

**AN ACCOUNT OF THE BLATTIDAE
(ORTHOPTERA) FROM CELEBES, THE MOLUCCAS,
AND NEW GUINEA**

by

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The Blattid fauna of Celebes, the Moluccas, and New Guinea, a region which from a zoogeographical point of view forms an important area of transition, is still insufficiently known. Moreover the literature on the Blattids of this region is scattered in various papers which made it desirable to give a general survey of the hitherto known species of the group from Celebes, the Moluccas, and New Guinea.

The present paper deals with the material of Blattidae from the region mentioned above contained in the Leiden and in the Amsterdam museums. I am indebted to Prof. Dr. H. Boschma and Dr. H. C. Blöte of the Rijksmuseum van Natuurlijke Historie at Leiden, and to Prof. Dr. L. F. de Beaufort and Mr. J. B. Corporaal of the Zoological Museum at Amsterdam for placing the material at my disposal. Further I should like to express my thanks to the board of Greshoff's Rumphiusfonds for a grant which enabled me to carry out the investigations.

As far as concerns our knowledge of the Blattidae in the region dealt with in the present paper, Celebes is the best known although the number of known species probably represents a part only of the existing forms. Hanitsch (1933) already came to this conclusion as he could state that few species only were caught by more than one collector. A survey of the most important collections from the region, with the names of the collectors and the authors who reported upon the material may be given here.

Basler Naturhistorisches Museum, collectors P. and F. Sarasin (1893-1896 and 1902-1903), author R. Hanitsch.

University Museum Oxford, collector A. R. Wallace (1856-1859), author F. Walker (1868); collector W. Doherty (1896), author R. Shelford (1907).

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Museo Civico di Storia Naturale Giacomo Doria, Genova, collector O. Beccari (1874), author R. Hanitsch (1933).

Zoologisches Museum Berlin, collector G. Heinrich (1930-1932), author R. Hanitsch (1933 and 1935).

Museum der Senckenbergischen Naturforschenden Gesellschaft, Frankfurt a. M., collector W. Küenthal (1895), author C. Brunner (1897).

Besides these larger collections, there are several smaller amounts of material from Celebes in various museums. From these I may mention here that of the Museum National d'Histoire Naturelle at Paris, collector P. Fruhstorfer, author R. Hanitsch; the Musée Royal d'Histoire Naturelle at Brussels, collector H. R. H. Prince Leopold of Belgium, author R. Hanitsch; the Rijksmuseum van Natuurlijke Historie at Leiden, collectors E. A. Forsten, C. B. H. von Rosenberg, dealt with in the present paper.

The material from the Mampoe cave, collected by Dr. S. Leefmans, which according to Hanitsch (1933) should be in the Leiden Museum, is not there; probably it is still present at Buitenzorg.

Though less known than Celebes, the Blattid fauna of Boeroe was rather extensively studied by Hanitsch (1936), who based his investigations on the material collected in this island by Toxopeus in 1921.

In several other islands of the Moluccas collections of Blattidae have been brought together by Bernstein (material in Leiden Museum) and by the Snellius expedition (material in Leiden Museum).

Finally mention may be made of material collected in New Guinea by Dr. P. N. van Kampen (in Leiden Museum) and of that collected by Prof. A. Schultze and reported upon by Shelford (1912). The material of the last expedition to New Guinea (1939) provisionally remained in the Buitenzorg Museum.

The area of distribution of the Blattidae dealt with in the present paper zoogeographically forms a region of transition between the Indomalayan subregion and the Australian region. As might be expected the fauna is mixed. Especially in Celebes, where besides the endemic species also representatives of the Indian fauna and of the Moluccas occur, it is evident that two zoogeographic regions meet and partly overlap each other. The following species occur in the Indomalayan subregion and in Celebes: *Plumiger histrio* (Burm.), *Hemithyrsocera soror* (Brunn.), *Scalida latiusvittata* (Brunn.), *Rhabdoblatta procera* (Brunn.), *Pseudophoraspis nebulosa* (Burm.). A wider distribution have: *Blattella bisignata* (Brunn.), which was reported from Celebes, the Indomalayan subregion and Burma, *Homalosilpha ustulata* (Burm.), which occurs in the Indomalayan subregion, Celebes, the Philippines, and *Paranauphoeta lyrata* (Burm.), which inhabits

India, the Indomalayan subregion, Celebes and the Philippines. The species so far mentioned form the Oriental element in the Blattid fauna of Celebes. As appears from the distribution of *Symplocodes ridleyi* (Shelf.), a species reported from the Indomalayan subregion, Celebes and Boeroe, the Oriental influence extends still further eastwards.

Not only Oriental forms occur on Celebes, but also forms from the Moluccas. *Haanina macasariensis* (De Haan), e.g., common in the Moluccas, extends its distribution into Celebes and the Philippines. On the other hand, *Pseudoplatia atra* Han., also an Austromalayan species, was reported from the Aroe Islands, the Moluccas including the Sangi and Talaut Islands, where it is a rather common Blattid, but not from Celebes.

The species belonging to the genus *Prosoplecta* Sauss. occur in the Moluccas, the Philippines and on Celebes only.

Paranauphoeta rufipes Brunn. is a moderately common species in the Moluccas, the Aroe Islands, Waigeo and New Guinea; the narrowly related *Paranauphoeta lyrata* (Burm.) has an area of distribution extending over the Indomalayan subregion as far as Celebes and the Philippines. Until now the records in literature pointed to the fact that the two species excluded each other in their respective areas. The Leiden Museum, however, possesses two specimens of *P. rufipes* from Java.

The distribution of *Ancaudellia serratissima* (Brunn.) reaches westward as far as the Moluccas and includes the Aroe Islands, New Guinea and New Ireland.

Of the regions considered here New Guinea is the least known and consequently the most interesting. Its Blattid fauna as far as it is known at present, shows a close relationship to that of Australia. The following Australian species were recorded from New Guinea: *Ellipsidion castaneum* Shelf., *Cutilia secunda* (Tepp.), *Polyzosteria bicolor* (Kirby).

At present the Blattid fauna of the Austromalayan region of transition is too badly known to draw important zoogeographical conclusions. Moreover most Blattids are subjected to accidental transport from one region to another so that their areas of distribution often become largely extended.

In the following table (p. 208-211) the distribution of each species is given as far as it is known at present.

	Celebes	Borneo	Ternate	Halmahera	Ambon	Ceram	New Guinea	Aroe Isl.	Batjan	Further distribution
Ectobiinae										
<i>Mareta propinqua</i> (Walk.) . . .	x	.	.	.	.	.	.	.	.	Borneo, Sumatra.
<i>Mareta jacobsoni</i> (Heb.) . . .	x	.	.	.	.	.	.	.	.
<i>Mareta globifera</i> Han. . . .	x	.	.	.	.	.	.	.	.
<i>Mareta granulosa</i> Han. . . .	x	.	.	.	.	.	.	.	.
<i>Mareta longe-alata</i> Han. . . .	.	.	.	.	.	.	x	.	.	Sumatra.
<i>Mareta suffusa</i> (Walk.) . . . .	.	.	.	.	.	.	x	.	.	
<i>Mareta contigua</i> (Walk.) . . . .	.	x	.	.	.	.	x	.	.	Siam, Malay Peninsula, Borneo, Mentawai Islands and Christmas Island.
<i>Plumiger histrio</i> (Burm.) . . .	x	.	.	.	.	.	.	.	.	Malayan subregion.
<i>Hemithyrsocera soror</i> (Brunn.) .	x	.	.	.	.	.	.	.	.	Malayan subregion.
Anaplectinae										
<i>Anaplectoidea nitida</i> Shelf. . .	x	.	.	.	.	.	.	.	.
<i>Anaplectoidea dohertyi</i> Shelf. . .	x	.	.	.	.	.	.	.	.
<i>Anaplectella beccarii</i> Han. . .	x	.	.	.	.	.	.	.	.
<i>Anaplecta calosoma</i> Shelf. . .	.	.	.	.	.	x	.	.	.	
Pseudomopinae										
<i>Blattella erythrocephala</i> Han. . .	x	.	.	.	.	.	.	.	.
<i>Blattella germanica</i> (L.) . . .	x	x	.	.	.	x	.	.	.	Cosmopolitan.
<i>Blattella bisignata</i> (Brunn.) . . .	x	.	.	.	.	.	.	.	.	Malayan subregion and Burma.
<i>Possoina uniformis</i> (Han.) . . .	x	.	.	.	.	.	.	.	.
<i>Haplosymploce sequens</i> (Walk.) .	x	.	.	.	.	.	.	.	.
<i>Haplosymploce curta</i> (Han.) . .	x	.	.	.	.	.	.	.	.
<i>Symploce breviramis</i> (Han.) . .	x	.	.	.	.	.	.	.	.
<i>Symploce castanea</i> Han. . . .	x	.	.	.	.	.	.	.	.
<i>Symploce excavata</i> (Shelf.) . .	x	.	.	.	.	.	.	.	.
<i>Symploce perpulchra</i> (Shelf.) .	x	.	.	.	.	.	.	.	.
<i>Symploce sarasinorum</i> Han. . .	x	.	.	.	.	.	.	.	.
<i>Symploce albomarginata</i> Han. .	x	.	.	.	.	.	.	.	.
<i>Symploce fissa</i> Han. . . .	x	.	.	.	.	.	.	.	.
<i>Parasymploce picticollis</i> (Walk.)	x	.	.	.	.	.	x	.	.	
<i>Parasymploce penicillata</i> Heb. .	x	x	.	.	.	.	.	.	.	Jarak Isl., Borneo.
<i>Parasymploce castanea</i> Han. . .	x	.	.	.	.	.	.	.	.
<i>Parasymploce triangulifera</i> Han. .	x	.	.	.	.	.	.	.	.
<i>Parasymploce biguttata</i> Han. . .	x	.	.	.	.	.	.	.	.
<i>Parascalida fusca</i> Han. . . .	x	.	.	.	.	.	.	.	.
<i>Scalida latiusvittata</i> (Brunn.) .	x	.	.	.	.	.	.	.	.	Malay Peninsula, Sumatra and Java.
<i>Margattea ceylonica</i> (Sauv.) . .	x	.	.	.	.	.	.	.	.	Malayan subregion.
<i>Papuablatta spinifera</i> nov. spec.	.	.	.	.	.	x	.	.	.	
<i>Symplocodes ridleyi</i> (Shelford) .	x	x	.	.	.	.	.	.	.	Malayan subregion.
<i>Parasigmoidella marginalis</i> Han. .	.	.	.	.	.	x	.	.	.	
<i>Parasigmoidella?</i> <i>beccari</i> Han. .	x	.	.	.	.	.	.	.	.
<i>Pseudophyllodromia?</i> <i>bipunctata</i> (Walk.)	x	.	.	.	.	.	.	.	.
<i>Arublatta basivittata</i> nov. spec.	.	.	.	.	.	x	x	.	.	

	Celebes	Boeroe	Ternate	Halmahera	Ambon	Ceram	New Guinea	Aroe Isl.	Batjan	Further distribution
<i>Pseudothysocera xanthophila</i> (Walk.)	x	.	.	.	.	.	.	.	.	Sumatra.
<i>Pseudothysocera henrici</i> Han.	x	.	.	.	.	.	.	.	.
<i>Lupparia inconspicua</i> Shelf. . . . .	.	.	.	.	.	.	x	.	.	
<i>Hanitschia toxopei</i> (Han.) . . . . .	.	x	.	.	.	.	.	.	.
<i>Liosilphoidea late</i> Han. . . . .	.	.	.	.	.	.	x	.	.	
<i>Ellipsidion castaneum</i> Shelf. . . . .	.	.	.	.	.	.	x	.	.	Australia.
<i>Ellipsidion terminale</i> Han. . . . .	.	.	.	.	.	.	x	.	.	
Epilamprinae										
<i>Haanina macassariensis</i> (De Haan)	x	x	.	x	x	x	.	.	.	Philippines.
<i>Haanina intermedia</i> (Bol.) . . . . .	.	.	.	.	.	.	x	.	.	Timor.
<i>Rhabdoblaatta concinnula</i> (Walk.)	x	x	.	.	.	.	.	.	.	Waigeo, Talaut Isl.
<i>Rhabdoblaatta castanea</i> Han.	x	.	.	.	.	.	.	.	.
<i>Rhabdoblaatta procera</i> (Brunn.)	x	.	.	.	.	.	.	.	.	Malayan subregion.
<i>Rhabdoblaatta pertruncata</i> (Brunn.)	x	x	.	.	.	.	.	.	.
<i>Epilampra plena</i> Walk.	x	.	.	.	.	.	x	.	.	Malayan subregion.
<i>Epilampra fervida</i> Walk.	x	.	.	.	.	.	.	.	.
<i>Epilampra dytiscoides celebensis</i> Han.	x	.	.	.	.	.	.	.	.
<i>Epilampra kerawrenii</i> (Le Guillou) . . . . .	.	.	.	.	.	.	.	.	.	Java.
<i>Epilampra gjellerupi</i> Han. . . . .	.	.	.	.	.	.	x	.	.	
<i>Epilampra papua</i> Sauss. . . . .	.	.	.	.	.	.	x	.	.	
<i>Epilampra doleschali</i> Brunn. . . . .	.	.	.	x	.	.	.	.	.
<i>Stictolampra trilineata</i> Han. . . . .	.	.	.	.	.	.	x	.	.	
<i>Stictolampra lurida</i> (Burm.)	x	.	.	.	.	.	x	.	.	Indomalayan region.
<i>Stictolampra brevipennis</i> Han. . . . .	.	.	.	.	.	.	x	.	.	
<i>Rhcnoda rugosa</i> Brunn.	x	.	.	x	.	.	.	.	.	Malayan subregion and Burma.
<i>Pseudoplatia atra</i> Han. . . . .	.	x	.	.	x	.	.	x	.	Sangi- and Talaut Islands.
<i>Pseudophoraspis nebulosa</i> (Burm.)	x	.	.	.	.	.	.	.	.	Malayan subregion.
<i>Derocardia acutipennis</i> Sauss. . . . .	.	.	.	x	.	.	.	.	.
<i>Audreia kampeni</i> nov. spec. . . . .	.	.	.	.	.	x	.	.	.	
Blattinae										
<i>Cutilia secunda</i> (Tepp.) . . . . .	.	.	.	.	.	.	x	.	.	Australia, Darnley Isl.
<i>Cutilia nitida</i> (Brunn.)	x	x	x	x	x	x	x	x	.	The whole Malayan and Austromalayan Archipelago, Australia, New Britain and New South Wales.
<i>Cutilia tristylata</i> Han.	x	.	.	.	.	.	.	.	.
<i>Platyzosteria soror</i> (Brunn.)	x	x	.	x	x	x	x	x	.	The whole Malayan and Austromalayan Archipelago, Polynesia and Formosa.
<i>Platyzosteria denini</i> Han. . . . .	.	.	.	.	.	x	.	.	.	
<i>Platyzosteria biloba</i> (Sauss.) . . . . .	.	.	.	.	x	.	.	.	.

