CATALOGUE OF THE ARADIDAE IN THE RIJKSMUSEUM VAN NATUURLIJKE HISTORIE

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with 37 text-figures

The group of the Aradidae was largely made accessible by the excellent work of R. L. Usinger & R. Matsuda (Classification of the Aradidae, London 1959). It gave me the possibility of revising the collection of the Rijksmuseum van Natuurlijke Historie, from which already some species had been described by C. J. Drake and R. L. Usinger before.

As a consequence of their ecology, the collecting of Aradidae is not very easy. The work done by the numerous collectors for our museum resulted in a medium-sized collection from a restricted number of localities, as in some cases the number of individuals in one capture is very high, and for the rest the captures are incidental only.

A single remark may be made regarding the drawings in this paper. Many specimens offer a notable asymmetry; in those cases I have not symmetrized the figure by turning the half of it, as this often would have changed the total aspect. In one case, where the right side is hidden by incrustations and rubbish, the drawing shows the left side only.

The data are given as found on the labels. Only in exceptional instances is the information translated into English, or the name of the locality transcribed.

Again I am much indebted to the staff of the British Museum (Natural History), for assistance during my stay in the Hemiptera section.

ISODERMINAE

Isodermus gayi Spin. 1-3. Punta Arenas, Straits of Magellan, Walker, British Museum leg.

Isodermus planus Er. 1-2. Van Diemensland, Klug.

ARADINAE

Aradus acutus Say. 1. Canada, Boisduval. — 2-3. Southern Pines, Moore Country, N.C., U.S.A., 26 February 1909, Staudinger.

Aradus angustellus Blanch. 1. Chile Chico, Chile, 25 February 1938, C. H. Andreas and M. J. de Graag.

Aradus anisotomus Put. 1. Mondy, Sajan Mts.

Aradus asper nov. spec. (fig. 1). Second joint of the antennae thin, about as thin as the anterior tibiae, slightly thickened towards the top, and longer than the third and fourth joints taken together (proportions of the lengths of the antennal joints: 3 : 22 : 7 : 8; head slightly longer than the second joint: 24). Tylus prolonged. Lateral edges of the pronotum flattened, expanded, armed with about 7 strong teeth; the posterior part of the edge making nearly a right angle with the anterior part. Head rather long, the posterior part of the vertex with four longitudinal keels, two near the centre and two over the eyes, the last mentioned ones armed with an acute tooth followed anteriorly by about five smaller denticles. Antennae and legs dark brown, the basal 2/3 part of the second and the apical half of the third joint of the antennae somewhat lighter. The tibiae yellowish brown, the bases slightly darkened. Rostrum reaching nearly the posterior edge of the mesosternum. Pronotum about 2½ times as broad as its length down the middle, with six longitudinal keels, the central ones in the anterior part nearly parallel, diverging backwards behind, the next pair straight, diverging backwards, anteriorly shortened, not reaching the anterior edge nor the central keels, the lateral keels only present on the posterior part. Scutellum with raised edges, a central longitudinal keel and a transverse elevation before the middle. Hemielytra with a rather large yellowish, rounded expansion at the basal costal edge, colour obscure brown in the remaining parts, the nerves in the membrane with lighter borders.

Length (of the ♂): 9 mm.

1. Borochojewa, Transbaikalia, (Holotype).

Aradus bergrothianus Kiritchenko. 1. Vladivostok, Siberia, E. le Moult.

Aradus betulae L. 1-19. Sinaia, Walachia, A. L. Montandon. — 20. Velebit Mts., Croatia, Sequens. — 21-22. Rámnicu Sarat-Plainesti, A. L. Montandon. — 23-24. Switzerland, Meyer Dür. — 25. Bohemia, Staudinger. — 26-27. Corsica. (The specimens 1-27 in Fokker's collection). — 28. Bosnia, June 1899. — 29-31. Minten, Eastern Prussia, R. Korchevski. — 32. Borochojewa, Transbaikalia.

Aradus betulinus Fall. 1-5. Switzerland, Meyer Dür, in Fokker's collection.

Aradus brenskei Reut. 1. Sicilia, M. H. Perana, in Fokker's collection. — 2. Split, Marjan peninsula, Jugoslavia, 18 May 1956, Leiden biologists.

Aradus cinnamomeus Panz. 1. Beek, 1 June, Six. — 2-4. Venlo, June 1874. — 5. Loosduinen, March, Everts. — 6. Imbosch, near Rozendaal (Geld.), 16 August 1893, J. Th. Oudemans. — 7. Maarsbergen, May 1896. — 8. Maarsbergen, June 1877. — 9. Winterswijk, June 1876. — 10. Winterswijk, July. — 11-12. Winterswijk, July 1886. — 13. Arnhem, April 1886. — 14. Vorden, June, Groll. — 15-16. Laag Soeren, June 1855. — 17. Wolfhezen, 27 August 1865, Snellen. — 18-25. Thüringen, Dr O. Schmiedeknecht. — 26. Thale. — 27-30, Tunis, 1898, Dr O. Schmiedeknecht. — 31. Soestdijk, Van Vollenhoven. — 32. Sterkenburg, Van Vollenhoven. — 33. Breda, December, Heylaerts. — 34. Breda? — 35. Den Haag (The Hague), August, Van Vollenhoven. — 36. Switzerland, Meyer Dür. (The specimens 1-36 in Fokker's collection). — 37. Koningsbosch, Meijendel, 7 april 1925, H. C. Blöte. — 38. Soesterberg, 11 September 1926, H. C. Blöte. — 39. Eerde, 7 July 1926, H. C. Blöte. — 40. Harderwijk, August 1925, T. Karstens. — 41. Corner of Conduit and Potomac Roads, Md., U.S.A., on *Pinus virginiana*, 12 April 1914, W. L. Mac Atee. — 42(-43?). Mastbosch, Breda, 2 May 1872, Heylaerts. — 44. ?, H. C. L. van Eldik. — 45-46. Groesbeek, August 1935, A. M. Scholte S.J. — 47-51. Aalst, (N.B.), 21-22 August 1935, H. C. Blöte. — 52. Valkenswaard, 23 August 1935, H. C. Blöte. — 53. De Schaffelaar, Barneveld, 1-11 September 1943, E. A. M. Speyer. — 54-55. Nederheide, Valkenswaard, 11 Augustus 1945, H. C. Blöte. — 56-70. Hoenderloo, 9 April 1946. — 71. Hoenderloo, 2 October 1949, E. T. G. Elton. (The nrs. 1-17, 31-35, 37-40 and 42-71 are from localities in the Netherlands).

Aradus corticalis L. 1. 's-Gravenhage (The Hague), June 1894. — 2. Bohemia, L. Duda. (The specimens 1-2 in Fokker's collection). — 3-6. Bavaria, Sturm. — 7. Germany, Germar. — 8-14. Switzerland, Meyer Dür.

Aradus crenaticollis Sahlb. 1. Radde, Amur.

Aradus crenatus Say. 1. Thüringen, Dr O. Schmiedeknecht. — 2. Gospič, Croatia, Sequens. — 3. Velebit Mts., Croatia, Sequens. — 4. Morea, Cumari, Brenske. — 5. Peloponnesus. — 6-8. Tunesia, 1898, Dr O. Schmiedeknecht. (The specimens 1-8 in Fokker's collection). — 9. Vallombroso, Italia, May 1904, H. J. Veth. — 10. Tennessee, Troost. — 11-15. Finkenkrug, R. Korschevsky.

