellar keels black. Base of tergite

2(1) also black. The apex of the abdomen is quite differently coloured. Apical margin of tergite 5(4) white, often somewhat interrupted in the centre; distinctly interrupted at the sides; following tergites also with a broad white margin, which is broadly interrupted in the centre and at the sides. The legs are coloured as in *Goryphus inferus*, tarsi III, however, reddish, only joint 5 black. Trochanters II also often reddish. Coxae III red, somewhat white above.

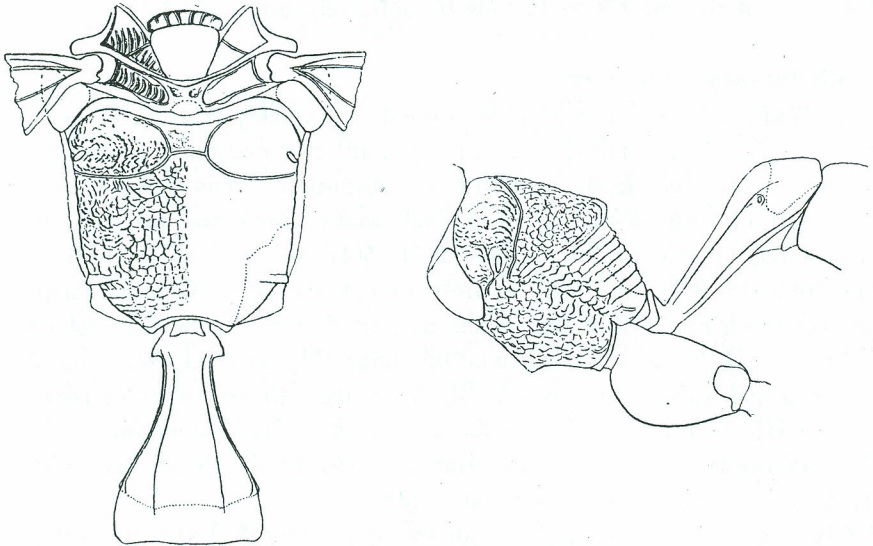


Fig. 5. *Goryphus bituberculatus* (SZEPL. 1910), ♀.

The structure is also almost identical with that of *Goryphus inferus*. Mesoscutum more distinctly punctured. Basal carina of the propodeum more curved inwardly, so that the space before this carina is broader at the sides. Horizontal part of propodeum broader.

Length 8 mm; length of the terebra 2 mm, length of the forewing 6 mm.

Plesiotype: Nongkodjadjar 1200 m, VIII.1934, coll. BETREM.

♂. Black. White are: palpi, mandibles except apices, genae broadly, labrum, clypeus, face except clypeal pits, vertical and subvertical orbits broadly, anterior margin of pronotum, stripes before tegulae, tubercles, frena, scutellum, metanotum in the centre, apical half of propodeum, a spot on the metapleura above, apex of tergites 2(1) till 4(3) broadly, apex of tergites 7(6) - 8(7) in the middle broadly. Clasps black, rarely also hind margin of tergites 5(4) and 6(5) narrowly white. Rarely small white spot on the scutellar keels (paratype). Legs I and II yellow, coxae and trochanters I and II white, tarsi II for the larger part dark, apices of the segments white. Coxae III entirely yellowish red, trochanters III dark, femora III red, apex narrowly black; tibiae yellowish, base narrowly, apex broadly black. Tarsi III dark, apices of the segments lighter. Scapus yellowish brown, flagellum brown.

Head: Mandibles short, at the base broad with a high margin: clypeus

not separated, it bears some points. Scrobi deep, indistinct, smooth. Subvertex short, impressed before the anterior ocellus, smooth.

Thorax: Mesoscutum distinctly punctured. Scutellum smooth and shining. Pronotum at the sides, below with striae. Mesopleura somewhat reticulated, somewhat dull, not distinctly striated; speculum smooth, distinct.

Propodeum smooth before the anterior carina. Area basalis distinct, behind the first carina reticulated, second carina present.

Abdomen: Post-petiolus quadrate, dorsal carinae indistinct.

Length 6 mm. Length of fore wings 5 mm.

Allotype: Noesawoengoe, Sikawoeh, V.'39, list 252, ex-cocoon *Artona catoxantha*, coll. BETREM.

Geographical distribution. WEST JAVA: Res. Batavia: Batavia (SZEPLIGETI 1910). CENTRAL JAVA: Res. Banjoemas: 1 ♂ Noesawoengoe; 2 ♀, 1 ♂ Desa Kloemprit near Noesawoengoe, South Banjoemas bred from cocoons of *Artona catoxantha*, coll. Institute f. Plant Diseases, coll. BETREM; 2 ♂ Plana, Banjoemas, bred from *Artona catoxantha* coll. Inst. f. Plant Diseases; EAST JAVA: Res. Malang: 1 ♀, Malang, 18.V.36, coll. BETREM; 1 ♀ Malang, V.'33, coll. BETREM; Nongkodjadjar (see plesiotype).

Goryphus mulleri nov. spec.

♀. Black. White are: palpi, mandibles except apices, clypeus except fore-margin, face, orbitae of the subvertex for the larger part, sides of vertex, stripe on the fore margin of the sides of pronotum, stripes on the thickened part of the hind margin of pronotum, tubercles, tegulae, scutellum, frena behind the hind wings, triangular marks on sides of the declivous part of propodeum including the spines, apical margin of tergite 2(1) and 3(2), tergite 5(4) or 6(5) till 9(8) broadly in the centre. Tergite 2(1) red. Legs red. White are: coxae and trochanters I and II. Tarsi III except apical joints. Black are: apex of femora III, base of tibiae III, outer side of tibiae III, segment 5 of the tarsi. Antennae black, segments 5 - 11 of flagellum white. Wings hyaline; stigma black. Areola small, square, nervulus almost interstitial; nervellus broken a little beneath the centre.

Head. Clypeus narrow, distinctly punctured with inflexed fore margin. Face densely punctured; scrobi large, deep, smooth; subvertex narrow, somewhat longitudinally wrinkled in the centre, sides finely alutaceous with scattered punctures; longitudinal carina before the anterior ocellus distinct.

Thorax. Sides of pronotum above smooth, posteriorly and below striated. Epomiae distinct. Mesoscutum somewhat dull, alutaceous and punctured. Notauli undep, with cross striae. Scutellum broad with distinct punctures. Mesopleura reticulated, epicnemiae reaching the tubercles, speculum smooth and shining. Mesosternum somewhat shining, punctured, hind margin complete.

Propodeum. Basal carina bent inwardly in the centre. Basal area distinct, broader than long. Propodeum before the basal carina almost smooth; beneath the small, oval spiracula with some fine wrinkles. Above the spiracula an in-

distinct carina behind the basal carina the propodeum coarsely reticulated, beneath the high flat spinae, however, coarsely striated.

Abdomen. Tergite 2(1) much broadened behind, smooth and shining, postpetiolus almost two times as broad as long. The lateral carinae distinct sub-lateral carinae only distinct on the flattened petiolus. Tergite 3(2) broad, densely somewhat coarsely punctured.

Length 7 mm; terebra 2 mm; antennae 8 mm; wings 6 mm.

Holotype: Tjibodas, Mt. Gedeh, 1400 - 1700 m, 28.VI.32, Java, leg. H. R. A. MULLER, coll. BETREM.

Geographical distribution. WEST JAVA: Compare holotype. CENTRAL JAVA: 1 ♀ Kopeng, IX.'39, 1400 m, Mt. Merbaboe, coll. BETREM.

Goryphus fasciatipennis (SZEPL. 1910).