	Celebes	Boeroe	Ternate	Halmahera	Ambon	Ceram	New Guinea	Aroe Isl.	Batjan	Further distribution
<i>Platygasteria bicolor</i> (Kirby)	.	.	.	.	.	.	x	.	.	Torres Straits.
<i>Dorylaea flavicincta</i> (De Haan)	x	.	.	.	.	.	.	.	.	Malayan subregion, Louisiade Archipelago, Panneati Isl., Formosa and Madagascar.
<i>Dorylaea pallipalpis</i> (Serv.)	.	x	.	.	x	x	.	.	.	The whole Archipelago, Australia.
<i>Neostylopyga papuæ</i> (Shaw)	.	.	.	.	.	.	x	.	.	Malayan subregion, tropical cosmopolitan.
<i>Neostylopyga rhombifolia</i> (Stoll)	x	.	.	.	.	.	x	.	.	
<i>Neostylopyga quadrilobata</i> (Brunner)	.	x	.	.	.	.	.	.	.	Johore?
<i>Neostylopyga maculifrons</i> (Han.)	.	.	.	.	.	.	x	.	.	
<i>Neostylopyga schultzei</i> (Shelford)	.	.	.	.	.	.	x	.	.	
<i>Neostylopyga coxalis</i> (Walk.)	.	.	.	.	.	x	x	.	.	Cosmopolitan.
<i>Periplaneta australasiae</i> (Fabr.)	x	x	.	x	x	.	x	.	.	Cosmopolitan.
<i>Periplaneta americana</i> (L.)	.	x	x	.	.	.	x	.	.	Cosmopolitan.
<i>Periplaneta celebensis</i> Han.	.	x	.	.	.	.	.	.	.
<i>Periplaneta methanoides</i> Brunn.	.	.	.	x	.	.	.	.	.
<i>Homalosilpha ustulata</i> (Burm.)	x	.	.	.	.	.	.	.	.	Morotai.
<i>Macrocerca leopoldi</i> Han.	.	.	.	.	.	.	x	.	.	Malayan subregion and Philippines.
<i>Blatta orientalis</i> (L.)	.	.	.	.	.	.	x	.	.	Cosmopolitan.
<i>Methana papua</i> Shelf.	.	.	.	.	.	.	x	.	.	
Panchlorinae										
<i>Pycnoscelus surinamensis</i> (L.)	x	x	.	.	.	x	.	x		Morotai, Cosmopolitan.
<i>Pycnoscelus aurantius</i> Han.	x	.	.	.	.	.	.	.	.
<i>Oniscosoma? contigua</i> (Sauss.)	.	.	.	.	.	x	.	.	.	
Corydiinae										
<i>Holocompsa debilis</i> Walk.	.	.	.	.	.	x	.	.	.	
Oxyhaloinae										
<i>Diploptera dytiscoides</i> (Serv.)	x	x	.	.	.	.	.	.	.	Ceylon, Malayan subregion, Philippines, Hawaii Islands, Samoa and Cambodia.
<i>Prosoplecta coelophoroides</i> Shelf.	x	.	.	.	.	.	.	.	.
<i>Prosoplecta gutticollis</i> Walk.	.	.	.	.	.	x	.	.	.	
<i>Prosoplecta quadriplagiata</i> Walk.	.	.	.	.	.	.	.	.	x	
<i>Prosoplecta trifaria</i> Walk.	.	.	.	.	.	.	.	.	x	
Perisphaeriinae										
<i>Paranauphoeta rufipes</i> Brunn.	.	.	x	x	.	.	x	x	x	Waigeo, Java.
<i>Paranauphoeta lyrata</i> (Burm.)	x	.	.	.	.	.	.	.	.	Indomalayan region and Philippines.
<i>Perisphaeria armadillo</i> Serv.	x	.	.	.	x	.	x	x	.	Malayan subregion.
<i>Perisphaeria glomeriformis</i> Lucas	.	.	.	.	.	x	x	.	.	Malay Peninsula, Sumatra, Philippines.

	Celebes	Boeroe	Ternate	Halmahera	Ambon	Ceram	New Guinea	Aroe Isl.	Batjan	Further distribution
<i>Perisphaeria inaequalis</i> Han.	x	.	.	Borneo.
<i>Glyptoptelis wallacei</i> Han.	x	.	.	.	.	Borneo.
Panesthiinae										
<i>Salganea amboinica</i> Brunn.	.	x	x	.	x	.	.	.	.	Taliaboe.
<i>Salganea rugulata</i> Sauss.	.	x	.	.	x	.	x	.	.	Malayan subregion, Philippines, Salawati and Australia.
<i>Salganea foveolata</i> Sauss.	.	x	.	.	.	.	.	.	.
<i>Salganea fruhstorferi</i> Han.	.	x	.	.	.	.	.	.	.
<i>Salganea rufipes</i> Han.	.	x	.	.	.	.	.	.	.
<i>Salganea rectangularis</i> Han.	.	x	.	.	.	.	.	.	.
<i>Salganea sarasinorum</i> Han.	.	x	.	.	.	.	.	.	.
<i>Salganea ovalis</i> Han.	.	x	.	.	.	.	.	.	.
<i>Salganea triangulifera</i> Han.	.	x	.	.	.	.	.	.	.
<i>Salganea lunifera</i> Han.	.	x	.	.	.	x	.	x	.	Ceylon, Malayan subregion, Australia.
<i>Salganea morio</i> (Burm.)	x	.	x	.	.	Salawati.
<i>Salganea papua</i> Shelf.	x	.	.	Obi Islands.
<i>Salganea ternatensis</i> Brunn.	.	.	x	.	.	.	.	.	.	Panesthia angustipennis (Ilig.)
<i>Panesthia angustipennis</i> (Ilig.)	x	.	.	.	.	.	.	x	.	Malayan subregion, Philippines.
<i>Panesthia nigricans</i> Kirby	.	x	.	.	.	.	.	.	.	Malayan subregion.
<i>Panesthia wallacei</i> Wood-Mason	x	.	.	.	.	.	.	.	.
<i>Panesthia celebica</i> Brunn.	.	x	.	.	.	.	.	.	.
<i>Panesthia brevipennis</i> Brunn.	.	x	.	.	x	x	.	.	.	
<i>Panesthia hamifera</i> Han.	.	.	x	.	.	.	x	.	.	Sumatra and Solomon Islands.
<i>Panesthia kheili</i> Bol.	x	.	.	
<i>Panesthia insularis</i> (Kirby)	.	x	.	.	.	.	.	.	.
<i>Panesthia microalata</i> nov. spec.	x	.	.	
<i>Ancaudellia serratissima</i> (Brunn.)	.	.	x	.	.	x	x	x	.	Haroekoe, Tidore and New-Ireland.

Since the tegminal and wing veins are named in different ways by the various authors, a diagram (fig. 1) is given which shows the terminology used in the present paper.

Under each species the material present in the Rijksmuseum van Natuurlijke Historie is mentioned. As far as concerns the material from the region dealt with in the present paper as far as possible the complete data are given. Material from other regions is only mentioned in a general manner. Only few specimens of the material belonging to the collections of the Zoologisch Museum Amsterdam are recorded. In a following publication a complete record of this material will be given.

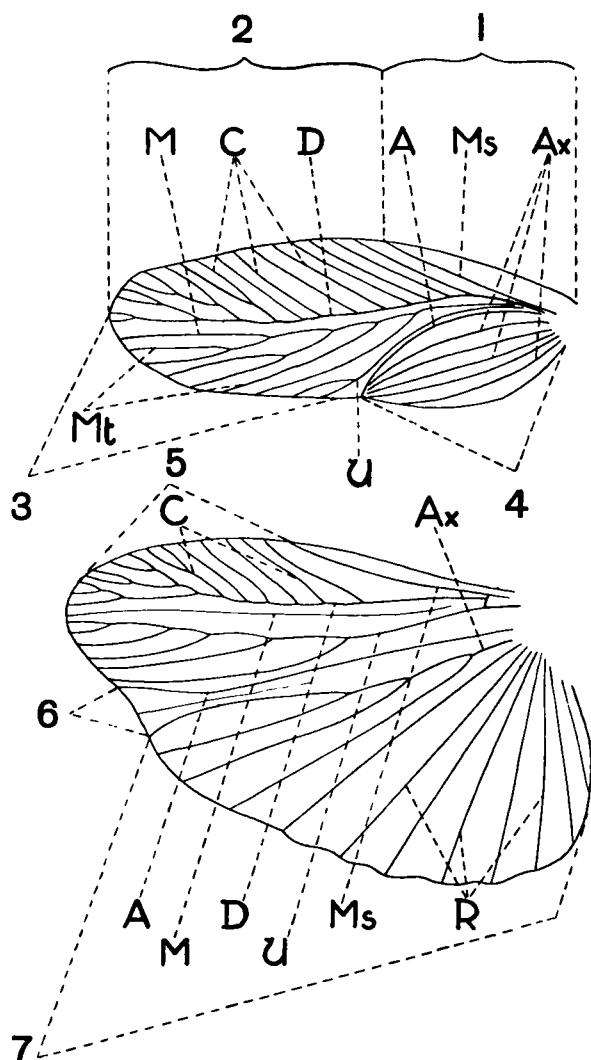


Fig. 1. Diagram of the terminology used for the wing venation. 1, marginal field; 2, scapular field; 3, discoidal field; 4, anal field; 5, anterior field; 6, intercalated field; 7, posterior field; A, anal vein; Ax, axillar vein; C, costal vein; D, discoidal vein; M, median vein; Ms, mediastin vein; Mt, branches of the median vein; R, radial vein; U, ulnar vein.

ECTOBIINAE

Mareta propinqua (Walker)

Blatta propinqua Walker, 1868, p. 228.

Phyllodromia propinqua, Kirby, 1904, p. 93.

Mareta propinqua, Hanitsch, 1933b, p. 122.

Type: ♀, Makassar, Celebes; Wallace; in Oxford Museum.

Remarks. Shelford (1906, 1908) regarded *Blatta propinqua* Walk. as a synonym of *Blatta contigua* Walk. After comparison of the types Hanitsch (1933b) concluded, that the two forms represent distinct species. According to Hanitsch *M. contigua* may be distinguished from *M. propinqua* by the white band between the eyes and the brown maculae along the margins of the abdominal sternites in the former which characters do not occur in the latter.

Mareta jacobsoni (Hebard)

Allactina jacobsoni Hebard, 1929, p. 19, pl. 2 fig. 1.

Chorisoblatta jacobsoni, Hanitsch, 1929b, p. 279.

Mareta jacobsoni, Hanitsch, 1933a, p. 305; 1933b, p. 123.

Type: ♀, Fort de Kock, Sumatra, Jacobson; in Hebard Collection.

Material¹⁾: Leiden Museum 1 ex. Sumatra. Amsterdam Museum 2 ex. Sumatra, 1 ex. Borneo.

Remarks. Originally described by Hebard as genotype of the genus *Allactina* this species has been transferred by Hanitsch into the genus *Mareta* Bol. The characters upon which the genus was based differ only in some unimportant features from those of *Mareta* (smaller intercalated triangle, distinctive colour pattern). Lack of material makes it impossible to conclude in which degree these differences have any importance as generic features.

Mareta globifera Hanitsch

Mareta globifera Hanitsch, 1933b, p. 123.

Type: ♀, Kandari, Celebes, O. Beccari, 1874; type in Genoa Museum.

Mareta granulosa Hanitsch

Mareta granulosa Hanitsch, 1933b, p. 124.

Type: ♂, Celebes, in Oxford Museum.

1) The localities of the region dealt with in the present paper are given with rather full details, the localities of material from outside the region are mentioned in a general way.

Mareta longe-alata Hanitsch

Mareta longe-alata Hanitsch, 1931b, p. 43, fig. 1.

Type: ♂, Angi Gita, Arfak, New Guinea, March 10th 1929; in Brussels Museum.

Mareta suffusa (Walker)

Blatta suffusa Walker, 1868, p. 223.

Phyllodromia suffusa, Kirby, 1904, p. 93.

Mareta suffusa, Shelford, 1912c, p. 52.

Type: ♂, New Guinea; in Oxford Museum.

Mareta contigua (Walker)

Blatta contigua Walker, 1868, p. 228.

Phyllodromia contigua, Tepper, p. 44; Kirby, 1904, p. 93; Hanitsch, 1925, p. 82.

Margattea contigua, Hanitsch, 1928, p. 21.

Mareta contigua, Hanitsch, 1931a, p. 338.

Type: ♀, New Guinea; in Oxford Museum.

Material: Leiden Museum 1 ♂, 1 ♀, Manoembai, Aroe Islands, Snellius Expedition, 11-14 X 1929.

Remarks. According to Hanitsch (1931a) the white band between the eyes is a good feature for this species. Some specimens in the Leiden Museum, however, show this band very indistinctly.

Plumiger histrio (Burmeister)

Thyrsocera histrio Burmeister, 1838, p. 499; Rehn, 1904, p. 545.

Blatta lateralis Serville, 1839, p. 107.

Phyllodromia inversa Brunner, 1865, p. 96.

Pseudomops fissa Walker 1868, p. 213.

Theganopteryx jucunda Saussure, 1869, p. 232.

Thyrsocera lineaticollis Bolivar, 1890, p. 302.

Thyrsocera fissa, Kirby, 1904, p. 78.

Hemithyrsocera histrio, Shelford, 1907a, p. 8; Hanitsch, 1915, p. 27, pl. 3 fig. 13; Hanitsch, 1923a, p. 197; Hanitsch, 1929a, p. 4.

Plumiger histrio, Hebard, 1929, pl. 23; Hanitsch, 1933a, p. 305; Hanitsch, 1933b, p. 125; Hanitsch, 1933c, p. 231.

Type: Java.

Material: Leiden Museum 6 ex. Java, 32 ex. Sumatra, 1 ex. Borneo, 3 ex. ?.

Remarks. *Plumiger histrio* is common in the Malayan subregion, but in the region dealt with in the present paper it has only been recorded from Celebes.

Hemithyrsocera soror (Brunner)

Thrysocera soror Brunner, 1865, p. 120; Tepper, 1893, p. 49.
Hemithyrsocera soror, Kirby, 1904, p. 77; Shelford, 1907a, p. 8; Hanitsch, 1915,
 p. 29; Hanitsch, 1932b, p. 396.

Type: ♂, Celebes; in the collection Dohrn.

Material: Leiden Museum 1 ex. Java.

Remarks. This species is generally common in the Malayan subregion.

ANAPLECTINAE

Anaplectoidea nitida Shelford

Anaplectoidea nitida Shelford, 1906, p. 248, pl. 16 fig. 8-9; Shelford, 1907a, p. 10;
 Hanitsch, 1932b, p. 58; Hanitsch, 1933b, p. 125.

Type: ♀, Batjan, W. Doherty; 1896; in Oxford Museum.

Distribution: Batjan and Makassar, Celebes.

Anaplectoidea dohertyi Shelford

Anaplectoidea dohertyi Shelford, 1907a, p. 10; Shelford, 1907b, p. 25; Hanitsch,
 1932b, p. 58; Hanitsch, 1933b, p. 125.

Type: Sangir, W. Doherty, 1896; in Oxford Museum.

Anaplectella beccarii Hanitsch

Anaplectella beccarii Hanitsch, 1933b, p. 125.

Type: Kandari, Celebes, O. Beccari, 1874; in Genoa Museum.

Remarks. According to Hanitsch (1933b) this species is closely related
 to *A. smedleyi* Han. of the Mentawai Islands.

Anaplecta calosoma Shelford

Anaplecta calosoma Shelford, 1912c, p. 51.

Type: ♀, mouth of the Tami, New Guinea, Prof. Schultze.

Remarks. The description given by Shelford of this species is as far as concerns the colour pattern completely in agreement with that given by Hanitsch of his species *A. vittata* from Singapore. However, the description which Shelford has given of the wing venation differs distinctly from the figure drawn up by Hanitsch. In the Amsterdam Museum there are two ♂ specimens (Bintang, Rho Archipelago and Sumatra, East Coast) which have the same colour pattern as *A. calosoma* and *vittata*, but as far as concerns their wing venations these lie between Shelford's description and the picture given by Hanitsch. One of this specimens has been recorded by

Hanitsch as *A. vittata*. It seems that the description of Shelford has not been known to Hanitsch (the latter expressed the opinion that *A. vittata* was the only species with such a colour pattern). The differences of the wing venations are of minor importance, since intermediates are known; therefore a conclusion might be justified that these species are synonyms.

For the present it is not possible to compare the two types with each other and therefore no final conclusion can be made.

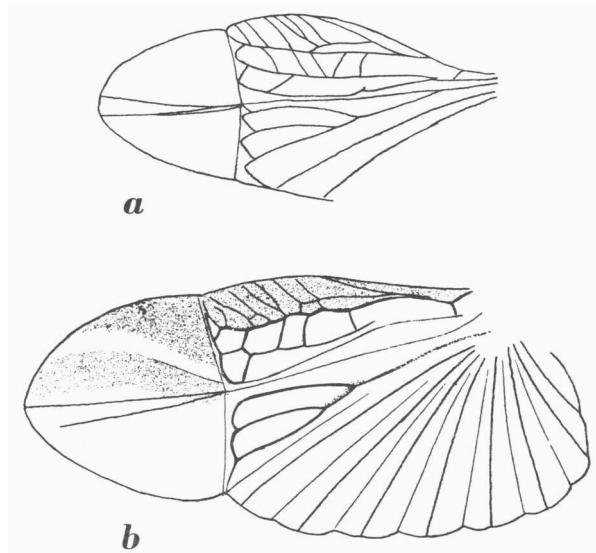


Fig. 2. a, wing of *Anaplecta vittata* Hanitsch (after Hanitsch); b, wing of a specimen of *Anaplecta*, determined by Hanitsch as *A. vittata*. $\times 12\frac{1}{2}$.

For the elucidation of the foregoing the description of *A. calosoma* Shelford and that of *A. vittata* Hanitsch follows as well as a figure of the wing of the specimen determined by Hanitsch from the Amsterdam Museum and also a copy of the figure drawn up by Hanitsch in his description (fig. 2).

A. calosoma Shelford: "♀ Head and pronotum flavo-testaceous. Tegmina castaneous with the entire marginal field and a band crossing each tegmen below the anal field, testaceous; radial vein simple, 8 costals and 3 longitudinal discoidal sectors. Wings slightly infuscated, costal area dilatated, medio-discal area three times broader than medio-ulnar, crossed by 3 transverse venules, ulnar vein simple, apical area $2/5$ of total winglength. Abdomen testaceous with the apex beneath castaneous; supraanal lamina trigonal, subgenital lamina ample, cucullate. Cerci and legs testaceous."