Aradus depressus F. 1. Utrecht, Van Hasselt. — 2(-3?). Utrecht, May, Six. — 4. Nijmegen, Ter Haar. — 5. Maarsbergen, May. — 6. 's-Gravenhage, July 1892. — 7. 's-Gravenhage, June, Van Vollenhoven. — 8. Breda, May 1890. — 9-12. Winterswijk, July. — 13-16. Winterswijk, July 1886. — 17-19. Baarn, July 1885. — 20. Zierikzee, 18 March 1883, Fokker. — 21. Thüringen, Dr O. Schmiedeknecht. — 22-24. Switzerland, Meyer Dür. — 25-28. Gospič, Croatia, Sequens. — 29. Tunesia, 1898, Dr O. Schmiedeknecht. (The specimens 1-29 in Fokker's collection). — 30(-31?). Holland, Van Vollenhoven. — 32. Den Haag, June, C. Ritsema. — 33. Den Haag, February, Leesberg. — 34. Den Haag, May, Leesberg, (larva). — 35-36. Arnhem, April, De Rooy. — 37. Amersfoort, June. — 38. Breda, Ulvenhoutsche bosch, 27 May 1887. — 39-40. ? Breda, Mastbosch, 2 May 1872, Heylaerts. — 41-42. Meijendel, 26 August 1923, H. C. Blöte, (larvae). — 43. Hilversum, 9 October 1920, H. C. L. van Eldik. — 44. ?, Périn. — 45(-46?). Switzerland, Meyer Dür. — 47. Göttingen, Everts. — 48. Eisenach, May 1905, Dr. H. J. Veth. — 49-51. Croatia, June 1899. — 52. Meijendel, 26 August 1923, J. van der Vecht, (larva). — 53. Meijendel, 12 September 1923, J. Sonneveldt. — 54. Den Haag. — 55. Scheveningen, Van Hasselt. — 56-65. Finkenkrug, R. Korschefsky. — 66. Meijendel, 26 August 1923, H. C. Blöte. — 67-69. Venlo, 12 June 1937, Geijskes. — 70. Rockanje, dunes near beach-mark 9, 14 June 1934, C. de Jong. — 71-74. „De Schaffelaar", Barneveld, 1-17 May 1943, E. A. M. Speyer. — 75. Caestert, under maple-tree and hawthorn, 18 May 1950, St. Pietersberg excursion. — 76. Montsude par Chabreloche, France, 19 June 1951, H. C. Blöte. — 77. La Corniche de Houlgate (Calvados), France, 26 May 1955, excursion of the Leiden Museum. — 78-79. Meijendel, 17 April 1957, H. C. Blöte. (The nrs. 1-20, 30-43, 52-55, 66-75 and 78-79 are from localities in the Netherlands).

Aradus hieroglyphicus Sahlb. 1. Mondy, Sajan Mts.

Aradus melas Jak. 1-2. Sutchan, Ussuri, Staudinger 1930.

Aradus mirabilis Bergr. 1. Laos, Vitalis de Salvaza. — 2. Tintoe (?), Laos, 1 December 1918, Vitalis de Salvaza.

Aradus mirus Bergr. 1. Dornbach, Handlirsch, in Fokker's collection.

Aradus muricatus Humm. 1-2. Namangan, Prov. Fergana, Staudinger 1930.

Aradus nemtshinovae Jak. 1. Radde, Amur.

Aradus quadrilineatus Say. 1. Wisconsin, Kumlien.

Aradus reuterianus Put. 1. Drôme, in Fokker's collection.

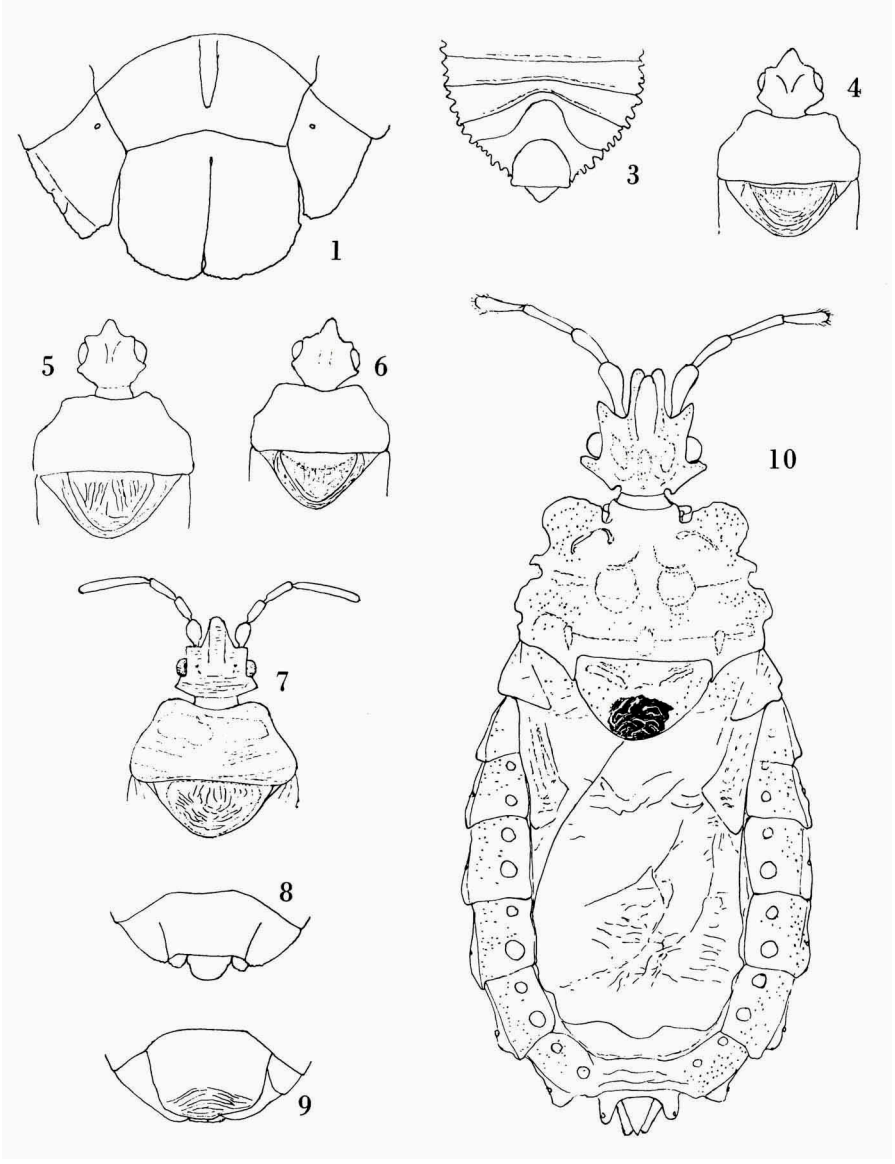

Fig. 1, 3-10. 1, *Aradus asper* nov. spec., ultimate sternites of ♂ ; 3, *Calisius spinulosus* nov. spec., ultimate sternites of ♂ ; 4, *Aneurus jacobsoni* nov. spec., head and thorax; 5, *Aneurus longicollis* nov. spec., head and thorax; 6, *Aneurus cetratus* Bergr., head and thorax; 7. *Aneurus toxopeusi* nov. spec., head and thorax; 8, *Aneurus toxopeusi* nov. spec., ultimate sternites of ♂ ; 9, *Aneurus toxopeusi* nov. spec., ultimate sternites of ♀ ; 10, *Carventus speculifer* nov. spec.

Aradus similis Say. 1-3. White Plains, N.Y., U.S.A., Staudinger 1930.

Aradus ussuriensis Jak. 1-2. Sutchan, Ussuri, Staudinger 1930, (larvae).

Aradus versicolor H.-S. 1. Ambouille, Pyrenées orientales. — 2. Gospič, Croatia, Sequens. (The specimens 1-2 in Fokker's collection). — 3. Canbeires par Tonniens, Lot et Garonne, France, E. le Moult.

CALISIINAE

Calisius ghiliani Costa. 1. Philippeville, Algérie, A. Théry, Staudinger 1930.

Calisius spinulosus nov. spec. (fig. 2-3). Abdomen about ¼ broader than the pronotum, the sides slightly rounded. Upper edges of the connexival

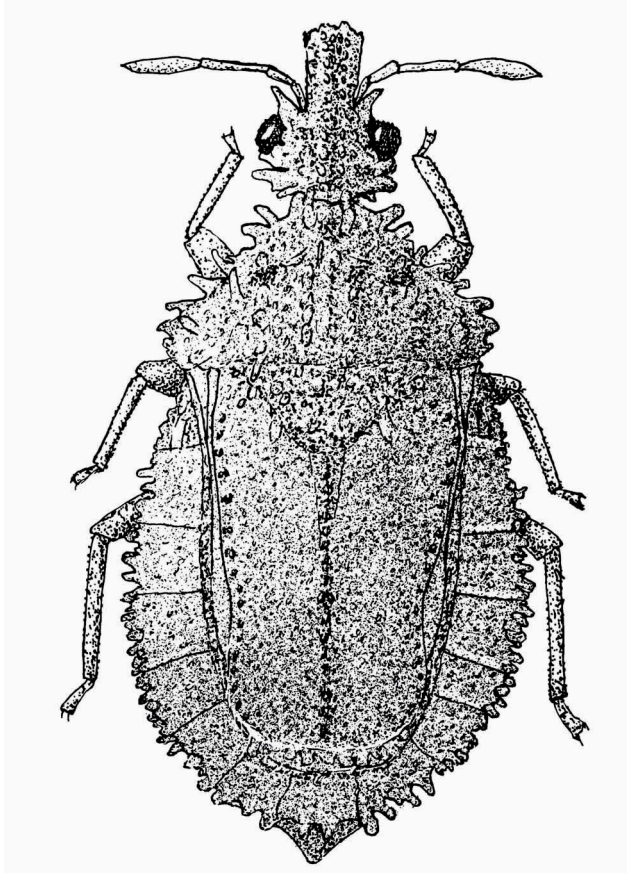

Fig. 2. *Calisius spinulosus* nov. spec., ♂.

segments each with three lobes. Antennae unicolourous, brownish, ultimate joint fusiform. Scutellum with a central row and two lateral rows of blunt spines, reaching near the apex. Head longer than broad. Fourth joint of the antennae only slightly longer than the third.