1910. Notes Leyden Museum, p. 98, ♀, *Gambrus fasciatipennis*.

1912. ROEPKE. Meded. Proefstation Midden Java 5, p. 19; parasite species C, ♂ nec ♀, plate fig. 3, ♂ nec ♀.

♀. The females before me fit to the description of SZEPLIGETI nicely. They are characterized by the structure of the propodeum. Spines broad and short, round, smooth, white. Propodeum coarsely reticulated. Part before the anterior carina more finely reticulated; second carina absent. Groove between propodeum and metanotum smooth. The central part of the metanotum and the scutellar groove with four keels. Mesoscutum distinctly punctured. Notauli with fine cross keels. Side lobes posteriorly almost smooth. Mesoscutum posteriorly reticulated in the centre. Sides of pronotum above somewhat sparsely punctured, lower edge of the sides with cross keels. Mesopleura coarsely reticulated; speculum smooth; beneath some striae. Scrobi deep, smooth, not keeled above. Subvertex with fine striae, radiating from the anterior ocellus; in the centre it bears a distinct, longitudinal keel. Petiolus flat and smooth; postpetiolus very broad, flat and smooth; dorsal carinae approximating lateral keels. Tergite 2(1) often red.

♂. Black. White are: palpi, mandibles except apices, clypeus, central part of face, rarely also facial orbits partly white, orbitae verticales and subverticales, anterior margin of pronotum, lines before the tegulae, tegulae, tubercles, scutellum, metanotum, frena behind hind wings, propodeum behind the second carina, apex of tergites 2(1), 3(2), 4(3) and tergite 8(7). Tergite 2(1) almost entirely yellowish red or brown. Very rarely a small spot on the genae also white. Tergite 5(4) rarely also with white margin. Legs reddish yellow to red. Coxae and trochanters I and II white. Black are: apical half of coxae III, trochanters III, apex of femora III, tibiae III except a yellowish subbasal band, tarsi III. Scapus yellowish red beneath. Wings hyaline, extreme apex somewhat infumated. Areola small, rectangular, apical vein almost wanting; nervulus somewhat anti-furcal; nervellus broken far below the centre.

Head. Clypeus with distinct punctures, distinctly inflexed, face distinctly

punctured. Scrobi distinct, subvertex shining, in the centre striated. Genal carina high.

Thorax. Sides of pronotum beneath striated. Mesoscutum distinctly punctured; scutellum almost smooth; mesopleura distinctly striated, anteriorly more punctured; epinemiae not very distinct, straight. *Propodeum* before the anterior carina that is bent forwards in the centre, smooth: Area basalis distinct, sides divergent. Propodeum behind the anterior carina coarsely reticulated, also the metapleura. Second carina distinct, straight.

Abdomen. Tergite 2(1) with quadrate postpetiolus, almost as broad as the somewhat flattened petiolus, lateral carinae distinct, sublateral carinae reaching the spiracula. Tergite 3(2) very long, somewhat constricted at the base, coarsely, densely punctured; at the base the punctures confluent. Tergite 4(3) distinct, punctured.

Length 6 mm, length of wings 4 mm.

Allotype. 1 ♂ Central Java from the old collection of the „Proefstation Midden-Java”, leg. ROEPKE, bred from spider egg nests typus I and II; compare Meded. Proefstation Midden Java no. 13.

This male looks very like *Mesostenus interceptus* CAM. 1907 (T. v. Ent. 50, p. 85, from Sikkim). The last mentioned species, however, is much larger, 11 mm long. According to the description it differs by the smooth mesonotum, the strongly obliquely striated metapleura and the aciculated tergites 3(2) and 4(3). The colour is practical identical, the description of the legs III contains however apparently some errors. The tarsi III seem to be for the larger part light.

Geographical distribution. WEST JAVA: Batavia (SZEPLI-GETI 1910). CENTRAL JAVA. Res. Kedoe: 1 ♀ Boroboedoer, VIII.'24, bred from *Artona catoxantha*; 1 ♂, 2 ♀ Ringin Poetih, Boroboedoer, lists 255 and 258, bred from *Art. cat.*; 2 ♀ Salaman, XII.'24 and '38, bred from *Art. cat.*; 1 ♂ Salaman near Karanglo, VI.'39, bred from *Art. cat.*; 1 ♀ Salaman, Menoreh, VI.'39, list 293, bred from *Art. cat.*; 2 ♂ Danoeredjo near Magelang bred from *Art. cat.*; Res. Pekalongan: Soebah, Sengon, VI.'39, bred from *Art. cat.* EAST JAVA: 1 ♀, Mt. Baoeng near Lawang, 950 m, VII.1935 (plesiotype), coll. BETREM (the tergite 2(1) of this specimen is black!).

All the bred specimens I received for identification from the Institute f. Plant Diseases. The males are paratypes in the coll. Inst. f. Plant Diseases and coll. BETREM.

According to ROEPKE (1912), a male of this species has been also bred from a cocoon of *Acanthocercops cramerella*, the cacao fruit moth.

Goryphus oxymorus (TOSQ. 1903).

1903. Mem. Soc. Ent. Belgique X, p. 214, ♀, *Cryptus oxymorus*.

1907. CAMERON. Ann. Mag. Nat. Hist. (7) 20, p. 24, *Cratocryptus annulitarsis*.

1938. TJOA, Arch. v. d. Theecultuur 12, p. 221, *Cryptus oxymorus*.

The description of TOSQUINET of this species is excellent, so it will be sufficient to give here some short remarks. The flagellum has 29 joints, the white

ring on the tarsi III may be almost entirely absent. The male is identical in form and colour with the female, the front tarsi are, however, yellowish brown (allotype from Tapos, coll. BETREM).

This form is a somewhat aberrant *Goryphus*-species. It differs from the typical species by the cross in the groove between the metanotum and the propodeum, the very indistinct epomiaie owing to the coarse striation, the shallow notauli which are formed by a crenulated line, the sternauli which are only anteriorly distinct, the rather shallow serobi, the petiolus basally with parallel sides, the identical form of tergite 2(1) of ♀ and ♂, the white band on the flagellum in both sexes.

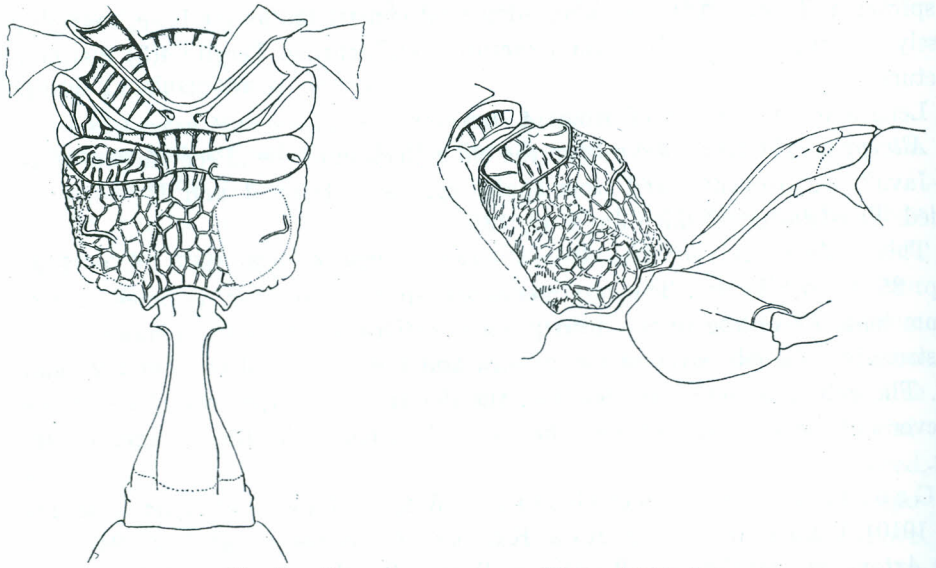


Fig. 6. *Goryphus oxymorus* (Tosq. 1903), ♀.