Total length 4-5 mm, length of tegmina 3-5 mm." (l.c., p. 51).

A. vittata Hanitsch: "♀. Head orange, antennae black filiform. Pronotum orange, its lateral margins hyaline. Tegmina black, with a broad white vitta across their middle; mediastinal field hyaline. Wings with the marginal field and apical area fuscous; apical area two-fifths of the total wing length, its basal margin obtusely angled; six costal veins; medio-discal area crossed by five roughly equistant venulae, the distance between the 3rd and the 4th being greatest; 1st axillary vein 3-ramose.

♂. Total length 5 mm, tegmina 4 mm.

Hab.: Near Impounding Reservoir, Thomson Road, Singapore. ... Type in the Oxford Museum. The white vitta across its tegmina readily distinguishes it from the other Malayan species." (l.c., p. 396-397).

PSEUDOMOPINAE

Blattella erythrocephala Hanitsch

Blattella erythrocephala Hanitsch, 1935, p. 15, fig. 1-2.

Type: ♂, Latimodjong Mountains, Celebes, G. Heinrich, Aug.-Sept. 1930.

Remarks. The horseshoe shaped pattern on the pronotum distinguishes this species from *B. germanica* (L.), *B. bisignata* (Brunn.) and *B. cuneivittata* (Han.) (species which all have two longitudinal bands on the pronotum) and also from the species *B. subvittata* Heb., which shows these bands only in a vague manner.

Blattella germanica (Linné)¹⁾

Blatta germanica Linné, 1767, p. 688.

Phyllostroma germanica, Brunner, 1898, p. 197.

Blattella germanica, Hanitsch, 1933b, p. 126; Hanitsch, 1936, p. 39.

Type: ?

Material: Leiden Museum 4 ♀♀, 21 larvae, Hollandia, New Guinea, Dr. P. N. van Kampen; 2 ♂♂, 2 ♀♀, Sekroë, New Guinea, Schaedler, 1897; 1 ♀, Limbatti, Celebes, Rosenberg. Also 15 ex. Java; 11 ex. Sumatra; 4 ex. Borneo; 3 ex. Wettar; 1 ex. Belang; 1 ex. Singapore; 46 ex. Dutch East Indies on board H. M. Snellius; 3 ex. Australia; 1 ex. Surinam; 1 ex. Chile; 1 ex. Samoa; 1 ex. Japan; 1 ex. Guinea; 69 ex. Netherlands; 1 ex. France.

Remarks. Probably this cosmopolitan species is distributed through the whole of the Archipelago.

1) A reference is made only to those publications in which cosmopolitan species are mentioned as far as concerns the region dealt with in the present paper.

Blattella bisignata (Brunner)

Phyllodromia bisignata Brunner, 1893, p. 15, pl. 1 fig. 1; Kirby, 1904, p. 90.
Blatta bisignata, Saussure & Zehntner, 1895, p. 28.
Blattella bisignata, Hebard, 1929, p. 60; Hanitsch, 1933a, p. 306; Hanitsch, 1933b, p. 126; Hanitsch, 1933c, p. 231.

Type: ♂, ♀, Bhamo, Birma; in Genoa Museum.

Material: Leiden Museum 1 ♀, Makassar, Celebes, J. Sonneveldt, Oct. 1927-Apr. 1928. Also 4 ex. Sumatra.

Possoina Strand

Shelfordina Hebard, 1929, p. 46.
Shelfordella Hanitsch, 1933b, p. 126.
Possoina Strand, 1934, p. 275.
Ebnerella Hanitsch, 1935, p. 14.

The genus *Shelfordina* Hebard was based on a wrong determination and for this reason Hanitsch altered this name into that of *Shelfordella*. This new name, however, was praecoccupied and therefore Strand replaced it by that of *Possoina*; meanwhile Prof. Ebner did point out the praecoccupation to Hanitsch, who consequently, in an article published by him shortly after that of Strand, proposed that the name of *Ebnerella* should be used.

Possoina uniformis (Hanitsch)

Shelfordella uniformis Hanitsch, 1933b, p. 127, fig. 1.

Type: ♂, Lake Posso, Celebes, Sarasin, Feb. 1895; in Basel Museum.

Haplosymploce sequens (Walker)

Blatta sequens Walker, 1868, p. 229.
Phyllodromia sequens, Kirby, 1904, p. 93; Shelford, 1906, p. 491; Shelford, 1908a, p. 14.
Haplosymploce sequens, Hanitsch, 1933b, p. 128.

Type: ♂, Makassar, Celebes, Wallace; in Oxford Museum.

Haplosymploce curta (Hanitsch)

Symploce curta Hanitsch, 1932a, p. 264.
Haplosymploce curta, Hanitsch, 1933b, p. 128.

Type: ♀, Mampoe cave, S. Celebes, S. Leefmans, Sept. 1929; ?.

Remarks. According to Hanitsch the type should be in the Leiden Museum but it could not be found in this collection; probably the type is still in the collection of the Buitenzorg Museum.

Symploce breviramis (Hanitsch)*Ischnoptera breviramis* Hanitsch, 1929a, p. 10.*Symploce breviramis*, Hanitsch, 1932a, p. 265; Hanitsch, 1933b, p. 129.

Type: ♂, ♀, Medan, Sumatra, E. Mjöberg, 1919-1921; in Stockholm Museum.

Symploce castanea Hanitsch*Symploce castanea* Hanitsch, 1933b, p. 129.

Type: ♀, Buol, N. Celebes, Sarasin, Aug. 1894; in Basel Museum.

Symploce excavata (Shelford)

Ischnoptera excavata Shelford, 1906, p. 265, pl. 16 fig. 11; Shelford, 1908a, p. 7; Hanitsch, 1915, p. 38.

Symploce excavata, Hebard, 1929, p. 68; Hanitsch, 1933a, p. 306; Hanitsch, 1933b, p. 129; Hanitsch, 1933c, p. 231.

Type: ♂, Sarawak; in Oxford Museum.

Symploce perpulchra (Shelford)*Ischnoptera perpulchra* Shelford, 1907b, p. 27; Shelford, 1908a, p. 7.*Symploce perpulchra*, Hanitsch, 1933b, p. 129; Hanitsch, 1935, p. 15, figs. 3-6.

Type: ♀, Makassar, Celebes, W. Doherty, 1896; in Oxford Museum.

Material: Leiden Museum 1 ♀, Minahassa, P. J. van den Bergh; 3 ♀♀, Goeroepahi, N. Celebes, April 13th 1917.

Remarks. This species is exclusively known from Celebes.

Symploce sarasinorum Hanitsch*Symploce sarasinorum* Hanitsch, 1933b, p. 130, figs. 2-3.

Type: ♂, between Mingkoka and Kendari, S. E. Celebes, 1895; ♀, Mo-wewe, S. E. Celebes, February 23rd 1903, Sarasin; in Basel Museum.

Symploce albo-marginata Hanitsch*Symploce albo-marginata* Hanitsch, 1935, p. 16.

Type: ♀, Bantimoeroeng, Celebes, G. Heinrich, Aug. 1931; in Berlin Zoological Museum.

Remarks. According to Hanitsch this species is narrowly related to *S. sarasinorum* but differs from it by its smaller proportion and by the whitish margins of the pronotum and tegmina.

Symploce fissa Hanitsch

Symploce fissa Hanitsch, 1935, p. 17, fig. 7.

Type: ♂, Paleleh, Celebes, G. Heinrich, December 15th 1930; in Berlin Zoological Museum.

Parasymploce picticollis (Walker)

Blatta picticollis Walker, 1869, p. 140.

Phyllodromia picticollis, Kirby, 1904, p. 91; Shelford, 1908a, p. 14.

Parasymploce picticollis, Hanitsch, 1933b, p. 131, fig. 4.

Type: ♀, Makassar, Celebes, Wallace; in Oxford Museum.

Parasymploce penicillata Hebard

Parasymploce penicillata Hebard, 1929, p. 71, pl. 4 fig. 7; Hanitsch, 1933b, p. 131; Hanitsch, 1933c, p. 232; Hanitsch, 1936, p. 391.

Type: ♂, Jarak, W. coast Malay Peninsula, V. Knight, April 1921; in Oxford Museum.

Parasymploce castanea Hanitsch

Parasymploce castanea Hanitsch, 1933b, p. 132.

Type: ♀, Ussu, S. E. Celebes, Sarasin, Feb. 1896; in Basel Museum.

Parasymploce triangulifera Hanitsch

Parasymploce triangulifera Hanitsch, 1933b, p. 132.

Type: ♀, Ile-Ile, Celebes, G. Heinrich; in the Berlin Zoological Museum.

Parasymploce biguttata Hanitsch

Parasymploce biguttata Hanitsch, 1936, p. 392.

Type: ♀, Station 5, Boeroe, L. J. Toxopeus, 1921; in Buitenzorg Museum.

Parascalida fusca Hanitsch

Parascalida fusca Hanitsch, 1936, p. 393.

Type: ♂, Station 9, Boeroe, L. J. Toxopeus, 1921; in Buitenzorg Museum.

Scalida latiusvittata (Brunner)

Phyllodromia latiusvittata Brunner, 1898, p. 202, pl. 16 fig. 2; Kirby, 1904, p. 90; Shelford, 1908a, p. 14; Hanitsch, 1915, p. 42; Hanitsch, 1923 a, p. 198; Hanitsch, 1923b, p. 407.

Margattea latiusvittata, Hanitsch, 1928, p. 23; Hanitsch, 1929a, p. 13; Hanitsch, 1929b, p. 276.

Scalida latiusvittata, Hebard, 1929, p. 53; Hanitsch, 1933b, p. 133.

Type: ♂, Buitenzorg, Java, Prof. Dr. W. Küenthal: in Frankfort/M. Senckenberg Museum.

Material: Leiden Museum 3 ex. Java. Amsterdam Museum 6 ex. Sumatra.

Margattea ceylonica (Saussure)

Blatta ceylonica Saussure, 1868, p. 355; Saussure, 1869, p. 247.

Allacta ceylanica, Kirby, 1904, p. 100.

Phyllodromia nimbata Shelford, 1907b, p. 31; Shelford, 1908a, p. 13; Hanitsch, 1915, p. 57; Hanitsch, 1923b, p. 410.

Phyllodromia ceylanica, Shelford, 1908a, p. 12.

Margattea ceylonica, Shelford, 1911, p. 155; Hanitsch, 1933a, p. 310; Hanitsch, 1933c, p. 232; Hanitsch, 1934, p. 118; Hanitsch, 1936, p. 392.

Margattea nimbata, Hanitsch, 1929a, p. 13; Hanitsch, 1931a, p. 392.

Kuchinga nimbata, Hebard, 1929, p. 42.

Type: ♀, Ceylon, Prof. A. Humbert.

Material: Leiden Museum 4 ex. Java; 1 ex. Krakatau.

Remarks. This is a rather common species in the Malayan subregion.

Papuablatta nov. gen.

The new genus is related to *Margattea* Shelford, but differs in the broad posterior field of the wing, the intercalated field, which lies at the top of the wing, and in the specialisation of the first abdominal tergite of the male.

Head with space between the antennal sockets slightly narrower than that between the eyes. Pronotum broad. Tegmina with simple discoidal veins and longitudinal discoidal sectors. Wings with a narrow anterior and a broad posterior field; intercalated field situated at the top but not prominent as in *Lupparia* Walker. First tergite of male specialized. Ventro-cephalic margin of cephalic femora armed with heavy spines, followed by a series of piliform spinules and distad two heavy spines (type B2).

Genotype: *Papuablatta spinifera* nov. spec.

Papuablatta spinifera nov. spec. (fig. 3)

Type: ♂, Hollandia, New Guinea, Dr. P. N. van Kampen, 1911; in the Leiden Museum.

Head with sides strongly converging; interocular space slightly larger than that between the antennal sockets; palpi with fifth joint longer and fourth joint slightly shorter than third. Pronotum one and a half times as broad as long, cephalic margin straight, rounding gradually into the lateral margins; caudal margin distinct but weakly produced with apex rounded.

Tegmina with seventeen costal veins. Wings with costal veins thickened

distad; the medio-discoidal area broad; distinct cross-veinlets between discoidal and median vein; ulnar vein bifurcated.

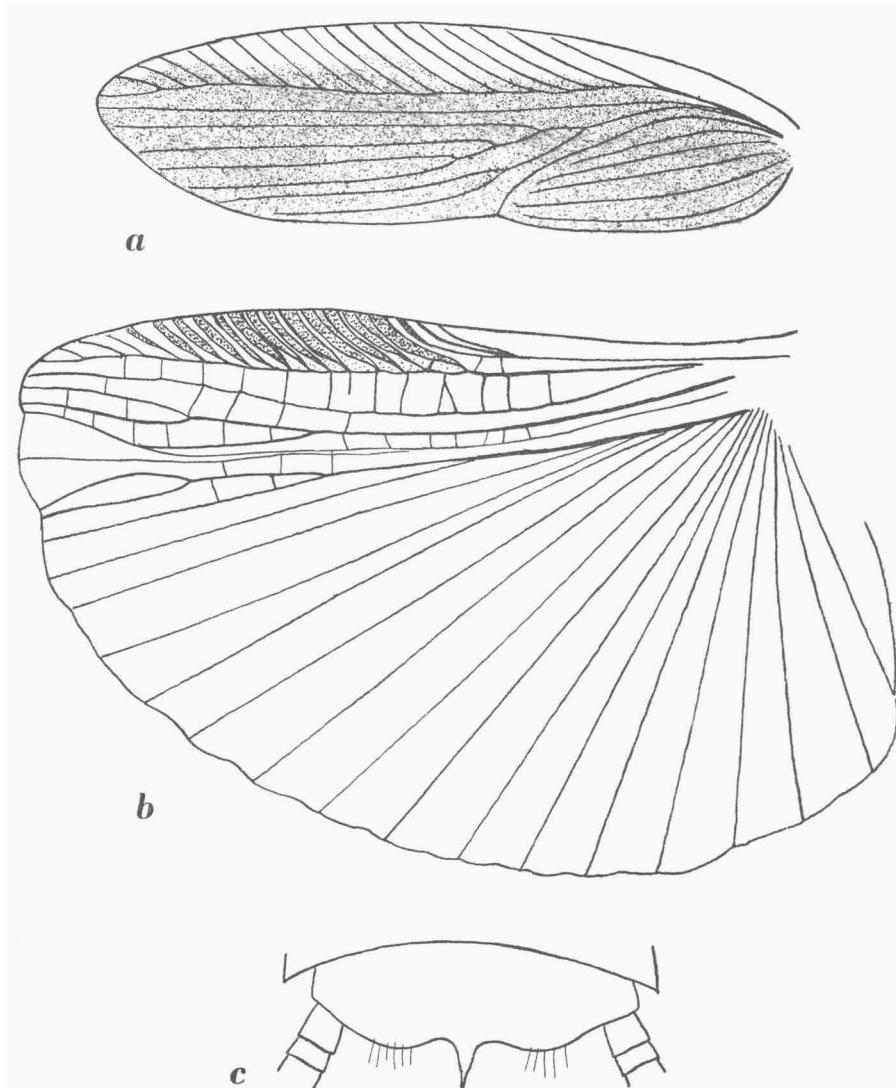


Fig. 3. *Papuablatta spinifera* nov. spec. a, tegmen ♂; b, wing ♂; c, supra-anal plate ♂. a $\times 12\frac{1}{2}$, b $\times 13$, c $\times 40$.

First abdominal tergite of male specialized; specialization formed by two ridges which first run from the middle of the cephalic margin in caudo-lateral direction but afterwards turn in cephalic direction; between these ridges a median brush of radially placed hairs.

Supra-anal plate three times as broad as long; the caudal margin on each side sigmoid and produced in the median. Sub-genital plate almost symmetrical; dextral style distinct, with some spines. Sinistral spine damaged in the type.

Tarsal claws symmetrical, unspecialized.

Head castaneous except the clypeus and the labrum, which are pale ochraceous tawny. Pronotum also castaneous with a narrow cephalic and broader lateral portions ochraceous.

Tegmina castaneous except the ochraceous lateral portions. Wings tinged with smoky-brown, this strongest in the area of the costal veins, which form a dark patch. Abdomen castaneous; the caudal margins of the sternites tawny.

Measurements: total length 9.5 mm, length tegmina 8 mm, width tegmina 2.3 mm, pronotum 2 × 3 mm.

Symplocodes ridleyi (Shelford)

Ischnoptera ridleyi Shelford, 1907b, p. 26; Shelford, 1908a, p. 7; Hanitsch, 1915, p. 39; Hanitsch, 1929a, p. 8.

Hemithysocera ridleyi, Shelford, 1912b, p. 660, pl. 80 fig. 15; Hanitsch, 1929a, p. 4.