This species is very remarkable by the long, blunt spines the thorax is set with, and by the long rounded lobes on the edge of the pronotum. The connexivum shows an upper and a lower row of tubercles of the same size. Both pronotum and scutellum are ornated with blunt tubercles, in places so close together as to leave hardly any room between them. The whole surface of the posterior part of the scutellum, the connexivum, and the underside granulose. Rostrum short, reaching about the middle of the eyes. Colour brown, the rows of spines and the elevated tuberculous basal part of the scutellum slightly darker. The pronotum at both sides with two somewhat darker pits about the middle. The apical edge of the scutellum within the apical row of tubercles and the apical parts of the connexival segments very slightly lighter than the rest of them.

The genital sternite of the ♂ (fig. 3) truncate at the apex, the foregoing sternite with distinctly inflexed base. Third to fifth sternites each with a row of dark punctures before the apex.

Length (of the ♂): nearly 3½ mm.

1. Kendeng, Idjen, E. Java, 1400 m, June 1924, Dammerman, (Holotype ♂).

ANEURINAE

Aneurus avenius Duf. 1-9. Rohrbach, Oberbayern, April-May 1935, K. Ruile. — 10. Cestas (Gironde), France, 27 May 1961, J. T. Wiebes and Ph. Pronk.

Aneurus brevisulcatus Bergr. 1-2. Tananarive, Madagascar.

Aneurus fiskei Heid. 1-2. White Plains, N.Y., U.S.A., 20 March 1910 and 7 September 1907, Staudinger 1930.

Aneurus inconstans Uhl. 1. Macedon, N.Y., U.S.A., 11 May 1924, W. L. Mac Atee. — 2-3. White Plains, N.Y., U.S.A., 14 September 1907, Staudinger 1930.

Aneurus jacobsoni nov. spec. (fig. 4). A species of the group of *A. cetratus* Bergr. and *A. longicollis* nov. spec. In this species the scutellum is nearly smooth, only with very fine sculpture. Parallel to the base there is a transverse furrow, behind it a very superficial sculpturation of longitudinal grooves, and nearer to the apical edge some equally fine grooves

parallel to this edge. Colour reddish brown; the tylus, the legs (femora included), the connexivum and the ventral parts lighter. Bases of corium (nerves excepted) and of the membranes yellowish brown. The antennae are slightly shorter than in both *A. cetratus* Bergr. and *A. longicollis* nov. spec. The first and second joints about equal in length, the third joint distinctly longer than the second (3 :2) and shorter than the fourth (2 :3).

Length about 4 mm.

1-10. Lubuksikaping, W. Central Sumatra, 450 m, 1926, E. Jacobson, (Holo- Allo- and Paratypes). — 11. Krakatau, April 1933, K. W. Dammerman.

Aneurus laevis F. 1. Voorst, June, Van Vollenhoven. — 2-6. Germany. — 7-9. Herculesbad, August 1896, Veth. — 10-25. Gospič, Croatia, Sequens. — 26-29. Velebit Mts., Croatia, Sequens. (The specimens 1-29 in Fokker's collection). — 30. Germany. — 31. Krefeld, Dohrn. — 32. Wageningen, 4 April 1920, H. C. L. van Eldik. — 33-44. Mijnheerkens, Limburg, De Fluiter. — 45-46. Jamunsk and Taydjan-Bazar, Crimea, 26 June 1907, W. Pleginsky, Staudinger 1930. — 47-60. Ankeveen, 18 March 1917, H. van der Vaart. (The nrs. 1, 32-44 and 47-60 are from localities in the Netherlands).

Aneurus longicollis nov. spec. (fig. 5). In the Malayan Archipelago some species of the genus *Aneurus* occur, that in their principal characters (shape of the head, small postocular tubercles, and the peculiar structure of the pterothorax and the sixth tergite) agree with *A. cetratus* Bergr. Nevertheless there are certain differences, especially in the structure of the scutellum, that I am inclined to regard to be specific.

Thanks to the kindness of Dr. Delfa Guiglia, of the Museo Civico di Storia Naturale "Giacomo Doria" at Genoa, I could examine a ♀ cotype of *Aneurus cetratus* Bergr. (fig. 6) from Bujakori, New Guinea. In this species the scutellum shows a distinct transverse, curved, and rounded elevation between the basal corners. Before this elevation the surface is nearly smooth, behind it, it shows very fine scratches, more or less at right angles to each other, near the apical edge slightly coarser, and more parallel to this edge.

In the present species — *A. longicollis* — the scutellum is flat, the basal edge is smooth, but behind this it shows a fairly coarse sculpturation of longitudinal or slightly radiating furrows. In this species too the furrows are more parallel to the edge the closer they are to it. Moreover this species is peculiar by its rather long neck.

Colour shining dark castaneous, the basal third part of the pronotum slightly lighter, the tylus, the tibiae, the connexivum and the underside lighter reddish brown. Membrane bronzine, with a lighter patch at the base.

The relative lengths of the antennal joints are slightly different in both species: in *A. cetratus* Bergr. the first joint is distinctly shorter than the second (3 : 4), and the second joint slightly shorter than the third (5 : 6), in *A. longicollis* the first and second joints are only slightly different, and the second joint is distinctly shorter than the third (2 : 3).

Length: 4-4½ mm.

1-16. Fort de Kock (= Bukittinggi), Sumatra, 920 m, 1924, E. Jacobson, (Holo- Allo- and Paratypes), and one paratype of the same locality in the collection of the Museo Civico di Storia Naturale "Giacomo Doria" at Genova.

Aneurus marginalis Walk. 1-4. Coroico, Bolivia.

Aneurus politus Say. 1-3. San Domingo, Klug.

Aneurus toxopeusi nov. spec. (fig. 7-9). Head nearly triangular; the posterior edge laterally nearly straight and transverse. Postocular tubercle developed into a distinct and slightly acutangular corner. Antenniferous tubercles rectangular. Second joint of the antennae slightly longer than the first and shorter than the third; fourth joint shorter than the second and third joints together (relative lengths: 13 : 14: 18 : 27). Vertex transversely furrowed. Pronotal sides shallowly inflexed before the middle, anterior and posterior corners rounded. Pronotal surface finely granulose and with fine transverse furrows. Scutellum broad at the base, rounded at the top, with an inscribed nearly semicircular carina. Length of the scutellum about 5/6 of the length of the pronotum measured in the central line. The surface with longitudinal furrows near the base and with transverse and often anastomosing furrows in the apical part. Lateral edge of the corium only slightly curved. Membrane transparent, slightly brownish. Abdomen not very broadly ovately rounded; no distinct suture separating a triangular part from the sixth tergite.

Ultimate sternite of the ♂ relatively small; penultimate segment distinctly furrowed at both sides. Penultimate sternite in the ♀ with rather coarse transverse furrows at the end of the central lobe. In the specimen figured the connexivum shows a remarkable asymmetry.

Length: $4^1/_5$ (small ♂) -5 mm.

1-7. Lake Habbema, W. Central New Guinea, 3250-3300 m, 11 August 1938, L. J. Toxopeus, Netherlands Indian-American New Guinea expedition (Holo- Allo- and Paratypes), and 5 paratypes from the same locality and date in the collection of the American Museum of Natural History at New York, U.S.A.