Geographical distribution: WEST JAVA: Res. Bantam: 2 ♀ Tjiroeas, Serang, 19.VIII.'36, leg. R. AWIBOWO (n. 1727) from cocoon of *Ploneta diducta*, coll. Institute f. Plant Diseases. One specimen is named by CUSHMAN *Cryptus oxymorus*. Res. Buitenzorg: 2 ♀, 1 ♂, Tapos, 800 m, Mt. Gedeh, VII.'32, I.'33, VII.'33 coll. KALSHOVEN, coll. BETREM, coll. Mus. Btz.; 1 ♀, 1 ♂ Soekaboemi, W. Preanger, 11.II.'33, coll. BETREM, coll. v. D. VECHT; Mt. Gedeh, VIII.1892 (TOSQUINET 1903). CENTRAL JAVA: Res. Pekalongan: 1 ♀ Karang Anjar, 10.VII.'32, parasite of *Parasa lepida* on coconut leaf, coll. Institute for Plant Diseases (n. 2) and coll. BETREM: Res. Semarang: 1 ♂ Salatiga, 22.V.'22, bred from *Parasa*, received from LEEFMANS, coll. BETREM. Gouvernement Djokjakarta: 1 ♂ Djokjakarta, bred from cocoon of *Parasa lepida*, XII.32 (n. 3a), coll. BETREM; EAST JAVA: Res. Malang: 2 ♀ Malang, 450 m, V.'33 coll. BETREM, coll. Zool. Mus. Btz.; 1 ♀, 1 ♂ Karang Ploso near Malang, coll. BETREM; 2 ♀, 2 ♂ Slopes of the Mt. Kawi near Malang, IV.'33, coll. BETREM; 1 ♂, on coffee-leaf, coll. Research Station Central and East Java (P.M.O.J.); 1 ♀ Malang, 4.I.'26, coll. Research Station Central and

East Java (P.M.O.J.); 2 ♀ Nongkodjadjar, 1200 m, Mt. Tengger, III.'34, VIII.'34, coll. BETREM. BANKA I.: 1 ♂ Pangkal Pinang III.'32, leg. v. D. VECHT. coll. BETREM. SIKKIM (CAMERON 1907).

Varietas **brunneocoxata** nov. var.

♂. Coxae III reddish, above yellowish white, at the base and apex somewhat darkened, otherwise as the typical form.

Holotype: Poendoeng, Patjitan, Central Java, bred from cocoon of Limacodid on coconut-leaves (n. 18, n. 2419), coll. Inst. for Plant Diseases.

Subspecies **sumatrana** nov. subspec.

♀, ♂. Tarsi III almost entirely white only extreme base of metatarsi and segment 5 more or less black. In the javanese form is at the utmost only the extreme apex of the metatarsi III white, the remainder of this joint is black. Often the tarsi III are, however almost entirely black.

Holotype and *Allotype*: Serapoh Estate, Deli, IV.'39, N. E. Sumatra, on coconut, leg. R. AWIBOWO. Coll. BETREM.

Geographical distribution: SUMATRA, 3 ♀♀, 1 ♂ Serapoh Estate, Deli, IV.'39, coll. Institute for Plant Diseases, coll. BETREM. These specimens are paratypes.

Goryphus oxymoroides nov. spec.

♂. Coloured as *Gor. oxymorus*, but tergite 2(1) red. Coxae III red with small yellowish white spot above. Tarsi III white except metatarsi that are only apically white and the black segment 5. Structure as in *Gor. oxymorus*. The lower posterior edge of mesopleura broadly smooth and shining. The space before the anterior carina on the propodeum smooth and shining. The lobes of the mesoscutum almost smooth, shining.

Length 6.5 mm; length of forewings 5 mm.

Holotype: Tjandi Poeweng, Patjitan III.'39 leg. AWIBOWO, bred from pupa of Limacodid n. 17 (n. 2422), coll. BETREM, received from the Institute for Plant Diseases.

Goryphus kalshoveni nov. spec.

♀. Black. White or whitish are: palpi maxillares except last two segments, labrum, segments 5 - 9 of the flagellum above, base of the wings, apices of the tergites 2(1), 3(2) and 7(6) in the centre. Tergite 8(7) almost entirely white, sides black, tergite 9(8) black. Red are: scutellum, metanotum, metapleura, mark on the mesopleura above the coxae II. Legs red, black are: coxae I, trochanters I for the larger part, outside of tibiae I and II, tibiae III entirely, all tarsi. Innerside of tibiae I white.

Belongs to another group than *Goryphus javanicus*. The structure is quite different. Occipital list somewhat angulated above, declivous part of the vertex short. Genae long. Scrobi deep, above in the middle often with curved striae. Mesoscutum along the sides and along the notauli finely cross striated. Scutellum basally punctured, sides keeled. Propodeum without second cross carina;

spinae high, flattened. Area basalis short. Tergite 2(1) gradually broadened; postpetiolus not distinctly separated, sides not parallel but a little divergent. Dorsal keels distinct till the spiracula, not very near lateral keels. Between the spiracula the tergite 2(1) distinctly punctured. Areola large, nervus parallelus a little under the centre, nervellus broken under the centre.

Length 12 mm; length of terebra 4 mm; length of fore wings 9 mm.

Holotype: Tapos, Mt. Gedeh, 800 m, West Java, IV.'33, leg. KALSHOVEN, coll. BETREM.

♂. Black. White are: labrum, sometimes a mark on the mandibles, posterior margin of the tergites 2(1), 3(2) and mostly of 7(6), posterior edges of tergite 4(3) sometimes, tergite 8(7) entirely. Red are: mesosternum posteriorly or entirely, more or less, posterior and inferior part of the mesopleura, scutellum, metanotum, metapleura, propodeum. Legs red, white are: anterior side of coxae I and tibiae I, joint 3 and 4 of tarsi III. Black are: rest of coxae I, trochanters I, rest of tibiae I, tibiae II, tibiae III, tarsi II and III, extreme apex of femora III. Trochanters II and III and tarsi I brown. Wings with almost complete cross band beneath the stigma.

The structure resembles very much that of the female. The mesoscutum almost smooth, not distinctly cross striated, only sides of central part indistinctly striated. The cross striae of the notauli very large. The propodeum bears, however, no large spinae, but instead of these low, short carinae. The postpetiolus is quadrate, between the spiracula it is punctured. Flagellum with 31 joints.

Length 10 mm; length of fore wings 7 mm.

Allotype: Tapos, Mt. Gedeh, 800 m, WEST JAVA, IX.'33, leg. KALSHOVEN, coll. BETREM.

Geographical distribution: WEST JAVA 2 ♂, 3 ♀ Tapos, Mt. Gedeh, IV, IX.'33, coll. BETREM; 2 ♂, Tjilendek, Buitenzorg, VII, V.'35 coll. Mus. Btz.; 1 ♀ Mt. Tangkoeban Prahoe, V.'36, 1200 - 1500 m, leg. DRESCHER, coll. Mus. Btz.

E. THE GENUS *ANCARIA* CAM. 1902.

1902. Ann. Mag. Nat. Hist. (7) 9, p. 204.

The typical species of *Ancaria* is not very much similar to the typical *Goryphus*-species. There are however many species, which are in some respects intermediate between *Ancaria* and *Goryphus*. It is therefore very difficult to sum up the differences between these genera, especially the differences between the males. There is, however, no doubt that *Ancaria* is a good genus. The best character to separate these two genera in both sexes is found in the scapulae which are swollen in *Goryphus* and normal in *Ancaria*. In the females of *Goryphus* the postpetiolus is much broader than long, while it is quadrate or longer than broad in *Ancaria*. In its present extension this genus is somewhat heterogeneous. When there are more species known, it may be subdivided into some subgenera or genera.