Symplocodes ridleyi, Hebard, 1929, p. 75; Hanitsch, 1931b, p. 45; Hanitsch 1933a, p. 310; Hanitsch, 1933b, p. 113; Hanitsch, 1933c, p. 232; Hanitsch, 1936, p. 392.

Symploce ridleyi, Hanitsch, 1932c, p. 3; Hanitsch, 1933c, p. 231.

Type: ♂, Singapore; in the Oxford Museum.

Material: Leiden Museum 5 ex. Java; 2 ex. Sumatra; 1 ex. Borneo.

Remarks. Common in the Malayan subregion.

Parasigmoidella marginalis Hanitsch

Parasigmoidella marginalis Hanitsch, 1931b, p. 46, figs. 2–4.

Type: ♂, New Guinea and ♀, Siwi, New Guinea, H. R. H. Prince Leopold of Belgium, March 8th 1929; in the Brussels Museum.

Parasigmoidella? beccarii Hanitsch

Parasigmoidella beccarii Hanitsch, 1933b, p. 133, fig. 5.

Type: ♂, Kandari, Celebes, O. Beccari, April 1874; in the Genoa Museum.

Remarks. Hanitsch provisionally placed this species in this genus.

Pseudophyllodromia? bipunctata (Walker)

Blatta bipunctata Walker, 1869, p. 141.

Prosoplecta bipunctata, Kirby, 1904, p. 177.

Pseudectobia bipunctata, Shelford, 1906, p. 495, pl. 30 fig. 3.

Pseudophyllodromia bipunctata, Shelford, 1908a, p. 17; Hanitsch, 1933b, p. 134.

Type: ♀, Makassar, Celebes, Wallace; in the Oxford Museum.

Arublatta nov. gen.

Head broad. Space between the eyes less than that between the antennal sockets. Pronotum transverse, symmetrically trapezoidal with angles rounded. Tegmina and wings fully developed, discoidal sectors of former oblique. Discoidal veins of the tegmina and wings bifurcating several times at the end. Intercalated field distinct. Ventocephalic margin of cephalic femora armed with heavy spines followed by piliform spinules and two heavy spines again at the distad part (type B2).

Subgenital plate ♂, almost symmetrical, styli present. Dorsal surface male abdomen unspecialized.

Genotype: *Arublatta basivittata* nov. spec.

Arublatta basivittata nov. spec. (fig. 4)

Type: ♂, Manoembai, Aroe Islands, Snellius Expedition, October 11th-14th 1929; in the Leiden Museum.

Material: 1 ♂, 1 ♀, Manoembai, Aroe Islands, Snellius Expedition, October 11th-14th 1929; 2 ♀♀, 1 ?, Hollandia, New Guinea Expedition. All in the Leiden Museum.

♂. Head broad, sides strongly converging. The third joint of the palpi slightly longer than fourth and fifth, which are of subequal length. Pronotum almost twice as broad as long, cephalic and caudal margin weakly convex.

Tegmina moderately broad, with eleven costal veins of which the distant three are bifurcated; distinct cross-veinlets between the costals; ulnar vein with five branches; axillary vein with three branches.

Subgenital plate almost symmetrical.

Head dark mummy brown except the mahogany red vertex; pronotal disk shining mummy brown nearly black, margin of the caudo-lateral angles yellow.

Tegmina also shining mummy brown except a sub-transparent ochraceous band which runs across the basal part of the anal field.

Wings transparent, heavily suffused with smoke-coloured brown, the intercalated field lighter. Abdomen shining mummy brown.

♀. Agrees closely with male, differing in the shorter tegmina and wings.

Measurements:	♂	♀
total length	11.5	10.5 mm,
tegmina	9.5	8.5 mm,
pronotum	3.5 × 2	3.5 × 2 mm.

According to Shelford's figure, *Pseudophyllodromia? bipunctata* (Walker) from Celebes agrees with this new species but differs from it in the

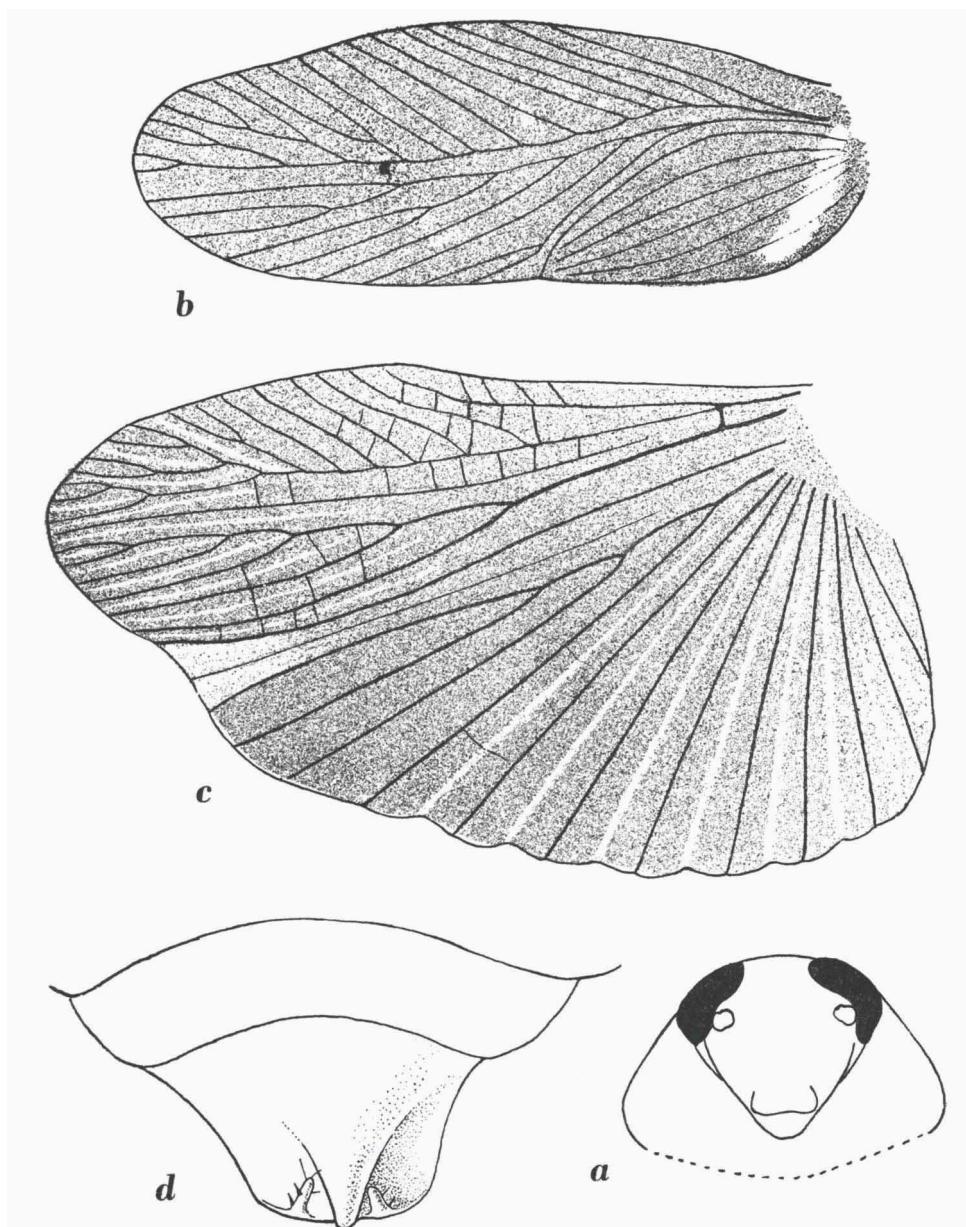


Fig. 4. *Arublatta basivittata* nov. spec. a, outline of head ♂; b, tegmen ♂; c, wing ♂; d, subgenital plate ♂. a $\times 11$, b $\times 11$, c $\times 12\frac{1}{2}$, d $\times 28$.

tegmina which have two small white patches besides the basal markings.

The specimens from New Guinea are damaged and discoloured.

Pseudothrysocera xanthophila (Walker)

Blatta xanthophila Walker, 1868, p. 230.

Thrysocera xanthophila, Kirby, 1904, p. 78.

Pseudothrysocera xanthophila, Shelford, 1908a, p. 5; Hanitsch, 1929b, p. 268; Hanitsch, 1933b, p. 135.

Type: ♂, Menado, Celebes, Wallace; in the Oxford Museum.

Material: Leiden Museum 4 ex. Sumatra; 2 ex. Belang.

Pseudothrysocera henrici Hanitsch

Pseudothrysocera henrici Hanitsch, 1935, p. 17.

Type: ♂, Latimodjong Mountains, Oeroe, Celebes, G. Heinrich, August-September 1930; in Berlin Zoological Museum.

Remarks. Narrowly related to the former species, but differs in the colour of the legs and the head.

Lupparia inconspicua Shelford

Lupparia inconspicua Shelford, 1912c, p. 52.

Type: ♀, mouth of the Tami River, New Guinea, Prof. Dr. A. Schultze.

Remarks. The description of this species is too short to be clear.

Hanitschia nov. nom.

Mopsella Hanitsch, 1936, p. 394.

The genus name *Mopsella* was preoccupied (*Mopsella* Gray, 1857, Proc. Zool. London, vol. 25, p. 284, Anthozoa Octocorallia) and consequently it has to be altered. In honour of the great scientist, the late Dr. R. Hanitsch, I propose the new name *Hanitschia* for *Mopsella*.

Hanitschia toxopei (Hanitsch)

Mopsella toxopei Hanitsch, 1936, p. 394, figs. 5-6.

Type: ♀, Boeroe, L. J. Toxopeus, 1921; in Buitenzorg Museum.

Liosilphoidea lata (Hanitsch)

Liosilpha lata Hanitsch, 1923b, p. 416, fig. 14.

Liosilphoidea lata, Hanitsch, 1931b, p. 48; Hanitsch, 1933a, p. 314.

Type: ♀, Kuching, Sarawak, Shelford, 1900 and ♂, Botanic Gardens, Singapore, H. N. Ridley, 1908; in Oxford Museum.

Ellipsidion castaneum (Shelford)

Ellipsidium castaneum, Shelford, 1907b, p. 28.

Ellipsidion castaneum, Shelford, 1908a, p. 6, pl. 1 fig. 6.

Type: ♀, Humboldt Bay, New Guinea, W. Doherty, 1896; in Oxford Museum.

Ellipsidion terminale Hanitsch

Ellipsidion terminale Hanitsch, 1923a, p. 201, fig. 4.

Type: ♀, Merauke, New Guinea, 1904; in Buitenzorg Museum.

Remarks. Narrowly related to *E. aurantium* Saussure from Australia. Differs from it in the black bases and tips of the tegmina.

This species and the former are two of the few representatives of this genus which are appearing outside Australia.

EPILAMPRINAE

Haanina macassariensis (De Haan)

Blatta (Epilampra) macassariensis De Haan, 1842, p. 51, pl. 18 fig. 7.

Homalopteryx macassariensis, Brunner, 1865, p. 197; Kirby, 1904, p. 115; Shelford, 1910a, p. 8, pl. 1 fig. 10; Hanitsch, 1923a, p. 202; Hanitsch, 1933b, p. 135; Hanitsch, 1935, p. 18; Hanitsch, 1936, p. 395.

Epilampra basifera Walker, 1869, p. 131.

Epilampra strigifrons Walker, 1869, p. 132.

Haanina macassariensis, Hebard, 1929, p. 89.

Type: ♀, Makassar, Muller; in Leiden Museum.

Material: Leiden Museum 1 ♀, 2 larvae, Makassar, Muller; 5 ♂♂, Ambon, Forsten; 4 ♀♀, North Halmahera, Bernstein; 3 ♀♀, Soemalatta, Celebes, Rosenberg.

Remarks. One of the most common Blattidae in the Moluccas and Celebes. Occurs also in the Philippines.

Haanina intermedia (Bolivar)

Homalopteryx intermedia Bolivar, 1898, p. 137; Kirby, 1904, p. 115; Shelford, 1910a, p. 8.

Type: ♀, Hassam, New Guinea, Vraz.

Remarks. Hebard has made a distinction between the species from the Americas, and those occurring outside the Americas, and has pointed out that only the former group, those of the Americas, are belonging to the genus *Homalopteryx* Brunner. Using *Blatta macassariensis* as genotype he has described the genus *Haanina*. Considering the narrow relationship between *Haanina macassariensis* and *Homalopteryx intermedia* it is almost certain that *H. intermedia* belongs to the genus *Haanina*.

Rhabdoblatta concinnula (Walker)

Epilampra concinnula Walker, 1896, p. 134.

Heterolampra concinnula, Kirby, 1904, p. 122.

Rhabdoblatta concinnula, Shelford, 1910a, p. 13; Hanitsch, 1936, p. 395.

Type: ♀, Timor; in Oxford Museum.

Material: Leiden Museum 2 ♀♀, Makassar, Muller; 1 ♀, Waigeo, Bernstein; 1 ♀, Beo, Talaut Islands, Snellius Expedition, 14-21 VI 1930. Also from Timor and Borneo.

Rhabdooblatta castanea Hanitsch

Rhabdooblatta castanea Hanitsch, 1936, p. 396.

Type: ♀, Nal'besi, Boeroe; in Buitenzorg Museum.

Remarks. Very closely related to *R. concinnula* (Walk.) but differing from it in regard to its castaneous colour.

Rhabdooblatta procera (Brunner)

Epilampra procera Brunner, 1865, p. 192.

Epilampra borrei Saussure, 1873, p. 127, pl. 10 fig. 44.

Hedaia procera, Kirby, 1904, p. 124.

Rhabdooblatta procera, Shelford, 1910a, p. 13; Hanitsch, 1915, p. 77; Hanitsch, 1923a, p. 203; Hanitsch, 1923b, p. 426; Hanitsch, 1925, p. 92; Hanitsch, 1928, p. 30; Hanitsch, 1929a, p. 15; Hanitsch, 1929b, p. 281; Hanitsch, 1930, p. 188; Hanitsch, 1931b, p. 51; Hanitsch, 1932b, p. 69; Hanitsch, 1933a, p. 319; Hanitsch, 1933b, p. 135; Hanitsch, 1933c, p. 233; Hanitsch, 1934, p. 121.

Type: ♀, Java; in Vienna Museum, collection Brunner.

Material: Leiden Museum 5 ex. Java; 1 ex. Bengal.

Remarks. *R. procera* is a common species in the Malayan part of the Archipelago.

Rhabdooblatta pertruncata (Brunner)

Epilampra truncata Brunner, 1898, p. 207.

Heterolampra truncata, Kirby, 1904, p. 122.

Rhabdooblatta truncata, Shelford, 1910a, p. 13; Hanitsch, 1933b, p. 136; Hanitsch, 1935, p. 18.

Rhabdooblatta pertruncata Hanitsch, 1936, p. 396.

Type: ♂, ♀, Minahassa, Celebes, Kükenthal, 1893-1894; in Frankfort/M. Senckenberg Museum.

Material: Leiden Museum 1 ♂, 1 ?, Bolaang, N. Celebes, W. Kaudern, May 15th 1917; 1 ♂, Limbatti, Celebes, Rosenberg.

Remarks. This is a rather common species on Celebes.

Epilampra plena Walker

Epilampra plena Walker, 1868, p. 210; Shelford, 1906, p. 499; Shelford, 1910a, p. 15; Hanitsch, 1915, p. 79; Hanitsch, 1923b, p. 430; Hanitsch, 1925, p. 92.

Heterolampra plena, Kirby, 1904, p. 122.

Type: ♀, Makassar, Celebes, Wallace; in Oxford Museum.

Epilampra fervida Walker

Epilampra fervida Walker, 1868, p. 211; Hebard, 1929, p. 86; Hanitsch, 1933b, p. 136.
Heterolampra fervida, Kirby, 1904, p. 122.

Type: ♀, Makassar, Celebes, Wallace; in Oxford Museum.

Remarks. According to Shelford (1910) *E. fervida* and *E. plena* are synonyms, but Hanitsch, who compared the types with each other provisionally kept them separated. According to Hanitsch the coloration of *E. fervida* is paler than that of *E. plena*.

Epilampra dytiscoides var. **celebensis** Hanitsch

Epilampra dytiscoides var. *celebensis* Hanitsch, 1933b, p. 136.

Type: ♀, Ile-Ile, Celebes, G. Heinrich, December 11th 1930; in Berlin Zoological Museum.

Remarks. The variety *celebensis* is larger and has a black pronotum.

Epilampra keraudrenii (Le Guillou)

Blatta keraudrenii Le Guillou, 1841, p. 292.

Epilampra keraudrenii, Brunner, 1865, p. 182; Shelford, 1910a, p. 5; Hanitsch, 1923a, p. 204.

Heterolampra keraudrenii, Kirby, 1904, p. 122.

Type: ?, Triton Bay, New Guinea.