CARVENTINAE

Carventus speculifer nov. spec. (fig. 10). This species is very peculiar by its two rounded, brown, shining spots on the pronotum and by a large, dull black spot on the scutellum. Head subquadrate, the anterior process rather thick, the genae separated at the tip. Antenniferous tubercles a little divergent, acutangular at the top; postocular tubercles distinct, surpassing the outer level of the eyes. At both sides of the neck a distinct tooth at the posterior edge. First antennal joint slightly surpassing the apex of the head, second joint somewhat shorter, third joint subequal to the first, nearly linear, fourth joint about as long as the second.

Pronotum with rounded anterior corners, inflexed in the central anterior edge, and with a rather long collar, that shows small lateral protrusions on a level below the surface of the anterolateral edge. Lateral edge with two large, irregular inflexions, leaving an angular tooth between them; a smaller inflexion before the posterolateral corners. Posterior edge with an angular tooth at both sides of the scutellum. The upper surface of head and pronotum is covered with a pale incrustation, except for two large, shining brown spots on the disk, two smaller and somewhat triangular spots before the protrusions at both sides of the scutellum and a central spot on the same level, connected with these small spots by a transverse ridge.

Scutellum with broadly rounded edge, nearly semicircular, with a deeply furrowed dull black spot on the apical part. The remaining surface covered with a pale incrustation, offering some furrows near the base. Corium ill-defined, because of incrustations. Basal part of the membrane laterally subcoriaceous, yellowish gray, the apical part bronzy brown, the extreme apex transparent. Connexivum covered with pale incrustations, each segment with two glassy shining, round spots. Spiracles on the third to eighth segments lateral, visible from above. Central lobes of the seventh sternite in the ♀ truncate, with right corners at the medial slit.

Length (of the ♀): $6^1/_4$ mm.

1. Mt. Lompobatang, S. W. Celebes, 1600 m, July 1936, L. J. Toxopeus, (Holotype).

Aglaocoris natalii Drake & Maldonado-Capriles. 1. Yauco, Puerto Rico, March 1955, (Paratype).

Apteraradus bloetei Drake. 1. Tjibodas, Java, 25-28 March 1904, K. Kraepelin, (Holotype).

Apteraradus collaris Usinger & Matsuda. 1. Tangkuban Prahu, 15 June

1933, P. H. van Doesburg, (Holotype). — 2-3. Tangkuban Prahu, Preanger, Java, 4000-5000 feet, November 1937 and March 1938, F. C. Drescher.

Sibilocoris nov. gen.

This genus is allied to *Libiocoris* Kormilev, *Zoroaptera* Drake and *Ainocoris* Drake. It is different from all three by the indistinct suture between meso- and metanotum, which laterally is hardly detectable at all, and by the structure of the head. The rostral atrium is closed anteriorly, apart from a longitudinal slit. Meso- and metanotum in the middle with a longitudinal elevation, which shows a fine longitudinal impression in the median line, more or less as in *Libiocoris* Korm.; anteriorly this elevation has a continuation on the basal part of the pronotum, however, without the central impressed line.

In places the body shows a thin, smooth incrustation, and here and there grains of sand etc. are sticking to it.

Head broader than long. Genae extending only a little beyond the clypeus. Antenniferous tubercles short and blunt. Postocular tubercles absent. Posterior lateral margins of the head slightly rounded. Antennae slightly over twice as long as the head, but as the head is short, the antennae are rather short too. First joint longest, second joint about equal to the fourth, third joint longer than the second. Rostral groove rather wide, oval, not reaching the base of the head. Pronotum short, broad, more than three times as wide as long in the middle, with an indistinct anterior collar. Surface uneven, granulated, but with a few smooth spots. Mesonotum, metanotum and basal abdominal tergites fused in the centre, forming a large saddle, the surface of which is uneven, but the sculpturation is finer in general than that of the pronotum; only anteriorly it is granulated in places. Abdominal tergites with about the same pattern of areas as in *Zoroaptera* Drake. Under surface rather smooth, with dispersed and rather flat granules, principally on the ultimate sternites.

Type species: *Sibilocoris brongersmai* nov. spec.

Sibilocoris brongersmai nov. spec. (fig. 11). Dark reddish brown, the head and the ultimate abdominal segment slightly darker. Moderately shining; in parts covered with a smooth, transparent incrustation, specially on the connexival tergites and on the areas of the abdominal segments. Dorsal surface of head and thorax uneven, the lateral edges of the whole body with irregular and often asymmetric protrusions. Head transverse, the anterior process with rather broad base, tapering to the top. Genae but slightly protruding. Basal joint of the antennae shorter than the head (6 :7), strongly granulate, with short hairs; second and third joints granulate,

fourth joint smooth, with a tuft of white hairs at the top. Relative lengths of the antennal joints: 12 : 5 : 9 : 5. Femora strongly granulate and hairy; tibiae smooth, but still more hairy; tarsi yellowish.

The only known specimen is a ♀; it shows distinct protuberances on the lobes of the 9th segment. The 8th segment with angular lateral processes.

Length (of the ♀): 5 mm.

1. Sibil, Star Range, W. New Guinea, 1260 m, 14 May 1959, Netherlands New Guinea expedition, (Holotype).

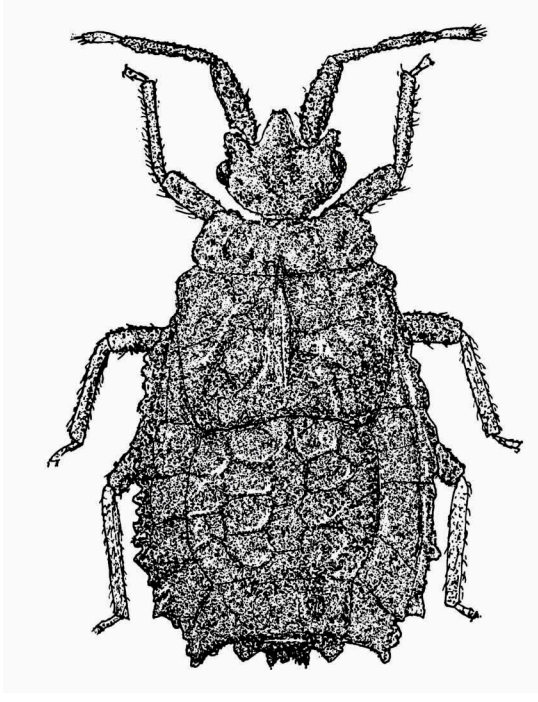

Fig. 11. *Sibilocoris brongersmai* nov. gen. nov. spec., ♀.

Dedicated to the leader of the expedition, Dr L. D. Brongersma.

Euricoris hollandicus Usinger & Matsuda. 1. Hollandia (Kota Baru), New Guinea, 23 February 1952, L. D. Brongersma, (Holotype).

Mezirinae

Parapictinus brachypterus Korm. 1. Madura, S. India.

Chelonocoris bloetei Usinger. 1-2. Sumatra, Muller, (Holo- and Allotype). — 3. ?.

Chelonocoris depressus Usinger. 1. Sarolangun, Sumatra, Djambi expedition, 2 July 1925, Dr O. Posthumus, (Holotype).

Chelonocoris ferrugineus Usinger. 1. West Sumatra, Heiting, (Holotype).

Dimorphacantha distincta Usinger & Matsuda. 1. Sinabang, Simalur, West of Sumatra, July 1913, E. Jacobson. — 2-4. Tandjong Morawa, Serdang, Sumatra, Dr B. Hagen. — 5. Anai cleft, West Sumatra, 500 m, 1926, E. Jacobson. — 6. Sukanegara, W. Java, 500-700 m, March 1940.

Dimorphacantha usingeri nov. spec. (fig. 12). Head hardly wider than long (17: 16). Anterior process rounded at the top, the genae narrow, only slightly protruding. Upper surface granulate. Vertex with two longitudinal rows of about five tubercles. Rostral groove narrow, the bucculae swollen. Relative lengths of the antennal joints: 7: 5 :7 :5 (head on that scale about 12); first and second joints granulate, third and fourth joints less so, altogether with rather long and semi-erect hairs; the apical joint moreover with a tuft of whitish hairs at the top.

Pronotum over twice as wide as long (20 :9), with a very short anterior collar and slightly anteriorly produced anterolateral angles, thereby nearly straight. Lateral margins in the anterior half nearly straight, in the middle strongly inflexed. Behind the inflexion with a rounded protrusion, the basal part nearly straight again, with hardly produced, blunt humeral corners. Surface moderately rough, granulate, and indistinctly furrowed, but with a strongly granulate hump near the anterolateral corners. Scutellum strongly elevated into a rounded hump, with a longitudinal keel on the posterior part, thickly and coarsely granulate, only the lateral basal parts flat, and with coarse, irregular sculpturation.