In *Ancaria* the thorax is more slender than in *Goryphus*, the pronotum is longer, before the tegulae the hind margin is not thickened, only somewhat swollen on the place where the epomiae are ending; in none of the known species the hind margin of the pronotum is white; the mesoscutum, especially the central lobe is anteriorly more rounded. The mesoscutum bears no fine striae next to the notauli (except in *A. sundaica*), the scutellum is longer and narrower, sometimes more or less margined at the sides; the propodeum is longer, the declivous part is not steep; the spinae may be weak or strong; the spiracula are round, rarely long, the tergite 2(1) is longer, the postpetiolus as long as broad or distinctly longer than broad; the tergite 3(2) is often distinctly narrowed anteriorly; the scrobi are not deep or very deep and margined; the subvertex is always long; hind legs mostly elongated.

In *Goryphus* the thorax is broad and short. The foreside of the thorax is almost straight; the pronotum is shorter; the hind margin before the tegulae is always thickened, swollen and often white. The mesoscutum is flattened, especially the central lobe anteriorly. Near the notauli the mesoscutum is mostly striated; the scutellum is broad and short, mostly shorter than its width at the base. The propodeum is short and the declivous part steep; the spinae are mostly broad and short, flattened; the spiracula are round or oval. The postpetiolus in the female is always much shorter than long; the spiracula are much farther from each other than from the hind margin. The tergite 3(2) is moderately narrowed anteriorly; the scrobi are mostly deep and large, the subvertex short; the hind legs and antennae are not long; the structure is coarse, especially that from subvertex and thorax.

Following synopsis may be useful for the understanding of the natural relations of the species. Included are also some species that are not treated in extenso in the present paper.

- A. Tergite 2(1) long and narrow. Postpetiolus longer than broad, rarely subquadrate. The sublateral carinae reaching far beyond the spiracula. Frena behind the hind wings beneath separated. Area coxalis more or less distinctly separated. Thorax and propodeum entirely or partly red.
- B. Scrobi indistinct. Subvertex long, dull, alutaceous. Nervellus broken far beneath the centre. Lists of area basalis very indistinct. Scutellum not margined to the end.

To this group belong the genotype *Ancaria fuscinervis* CAM. 1902 and some other species.

- BB. Scrobi deep and for the larger part margined behind; margin in the males with tooth above. Scutellum in the female margined to the end. Lists of area basalis distinct. Subvertex more or less striated. Nervellus broken in the centre. *Ancaria longicornuta* BETR. i.litt.
- AA. Postpetiolus broader, rarely longer than broad never much longer than broad.
- C. At least propodeum red. Postpetiolus quadrate, dorsal carinae reaching distinctly beyond the spiracula. Anterior carina of propodeum at the sides

reaching to the frena. Area coxalis more or less separated. Vertex short and not steep. Nervellus broken somewhat beneath the centre. Dark spot beneath the stigma.

- D. Only propodeum red. Scutellum white, not carinated basally at the sides. Beneath the frena a cross carina. Clypeus with central, almost apical tooth. Epomiae distinctly bent. Scrobi not margined. Area basalis long, next to the carina basalis very narrow, sides divergent. Spinae very weak. Java.
Ancaria adornata (Tosq. 1903)
- DD. Mesopleura and mesosternum also red. Beneath the frena no cross carina. Clypeus unarmed. Scutellum more or less carinated basally at the sides.
- E. Scrobi deep and carinated above. Java. ... *Ancaria quadrata* (SZEPL. 1908)
- EE. Scrobi not deep, not distinctly separated above. Java.
Ancaria vandervechti BETR. i.litt.
- REMARK: *Goryphus kalshoveni* and *Goryphus similis* (SZEPL. 1908) look very like the last species. They have however shorter postpetiolus and propodeum. The scapulae are, however, not very distinctly swollen. These two species, especially *G. similis*, are somewhat intermediate between *Goryphus* and *Ancaria*.
- CC. Propodeum not red, black, marked with white; postpetiolus mostly quadrate, sublateral carinae not reaching distinctly beyond the spiracula. Area coxalis not separated.
- F. Hind margin of mesosternum only margined near the mesosulcus, margin shaped like a high toothlike carina. Nervellus broken far below the centre. Epicnemiae distinctly abbreviated. A distinct carina above spiracula of propodeum. Areola of wings moderately large, square.
Ancaria nigripes BETR.; *Ancaria djampangensis* BETR.
- FF. Hind margin of mesosternum normal, mostly interrupted before the coxae III.
- G. Nervellus broken far below the centre. Scutellum carinated at the sides. Legs III black, sometimes white marked. Subvertex more or less impressed. Area basalis long with parallel, somewhat indistinct lateral lists.
- H. Subvertex with coarse striae. Areola of wings large. Spiracula of propodeum oval. Spinae large, toothlike. Postpetiolus very broad, alutaceous. Vertex behind ocelli short, not steep. *Ancaria javanica* (SZEPL. 1908)
- HH. Subvertex alutaceous. Areola small. Spiracula of propodeum long. Spinae small, low. Postpetiolus not so broad, almost smooth. Vertex behind ocelli long and steep. Epomiae indistinct. *Ancaria sumatrensis* BETR.
- GG. Nervellus broken in the centre or below the centre, sides of area basalis divergent, when nervellus broken below the centre. Spiracula of propodeum small oval. Epomiae distinct.
- I. Area basalis with parallel sides, that are not very distinct. No carina above the spiracula of propodeum. Scutellum somewhat indistinctly carinated at the sides. Nervellus broken in the centre. Head entirely black. Coxae III red. *Ancaria definis* (Tosq. 1903)

- II. Area basalis with distinct, divergent sides. Scutellum not carinated at the sides. Nervellus broken below the centre. Vertex behind ocelli long and steep.
- K. A carina above the spiracula of propodeum which are almost round. Coxae III black. Subvertex deeply impressed. Anterior half of clypeus standing rectangular on the posterior half. Wings with incomplete cross band.
Ancaria sundaica BETR.
- KK. No distinct carina above the spiracula, at most a plica. Coxae III for the the larger part or entirely red.
- L. Subvertex long somewhat bent, with faint parallel striae. Scrobi not deep, small. Clypeus much broader than high. Anterior margin without teeth.
Ancaria anomala BETR.
- LL. Subvertex alutaceous, long, rounded. Clypeus not so broad, two small teeth on anterior margin. *Ancaria tjibodas* BETR.

***Ancaria fuscinervis* CAM. 1902.**

1902. Ann. Mag. Nat. Hist (7) 9, p. 241 ♀.

It is with some doubt, that I give the here mentioned, javanese specimens this name.

In the Zoological Museum at Buitenzorg however, are some specimens named by Miss CHEESMAN *Ancaria fuscinervis*, which are conspecific with my wasps.