Epilampra gjellerupi Hanitsch

Epilampra gjellerupi Hanitsch, 1923a, p. 205, fig. 6.

Type: ♀, New Guinea, Gjellerup, 1911; in Buitenzorg Museum.

Epilampra papua Saussure

Epilampra papua Saussure, 1895, p. 361, pl. 9 fig. 16, Shelford, 1910a, p. 15.

Heterolampra papua, Kirby, 1904, p. 122.

Type: ♀, New Guinea; in Geneva Museum.

Epilampra doleschali Brunner

Epilampra doleschali Brunner, 1865, p. 194; Shelford, 1910a, p. 15.

Heterolampra doleschali, Kirby, 1904, p. 122.

Type: ♀, Ambon; in Vienna Museum.

Stictolampra trilineata Hanitsch

Stictolampra trilineata Hanitsch, 1931b, p. 52, pl. 1 fig. 2.

Type: ♂, New Guinea, H. R. H. Prince Leopold of Belgium; in Brussels Museum.

Stictolampra brevipennis Hanitsch

Stictolampra brevipennis Hanitsch, 1931b, p. 53, pl. 1 fig. 3.

Type: ♀, Sakoemi, Arfak, New Guinea, H. R. H. Prince Leopold of Belgium; in Brussels Museum.

Stictolampra lurida (Burmeister)

Epilampra lurida Burmeister, 1838, p. 505; De Haan, 1842, p. 50; Brunner, 1865, p. 185; Rehn, 1909, p. 178; Shelford, 1910a, p. 14; Hanitsch, 1919, p. 68; Hanitsch, 1923b, p. 429, pl. 12 fig. 7; Hanitsch, 1925, p. 92; Hebard, 1929, p. 28.

Blatta cribricollis Serville, 1839, p. 93.

Heterolampra lurida, Kirby, 1904, p. 122.

Stictolampra lurida, Hanitsch, 1931b, p. 52; Hanitsch, 1933a, p. 319; Hanitsch, 1933b, p. 137; Hanitsch, 1933c, p. 233.

Type: Java.

Material: Leiden Museum 2 ♂♂, 1 ♀, New Guinea Expedition, Dr. P. N. van Kampen, 1911; 1 ♀, New Guinea, ex coll. Fruhstorfer.

Also 3 ex. from Borneo and 5 ex. from Bengal.

Remarks. In the Malayan part of the Archipelago a common species.

Rhincnoda rugosa Brunner

Rhincnoda rugosa Brunner, 1893, p. 31, pl. 1 figs. 11a-11b; Krauss, 1903, p. 747; Kirby, 1904, p. 124; Rehn, 1904, p. 552; Rehn, 1909, p. 179; Shelford, 1910a, p. 9; Hanitsch, 1915, p. 93; Hanitsch, 1923a, p. 205; Hanitsch 1925, p. 94; Hanitsch, 1929a, p. 15; Hanitsch, 1929b, p. 283; Hanitsch, 1933b, p. 138.

Type: ♀♀, Tenasserim, Pegoe and Java; in Vienna Museum, Brunner collection.

Material: Leiden Museum 1 ex. Sumatra; 9 ex. Borneo.

Remarks. Common in the Malayan part of the Archipelago.

Pseudoplatia atra Hanitsch

Pseudoplatia atra Hanitsch, 1931b, p. 54, pl. 1 fig. 4; Hanitsch, 1936, p. 395.

Type: 3 ♀♀, Manoembai, Aroe Islands, H. R. H. Prince Leopold of Belgium, March 26th 1929; in Brussels Museum.

Material: 1 ♀, Amboin, Hoedt, 1864.

Pseudophoraspis nebulosa (Burmeister)

Epilampra nebulosa Burmeister, 1838, p. 505; Brunner, 1865, p. 193, pl. 4 figs. 19A-E; Walker, 1868, p. 194; Krauss, 1903, p. 747.

Blatta jaspidea Serville, 1839, p. 88; Saussure, 1864, p. 138; Brunner, 1865, p. 184; Walker, 1868, p. 193.

Epilampra congrua Walker, 1868, p. 199.

Epilampra conformis Walker, 1868, p. 200.

Epilampra scita Walker, 1868, p. 200.

Epilampra deplanata Walker, 1868, p. 200.

Pseudophoraspis nebulosa, Kirby, 1904, p. 119; Shelford, 1910a, p. 12, pl. 2 fig. 4; Hanitsch, 1915, p. 72, pl. 5 fig. 4; Hanitsch, 1923a, p. 203; Hanitsch, 1923b, p. 425, pl. 12 fig. 4; Hanitsch, 1928, p. 30; Hebard, 1929, p. 91; Hanitsch, 1929a, p. 15; Hanitsch, 1930, p. 188; Hanitsch, 1931a, p. 394; Hanitsch, 1932b, p. 69; Hanitsch, 1933a, p. 317; Hanitsch, 1933c, p. 233; Hanitsch, 1934, p. 121.

Type: Java.

Material: Leiden Museum 2 ♀♀, Makassar, Celebes. Also 12 ex. Java; 3 ex. Sumatra; 15 ex. Borneo; 1 ex. Poeloe Weh; 1 ex. Banka and 2 ex. Malay Peninsula.

Remarks. Very common species in the Malayan part of the Archipelago.

Derocardia acutipennis Saussure

Derocardia acutipennis Saussure, 1895, p. 353, pl. 9 fig. 11; Kirby, 1904, p. 119; Shelford, 1910a, p. 13.

Type: ♀, Ambon; in Brussels Museum.

Remarks. *D. acutipennis* Sauss. is the genotype and also as far as known the only species of the genus *Derocardia* Sauss.

Audreia kampeni¹⁾ nov. spec. (fig. 5).

Type: ♀, Hollandia, New Guinea, Dr. P. N. van Kampen, 1911; in Leiden Museum.

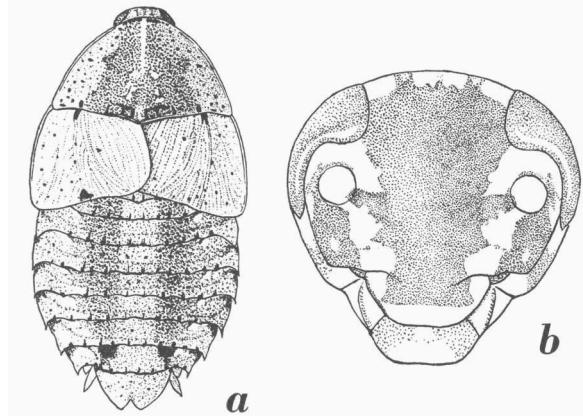


Fig. 5. *Audreia kampeni* nov. spec. a, general outline ♀; b, outline head ♀. a × 2, b × 8½.

♀. Size medium for genus. Form decidedly depressed, oval. Head with

1) In honour of the late Prof. Dr. P. N. van Kampen.

occiput visible beyond pronotum, broadly pyriform; interocular space narrower than space between the antennal sockets.

Antennae mutilated. Palpi slender, ultimate and penultimate joints equal in length.

Pronotum with cephalic margin strongly convex; caudal margin very slightly produced.

Tegmina strongly chitinous, trapezoidal, lateral margin thickened, slightly convex. Caudo-lateral angle of tegmina less rounded than medio-caudal; medio-caudal part of metanotum not covered by tegmina. Wings represented by lateral squamiform appendages.

Abdomen very broad with longitudinal ridges along the caudal margins of the tergites, the latero-caudal angles acute-angulately produced.

Supra-anal plate with a strong angulate emargination in the median. Subgenital plate large, arcuate with a shallow emargination before each cercus.

Cephalic and caudal legs mutilated.

General coloration ochraceous buff; the centre of pronotum mummy-brown; along the caudal margin some longitudinal mummy-brown maculae; in the lateral parts also small maculae of the same colour.

Tegmina with a dark nearly black patch at the base of the discoidal vein. Tergites also with small maculae of mummy-brown which are closer together in two longitudinal bands; along the caudal margin the maculae are larger. Ventral part abdomen mummy-brown with ochraceous lateral margins.

Head almost black except the vertex which is ochraceous with three narrow bands; the mouthparts, clypeus, ocelli and lateral margins are also ochraceous.

Measurements: length of body 26.5 mm, width of head 4.5 mm, pronotum 7 × 12 mm, length of external margin tegmen 7 mm, internal margin 5 mm, greatest width abdomen 14.5 mm.

BLATTINAE

Cutilia secunda (Tepper)

Leptozosteria secunda Tepper, 1894, p. 183; Kirby, 1904, p. 131.

Polyzosteria triangulata Brunner, 1893, p. 33; Krauss, 1903, p. 750, pl. 67 fig. 1.

Cutilia triangulata, Shelford, 1909, p. 291; Shelford, 1910b, p. 8.

Cutilia secunda, Shaw, 1925, p. 192.

Type: ♀, Cooktown, Queensland, C. French; in Queensland Museum.

Remarks. The differences of opinion about the nomenclature were settled by Shaw (l.c.).

Cutilia nitida (Brunner)

Platyzosteria nitida Brunner, 1865, p. 214.
Periplaneta polita Walker, 1868, p. 139.
Polyzosteria (Platyzosteria) nitida, Saussure, 1872, p. 112.
Cutilia tartarea Stål, 1877, p. 36.
Melanozosteria nitida, Kirby, 1904, p. 129.
Cutilia nitida, Shelford, 1910b, p. 8; Hanitsch, 1915, p. 99; Hanitsch, 1923a, p. 207;
Hanitsch, 1923b, p. 433; Shaw, 1925, p. 188; Hanitsch, 1931b, p. 55; Hanitsch, 1933b,
p. 139; Hanitsch, 1934, p. 123; Hanitsch, 1936 p. 397.

Type: ♂, ♀, Ambon; in Vienna Museum.

Material: Leiden Museum 1 ♂, 1 ♀, Ambon, Hoedt; 4 ♂♂, 1 ♀, 5 larvae, Morotai, Snellius Expedition, 3-7 VI 1930; 2 ??, Ambon, Forsten; 1 ♂, 1 ♀, Morotai, Bernstein; 1 ♀, 2 larvae, Pasi Ipah, near Soela Mangoli, Snellius Expedition, 18-19 III 1930; 2 ♀♀, 3 larvae, Tidore, Snellius Expedition, 24-29 IX 1928; 1 ♀, 7 larvae, Obi latoe, Snellius Expedition, 23-27 IV 1930; 1 ♂, 2 ♀♀, 2 larvae, Aroe Islands, Manoembai, Snel'ius Expedition, 11-14 X 1929; 1 ♀, Haroekoe, Snellius Expedition, 3-7 V 1930; 1 ♂, Sipankot, Snellius Expedition, 10-14 IV 1929; 1 ♀, Ceram, Forsten; 1 ♂, 4 ♀♀, Hollandia, New Guinea Expedition, Dr. P. N. van Kampen, 1911. Also 2 ex. Borneo; 2 ex. Samoa; 2 ex. ?.

Amsterdam Museum: ♂, Ambon, Hoedt, 1880.

Remarks. Through the whole of the Malayan and Australian regions and also on Formosa a common species.

Cutilia tristylata Hanitsch

Cutilia tristylata Hanitsch, 1933b, p. 139.

Type: 3 ♂♂, 1 ♀, Lake Posso, Celebes, Sarasin, February 1895, in Basel Museum.

Remarks. The subgenital plate with its spinous prolongation forms a clear distinction of this species.

Platyzosteria soror (Brunner)

Polyzosteria soror Brunner, 1865, p. 219.
Periplaneta semicincta Walker, 1868, p. 140.
Polyzosteria (Platyzosteria) soror, Saussure, 1872, p. 107.
Platyzosteria soror, Shelford, 1909, p. 285, pl. 8 figs. 24 a-b; Shelford, 1910b, p. 7;
Hanitsch, 1915, p. 98; Hanitsch, 1929a, p. 16; Hanitsch, 1931b, p. 55; Hanitsch, 1933b,
p. 138; Hanitsch, 1933c, p. 33; Hanitsch, 1936, p. 397.
Cutilia soror, Kirby, 1904, p. 134; Chopard, 1925, p. 326, fig. 43; Hebard, 1935, p. 60.

Type: ♂, Ambon; in Vienna Museum.

Material, Leiden Museum 1 ♀, Ambon, Hoedt; 1 ♀, Halla Besrip, Hoedt;

1 ♂, 1 ♀, Sekroe, New Guinea, Schädler, July 1897. Also 5 ex. Sumatra; 1 ex. Timor; 2 ex. Banda; 5 ex. Samoa.
Amsterdam Museum 1 ♀, Ambon, Hoedt, 1880.

Platyzosteria denini Hanitsch

Platyzosteria denini Hanitsch, 1923a, p. 206, fig. 7.

Type: ♂, Ceram, Wahai, Denin, August 1919; in Buitenzorg Museum.

Platyzosteria biloba (Saussure)

Polyzosteria (Platyzosteria) biloba Saussure, 1869, p. 258, pl. 3 fig. 20.

Cutilia biloba, Kirby, 1904, p. 134.

Platyzosteria biloba, Shelford, 1910b, p. 6.

Type: ♂, Ambon.

Platyzosteria bicolor (Kirby)

Melanozosteria bicolor Kirby, 1903, p. 373; Kirby, 1904, p. 129.

Platyzosteria bicolor, Shelford, 1910b, p. 6, pl. 1 fig. 3; Shaw, 1925, p. 179.

Type: Torres Straits and Cornwallis Islands; in British Museum (Natural History).

Dorylaea flavicincta (De Haan)

Blatta (Periplaneta) flavicinata De Haan, 1842, p. 50.

Blatta (Periplaneta) flavicincta De Haan, ibidem, p. 245.

Periplaneta flavicincta, Brunner, 1865, p. 231; Walker, 1868, p. 131.

Methana flavicincta, Saussure & Zehntner, 1895, p. 72; Kirby, 1904, p. 136; Rehn, 1909, p. 179.

Methana zehntneri Kirby, 1903, p. 374.

Dorylaea flavicincta, Shelford, 1910b, p. 13; Hanitsch, 1915, p. 102; Karny, 1915, p. 97; Hanitsch, 1928, p. 34; Hanitsch, 1931b, p. 55; 1932b, p. 73; Hanitsch, 1933a, p. 138; Hanitsch, 1933b, p. 138; Hanitsch, 1933c, p. 233.

Type: ♂, ♀, Java; in Leiden Museum.

Material: Leiden Museum 7 ex. Java; 4 ex. Sumatra; 3 ex. Nias.

Remarks. This species is widely distributed and common in the Malayan part of the Archipelago. On Celebes only a few specimens were caught and in the Austromalayan area *D. flavicincta* has not yet been mentioned.

Dorylaea pallipalpis (Serville)

Kakerlac pallipalpis Serville, 1839, p. 71.

Periplaneta pallipalpis, Brunner, 1865, p. 238; Saussure, 1869, p. 262.

Methana pallipalpis, Kirby, 1904, p. 136; Shelford, 1909, p. 309; Shelford, 1910b, p. 11; Hanitsch, 1915, p. 100; Hanitsch 1923b, p. 434; Hanitsch, 1925, p. 94.

Dorylaea pallipalpis, Hanitsch, 1928, p. 34; Hanitsch, 1929b, p. 283; Hanitsch, 1930, p. 190; Hanitsch, 1933c, p. 241.

Type: ♀, Java, M. Buquet.

Material: Leiden Museum 1 ♀, Malino, Celebes, Prof. Dr. H. Boschma, August 7th 1939. Also 4 ex. Java and 4 ex. Sumatra.

Amsterdam Museum 1 ♀, Amboin, Hoedt, 1880.

Neostylopyga papuiae (Shaw)

Stylopyga papuiae Shaw, 1925, p. 204.

Type: holotype ♂, allotype ♀, paratype ♂, Kui-ara, S. E. Papua; in Queensland Museum.

Neostylopyga rhombifolia (Stoll)

Blatta rhombifolia Stoll, 1813, p. 5, pl. 3d fig. 13.

Periplaneta histrio Saussure, 1864, p. 318; Walker, 1868, p. 130.

Periplaneta decorata Brunner, 1865, p. 224.

Periplaneta rhombifolia, Saussure, 1869, p. 260.

Polyzosteria heterospila Walker, 1871, p. 35.

Stylopyga decorata, Brunner, 1893, p. 35.

Dorylaea rhombifolia, Saussure & Zehntner, 1895, p. 73.

Stylopyga rhombifolia, Shelford, 1910b, p. 14; Hanitsch, 1915, p. 105, pl. 5 fig. 24; Hanitsch, 1923a, p. 209; Hanitsch, 1932b, p. 73; Hanitsch, 1933c, p. 234; Hanitsch, 1934, p. 123.

Neostylopyga rhombifolia Hebard, 1929, p. 84.

Type ?.