Brachypterous; the corium not exceeding the apex of the scutellum, the membrane vestigial. Apical corners of the connexival segments with rounded protrusions, that are much less developed than in *D. distincta* Us. & Mats. The central parts of the abdominal tergites with very large and rather tightly set punctures, leaving rather small smooth spots in the lateral areas, and a narrow, anteriorly truncate, smooth stripe in the centre.

All femora show a large spine at about $^3/_4$ of their lengths.

The only specimen available is a ♀; it shows no trace of a metapleural spine. The 9th sternal plates show each a conical protrusion; the 8th segment has blunt and rounded, backwards directed, lateral corners.

Length (of the ♀): $5^1/_3$ mm.

1. Gunung Megamendung, W. Java, 700 m, 21 October 1951, A. M. R. Wegner, (Holotype).

This species I dedicate to Professor R. L. Usinger, the well-known investigator of Aradidae, who already mentioned the occurrence of brachypterous forms of *Dimorphacantha.*

Rossius polyacanthus Walk. 1-3. Upper Sermowai river, New Guinea, ± 400 m, 5 May and 4 June 1911. — 4. Arabubivouac, W. Central New Guinea, 22 October 1939, expedition of the Royal Netherlands Geographical Society (K.N.A.G.). — 5. Sorong, N.W. New Guinea, June-July 1948, M. A. Lieftinck.

Artabanus bilobiceps Leth. 1. Sambas, Borneo, May 1890, Th. F. Lucassen. — 2. Manna, Sumatra, M. Knappert. — 3. Sukanegara, W. Java, 500-700 m, February 1940.

Artabanus brevis nov. spec. (fig. 13). This species is not unlike *A. bilobiceps* Leth., but smaller and relatively broader, and of a more reddish brown colour throughout. Like in *A. bilobiceps* the apex of the head is distinctly bilobate because of the protruding genae. In our specimen there is an additional knob at the right side of the apical process. Head about as wide as long, subquadrate. Antenniferous tubercles conical, but with rather acute top.

Pronotum hardly longer than the head, granulate, the transverse furrow rather ill-defined. The anterior part with two longitudinal elevations near the middle and with two rounded tubercles near the anterolateral corners. Posterior part irregularly uneven.

Scutellum with a longitudinal keel in the centre, the surface granulate. Corium slightly surpassing the top of the scutellum. Membrane greyish yellow, with in places reticulate nervature. Connexivum broad, with rounded and slightly protruding apical corners to the segments.

Antennae rather short, about as long as head and pronotum taken together. Relative lengths of the joints: 6 : 4 : 8 : 5.

The only specimen available is a ♀. The genital plates (9th sternites) show a distinct, rounded inflexion laterally, giving room to a round tubercle on the 8th sternite. The central prolonged part slightly curved upwards. Along the common suture finely keeled, and with a very small angular tubercle near the apex.

Length (of the ♀): $5^2/_3$ mm.

1. Pulu Babi, near Simalur, west of Sumatra, April 1913, E. Jacobson, (Holotype).

Artabanus excelsus Bergr. 1-3. Sumatra, Muller. — 4-7. Fort de Kock (= Bukittinggi), W. Central Sumatra, 920 m, 1926, E. Jacobson.

Artabanus halaszfyi Korm. 1. Upper Mahakkam, Borneo, 1894, Dr Nieuwenhuis, Borneo-expedition.

Artabanus obscurus nov. spec. Colour dark brown. The third and fourth antennal joints, the rostrum, the tarsi, the trochanters, two circular spots at each side of the 2nd to 6th tergites and sternites and the bases of the membranes fulvous. Anterior process of the head rather long, nearly parallel-sided and hardly bifid at the top, reaching slightly beyond the middle of the first antennal joint. Antenniferous tubercles acuminate, short. Vertex with two longitudinal keels.

First antennal joint fusiform, the fourth joint clavate. Relative lengths of the joints: 15 : 10 : 19 : 9. Antennae only slightly longer than head and pronotum together, about $^3/_8$ of the length of the body. Anterolateral edges of the pronotum with roundly protruding corners and similar protrusions just behind them. Disk of the anterior part with four rather low elevations; the posterior part irregularly uneven. Lateral edge of the pronotum strongly inflexed between the anterior and posterior parts, the transverse furrow, however, not very obvious. The anterior part notably narrower than the posterior. Scutellum with a median longitudinal elevation. The whole upper side of head and thorax rather coarsely granulate, and set with yellowish curled hairs, especially on the elevated parts. The scutellum, moreover, with a few very distinct, transverse furrows near the base.

Hind border of the pronotum with a broad, shallow, but nearly rectangular incision before the base of the elevated part of the scutellum, that fits into it. Corium reaching slightly beyond the apex of the scutellum. Membrane with strong, reticulate nervature. Connexival segments with slightly protruding apical corners; the 7th and 8th segments each with a distinct, rounded protrusion (in the ♀). The genital plates in the ♀ regularly rounded, rather narrow, with a low, round little knob posteriorly. There is a very distinct suture between the central and the lateral parts of the 7th sternite.

Length (of the ♀): nearly 11 mm.

1. Bernhard Camp, Northern New Guinea, 50 m, July-November 1938, J. Olthof, Netherlands Indian-American New Guinea expedition, (Holotype).

Ctenoneurus hochstetteri Mayr. 1-323. Pelorus Bridge, New Zealand, 28 February 1949, H. Boschma.

Chinessa acutissima nov. spec. (fig. 14). This species is very peculiar by the long and sharp pointed genae and the sharp pointed protuberances of the 7th abdominal segment. It differs moreover notably from the only congeneric species *C. bispiniceps* Walk. in the structure of the pronotum, the