The description of CAMERON is not very clear. In the latin diagnosis he writes "Apice mesonoti rufis"; in the english description is written: "mesothorax black, the apex of the mesothorax rufous". In my specimens the mesoscutum is black, the scutellum red, the mesopleura and the mesoscutum are for the larger part red, anteriorly they are black. The latin diagnosis mentions "trochanteribus, femoribus tibiisque posticis nigris", the english description: „the trochanters apex of femora and tibiae broadly blackish". In the specimens before me the trochanters III, the femora and tibiae III are mostly entirely black; the tibiae III bear

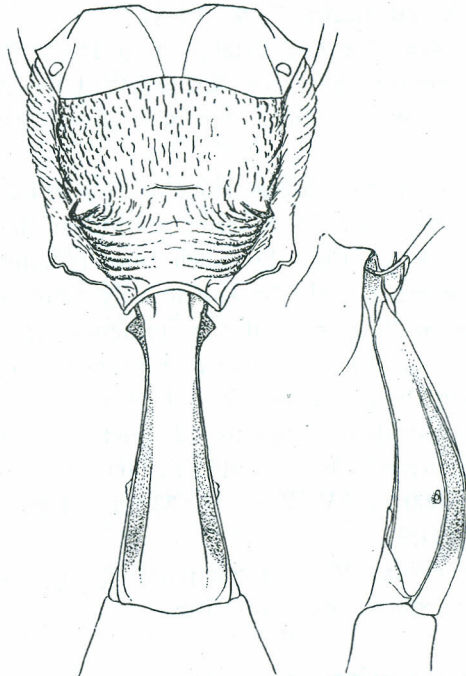


Fig. 7. *Ancaria fuscinervis* CAM. 1902, ♀.

often a subbasal whitish ring. In some specimens however, the trochanters and base of the femora and tibiae are reddish. There is some variation in some colour-characters: the scutellum may be entirely red or red with white sides, the coxae II entirely white to red or red with black apex; the spines of the

propodeum are rarely whitish, mostly they are red. The tarsi III are mostly entirely black, sometimes the base of the basal two joints is broadly white. The stigma is dark red.

The structure is also in some respects different from the description. The face, the subvertex, the vertex and the mesonotum are not aciculated but alutaceous. The areola is moderately large not small, the nervus recurrens is received a little beyond the centre, not before, etc.

Geographical distribution: WEST JAVA: Residency Buitenzorg; 1 ♀ Tjibeureum near Tjibodas, 1700 m, Mt. Gedeh, 30.VIII.'31, leg. LIEFTINCK, Mus. Btz.; 1 ♀ Rarahan, Tjibeureum, 20.VI.'32, leg. MULLER, coll. VAN DER VECHT; 2 ♀ Tjibodas, 1400 m, 27-29.VIII.'30, leg. LIEFTINCK, Mus. Btz.; 1 ♀ Tapos, III.'33, Mt. Gedeh, leg. KALSHOVEN, coll. BETREM; 1 ♀ Mt. Salak, I.'37, leg. DUPONT, Mus. Btz.; 1 ♀ Telaga Warna, Poentjak Pass, 4.V.'30, leg. LIEFTINCK, Mus. Btz.; 1 ♀ Tjisaroea, Mt. Panggerango, 12.II.'39, leg. LIEFTINCK, Mus. Btz. CENTRAL JAVA. Res. Semarang: 2 ♀ Mt. Telomojo, 29.X.'39, 1200 m, leg. LIEFTINCK, coll. Mus. Btz. EAST JAVA: Res. Malang: 3 ♀ Goenoeng Pandjang near Nongkodjadar, Tengger Mnts., 1500 m, VIII.'35, coll. BETREM.

***Ancaria adornata* (Tosq. 1903).**

1903. Mem. Soc. Ent. Belgique X, p. 168, ♀, *Cryptus adornatus*.

TOSQUINET has given an excellent description of this species, so that it is sufficient to mention here only the differences with some similarly coloured species.

This species differs from other related species I know by the little tooth in the centre of the anterior margin of the clypeus, the long propodeum, the long area basalis, the much finer reticulation of the propodeum behind the anterior cross keel, the spinae only represented by two fine keels; the postpetiolus is long, so that the spiracula are almost nearer together than to the hind margin; the dorsal carina reaches far beyond the spiracula. The postpetiolus is distinctly punctured. The first sternite reaches beyond the spiracula. The nervus parallelus originates distinctly above the centre.

Geographical distribution. WEST JAVA: 3 ♀♀, Tapos, Mt. Gedeh, 800 m, IV, VIII, IX.'33, coll. BETREM; Mt. Gedeh, 4000 feet (TOSQUINET 1903).

SUMATRA: Res. Lampoeng: 1 ♀ Giesting, Mt. Tanggamoos, XII.'39, leg. LIEFTINCK, coll. Mus. Btz.

***Ancaria nigripes* nov. spec.**

♀. Black. White are: palpi, centre of the face, tubercles, indistinct spot on the frena of the hind wings, a narrow horseshoe-shaped mark on the declivous part of the propodeum, that is especially indistinct between the white spinae, tergite 8(7) broadly in the centre. Tergite 3(2) narrowly reddish at the apex. Legs black, white are: apex of coxae I and II, trochanters I and II, trochan-

ters III basally beneath, subbasal incomplete ring on the tibiae III, tarsi III except base of metatarsi and joint 5. Antennae black, flagellum with 25 joints, white are joint 4-11 above. Wings as in *A. djampangensis*, hyaline, stigma black.

Head. Clypeus shining, in the centre with scattered fine punctures, in the centre apically on the margin with two small teeth. Face in the centre with punctures, at the side coarsely reticulated. Subvertex deeply impressed, in the centre with coarse cross striae, longitudinal carina present, sides finely alutaceous with scattered punctures.

Thorax. Sides of pronotum striated above, shining, finely punctured. Epomiae distinct, above bent inwardly. Mesoscutum shining, finely deeply not densely punctured. Notauli deep, central lobe higher than the lateral lobes. Scutellum shining, with scattered punctures. Mesopleura distinctly, coarsely cross striated; speculum shining above with punctures. Epicnemiae not reaching the tubercles. Mesosternum shining with fine punctures, hind margin absent, only in the centre a flat high, toothlike carina.

Propodeum. Groove between metanotum and propodeum smooth. Basal carina complete, distinct, somewhat bent inwardly in the centre. Area basalis large, as long as broad, propodeum before the basal carina smooth, posteriorly somewhat longitudinal striated. Distinct carina above the oval spiracula. Rest of propodeum and metapleura coarsely reticulated, on some parts indistinctly striated. Spinae high and flat; the second carina between them indistinct.

Abdomen. Tergite 2(1) smooth, broad. Spiracula almost as far from each other as from the hind margin. Sublateral carinae reaching the spiracula and there not very near the lateral carinae. Sternite 2(1) reaching almost the spiracula. Structure of following tergites fine.

Length 11 mm; terebra 3 mm; wings 8 mm.

Holotype: Kariorang near Sangkoelirang, East Borneo, IV.'37, 450 m, leg. WALSH, coll. BETREM.

***Ancaria djampangensis* nov. spec.**

♀. Black. White are: palpi, central mark on the face, two indistinct spots on the vertex next to the eyes, scutellar lists, sides of scutellum, tubercles indistinct, spinae of propodeum indistinct, centre of tergites 8(7) and 9(8) broad. Legs yellowish red. Black are: the apex of femora III, the apex and base of tibiae III, tarsi I and II. Tarsi III white, only base of metatarsi and apical joints black. Antennae black. Flagellum white, with 25 joints. Joints 4 to 11 white. Hind margin of tergites 3(2) narrowly reddish brown.

Head. Clypeus shining with scattered punctures with two indistinct marginal tubercles, in the centre. Face somewhat finely reticulated, scrobi small, smooth, not separated from the vertex, subvertex impressed with distinct, central carina.

Thorax. Pronotum at the sides striated, above almost smooth, not distinctly striated. Epomiae very high. Mesoscutum somewhat densely, finely punctured,

shining. Scutellum shining with fine scattered punctures. Mesopleura reticulated, substriated. Speculum shining, smooth: Tubercles shining, small, finely punctured. Epicnemiae not reaching the tubercles. Only anterior half of sternauli deep. Mesosternum shining, finely punctured, at the end of the mesosulcus a high distinct tubercle.