Material: Leiden Museum 1 ♀, Makassar, J. Sonneveldt, October 1927-April 1928. Also 12 ex. Java, 2 ex. Sumatra, 5 ex. Borneo, 6 ex. Timor, 1 ex. Banda, 1 ex. Wettar, 1 ex. Madoera, 6 ex. Soemba, 2 ex. Poeloe Weh, 1 ex. Malacca, 1 ex. Jodpur, 1 ex. South Africa, 1 ex. Mayott, 1 ex. ?.

Neostylopyga quadrilobata (Brunner)

Stylopyga quadrilobata Brunner, 1898, p. 209; Shelford, 1910b, p. 14; Hanitsch, 1931a, p. 399; Hanitsch, 1933b, p. 140.

Blatta quadrilobata Kirby, 1904, p. 139.

Type: ♀, Minahassa, Celebes, Küenthal, 1893-1894; in Berlin Zoological Museum.

Neostylopyga maculifrons (Hanitsch)

Stylopyga maculifrons Hanitsch, 1931a, p. 399.

Type: ♂, near Mimika River, New Guinea, A. F. R. Wollaston; in British Museum (Natural History).

Remarks: Can easily be distinguished from the former species as the head has a reddish yellow colour with a black patch.

Neostylopyga schultzei (Shelford)

Stylopyga schultzei Shelford, 1912c, p. 52.

Type: ♂, mouth of Tami River and Sepik, New Guinea, Prof. Dr. Schultze; ?.

Neostylopyga coxalis (Walker)

Periplaneta coxalis Walker, 1868, p. 138.

Blatta coxalis, Kirby, 1904, p. 139.

Stylopyga coxalis, Shelford, 1910b, p. 14.

Type: ♂, Ceram; in British Museum (Natural History), Pfeiffer Collection.

Material: Leiden Museum 1 ♀, Zoutbron, New Guinea Expedition, Dr. P. N. van Kampen; 1 ♀, Hollandia, New Guinea Expedition, Dr. P. N. van Kampen.

Periplaneta australasiae (Fabricius)

Blatta australasiae Fabricius, 1775, p. 271.

Periplaneta australasiae, Hanitsch, 1923a, p. 208; Hanitsch, 1931b, p. 56; Hanitsch, 1933b, p. 140; Hanitsch, 1936, p. 397.

Type: ?.

Material: Leiden Museum 1 ♂, New Guinea, Sekroë, Schaedler, 1897; 1 ♀, New Guinea, Dr. P. N. van Kampen, 1911; 1 ♀, New Guinea, Friedrich Wilhelms Hafen; 1 ♀, Tondano, Forsten; 1 ♀, 4 larvae, Modajag, Bolaang-Mongodon, N. Celebes, W. Kaudern, October 1917; 1 ♀, Ambon, Hoedt, May 1865; ?, Boeroe, Bernstein; 1 ♂, 1 ♀, Tobelo, Halmahera, Henting. Also 10 ex. Java; 19 ex. Sumatra; 41 ex. Borneo; 6 ex. Malacca; 1 ex. Timor; 1 ex. Roti; 3 ex. Poeloe Weh; 2 ex. Flores; 8 ex. Nias; 1 ex. Meester Cornelis; 39 ex. Surinam; 2 ex. Honduras; 3 ex. West-Indies; 2 ex. Brazil; 1 ex. Peru; 1 ex. Central Africa; 2 ex. S. W. Africa; 2 ex. Liberia; 1 ex. Congo; 4 ex. Netherland; 1 ex. Tonga Islands; 1 ex. Bermuda; 2 ex. Tortugas.

Remarks. This very common cosmopolitan may be expected to appear in all the parts of the region dealt with in the present paper.

Periplaneta americana (Linné)

Blatta americana Linné, 1758, p. 424.

Periplaneta americana, Shaw, 1825, p. 204; Hanitsch, 1936, p. 397.

Type: ?.

Material: Leiden Museum has no specimens from the Austromalayan

region. 30 ex. Java; 11 ex. Sumatra; 25 ex. Borneo; 3 ex. Poeloe Weh; 3 ex. Timor; 1 ex. Rhio Archipelago; 1 ex. Bandaneira; 1 ex. China; 1 ex. Assam; 1 ex. Syria; 55 ex. Surinam; 6 ex. St. Eustatius; 1 ex. Curaçao; 4 ex. Reunion; 1 ex. Mexico; 60 ex. Netherland; 3 ex. Monrovia; 6 ex. Liberia; 2 ex. Cameroon; 2 ex. E. Africa; 3 ex. Algeria; 3 ex. Nubia; 2 ex. Congo; 5 ex. Zanzibar; 5 ex. Samoa; 16 ex. ?.

Remarks. Also this cosmopolitan will appear on the other islands of the Austromalayan region.

Periplaneta celebensis Hanitsch

Periplaneta celebensis Hanitsch, 1933b, p. 140, fig. 8.

Type: ♀, Tjambe, Celebes, Sarasin, September 17th 1902; in Basel Museum.

Distribution: see type.

Periplaneta methanoides Brunner (fig. 6)

Periplaneta methanoides Brunner, 1898, p. 209, pl. 16 fig. 14; Kirby, 1904, p. 141; Shelford, 1910b, p. 18.

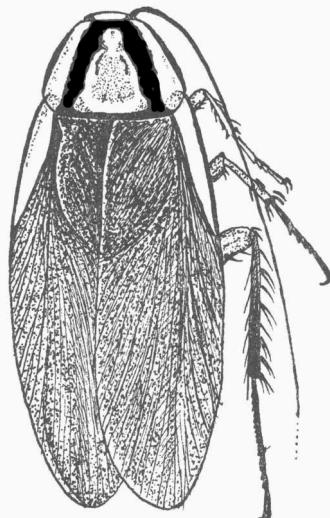


Fig. 6. *Periplaneta methanoides*
Brunner. X 2.

Type: ♂, Halmahera, Dr. W. Küenthal, 1893-1894.

Material: Leiden Museum 2 ♂♂, Morotai, Bernstein.

Remarks. The specimens in Leiden Museum are the only specimens mentioned besides the type.

*

Homalosilpha ustulata (Burmeister)

Periplaneta ustulata Burmeister, 1838, p. 503; Brunner, 1865, p. 235.

Kakerlac thoracica Serville, 1839, p. 69, pl. 2 fig. 1.

Periplaneta configurata Walker, 1868, p. 145.

Homalosilpha ustulata, Stål, 1874, p. 13; Kirby, 1904, p. 143; Shelford, 1910b, p. 19; Hanitsch, 1915, p. 112 pl. 7 fig. 38; Hanitsch, 1923a, p. 210; Hanitsch, 1932b, p. 75; Hanitsch, 1933b, p. 75; Hanitsch, 1933c, p. 234.

Type: Java.

Material: Leiden Museum 1 ♂, 2 larvae, Tondano, Forsten; 1 larva, Goeroepahi, N. Celebes, W. Kaudern, August 22nd 1917. Also 5 ex. Java; 6 ex. Sumatra; 14 ex. Borneo.

Remarks. Common in the Malayan part of the Archipelago and the Philippines.

Macrocerca leopoldi Hanitsch

Macrocerca leopoldi Hanitsch, 1931b, p. 56, pl. 1 fig. 5, textfig. 5.

Type: 2 ♂♂, ♀, Angi Gita, New Guinea, H.R.H. Prince Leopold of Belgium, March 10th 1929; in Brussels Museum.

Blatta orientalis Linné

Blatta orientalis Linné, 1758, p. 424; Hanitsch, 1923a, p. 208.

Type: ?

Material: Leiden Museum 80 ex. Java; 1 ex. Nias; 2 ex. Belang; 2 ex. Netherland; 4 ex. "Europe"; 2 ex. Switzerland; 1 ex. U.S.A.; 6 ex. ?.

Remarks. Though very common in the Malayan part of the Archipelago, this cosmopolitan species as far as known, has not been mentioned from any part of the Moluccas.

Methana papua Shelford

Methana papua Shelford, 1908b, p. 234.

Type: ♂, ♀, Astrolabe District, British New Guinea; ♂ type in Genoa Museum, ♀, type in Brussels Museum.

Remarks. *M. papua* Shelf. agrees with the Australian species and is narrowly related to *M. marginalis* Sauss.

PANCHLORINAE**Pycnoscelus surinamensis (Linné)**

Blatta surinamensis Linné, 1758, p. 424.

Leucophaea surinamensis, Brunner, 1898, p. 194; Hanitsch, 1923a, p. 211.

Pycnoscelus surinamensis, Hanitsch, 1933b, p. 142; Hanitsch, 1936, p. 397.

Type: ?, Surinam.

Material: Leiden Museum 2 ♀♀, 11 larvae, Morotai, Snellius Expedition, 3-7 VI 1929; 1 ♂, 1 ♀, Makassar, J. Sonneveldt, X 1927- IV 1928; larva, Soemalatti, Celebes, Rosenberg. Also 114 ex. Java; 40 ex. Sumatra; 8 ex. Borneo; 9 ex. Wettar; 5 ex. Nias; 10 ex. Poeloe Weh; 1 ex. Flores; 2 ex. Formosa; 1 ex. Himalaya; 1 ex. Philippines; 10 ex. Surinam; 3 ex. Brazil; 1 ex. St. Martin; 1 ex. U.S.A.; 2 ex. Samoa; 3 ex. "Africa"; 15 ex. Liberia; 1 ex. Congo; 1 ex. Australia; 18 ex. Netherland; 23 ex. England; 89 ex. ?.

Remarks. This cosmopolitan also can be expected to appear in the whole of the Austromalayan region.

Pycnoscelus aurantius Hanitsch

Pycnoscelus aurantius Hanitsch, 1935, p. 18, fig. 8.

Type: 2 ♂♂, Tangke Salokko, S. E. Celebes, G. Heinrich, January 5th 1932; in Berlin Zoological Museum.

Remarks. *P. aurantius* Han. is closely related to *P. surinamensis* (L.) and *P. striatus* Kirb., but is distinguished from the others by its dark orange colour.

Oniscosoma ? contigua (Saussure)

Derocephalymma contigua Saussure, 1872, p. 140, pl. 10 figs. 51, 51A.

Oniscosoma? contigua, Kirby, 1904, p. 160.

Type: ♂, New Guinea.

CORYDIINAE

Holocompsa debilis Walker

Holocompsa debilis Walker, 1868, p. 192; Kirby, 1904, p. 170; Hanitsch, 1915, p. 128; Hanitsch, 1923a, p. 211; Hanitsch, 1923b, p. 449; Hebard, 1929, p. 96; Hanitsch, 1929a, p. 18; Hanitsch, 1929b, p. 299; Hanitsch, 1932c, p. 7; Hanitsch, 1934, p. 125.

Type: ♂, Sarawak, Borneo; in Oxford Museum.

Material: Leiden Museum 1 ♀, Sekroë, New Guinea, K. Schädler, 1898. Also 5 ex. Java; 9 ex. Sumatra.

Remarks. Known from Ceylon, the Malayan subregion and the Philippines.

OXYHALOINAE

Diploptera dytiscoides (Serville)

Blatta dytiscoides Serville, 1839, p. 102.

Prosoplecta silpha Saussure, 1864, p. 325.

Diploptera silpha, Saussure, 1864b, pp. 167-178, pl. 2 fig. 28.

Eleutheroda dytiscoides, Brunner, 1865, p. 265, pl. 6 figs. 29A-E.
Diploptera dytiscoides, Brunner, 1893, p. 41; Kirby, 1904, p. 176; Hanitsch, 1915,
 p. 133, pl. 6 fig. 31; Hebard, 1922, p. 335; Hanitsch, 1923a, p. 212; Hanitsch, 1923b,
 p. 449; Hebard, 1929, p. 100; Chopard, 1929, p. 21; Hanitsch, 1929a, p. 18; Hanitsch,
 1933b, p. 142; Hanitsch, 1933c, p. 235; Hanitsch, 1936, p. 398.

Type: ♂, ♀, Australia.

Material: Leiden Museum 14 ex. Java; 2 ex. Sumatra; 7 ex. Samoa Islands.

Remarks. The area of distribution of this species is a very wide one, extending from Burma to the Hawaii Islands.

Prosoplecta coelophoroides Shelford

Prosoplecta coelophoroides Shelford, 1912a, p. 373, pl. 48 fig. 19; Hanitsch, 1933b, p. 142.

Type: ♂, Toli-toli, N. Celebes, Fruhstorfer, November-December 1895; in Oxford Museum.

Prosoplecta gutticollis Walker

Prosoplecta gutticollis Walker, 1868, p. 189; Kirby, 1904, p. 177; Shelford, 1912a, p. 372, pl. 48 fig. 7.

Type: ♂, Ceram; in Oxford Museum.

Prosoplecta quadriplagiata Walker

Prosoplecta quadriplagiata Walker, 1868, p. 189; Kirby, 1904, p. 177; Shelford, 1912a, p. 372, pl. 48 fig. 14.

Type: ♂, Batjan; in Oxford Museum.

Prosoplecta trifaria Walker

Prosoplecta trifaria Walker, 1868, p. 190; Kirby, 1904, p. 177; Shelford, 1912a, p. 370, pl. 48 figs. 4 and 11.

Prosoplecta megaspila Walker, 1868, p. 190; Kirby, 1904, p. 177.

Type: ♂, Batjan, in Oxford Museum.

PERISPHEARIINAE

Paranauphoeta rufipes Brunner

Paranauphoeta rufipes Brunner, 1865, p. 400; Kirby, 1904, p. 180; Hanitsch, 1923a, p. 212; Hanitsch, 1931b, p. 58, pl. 1 fig. 6.

Nauphoeta discoidalis Walker, 1868, p. 39.

Paranauphoeta rufipes var. *Novaeguineae* Bolivar, 1898, p. 138.

Paranauphoeta discoidalis, Kirby, 1904, p. 180.

Type: ♂, ♀, Ternate; in Vienna Museum, Brunner Collection.

Material: Leiden Museum 2 ♀♀, N. Halmahera, Bernstein; 2 ♀♀, Se-kroë, Schädler, 1898, 1 ♂, 1 ♀, Fak Fak, New Guinea, C. J. L. Palmer; 6 ♀♀, 2 ♂♂, Aroe Islands, Rosenberg, 1876; 1 ♀, New Guinea Expedition, Dr. P. N. van Kampen, 1911. Also 2 ex. Java; these are the first reports from the Malayan subregion.

Paranauphoeta lyrata (Burmeister)

Nauphoeta lyrata Burmeister, 1838, p. 508; Walker, 1868, p. 37.

Blatta ornata Serville, 1839, p. 99.

Blatta (Nauphoeta) lyrata, De Haan, 1842, p. 52.

Paranauphoeta lyrata, Brunner, 1865, p. 401; Kirby 1904, p. 180; Rehn, 1904, p. 559; Rehn, 1909, p. 179; Hanitsch, 1915, p. 139, pl. 6 fig. 32; Hanitsch 1925, p. 105; Hebard, 1929, p. 104; Hanitsch, 1932b, p. 82; Hanitsch, 1933a, p. 329; Hanitsch, 1933b, p. 142; Hanitsch, 1933c, p. 235.

Type: ?, Java.

Material: Leiden Museum 1 ♀, Tondano, Celebes, Forsten; 1 ♀, Gorontalo, Celebes, Rosenberg. Also 1 ex. Java; 35 ex. Borneo; 16 ex. Sumatra; 4 ex. Boetan boloba; 1 ex. Malay Peninsula; 2 ex. ?.

Remarks. This species is common in the Malayan subregion, Burma, the Philippines and Celebes. The areas of distribution of the former species and this one are adjoining.

Perisphaeria armadillo Serville

Perisphaeria armadillo Serville, 1831, p. 44; Serville, 1839, p. 133, pl. 3 fig. 2; Kirby, 1904, p. 190; Hanitsch, 1915, p. 142, pl. 7 fig. 39; Hanitsch, 1923a, p. 213; Hanitsch, 1923b, p. 451; Hanitsch, 1931a, p. 405; Hanitsch 1932b, p. 82; Hanitsch, 1933a, p. 329; Hanitsch, 1933b, p. 142; Hanitsch, 1933c, p. 235.

Type: ?, Java.

Material: Leiden Museum 2 ex. Java; 2 ex. Borneo.

Remarks. *P. armadillo* Serv. probably occurs also in the other islands of the Moluccas.

Perisphaeria glomeriformis Lucas

Perisphaeria glomeriformis Lucas, 1863, p. 408, pl. 9 figs. 10-10A; Saussure & Zehntner, 1895, p. 37; Kirby, 1904, p. 190; Hanitsch, 1923a, p. 213; Hanitsch, 1932b, p. 83.

Type: ?.

Material: Leiden Museum 3 ♀♀, Aroe Islands, Srellius Expedition, 11-14 X 1929.

Remarks: This species has also a wide area of distribution extending from Zoologische Mededeelingen, XXVII

the Philippines to the Malayan subregion and probably including the whole Austromalayart subregion.