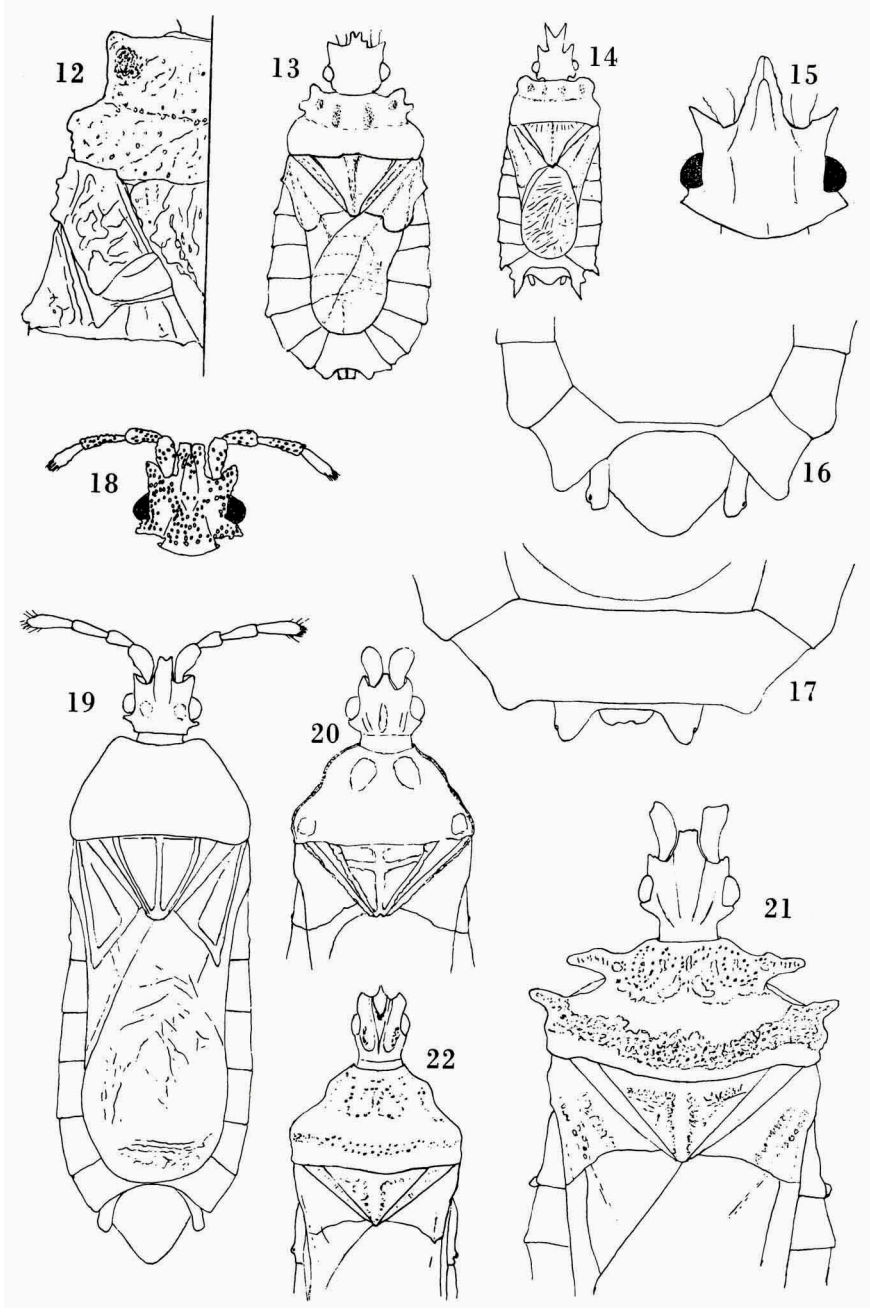

Fig. 12-22. 12, *Dimorphacantha usingeri* nov. spec., thorax, left side; 13, *Artabanus brevis* nov. spec., ♀ ; 14, *Chinessa acutissima* nov. spec., ♂ ; 15, *Neuroctenus flavosuturatus* nov. spec., head; 16, *Neuroctenus flavosuturatus* nov. spec., ultimate tergites of ♂ ; 17, *Neuroctenus flavosuturatus* nov. spec., ultimate tergites of ♀ ; 18, *Neuroctenus javanicus* nov. spec., head; 19, *Pictinellus sundanus* nov. spec., ♂ ; 20, *Chiastoplonia sumatrana* nov. spec., head and thorax; 21, *Aphelocoris grandis* nov. spec., head and thorax; 22, *Aphelocoris simplex* nov. spec., head and thorax.

anterolateral corners of which are regularly rounded, not inflexed towards the head.

Colour piceous throughout, only the basal half of the membrane with a pale patch. Head with a central longitudinal elevation, the tylus and genae situated notably over the level of the antenniferous tubercles. Antenniferous tubercles acute. Postocular tubercles rounded, directed backwards. Antennae as long as head (without the prolonged genae) and pronotum together. Relative lengths of the joints: 9 :7 :10 :8, their forms much the same as in *C. bispiniceps* Walk.

Pronotum with distinct inflexions behind the anterolateral lobes. The anterior portion with four rounded tubercles, the posterior part hardly uneven. Scutellum with a central keel and a number of short keels near the base. The whole upper surface coarsely granulate, in places the granules are arranged in rows, so on the scutellum, on the corium and near the connexival edges. The connexivum shows a few small, irregular, smooth spots, but is generally granulate throughout.

Underside piceous, the rostrum, trochanters and tarsi yellowish. On the underside of our specimen a large number (± 30) Uropodid mites is present. Posterior corners of the sixth connexival segment acute, its spiracle visible from above. Posterior corners of the 7th segment prolonged into long and sharp spines; spiracles situated on a distinct tubercle. The genital segment of the ♂ rounded, with long lateral lobes.

Length (of the ♂): 7 mm.

1. Rattan camp, Northern New Guinea, 1100 m, 1-7 February 1933, L. J. Toxopeus, Netherlands Indian-American New Guinea expedition, (Holotype).

Neuroctenus affinis Dist. 1-30. Orissa, Teypone, E. Central India, 1775 feet, September 1958, P. Susai Nathan. — 31. Anamalai Hills, Cinchona, S. India, 3500 feet, May 1960, P. Susai Nathan.

Neuroctenus bilobus Sign. 1-2. Mayotte, R. Oberthür.

Neuroctenus flavosuturatus nov. spec. (fig. 15-17). First antennal joint not surpassing the top of the genae (anterior process of the head). The tylus is much shorter than the genae, which are narrowed in front, as to form a rather acute point. Antenniferous tubercles sharp pointed, distinctly diverging. Postocular tubercles acutangular, hardly surpassing the outer level of the eyes. First, second and fourth antennal joints subequal in length, third joint slightly longer (5 :4). Colour dark brown, with some yellowish markings; the tibiae and tarsi hardly lighter.

Pronotum transverse, its length in the median line about 9/20 of its

width. The anterior part with four large, rounded, but less prominent humps, the posterior part nearly flat, faintly foveate. Lateral edges distinctly and widely inflexed, the anterior corners rounded, slightly protruding. The posterior corners with a short, rounded, backward directed lobe. Upper surface of head, thorax and scutellum thickly and regularly granulate. Scutellum tricarinate, the lateral carinae short and close to the anterolateral corners. Between the carinae the surface is slightly quadrifoveate. Apical edge of the corium with two rounded inflexions between the nerves, the top reaching about the middle of the third abdominal segment. Basal part of the membrane subcoriaceous, yellowish, with three dull black spots against the apical edge, one of which occupies the top, and reaches slightly beyond the middle of the fourth abdominal segment.

Connexivum with yellow bands along the segmental sutures on the upper side; on the ventral side these bands are less obvious, and distinct only near the lateral edges. In both sexes the edge of the 7th tergite is distinctly inflexed, and the posterolateral corners are roundly protruding, especially in the ♂. The lateral lobes of the 8th segment in the ♂ rather long, the genital capsule relatively large and swollen. In both sexes the spiracles of the 8th segment are very conspicuous.

Length of the ♂: $6^1/_4$ mm, of the ♀: $7^3/_4$ mm.

1-2. Mist Camp, N. New Guinea, 1800 m, 11 January 1939, L. J. Toxopeus, Netherlands Indian-American New Guinea expedition, (Holo- and Allotype).

Neuroctenus javanicus nov. spec. (fig. 18). This species differs from most of the other oriental species in having the genae distinctly surpassed by the first antennal joints. In general appearance this species is rather similar to *N. mayri* Stål; the colour is more brownish, the whole surface thickly and not very coarsely granulate, showing only a few smooth patches, viz., one on either side of the head, two small reniform spots on the pronotum, and the usual round spots on the connexival segments, of which the anterior ones on each segment are situated more lateral than the posterior ones. Mid-lateral area with two glabrous spots on each segment; about $^1/_3$ of the width of the connexivum. Scutellum in the apical half with an obsolete keel. The coriaceous basal part of the membrane whitish, traversed by a brown spot, the lateral top of this part black. The membraneous part bronzy, the central part somewhat lighter. Underside and femora reddish brown, tibiae, tarsi and rostrum yellowish brown. Ultimate antennal joint with white pubescence at the top.

Ventral lobes of the 9th segment of the ♀ emarginate and bilobate at the

apex; its lateral edges without incisures, slightly surpassing the lobes of the 8th segment, which are regularly rounded.

Length (of the ♀): 5 mm.

1. Sukabumi, Java, December 1935, (Holotype).

Neuroctenus litigiosus Stål. 1-3. Panzos, Guatemala.

Neuroctenus par Bergr. 1-3. Java, Muller. — 4. Sumatra, Muller. — 5. Tandjong Morawa, Serdang, Sumatra, Dr B. Hagen. — 6. Sinabang, Simalur, May 1913, E. Jacobson. — 7. Sumbawa, Van Lansberge.

Neuroctenus parus Hsiao. 1-14. Tayninh, Cochin-China, E. le Moult.

Neuroctenus punctulatus Burm. 1-2. San Domingo, Museum Berlin. — 3. America, Latreille. — 4-23. Nova Teutonia, Rio Grande do Sul, S. Brazil. — 24-41. Campo Vaera, Misiones, Argentine, December 1954, F. H. Walz.

Neuroctenus rubiginosus Bergr. 1. Coroico, Bolivia. — 2. Tinga Maria, Peru, 1934, J. de Voogd.

Neuroctenus rubrescens Walk. 1. Borneo, Schwaner. — 2. Sumatra, Muller. — 3. Solok, Sumatra, Schagen van Leeuwen. — 4-5. Suban Ajam, Sumatra, July 1916, E. Jacobson. — 6. Sinabang, Simalur, West of Sumatra, E. Jacobson. — 7-9. Timor, Wienecke. — 10-11. Perak, Malacca, Staudinger 1930. — 12-13. Preanger, Java. — 14. Sukabumi, Java, April 1933, F. A. Th. H. Verbeek.