Propodeum not finely reticulated, part before the basal carina not reticulated, somewhat striated, basal carina distinctly bent inwardly in the centre. Area basalis distinct, groove between propodeum and metanotum smooth, sometimes with very indistinct striae. Spinae flattened and high, indistinct carina above the oval spiracula present. Metapleura substriated.

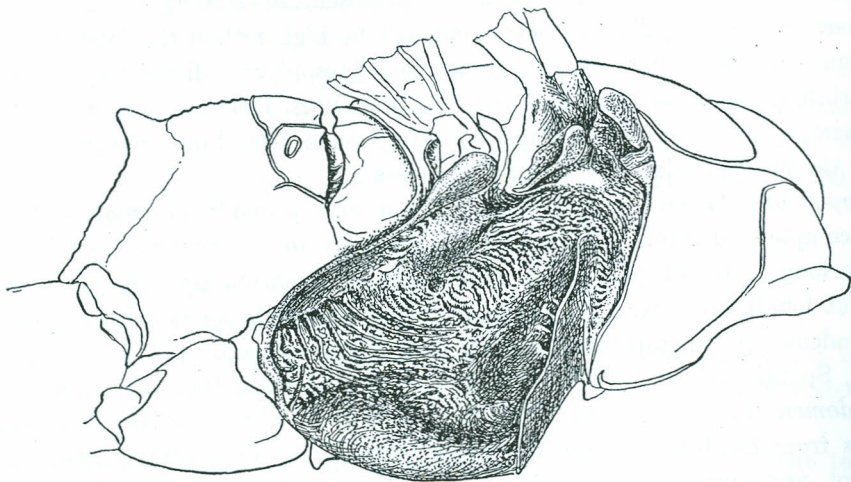


Fig. 8. *Ancaria djampangensis* BETR.

Abdomen. Tergite 2(1) distinctly broadened towards the apex, however, no distinct postpetiolus separated. Spiracula as near to each other as from the apex. Tergite 2(1) smooth shining, in the centre finely alutaceous; sublateral carinae very near the lateral ones, ending behind the spiracula. Next to the lateral carinae on the postpetiolus some punctures. Sides of tergite 2(1) smooth and shining. Sternite 2(1) reaching almost the spiracula. Tergite 3(2) very finely, densely punctured, almost alutaceous, the other tergite with still finer structure.

Wings hyaline. Stigma black. Areola square, moderately small. Nervus recurrens secundus in the centre. Discocubital nerve somewhat broken in the centre. Nervulus praefurcal. Nervellus broken very low.

Length 10 mm; terebra 3 mm; wings 7 mm.

Holotype: South Soekaboemi, Preanger, II-III.'33, coll. BETREM.

Remark. Some specimens have a white mark on the frena behind the hind wings and also the sides of the apical slope of the propodeum white.

Geographical distribution: WEST JAVA: 2 ♀ South of Soekaboemi, West Preanger, II-III.'33, coll. BETREM, coll. V. D. VECHT; 1 ♀ Djam-

pang Tengah, IX.'35, leg. WALSH, coll. BETREM, 1 ♀ Mt. Bèsèr, Djampang, IV.'36, leg. WALSH, coll. BETREM.

All the specimens mentioned above are paratypes.

Ancaria javana SZEPL. 1908.

1908. Notes Leyden Museum 29, p. 241, *Cryptus javanus*.

1910. SZEPLIGETI, Notes Leyden Museum 32, p. 97, *Gambrus javanus*.

♀. Black. White are: labrum, palpi, spot on the sides of the face, line on the orbitae verticales and subverticales, collum, tubercles, tegulae, scutellum, spot on the frena behind the hind wings, spinae of propodeum, apices of tergites 2(1), 3(2), 4(3), centre of tergite 8(7) broadly. Legs black with large white spots on the coxae I and II; white are also: small stripe on trochanters I and stripe on tibiae I and a narrow somewhat indistinct subbasal band on tibiae III. Legs I and II somewhat reddish. Wings hyaline. Areola large, almost square, nervus recurrens secundus a little beyond the centre. Nervulus distinct, antefurcal. Nervellus broken far below the centre. Antennae black; flagellum with 29 joints, joints 5-9 white.

Head. Clypeus swollen, finely, densely punctured. Face with fine pubescence. indistinctly, coarsely striated-punctated. Scrobi deep, shining not distinctly separated from the deeply impressed subvertex. Subvertex with slanting coarse striae, above the scrobi some cross striae; longitudinal carina distinct. Vertex behind ocelli not long, not steep, moderately sloping. Genae distinct, not very long. Orbitae above the mandibles broad.

Thorax. Pronotum at the sides striated, above more indistinctly. Epomia almost absent. Mesoscutum almost smooth with somewhat plumbeous hue. Scutellum at the sides carinated almost to the end, with scattered punctures. Groove between propodeum and metanotum smooth and shining.

Propodeum long. Anterior part before the anterior carina long and in the centre almost smooth. Area basalis distinct, narrow and long. Spiracula long. Part behind the anterior carina with fine irregular striae, also the metapleura striated; spinae high; second carina not present; declivous part distinct, somewhat steep and long.

Abdomen. Tergite 2(1) very much broadened to the apex; postpetiolus large, broad, quadrate, alutaceous; spiracula on tubercles; sublateral carinae reaching a little beyond the spiracula and very near the lateral carinae. Sides of petiolus smooth and shining, without striae. Tergite 3(2) very densely and finely punctured.

Length 7 mm; terebra 4 mm; length of wings 9 mm; antennae 11 mm.

Plesiotype: Tapos, Mt. Gedeh, V.'33, Prov. W. Java, coll. BETREM.

Geographical distribution: CENTRAL JAVA, Semarang (SZEPL. 1908).

Ancaria sumatrensis nov. spec.

♀. Black. White are: palpi, mandibles except the apex, clypeus almost entirely, spot in the centre of the face, triangular marks next to the eyes on the

vertex, collum, tubercles, tegulae, scutellum, metanotum in the centre, triangular mark on the frena above, declivous part of the propodeum except a spot above the insertion of the abdomen, apices of tergite 2(1), 3(2), 4(3), tergites 8(7) and 9(8) in the centre broadly. Legs I and II fulvous, coxae I and II anteriorly white. Trochanters I, II and III white. Trochantelli more or less dark. Legs III fuscous; coxae III basally above with white mark; tarsi III white, only base of metatarsi and joint 5 dark. Flagellum with 33 joints, joint 5 till 11 more or less white. Apex of flagellum flattened beneath, there brown. Wings hyaline, stigma black.

Head. Clypeus broader than long, convex, anterior margin almost straight, anteriorly almost smooth, posteriorly punctured. Face densely, finely punctured. Scrobi large smooth; innerside with some striae; not deep. Subvertex short, finely alutaceous, with scattered punctures, in the centre finely wrinkled, longitudinal carina distinct.

Thorax. Sides of pronotum with fine striae, above obliquely striated, epomia not very distinct. Mesonotum finely, densely punctured, shining, in the centre finely reticulated. Scutellum triangular, with lateral carinae almost to the apex. Mesopleura reticulated, anteriorly somewhat striated; speculum punctured, shining; beneath the speculum mesopleura somewhat striated. Epicnemiae short, only reaching to the centre of the mesopleura. Mesosternum finely punctured, hind carina only present in the centre.

Propodeum. Basal carina somewhat bent inwardly in the centre; basal area long, narrow. Spiracula two times as long as broad, no carina above the spiracula. Before the basal carina the propodeum is finely punctured, behind finely reticulated as also the metapleura. Second carina only represented by the small, low spinae that are situated far behind.