Perisphaeria inaequalis Hanitsch

Perisphaeria inaequalis Hanitsch, 1931a, p. 405, figs. 10-11.

Type: ♀, W. Borneo, 1868; in British Museum (Natural History).

Material: Leiden Museum 1 ♀, Sabang, New Guinea, New Guinea Expedition.

Glyptopeltis wallacei Hanitsch

Glyptopeltis wallacei Hanitsch, 1933a, p. 331.

Type: ♂, Mount Kinabalu, N. Borneo; in Oxford Museum.

PANESTHIINAE

Salganea amboinica Brunner

Salganea amboinica Brunner, 1893, p. 47; Kirby, 1904, p. 200; Caudell, 1924, p. 661; Hanitsch, 1933b, p. 143; Hanitsch, 1936, p. 398, figs. 7-9.

Type: 1 ♂, 1 ♀, Amboin; in Vienna Museum, Brunner Collection.

Material: Leiden Museum 1 ♂, 4 ♀♀, 4 larvae, Taliaboe, Jhr. Van Nouhuys, April 1905; 1 ♀, Tondano, Forsten.

Salganea rugulata Saussure

Salganea rugulata Saussure, 1895, p. 304; Kirby, 1904, p. 200; Hanitsch, 1915, p. 146; Hanitsch, 1923b, p. 456; Caudell, 1924, p. 301; Hanitsch, 1929b, p. 301.

Type: ♀, Java.

Material: Leiden Museum 5 ex. Java; 3 ex. Sumatra; 1 ex. Australia.

Remarks. This species is narrowly related to the former species.

Salganea foveolata Saussure

Salganea foveolata Saussure, 1895, p. 304; Kirby, 1904, p. 200; Caudell, 1924, p. 662; Hanitsch, 1933b, p. 143.

Type: ♀, Makassar; in Geneva Museum.

Salganea fruhstorferi Hanitsch

Salganea fruhstorferi Hanitsch, 1933b, p. 143.

Type: ♂, Bua-Kraeng, S. Celebes, H. Fruhstorfer, February 1896; in Paris Museum.

Salganea rufipes Hanitsch*Salganea rufipes* Hanitsch, 1933b, p. 144.

Type: ♂, 4 ♀♀, ♀ nymph, Latimodjong Mountains, Celebes, G. Heinrich, August 1930; in Berlin Zoological Museum.

Salganea rectangularis Hanitsch*Salganea rectangularis* Hanitsch, 1933b, p. 144, fig. 9; 1935, p. 19.

Type: ♀, Central Celebes, Lompong pang, Sarasin, February 6th 1895; in Basel Museum.

Salganea sarasinorum Hanitsch*Salganea sarasinorum* Hanitsch, 1933b, p. 145.

Type: ♀, Central Celebes, Sarasin; in Basel Museum.

Salganea ovalis Hanitsch*Salganea ovalis* Hanitsch, 1933b, p. 146.

Type: ♀, Matinang Mountains, N. Celebes, Sarasin, August 1894; in Basel Museum.

Salganea triangulifera Hanitsch*Salganea triangulifera* Hanitsch, 1933b, p. 146.

Type: ♂, Takalekadjo Mountains, Central Celebes, Sarasin, February 8th 1895; in Basel Museum.

Salganea lunifera Hanitsch*Salganea lunifera* Hanitsch, 1933b, p. 147.

Type: ♂, Takalekadjo Mountains, Central Celebes, Sarasin, February 8th 1895; in Basel Museum.

Remarks. Hanitsch (1933b) gave a key of determination to the Celebian species of *Salganea*. He recognized seven new species but the characters used by him are not all of specific value because of their instability; it would therefore not be surprising when it occurs that some of his new species are only varieties. By lack of material it is not possible to draw more definite conclusions.

Salganea ternatensis Brunner

Salganea ternatensis Brunner, 1893, p. 47; Kirby, 1904, p. 200; Caudell, 1924, p. 666.
 ? *Salganea dux* Kirby, 1903, p. 408; Kirby, 1904, p. 200.

Type: ♂, ♀, Ternate; in Vienna Museum, Brunner Collection.

Remarks. According to Kirby (1903), the new species *Salganea dux* might be identical with *Salganea ternatensis* Brunner. The description of the latter, however, is very brief; moreover the type was damaged, so Kirby provisionally described *S. dux* as a new species.

Salganea morio (Burmeister)

Panesthia morio Burmeister, 1838, p. 513; Brunner, 1866, p. 392.

? *Panesthia morio*, Tepper, 1893, p. 124.

Panesthia regina Saussure, 1864, p. 167, pl. 1 fig. 24.

Salganea morio, Kirby, 1904, p. 200; Hanitsch, 1915, p. 145; Hanitsch, 1923a, p. 213; Hanitsch, 1923b, p. 455, pl. 13 fig. 12; Caudell, 1924, p. 663; Hanitsch, 1925, p. 105; Hebard, 1929, p. 107; Hanitsch, 1929a, p. 20; Hanitsch, 1929b, p. 301; Hanitsch, 1932b, p. 83; Hanitsch, 1933a, p. 332; Hanitsch, 1933c, p. 236; Hanitsch, 1934, p. 128.

Type: ?, New Guinea and New Holland.

Material: Leiden Museum 24 ex. Java; 18 ex. Sumatra; 8 ex. Borneo; 1 ex. Malay Peninsula; 2 ex. locality unknown.

Remarks. *S. morio* (Burm.) probably occurs also in the other islands of the Moluccas. It is surprising that this species has not yet been mentioned from Celebes.

Salganea papua Shelford

Salganea papua Shelford, 1908b, p. 236; Caudell, 1924, p. 664.

Type: ♀, New Guinea, Sattelberg; in Oxford Museum.

Material: Leiden Museum 1 ♀, Salawatti, Bernstein.

Remarks. The measurements are: length 60.5 m, pronotum 12 × 21.5 mm. The pronotal horns have strongly developed.

Panesthia angustipennis (Illiger) (fig. 7)

Blatta angustipennis Illiger, 1801, p. 185.

Panesthia angustipennis, Brunner, 1865, p. 395; Saussure, 1895, p. 312; Kirby, 1904, p. 202; Hanitsch, 1915, p. 149; Caudell, 1924, p. 649; Hebard, 1929, p. 106; Hanitsch, 1933b, p. 149.

Blatta aethiops Stoll, 1813, p. 3, pl. 1d fig. 3.

Panesthia aethiops, Kirby, 1903, p. 412; Kirby, 1904, p. 202; Caudell, 1924, p. 648.

Panesthia javanica Serville, 1831, p. 38; Serville, 1839, p. 131, pl. 2 fig. 5; Brunner, 1865, p. 393, pl. 13 figs. A-E; Saussure, 1869, p. 286; Saussure, 1895, p. 312; Krauss, 1903, p. 748; Kirby, 1903, p. 411; Kirby, 1904, p. 202; Rehn, 1904, p. 559; Rehn, 1909, p. 179; Hanitsch, 1915, p. 147, pl. 6 fig. 34; Hanitsch, 1923a, p. 214; Caudell, 1924, p. 653; Hanitsch, 1925, p. 105; Hanitsch, 1928, p. 39; Hanitsch, 1929a, p. 20; Hanitsch, 1929b, p. 301; Hanitsch, 1932b, p. 83; Hanitsch, 1932c, p. 8; Hanitsch, 1933a, p. 333; Hanitsch, 1933b, p. 149; Hanitsch, 1933c, p. 236; Hanitsch, 1934, p. 128; Hanitsch, 1936, p. 399.

Panesthia aethiops De Haan, 1842, p. 53; Walker, 1868, p. 202.

Panesthia saussurii Stål, 1877, p. 37; Hanitsch, 1923a, p. 214; Hanitsch, 1923b, p. 457; Hanitsch, 1932b, p. 84.

Panesthia saussurei Saussure, 1895, p. 312; Kirby, 1904, p. 202; Karny, 1915, p. 90; Caudell, 1924, p. 657.

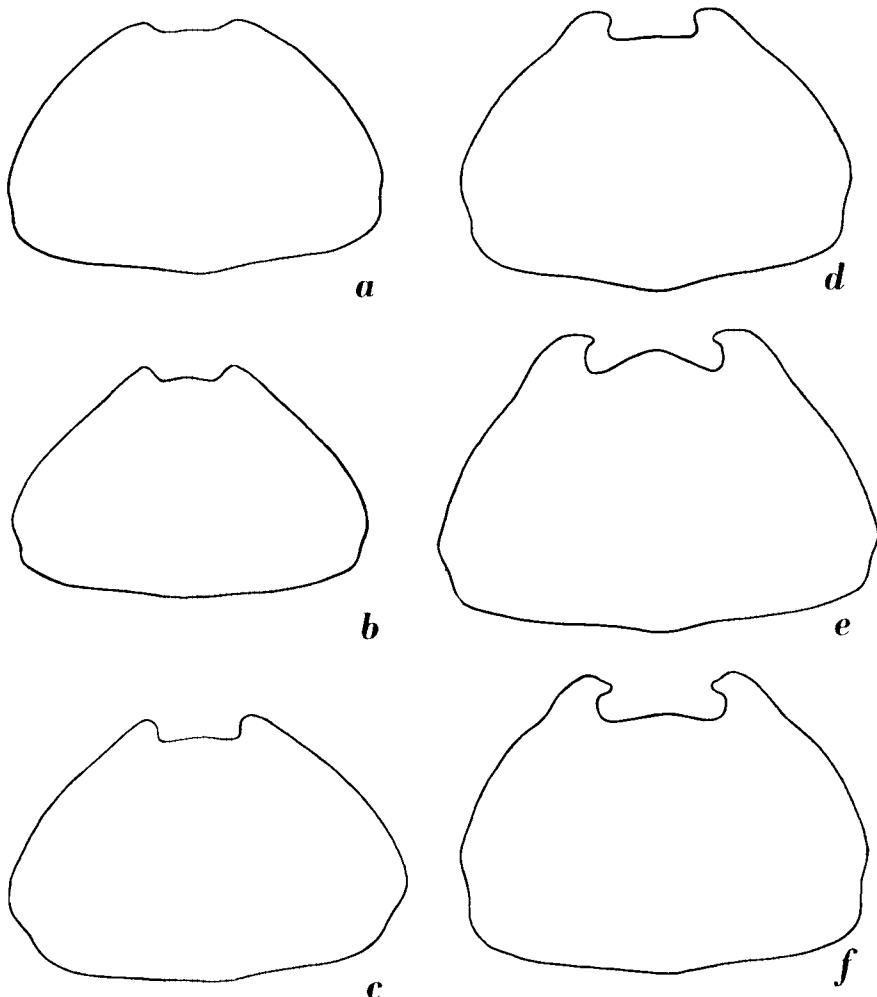


Fig. 7. *Panesthia angustipennis* (Illiger) ♂, outline pronotum of various specimens, a, Long Bloe-oe, Borneo; b, c and d, Tandjong Morawa, Serdang, N. E. Sumatra; e, Java; f, S. Halmahera. $\times 7\frac{1}{4}$.

Type: ?, Sumatra.

Material: 1 ♂, 1 ♀, S. Halmahera, Bernstein; 3 ♀♀, 1 ♂, 4 larvae, Makassar; 1 ♂, larva, Tondano, Forsten; 1 ♂, Banda, Rosenberg; 1 ♂, Waigeo, Bernstein; 1 ♂, 2 larvae, Gorontalo, Rosenberg; 13 larvae, Sipankot near Siboetoe, Soela Archipelago, Snellius Expedition, 10-14 IX 1929; 4 ♂♂,

4 ♀♀, Toelabello, Celebes, Rosenberg, 1865; 3 ♂♂, 2 larvae, Haroekoe, Snellius Expedition, 3-7 V 1930; 2 larvae, Belang, Forsten; 1 ♂, 1 ♀, larva, Goerapahi, N. Celebes, W. Kaudern, May 4th 1917; 1 larva, Morotai, Bernstein; 4 ♀♀, 5 ♂♂, 8 larvae, Sipankot, Snellius Expedition, 10-14 VIII 1929; 1 ♀, Bolaang Mongodon, W. Kaudern. Also 81 ex. Java; 92 ex. Sumatra; 68 ex. Borneo; 11 ex. Nias; 10 ex. Malay Peninsula; 3 ex. Bangka; 4 ex. Billiton; 3 ex. Rhio Archipelago; 2 ex. Australia; 8 ex. ?.

Remarks. De Haan (1842) already expressed the opinion that *P. angustipennis* and *P. javanica* are synonyms. Brunner (1865), however, distinguished these as two different species and stated: "Elle (*P. angustipennis*) n'en diffère en effet que par la forme de l'échancrure du pronotum. Celle-ci est à-peu-près la même dans le mâle de la *P. angustipennis*, comme dans la femelle de l'espèce citée, et la forme du pronotum de la femelle de notre espèce ressemble à celle des larves de la *P. javanica* Serv." (l.c., p. 395).

Hanitsch also distinguishes them as two different species but he gave no comment.

Hebard (1929) on his turn has expressed the opinion that these two species are synonyms, but in his expression he was somewhat vague when writing: "From series before us we believe that *javanica* Serville is a synonym of *angustipennis*, based on material in which the normal pronotal emargination is decidedly intensified with its angles produced." (l.c., p. 16).

The Leiden Museum possesses a large series of species from all parts of the Archipelago and from these it appears that the shape of the pronotum varies much and that it also is possible to compile a series of transition-cases in which the pronotums of the ♂ specimens vary from nearly hornless to those with strongly developed cornu. More or less connected with the development of the pronotal cornu is the development of the furrows and tubercles of the pronotum. Six pronotums have been drawn up from a series of transition which give a clear picture of the gradual changes (fig. 7).

The size as well as the coloration are also varying strongly, but for these features too there are series of gradual transition to be found.

The number of spines on the front femora, formerly used by authors as a characteristic, is of no value, since this number shows great fluctuations as Hanitsch already pointed out (Hanitsch, 1923a).

It may finally be mentioned that also the characteristic used by Hebard to distinguish *P. angustipennis* from *P. aethiopis* (the occurrence or not of punctae in the proximal part of the anal field) on itself also shows all shapes of transition.

In the opinion of Hebard (1929) *P. saussurei* is a synonym of *P. aethiopis*

and I am sharing his opinion. The characteristic by which *P. angustipennis* should be distinguished from *P. aethiopis* has proved to be, as mentioned before, inserviceable and therefore also these species are to be taken as synonyms. Caudell already was in doubt about the question whether or not it was correct to distinguish *P. javanica* from *P. aethiopis* and wrote (l.c., p. 648): "The distinctness of these two species is rather doubtful" and furthermore he mentioned about a specimen which was identified as *P. saussurei* the following: "This is very like *P. aethiopis* and *P. javanica* except for the smaller size. It may eventually prove to be a diminutive form of one of these larger species." (l.c., p. 658).

The variability of this species with its large area of distribution has led to many descriptions under different names. Thanks to the nice series in the Leiden Museum it was possible to elucidate somewhat the problems of these synonyms.

The area of distribution includes Burma, Cambodia, Siam, the Malayan subregion, the Austromalayan subregion, the Philippines, Australia, Christmas Island and New South Wales.

Panesthia nigricans Kirby

Panesthia nigrita Saussure, 1895, p. 317.

Panesthia nigricans Kirby, 1903, p. 381; Kirby, 1904, p. 203; Hanitsch, 1933b, p. 149.

Type: ♂, ♀, Makassar; in Genoa Museum.

Panesthia wallacei Wood-Mason

Panesthia wallacei Wood-Mason, 1876, p. 189; Wood-Mason, 1877, p. 117; Kirby, 1904, p. 204; Hanitsch, 1915, p. 152, pl. 2 fig. 12; Caudell, 1924, p. 659; Hanitsch, 1933b, p. 149.

Panesthia walacei Saussure, 1895, p. 323.

Type: ♂, Sinkep.

Material: Leiden Museum 1 ex. Borneo.

Panesthia celebica Brunner

Panesthia celebica Brunner, 1893, p. 53; Kirby, 1904, p. 204; Caudell, 1924, p. 651; Hanitsch, 1933b, p. 149.

Type: ♀, N. Celebes; in Vienna Museum, Brunner Collection.

Remarks. As differences between this and the former species to which it is narrowly related, are mentioned the larger size and the absence of spines on the anterior femora. Since these characteristics in the genus *Panesthia* are proved to be of less importance as a characteristic of the species, the question has risen whether or not one has to deal with a species on itself.

Panesthia brevipennis Brunner

Panesthia brevipennis Brunner, 1893, p. 511; Kirby, 1904, p. 203; Caudell, 1924, p. 651; Hanitsch, 1933a, p. 334; Hanitsch, 1933b, p. 150.

Type: ♂, Ambon; in Vienna Museum, Brunner Collection.