Neuroctenus serrulatus Stål. 1. Sumatra, Muller. — 2. Rawas, May 1878, Sumatra expedition. — 3-15. Tandjong Morawa, Serdang, Sumatra, Dr B. Hagen. — 16. Sangihe, N. of Celebes, C. E. W. Schröder. — 17-18. Dolokmarangir, E. coast of Sumatra, H. C. L. van Eldik leg.

Neuroctenus simplex Uhler. 1. Washington, D.C., U.S.A., May, J. D. Hood. — 2-6. Jeanette, Pa., U.S.A., Staudinger 1930.

Neuroctenus tenuicornis Sign. 1-2, Madagascar. — 3-6. Tananarive, Madagascar, Staudinger 1930.

Neuroctenus yunnanensis Hsiao. 1. Chapa par Laos, Haut Tonkin, 1800 m, 1912-1913, E. le Moult.

Barcinus horridus Stål. 1. Fort de Kock (= Bukittinggi), Sumatra, November 1915, E. Jacobson. — 2. Preanger, Java, 12-30 November 1941, Groenendael.

Barcinus laminiferus Walk. 1. Zoutbron, N. New Guinea, June-July 1910, Van Kampen.

Crimia armata Walk. 1. Sumatra, Muller.

Crimia tuberculata Am. & Serv. 1. Java, Muller. — 2-4. Sumatra, Muller. — 5-6. Kepahiang, Sumatra, Van Lansberge. — 7-8. Tandjong Morawa, Serdang, Sumatra, Dr B. Hagen. — 9. Java, Van Lansberge. — 10. Upper Mahakkam, Borneo, 1894, Dr Nieuwenhuis. — 11-12. ?. — 13. Java, Muller. — 14-16. ?. — 17. Sepandjang Isl., E. le Moult. — 18. Gunung Yalimun, Preanger, Java, May 1936, E. le Moult. — 19. Gunung Megamendung, W. Java, 700 m, September 1951, A. M. R. Wegner. — 20. Sukabumi, Java, E. le Moult.

Pictinellus sundanus nov. spec. (fig. 19). Anterolateral corners of the pronotum hardly produced, widely rounded. Anterior process of the head notched at the apex, the notch is, however, not equally distinct in all specimens. Sides of the antenniferous tubercles parallel, the tops rather blunt. Postocular tubercles subacute, behind these the lateroposterior corners of the head distinctly angular in most specimens. Antennae rather thick; the first joint swollen and curved outward, second joint shortest, about $^3/_5$ the length of the first; third joint slightly shorter, fourth joint slightly longer than the first.

Anterior portion of the pronotum with four rounded but rather low elevations, the posterior corners narrowly inflated, the edge less sharply defined there. The upper side of head, pronotum, and central part of the scutellum rather coarsely but in places widely granulate, the sculpturation of the lateral parts of the scutellum, the coriaceous parts of the hemielytra and of the connexiva is finer and dense. The colour of the upper parts is dark brown; the lateral edges of the pronotum, the posterior inflations included, and the connexivum notably lighter reddish brown. Membrane blackish, with a large basal whitish part (nearly $^1/_3$).

Genital capsule of the ♂ large, somewhat pointed, but in general rounded and swollen; the lateral lobes of the eighth segment rather long and protruding. The lobes of the 8th sternite in the ♀ short, the stigmata situated on the edge. The lobes of the 9th segment with distinct lateral longitudinal furrows beneath, notably protruding beyond the lobes of the 8th segment.

Length: $4^1/_2$-$5^1/_4$ mm.

1-8. Patuha, Tjigombong, Java, 1200 m, (Holo- Allo- and Paratypes). — 9. Pengalenggan, Java, 1600 m, 11 October 1935, Drescher, (Paratype). — 10. Tandjong Morawa, Serdang, N. E. Sumatra, Dr B. Hagen. — 11. Fort de Kock, (= Bukittinggi), Sumatra, 920 m, 1924, E. Jacobson.

Chiastoplonia sumatrana nov. spec. (fig. 20). Colour dark reddish brown, the central part of the pronotum, the scutellum and the (greater) apical

part of the membrane blackish (in one specimen the whole membrane is transparent and whitish, probably due to immaturity). Base of the membrane yellowish.

Head slightly narrower than in *C. pygmaea* China, especially the anterior process narrower and more acute, the basal joints of the antennae much closer to each other. Postocular spines obtuse, vertex with a distinct longitudinal ridge. Antennae shorter than head and pronotum together (about 5/6), the first joint strongly incrassate, less than twice as long as broad. Relative lengths of the antennal joints: 12 : 10 : 14 : 13. Apex of the fourth joint covered with white hairs.

Pronotum half as long as broad at the base; its anterior part is more attenuate than in *C. pygmaea* China, and the sides are less inflexed than in that species. The lateral margins are strongly carinate and anteriorly they are distinctly erected. Anterior corners obsolete. Posterior margin faintly winding. Corium shorter than the clavus, the inner apical margin not surpassing the top of the scutellum. Membrane strongly transversely wrinkled. Genital capsule of the ♂ slightly stronger protruding than in *C. pygmaea* China, distinctly surpassing the apices of the lobes of the 8th segment.

Length (of the ♂): nearly 3 mm.

1-3. Tandjunggadang, Western coast of Sumatra, 1200 m, February 1926, E. Jacobson, (Holo- and Paratypes).

Aphelocoris grandis nov. spec. (fig. 21). This species is much larger than the only species of the genus hitherto described (*A. spinosus* Usinger & Matsuda), but strongly agrees with it in general appearance.

Head (with neck) slightly longer than broad, the anterior tubercles directed anteriorly, their lateral edges parallel. Postocular tubercles obsolete, the postocular edges of the head strongly convergent. Relative lengths of the antennal joints: 11 : 11 : 16 : 7.

Pronotum with long protuberances at the sides of the anterior portion. The lateral edge strongly inflexed behind these protuberances, so that the underlying edge of the prothorax is partly visible in dorsal view. The posterior portion of the pronotum also shows long protuberances at the anterior corners. Hence the lateral edge is somewhat irregularly winding, and nearly parallel on to the blunt and rounded posterior corners. Surface of the pronotum with patches of coarse punctures and granulations in the anterior part, intermixed with small glabrous areas, the transverse furrow well marked. The posterior part with a transverse zone of granules.

Scutellum broad at the base, with a central longitudinal ridge. Corium shorter than the clavus, laterally slightly longer than in *A. spinosus* Us.

& Mats., the apical outer corner distinctly surpassing the apex of the scutellum.

Stigmata of the second abdominal segment situated on a small rounded knob, protruding from under the lateral edge of the connexivum, near the apical corner of the segment. Connexival segments 3-6 very finely granulate, each with a large, ovate, but ill-defined area with a still finer sculpturation. The 7th segment with a long, angular, rather acute apical tooth at the posterior corners. Lateral lobes of the 8th segment (♀) small and rounded. Lobes of the 9th segment distinctly protruding, surpassing those of the 8th segment, and reaching backward nearly as far as the apical corners of the 7th segment if seen from above. The central parts of the 7th sternite transversely truncate. Lobes of the 9th segment small and rounded.

Length (of the ♀): $5^2/_3$ mm.

1. Sigi Camp, N. New Guinea, 1500 m, 25 February 1939, L. J. Toxopeus, Netherlands Indian-American New Guinea expedition, (Holotype).

Aphelocoris simplex nov. spec. (fig. 22). In general appearance this species is not unlike a *Chiastoplonia,* but the rostral atrium is closed, showing only a narrow slit anteriorly. Head distinctly longer than broad (11 :8), with longitudinal and V-shaped furrows; punctured at both sides. Relative lengths of the antennal joints: 14 : 13 : 18 : 12. The first joint thick, but except at the base cylindrical, the remaining joints thinner, but nevertheless rather stout.

In this species the lateral edges of the prothorax are devoid of protuberances, the anterior portion is narrowed anteriorly, the edge slightly elevated, the posterior portion separated from the anterior by a distinct inflexion and a well developed transverse furrow. Posterior part of the lateral edges a little convergent towards the nearly right posterior corners. Surface of the anterior part with a coarse sculpturation, more punctuate in the central parts, more granulate near the lateral borders. On the posterior portion only a transverse zone shows this sculpturation.

Scutellum short and broad, triangular, with a central longitudinal ridge. Corium short, the inner corner not reaching the apex of the clavus, the outer corner reaching but slightly beyond the apex of the scutellum. The apical lateral corners of the 3rd to 7th connexival segments protruding, in each following segment somewhat more distinctly than in the foregoing one, but even in the 7th segment the apical corner is not more than acutangularly rounded and the 5th segment does not show a spine as in *A. bellicosus* Korm.