Abdomen. Tergite 2(1) long and narrow, smooth and shining, with only some scattered punctures. Spiracula nearer to each other than to the hind margin. Sides of petiolus not flattened; lateral carinae almost absent, lower carinae also absent, sublateral carinae not present. Sternites 2(1) reaching to the spiracula. Tergite 3(2) long, very finely, densely punctured.

Areola of the wings square, very small; nervulus antefurcal; nervellus broken far beneath the centre.

Length 10 mm, terebra 4 mm, flagellum 9 mm, length of forewings 7 mm.

Holotype: Medan, Sumatra, coll. BETREM.

♂. Coloured as the ♀ but face entirely white; scapus beneath white. Hind margin of tergite 2(1) - 5(4) white; apical two tergites and genital clasps white. Flagellum with white ring on two-third of its length. Legs I and II lighter than in the ♀. Coxae almost entirely white. Structure finer than in the ♀; sides of pronotum almost not striated; sides of mesopleura before the speculum distinctly striated.

Allotype: Medan, Sumatra, coll. BETREM.

Geographical distribution: SUMATRA: 1 ♀, Medan, coll. BETREM; WEST JAVA, 1 ♀, Tapos, Mt. Gedeh, V. '33, coll. BETREM.

Ancaria sundaica nov. spec.

♀. Black. White are: labrum, palpi, centre of clypeus, orbitae verticales broadly, tegulae, tubercles, scutellum, frena behind hind wings, two rectangular spots on the sides of the declivous part of the propodeum including the spinae, hind margin of tergites 2(1) and 3(2), tergite 7(6) in the centre, tergite 8(7) and 9(8) except the sides. Legs fuscous, antennae somewhat lighter. White are: coxae I anteriorly, coxae II apically, trochanters I and II, stripe on the innerside of the tibiae I, subbasal ring on the tibiae III. Wings hyaline with an abbreviated cross band beneath the stigma. Flagellum centrally narrowly white above.

Head. Clypeus with a horizontal and vertical part that are both almost equally long, narrower than the breadth of the face which is finely, regularly reticulated. Scrobi not deep, smooth, not distinctly separated from the subvertex. The latter wrinkled in the centre, with a central carina, sides broadly almost smooth.

Thorax. Sides of pronotum above distinctly obliquely striated, cross striated beneath. Mesoscutum next to the not deeply impressed notauli indistinctly striated, in the centre reticulated, lobes shining, indistinctly punctured before the scutellar groove that has two carinae, smooth. Scutellum triangular, shining, finely punctured. Mesopleura reticulated; epicnemiae almost reaching the small tubercles. Speculum smooth, shining. Groove between propodeum and metanotum smooth. Sternum at the sides and next to the mesosulcus striated. Hind carina almost complete, somewhat interrupted before the centre of coxae II.

Propodeum. Anterior carina distinctly bent forwardly in the centre. Area basalis distinct with strongly divergent carinae; above the small oval spiracula a distinct carina. Before the anterior carina propodeum finely reticulated, behind this carina coarsely reticulated; declivous part coarsely irregularly cross striated. Spinae flat, moderately high, metapleura reticulated.

Abdomen. Tergite 2(1) distinctly broadened, postpetiolus quadrate, not distinct, finely alutaceous with some punctures. Lateral carinae strong, sublateral carinae only basally distinct. Sternites reaching as far as the spiracula. Tergite 3(2) densely punctured.

Wings. Areola square; discocubital vein not broken; nervulus almost interstitial; nervellus broken somewhat beneath the centre.

Length 8 mm, terebra 2,5 mm, fore-wings 6 mm.

Holotype: Malang, IV.1933, coll. BETREM.

♂. Coloured as ♀, but declivous part of propodeum, except dark spot above the insertion of the abdomen, white. White are on the abdomen: hind margin of tergite 2(1) and tergite 3(2), that of tergite 4(3) sometimes somewhat interrupted in the middle, tergite 8(7) - 9(8) entirely white. Genital claspers black. Tibiae II are yellowish with a subbasal white band. Tarsi III with joint 2 and 3 more or less white. Sometimes base of mandibles and the spot in the centre of the face also white. Trochanters III more or less whitish. Flagellum entirely black.

Allotype: Malang IV.1933, coll. BETREM.

Geographical distribution: EAST JAVA: 1 ♀ 7 ♂, Malang IV-V.'33, coll. BETREM; WEST JAVA: 1 ♂, Soekaboemi, '33, leg. VERBEEK, coll. BETREM; Sumatra: 1 ♀, Medan, Deli, coll. BETREM. This ♀ has somewhat dark palpi, a black clypeus and black coxae I.

***Ancaria anomala* nov. spec.**

♀. Black. White are: palpi, mandibles except the teeth, labrum, two large triangular marks on vertex, tegulae, tubercles, scutellum, frena behind the hind wings, apical half of the propodeum including the spines, apex of tergite 2(1) and 3(2) broadly, tergites 6(5), 8(7) and 9(8) in the centre broadly. Red or reddish are: clypeus, scapus and underside of the flagellum at the base, apex of metapleura, tergite 2(1) and anterior edges of tergites 3(2). Coxae and trochanters I and II white, femora and tibiae I and II yellowish red. Tarsi I and II blackish yellow. Coxae III red; trochanters III dark brown; femora III red, apex black, tibiae II black with broad subbasal white band; tarsi III white, joint 5 and 4 blackish. Flagellum with 28 joints, joints 5-11 white. Wings hyaline with large, square, black spot. Areola small, somewhat pentagonal, sides converging. Nervulus praefurcal. Nervulus broken angular below the centre.

Head. Clypeus rounded, high with inflexed anterior half, shining with scattered punctures. Face above the clypeus transversely striated, below the antennae with some longitudinal striae; scrobi very small, not deep, shining; subvertex very broad with irregular longitudinal striae, the sides finely alutaceous. Vertex behind the ocelli very steep, almost vertical and very broad; occipital carina very low, occipital carina near the mandibles very broad.

Thorax. Sides of pronotum striated, above near the distinct epomiaie almost smooth. Mesoscutum somewhat dull, very finely transversely striated; notauli distinct, anteriorly deep; scutellum shining with scattered fine punctures. Mesopleura finely reticulated beneath the shining smooth speculum striated. Epicnemiae straight, almost reaching tubercles. Groove before speculum striated, also striae next to the epicnemiae and beneath the tubercles. Mesosternum shining, not smooth.

Propodeum. Anterior carina complete, bent inwardly in the centre. Area basalis narrow with divergent sides. Part before the anterior carina in the centre almost smooth, near the oval small spiracula with indistinct striae; part behind the anterior carina with fine reticulation; declivous part with coarse reticulation, beneath the high flattened spinae with coarse striae; declivous part long. Metapleura with somewhat indistinct, coarse striae.

Abdomen. Tergite 2(1) narrow not much broadened to the apex, postpetiolus not distinct, almost quadrate. Lateral carinae distinct, sublateral carina only on the basal half of the petiolus very near the lateral carine. Lower carina almost absent. Sternite 2(1) almost reaching spiracula; tergite 3(2), densely, not finely punctured.

Length 8,5 mm; terebra 2,5 mm; antennae 9 mm; wings 7 mm.

Holotype. Soekaboemi, Preanger, Java 1933, coll. BETREM.

Geographical distribution: WEST JAVA: 1 ♀, Mt. Gedeh 1200 m, 19.I.'33, leg. v. D. VECHT, paratype.