Panesthia hamifera Hanitsch

Panesthia hamifera Hanitsch, 1931b, p. 59, textfig. 6, pl. 1 fig. 7; Hanitsch, 1933b, p. 150.

Type: ♂, New Guinea, ♀, Sumatra, H. R. H. Prince Leopold of Belgium, 1929; in Brussels Museum.

Panesthia kheili Bolivar

Panesthia kheili Bolivar, 1898, p. 138; Kirby, 1904, p. 201.

Type: ♀, Hassam, New Guinea.

Panesthia insularis (Kirby)

Dicellonotus insularis Kirby, 1903, p. 410; Kirby, 1904, p. 201.

Panesthia insularis, Hanitsch, 1936, p. 399, fig. 10.

Type: ♂, ♀, Bara, Boeroe; in British Museum (Natural History).

Panesthia microalata nov. spec. (fig. 8)

Holotype: ♂, New Guinea, in the collection of Mr. C. J. M. Willemse, Eygelshoven (L.).

Allotype: ♀, New Guinea, in Leiden Museum.

♂. Size medium for the genus. Head slightly extending beyond pronotum. Interocular space larger than that between the antennal sockets.

Tegmina squamiform, lateral. Wings also squamiform but smaller than tegmina.

Cephalic part tergites slightly punctured, caudal part strongly. Seventh tergite with two shallow emarginations on the lateral margins; the apical tooth obliquely divergent.

Supra-anal plate distinctly dentated. Cerci small.

Cephalic femora with two and three spines.

General coloration dark rufous-castaneous to black.

Head castaneous except clypeus and labrum which are rufous; ocelli ochraceous. Pronotum castaneous, caudal half shining, meso- and metanotum shining rufous-castaneous. Abdomen castaneous at base, gradually darkening towards apex. Coxae, trochanter, femora and tarsi rufous-castaneous; tibiae dark castaneous.

♀. Equal to ♂, but emargination of the pronotum very shallow.

Measurements:	♂	♀
length	44	40 mm,
pronotum	9.5 × 15	9.5 × 15 mm,
tegmina	9.5 × 5	7.5 × 5 mm.

Remarks. This species is related to *P. frogatti* Shelford of the Solomon Islands but differs in the tooth of the seventh tergite which is directed caudally and not laterally, and furthermore in a smaller emargination of the pronotum.

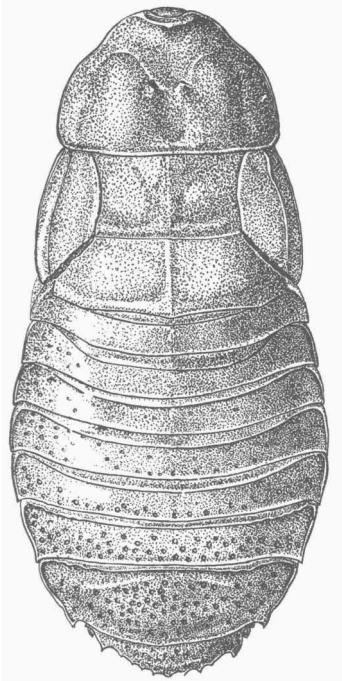


Fig. 8. *Panesthia microalata*
nov. spec. × 2.

Ancaudellia serratissima (Brunner)

Panesthia serratissima Brunner, 1865, p. 394; Kirby, 1904, p. 203; Caudell, 1924, p. 658; Hanitsch, 1932b, p. 84.

Ancaudellia serratissima, Shaw, 1925, p. 50.

Type: ♂, ♀, Ternate; in Vienna Museum, Brunner Collection.

Material: Leiden Museum 2 ♂♂, 8 ♀♀, 1 larva, Haroekoe, Snellius Expedition, 3-7 V 1930; 2 ♀♀, Tidore, Snellius Expedition, 24-29 IX 1929; ♀, New Guinea, April-May 1911; ♀, Sekroë, New Guinea, Schädler; 1 ♀,

larva, Fak-Fak, New Guinea, C. J. L. Palmer; ♀, Ternate, Forsten; 2 larvae, Aroe Islands, Manoembai, Snellius Expedition 11-14 X 1929. Also 2 ex. locality unknown.

LITERATURE¹⁾

- BOLIVAR, I., 1890. Diagnosis de Ortópteros Nuevos. An. Soc. Espan. Hist. nat., vol. 19, pp. 299-334.
- , 1898. Ortópteros nuevos de Borneo y de Nueva Guinea. Act. Soc. Espan. Hist. nat., vol. 27, pp. 137-142.
- BRUNNER VON WATTENWYL, K., 1865. Nouveau Système des Blattaires, pp. 1-426, pl. I-XIII.
- , 1893. Révision du système des Orthoptères et description des espèces rapportées par M. Leonardo Fea, de Birmanie. Ann. Mus. Stor. nat. Genova, vol. 33, pp. 5-230, pls. I-VI.
- , 1898. Orthopteren des malayischen Archipels, gesammelt von Prof. Dr. W. Kükenthal in den Jahren 1893 und 1894. Abh. senckenb. naturf. Ges., vol. 24, pp. 189-288, pl. XVI-XX.
- BURMEISTER, H., 1838. Handbuch der Entomologie, vol. 2 part 2a, pp. I-VIII, 397-756.
- CAUDELL, A. N., 1924. Malayan and East Indian Blattidae, I Introduction and subfamily Panesthiinae. Philipp. J. Sci. Manila, vol. 24, no. 6, pp. 641-668, pl. I.
- CHOPARD, L., 1923-25. Blattidae de la Nouvelle-Calédonie et des Iles Loyalty. Nova Caledonia A. Zoologie, vol. III, pp. 301-336, pl. IV, 73 textfigs.
- FABRICIUS, J. C., 1775. Systema Entomologiae sistens Insectorum classes, ordines, genera, species, adjectis synonymis, locis, descriptionibus, observationibus. Flensburgi et Lipsiae, pp. 30-832.
- GUILLOU, LE, 1841. Description de 23 espèces nouvelles d'Orthoptères. Rev. zool., vol. 4, pp. 291-295.
- HAAN, W. DE, 1842. Bijdragen tot de Kennis der Orthoptera. Verhandelingen over de Natuurlijke Geschiedenis der Nederlandsche Overzeesche bezittingen, door de Leden der Natuurkundige Commissie in Oost-Indië en andere schrijvers. Afl. 16, Zoologie No. 6, pp. 45-248, pls. 10-23.
- HANITSCH, R., 1915. Malayan Blattidae. J. Straits Br. Asiat. Soc., vol. 69, pp. 17-178, pls. I-VII.
- , 1919. Blattidae. Collected in Korinchi, West Sumatra, by Messrs. H. C. Robinson and C. Boden Kloss. J. F. M. S. Mus. Kuala Lumpur, vol. VIII, part III, pp. 67-72.
- , 1923a. On a collection of Blattidae from the Buitenzorg Museum. Treubia, Buitenzorg, vol. 3, pp. 197-221, 8 textfigs.
- , 1923b. Malayan Blattidae. Part II. J. Malayan Br. Asiat. Soc., vol. I, pp. 393-480, pls. XII-XIII, 32 textfigs.
- , 1925. On a Collection of Blattidae from Northern Sarawak, chiefly Mt. Murud and Mt. Dulit. Sarawak Mus. J., vol. 3, no. 8, pp. 75-106, 18 textfigs.
- , 1928. Spolia Mentawiensis: Blattidae. Bull. Raffles Mus. Singapore, vol. 1, pp. 1-44, pls. I-II.
- , 1929a. Dr. E. Mjöberg's zoological collections from Sumatra. Blattidae. Ark. Zool. Stockholm, vol. 21A, no. 2, pp. 1-20, 3 textfigs.
- , 1929b. Fauna Sumatrensis (Beitrag No. 63). Blattidae. Tijdschr. Ent. Amsterdam, vol. 72, pp. 263-302, 10 textfigs.
- , 1930. Über eine Sammlung malayischer Blattiden des Dresdner Museums (Orth.). Stett. ent. Ztg., vol. 91, part I & II, pp. 177-195, 10 textfigs.

1) Papers marked with an * were not available to me.

- HANITSCH, R., 1931a. On a Collection of Malayan Blattidae from the British Museum (Natural History). Ann. Mag. nat. Hist., (10), vol. 7, pp. 385-408, 12 textfigs.
- , 1931b. Blattidae: Résultats Scientifiques du Voyage aux Indes Orientales Néerlandaises de LL. AA. RR. le Prince et la Princesse Léopold de Belgique. Mém. Mus. Hist. nat. Belg., hors ser., vol. IV, part 1, pp. 41-62, 6 textfigs., 1 pl.
- , 1932a. On some cave-dwelling Blattids from Celebes. Tijdschr. Ent. Amsterdam, vol. 75, pp. 264-265.
- , 1932b. Beccari and Modigliani's collection of Sumatran Blattidae in the Museo civico, Genova. Ann. Mus. Stor. nat. Genova, vol. 56, pp. 48-92, 21 textfigs.
- , 1932c. On a collection of Blattids from East Coast of Sumatra. Miscellanea Zoologica Sumatrana, no. 62, 8 pp.
- , 1933a. The Blattidae of Mount Kinabalu British North Borneo. J. F. M. S. Mus. Kuala Lumpur, vol. 17, part 2, 297-337, 24 textfigs.
- , 1933b. The Blattid fauna of Celebes, based chiefly on the collections made by P. and F. Sarasin. Verh. naturf. Ges. Basel, vol. 44, part 2, pp. 119-150, 9 textfigs.
- , 1933c. On a collection of Bornean and other Oriental Blattidae from the Stockholm Museum. Ent. Tidskr. Stockholm, vol. 54, part 3-4, pp. 230-245, pl. 12.
- , 1934. On a collection of Blattids, chiefly from Java and Northern Australia, made by Professor Ed. Handschin. Rev. suisse Zool. Genève, vol. 41, pp. 111-130, 8 textfigs.
- , 1935. On further Blattids (Orth.) from Celebes. Stylops, vol. 4, pp. 14-19, 8 textfigs.
- , 1936. Fauna Buruana. Blattidae. Treubia Buitenzorg, vol. 7, suppl. 1927-1936, pp. 389-400, 10 textfigs.
- HEBARD, M., 1922. The Dermaptera and Orthoptera of Hawaii. Occ. Pap. Bishop Mus. Honolulu, vol. 7, pp. 305-379, pl. 26-27.
- , 1929. Studies in Malayan Blattidae (Orthoptera). Proc. Acad. nat. Sci. Philad., vol. 81, pp. 1-109, pls. 1-6.
- , 1935. Dermaptera and Orthoptera from the Society Islands. Bull. Bishop Mus. Honolulu, vol. 113, pp. 57-65, 1 textfig.
- *ILLIGER, J. K. W., 1801. Magazin für Insektenkunde, vol. 1.
- KIRBY, W. F., 1903a. Notes on Blattidae etc., with descriptions of new genera and species in the collection of the British Museum, South Kensington I. Ann. Mag. nat. Hist. (7), vol. II, pp. 404-415.
- , 1903b. Idem II. Ann. Mag. nat. Hist. (7), vol. 12, pp. 373-381.
- , 1904. A Synonymic Catalogue of Orthoptera, vol. I. Orthoptera Euplexoptera, Cursoria et Gressoria (Forficulidae, Hemimeridae, Blattidae, Mantidae, Phasmidae), 501 pp.
- KRAUSS, H. A., 1903. Orthopteren aus Australien und dem Malayischen Archipel gesammelt von Professor Dr. Richard Semon. Denkschr. med.-naturwiss. Ges. Jena, vol. 8, pp. 743-770, pl. 67.
- LUCAS, W. J., 1863. Quelques remarques sur le genre *Perisphaeria*, Orthoptère de la famille des Blattaires. Ann. Soc. Ent. France (4), vol. 3, pp. 405-409, pl. IX, figs. 10-10c.
- REHN, J. A. G., 1904. Studies in old world Forficulids or Earwigs and Blattids or Cockroaches. Proc. U. S. nat. Mus., vol. 27, pp. 539-560.
- , 1909. A Contribution to the knowledge of the Orthoptera of Sumatra. Bull. Amer. Mus. nat. Hist., vol. 26, pp. 177-211, 31 textfigs.
- SAUSSURE, H. DE, 1864. Orthoptères de l'Amérique Moyenne. Mém. Hist. nat. Mexique vol. 3, pp. 1-279, 2 pls. 43 figs.
- , 1869. Mélanges Orthoptérologiques. Mem. Soc. Phys. Genève, vol. 20, pp. 227-326, pls. 2-3.

- SAUSSURE, H. DE & L. ZEHNTNER, 1895a. Revision de la tribu des Perisphaeriens (Insectes Orthoptères de la Famille des Blattides). *Rev. suisse Zool.* Genève, vol. 3, pp. 1-59, pl. I.
- , 1895b. Histoire naturelle des Orthoptères, in Grandidier's *Hist. Phys. nat. Madagascar*, pp. I-XVI, 1-244, I-IV, pls. I-X.
- SERVILLE, A., 1839. *Histoire naturelle des Insectes. Orthoptères.* pp. I-VIII, 1-776, 14 pls.
- SHAW, E., 1925. New Genera and Species (mostly Australasian) of Blattidae, with notes, and some remarks on Tepper's types. *Proc. Linn. Soc. N. S. W.*, vol. 50, part 3, pp. 171-213, 33 textfigs.
- SHELFORD, R., 1906. Studies of the Blattidae. *Trans. Ent. Soc. London*, pp. 231-280, pls. XIV-XVI; pp. 487-518, pl. XXX.
- , 1907a. Ectobiinae. *Genera Insect.*, vol. 55, pp. 1-13, 1 pl.
- , 1907b. On some new Species of Blattidae in the Oxford and Paris Museums. *Ann. Mag. nat. Hist. (7)*, vol. 19, pp. 25-49.
- , 1908a. Phyllodromiinae. *Genera Insect.*, vol. 73, pp. 1-29, 2 pls.
- , 1908b. Some new species of Blattidae in the Brussels Museum. *Mém. Soc. ent. Belg.*, vol. 15, pp. 227-236.
- , 1909. Studies of the Blattidae. X. A revision of the old world Blattinae belonging to the Polyzosteria group. *Trans. Ent. Soc. London*, pp. 253-327, pls. VII-IX.
- , 1910a. Epilamprinae. *Genera Insect.*, vol. 101, pp. 1-21, 2 pls.
- , 1910b. Blattinae. *Genera Insect.*, vol. 109, pp. 1-27, 2 pls.
- , 1911. Preliminary diagnoses of some new genera of Blattidae. *Ent. mon. Mag. London (2)*, vol. 22, pp. 154-156.
- , 1912a. Mimicry amongst the Blattidae; with a Revision of the Genus Prosoplecta Sauss., and the Description of a new Genus. *Proc. zool. Soc. London*, pp. 358-376, pl. XLVIII, textfigs. 42-46.
- , 1912b. Studies of the Blattidae. *Trans. Ent. Soc. London*, pp. 643-661, pls. LXXIX-LXXX.
- , 1912c. New Blattidae from New-Guinea collected by Prof. Dr. Schultze. *Ent. Rdsch. Stuttgart*, 1912, pp. 51-52.
- STÅL, C., 1874. Recherches sur le système des Blattaires. *Bih. Svensk. Akad.*, vol. 2, no. 13, pp. 2-18.
- , Orthoptera nova ex Insulis Philippinis. *Oefv. Kongl. Vet. Akad. Förh.*, vol. 34 (10), pp. 33-58.
- STOLL, C., 1787-1813. *Représentation exactement colorée d'après nature des Spectres, des Mantes, des Sauterelles, des Grillons, des Criquets et des Blattes.*
- STRAND, E., 1934. Miscellanea nomenclatorica zoologica et palaeontologica. VI. *Folia zool. hydrobiol. Riga*, vol. 6, no. 2, pp. 271-277.
- TEPPER, J. G. O., 1893. The Blattariae of Australia and Polynesia. *Trans. roy. Soc. S. Austr.*, vol. 17, part 1, pp. 25-126.
- , 1894. Supplemental notes on the Blattariae of Australia. *Trans. roy. Soc. S. Aust.*, vol. 18, pp. 169-189.
- WALKER, F., 1868. Catalogue of the specimens of Blattariae in the collection of the British Museum, 239 pp.
- , 1869. Supplement to the Catalogue of Blattariae. Catalogue of the specimens of Dermaptera Saltatoria and Supplement to the Blattariae in the Collection of the British Museum, pp. 119-156.
- , 1871. Supplement to the Catalogue of Blattariae, pp. 1-43.
- WOOD-MASON, J., 1876. Descriptions of new Species of Blattidae belonging to the Genus Panesthia. *J. Asiatic Soc. Bengal*, vol. XLV (2), pp. 189-190.
- , 1877. Descriptions of new Species of Blattidae belonging to the Genus Panesthia. *Ann. Mag. nat. Hist. (4)*, vol. 19, pp. 117-118.