***Ancaria tjibodas* nov. spec.**

♀. Black. White are only: palpi, tergite 7(8) and 8(9) broadly in the centre. Yellowish brown are: Mandibles partly, scapus beneath hind margin of tergite 3(2) narrowly, sometimes also a small spot on the scapulae and tubercles and anterior margin of pronotum. Legs yellowish red. Black are: extreme apex of femora III and tibiae III, tarsi I and II somewhat darker, tarsi III also yellowish red. Flagellum black with 25 joints, joint 4 to 8 above white.

Head. Clypeus with two not very distinct marginal tubercles, shining distinctly punctured. Face densely punctured, dull. Scrobi smooth and shining, moderately deep, separated from the, a little depressed subvertex that is dull and very finely alutaceous. Vertex next to the ocelli with the same structure. Central carina of subvertex distinct.

Thorax. Pronotum striated at the sides, above not striated. Thickened part somewhat striated, epomiae distinct. Mesoscutum shining, very finely punctured. Scutellum shining, with scattered punctures, not flat, lateral lists reaching to the centre. Mesopleura with fine, cross striae beneath the smooth speculum and lower part with fine structure, finely punctured. Epicnemiae ending in the

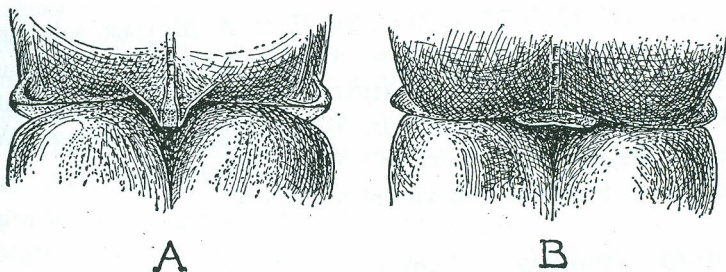


Fig. 9. A. Mesosternum of *Ancaria djampangensis*;
B. Mesosternum of *A. tjibodas*.

broadly smooth anterior margin, seem to reach the tubercles. Groove between propodeum and metanotum smooth. Mesosternum shining, mesosulcus at the apex with cross carina, not with a tubercle.

Propodeum before the basal carina, that is somewhat bent forwards in the centre, almost smooth. Basal area not distinct. Second carina between the flattened high spinae especially in the centre distinct, it is there distinctly bent forwards. Between the two carinae is the propodeum in the centre somewhat indistinctly, longitudinally striated. Apical slope of propodeum reticulated, sides more striated. Above the oval spiracula the propodeum bears a plica, not a carina. Metapleura somewhat striated.

Abdomen. Tergite 2(1) with somewhat distinct postpetiolus. Spiracula as far from each other as from the hind margin. Tergite 2(1) smooth, sublateral carina reaching beyond the spiracula not very near the lateral carinae. Postpetiolus at the sides very finely alutaceous. Tergite 3(2) densely and finely punctured, almost alutaceous.

Wings hyaline. Stigma in the centre broadly yellowish. Areola small, square, apical vein faint. Discocubital vein not broken. Nervulus almost interstitial. Nervellus broken below the centre.

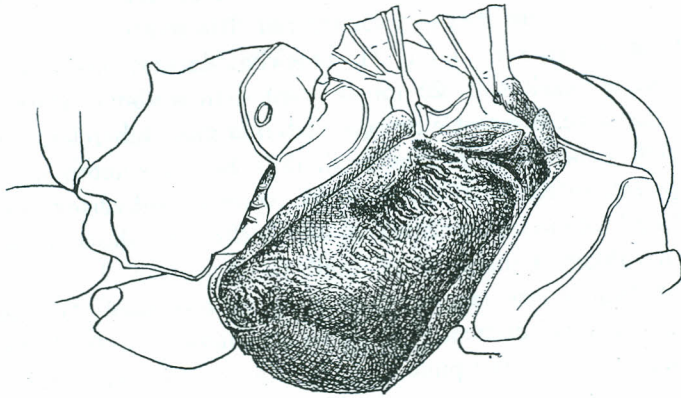


Fig. 10. *Ancaria tjibodas* BETR.

Length 8 mm; terebra 2,5 mm; wings 7 mm.

Holotype: Tjibodas, 18.VI.'32, 1450 m, leg. H. R. A. MULLER, coll. BETREM.

Geographical distribution: WEST JAVA: 1 ♀ Tjibodas 1400 m, Mt. Gedeh, 18.VI.'32, 1450 m, leg. MULLER, coll. BETREM; 1 ♀ Tjibodas, 20-30.XII.'30, leg. LIEFTINCK, coll. Mus. Buitenzorg; 1 ♀ Telaga Warna, Poentjak Pass, 4.V.'30, leg. LIEFTINCK, coll. Mus. Buitenzorg.

All the specimens mentioned above are paratypes.

***Ancaria lieftincki* (CHEESMAN i.l.), nov. spec.**

♀. Black. White are: palpi, labrum, small spot on tubercles, sides and apex of scutellum, spot on the frena behind the hind wings, the spinae of the propodeum indistinctly; apical margin of tergite 3(2) yellowish white. Tergite 8(7) and 9(8) broadly white in the centre. Sometimes on the inner orbits of vertex and subvertex an indication of a light line. Legs rufous. Tarsi I and II for the larger part fuscous. Apex of femora III and base and apex of tibiae III black. Tarsi III broken; metatarsi III for three quarter dark, apical fourth white. Wings hyaline, base white; stigma black. Flagellum with 26 joints. The joints 5 to 9 white above. Mandibles brown.

Head. Clypeus with two indistinct tubercles on the anterior margin, shining, not densely punctured. Face densely punctured in the centre, sides finely alutaceous with scattered punctures, dull. Scrobi transversely striated not distinctly

separated from the subvertex that has scattered fine punctures and that is alutaceous with some, somewhat indistinct striae in the centre. Longitudinal carina distinct, also some vague striae radiating from the anterior ocellus. Occipital carina near the mandibles not high.

Thorax. Sides transversely striated above, next to the mesoscutum shining with fine punctures. Epomiae distinct bent inwardly above. Hind margin of the pronotum thickened at the sides, where it is above transversely striated. Mesoscutum shining, finely punctured. Notauli very deep, ending in a roughly structured spot. Scutellum shining with distinct somewhat scattered punctures. Lateral carinae reaching behind the centre of the sides. Metanotum shining and smooth in the centre. Mesopleura roughly sculptured, irregularly, transversely striated. Speculum shining, punctured. Epicnemiae reaching the small tubercles. Sternauli deep, complete. Mesosternum shining, finely punctured.

Propodeum. Groove between metanotum and propodeum smooth. Basal cross carina complete, somewhat bent inwardly in the centre. Basal area somewhat indistinct with strongly divergent sides. Second carina strongly bent inwardly between the flat distinct spinae. Propodeum entirely somewhat coarsely reticulated, the upper part indistinctly longitudinally striated. Metapleura indistinctly striated.

Abdomen. Tergite 2(1) with somewhat distinct postpetiolus. Spiracula as far from each other as from the hind margin. Basal part of postpetiolus finely alutaceous, with scattered punctures; in the centre with a flat groove. Apical part smooth and shining, the sublateral carinae very near to the lateral carinae, the first ones reaching somewhat beyond the spiracula. Sternite reaching to the spiracula. Tergite 3(2) finely densely punctured, somewhat dull. Following tergites more shining, not smooth, not distinctly punctured.

Wings. Areola square, apical vein indistinct. Discocubital vein only a little bent, not broken in the centre. Apical angle of the discoidal cell obtuse. Nervellus broken, distinctly beneath the centre.

Length 9 mm; length of terebra 4 mm; length of forewing 8 mm.

Holotype: WEST JAVA, Mt. Gedeh, Tjibodas, 1400 m, 27-29.VII.'30, leg. LIEFTINCK, coll. Mus. Buitenzorg.