Genital capsule of the ♂ small, nearly hemisphaerical, distinctly protruding beyond the small, rounded lobes of the 8th segment if seen from above.

Central parts of the 7th sternite in the ♀ nearly vertically truncate at the posterior edges. The lobes of the 9th segment only slightly protruding backward, nearly vertical, and somewhat swollen, hardly protruding beyond the small and rounded lobes of the 8th segment.

Length: $3^1/_3$-$3^1/_2$ mm.

1-4. Sumatra, E. Jacobson, 2 ♂ (Holo- and Paratype) and 2 ♀ (Allotype, one damaged specimen).

Usingerida flavosetosa nov. spec. (fig. 23-24). In general aspect this species is not unlike *U. verrucicollis* Walk. The anterolateral lobes of the pronotum, however, are much broader, and more widely rounded.

The granular sculpturation of the upper surface is less distinct, partly because the granules are less pronounced, partly because of the curved and rather thick yellowish setae, covering a large part of the upper surface, but leaving some irregular bare spots. The anterior part of the pronotum with two distinct tubercles, the posterior part somewhat elevated in the middle.

Scutellum with yellow setae in the central portion, bare, and with three transverse keels at the sides. Near the anterolateral corners a dense tuft of yellowish setae.

Corium with yellow hairs on the nerves; in structure much as in *U. verrucicollis* Walk. Membrane very rough, without veins. Connexival segments brown, with darker spots against the basal part of the lateral edge.

Underside and legs of a uniform brown, the flattened parts of the pronotum somewhat lighter, the connexival segments with a pattern similar to that of the upper side, the yellow markings somewhat more extended. The 7th tergite with a short central part. The lobes of the 8th segment narrow, trapezoidal. Genital capsule long, conical, the dorsal surface bluntly longitudinally ridged, the under surface rounded.

Length (of the ♂): $7^2/_3$ mm.

1. Rattan Camp, N. New Guinea, 1200 m, 12 February 1939, L. J. Toxopeus, Netherlands Indian-American New Guinea expedition, (Holotype).

Usingerida tricolor Walk. *Mezira tricolor* Walk. has to be included in this genus.

Usingerida verrucigera Bergr. 1. Radde, Amur.

Arictus alfa Korm. 1. Tondano, Forsten.

Arictus chinai Korm. 1. Sumbawa, Van Lansberge.

Arictus lobuliventris Korm. 1. New Guinea, Ter Porten.

Arictus sundaicus nov. spec. (fig. 25). Examining the species of the

genus *Arictus,* collected in the western part of the Indian archipelago, it appeared to me that *A. tagalicus* Stål, or at least a form that I cannot distinguish from it, occurs on the isle of Simalur, west of Sumatra; the same species was caught at Verlaten Island (Krakatau group, in Strait Sunda) in 1933, about 35 years after the Krakatau eruption, on which occasion probably all life on Verlaten Island was fully destroyed.

On the other hand a slightly smaller species occurs on the larger islands Sumatra, Java, and Borneo; I name it *A. sundaicus.*

This species differs from *A. tagalicus* Stål by the spiracles on the 7th sternite, which are situated at some distance from the lateral edge and by the lobes of the 8th segment protruding in both sexes beyond the apex of the 9th (the genital capsule in the ♂).

Head about as long as wide across the eyes. Anterior process moderately stout, with a very small notch at the apex, reaching about the middle of the first antennal joint. Postocular spines as usual in this genus. Proportional lengths of the antennal joints about: 16 :8 :20 :9.

The structure of the pronotum is similar to that of *A. tagalicus* Stål, however, the latero-anterior lobes are somewhat more distinctly expanded anteriorly, reaching about the same level as the anterior subtriangular protrusions. The lateral incisures are very distinct. The lateral edges of the posterior portion more or less rounded and denticulate. Scutellum with two central keels close together, and with lateral keels near the edges. Connexival segments with more or less protruding apical corners. The 7th segment somewhat lobate, the lobes rounded or with indistinct and outwards directed apical corners. The sides are slightly more parallel than in *A. tagalicus* Stål.

Length of the ♂: $6^3/_4$ mm; of the ♀: $7^1/_4$-$8^1/_2$ mm.

1. Java, Muller, (Holotype ♂). — 2. Kaliputjang, Penandjung Bay, S. Java, 300 m, July 1936, M. A. Lieftinck, (Allotype ♀). — 3. Borneo, Schwaner, (Paratype ♀). — 4. Sumatra, Muller, (Paratype ♀). — 5. Baso, West Central Sumatra, 800 m, March 1926, E. Jacobson, (Paratype ♂).

Arictus tagalicus Stål. 1-2. Philippines, Semper. — 3-5. Lasikin, Simalur, April 1913, E. Jacobson. — 6. Verlaten Island, Krakatau group, December 1933, K. W. Dammerman.

Arictus thoracoceras Montr. 1. Sekru, New Guinea, Schädler. — 2. Asike on the Digul River, New Guinea, 1 April 1923, F. Kopstein. — 3. Joka, Lake Sentani, W. New Guinea, 20 October 1954, L. D. Brongersma. — 4. Katem, Star Range, New Guinea, 200 m, 23 June 1959, Netherlands New Guinea expedition.

Arictus usingeri Korm. 1-4. Tayninh, Cochin China, October 1923, E. le Moult.

Kema bloetei Usinger & Matsuda. 1. Belang Amurang, Minahassa, Celebes, Forsten, (Holotype).

Hammatoneurum nov. gen.

A genus in the subfamily Mezirinae. The only species known to me is macropterous. The hind tibiae are normal, nearly straight. The fourth sternite does not show a stridulatory apparatus as in *Artabanus* or *Strigocoris*; the fifth and sixth sternites without a transverse carina at the base.

The middle and hind femora with a distinct spine at about $^3/_4$ of their length, and some smaller tubercles next to it. Midlateral glabrous areas exposed. Spiracles of second abdominal segment visible. Antenniferous tubercles not bifid. Edge of the abdomen without distinct tubercles, granulated. Postocular spines small, not surpassing the outer edge of the eyes.

Membrane with distinct veins, and beset with tuberculiform clumps of hairs. Pronotum with one shallow inflexion in the lateral edges; the posterior edge regularly rounded, as is the anterior edge of the scutellum. Genae slightly protruding beyond the tylus. Rostral atrium closed anteriorly, except for a narrow slit.

Upper surface covered with small, less prominent granulations, and very thinly covered with short and thin hairs.

Type species: *Artabanus quadrispinosus* Bergroth, 1894, Entomologisk Tidskrift **15**: 101.

The genus is allied to *Armoneurum* Us. & Mats., and to *Daulocoris* Us. & Mats.; from both it differs by characters mentioned above.

Hammatoneurum quadrispinosum Bergr. 1. Rawas, May 1878, Sumatra expedition. — 2-5. Kutur, June 1878, Sumatra expedition. — 6. Fort de Kock (= Bukittinggi), E. Jacobson. — 7-8. Sumatra, Muller.

Daulocoris feana Bergr. (*D. auritomentosa* Korm.). 1-31. Upper Mahakkam region, Borneo expedition, 1894, Dr Nieuwenhuis. — 32. Anai cleft, West Central Sumatra, 500 m, 1926, E. Jacobson.

Daulocoris marginella nov. spec. (fig. 26). This species is closely allied to *D. feana* Bergr. The rostrum is slightly shorter, not reaching beyond the anterior prosternal edge. The anterior process of the head less distinctly bifurcate, as the genae are less protruding and diverging as they are in *D. feana* Bergr. The posterior portion of the pronotum nearly smooth, but with a band of fine tomentum across, the lateroposterior lobes slightly more expanded.

The abdomen (in the ♀) is less narrowed behind, notably the 7th segment is much broader, the width about 4 × its length (in *D. feana* Bergr. the width is about $2^2/_3$ × its length) at the base. As the apical edges in both species are of about the same shape, the lateral edges in *D. marginella* nov. spec. are much more convergent backward.

Colour slightly lighter than in *D. feana* Bergr. Connexivum yellowish brown, with a percurrent black longitudinal stripe at some distance of the outer edge.

Genital segments of the ♀ similar to those of *D. feana* Bergr., the slit in the 7th sternite narrower.

Length (of the ♀): 11 mm.

1. Hollandia (= Kota Baru), N.W. New Guinea, 20 July 1938, L. J. Toxopeus, Netherlands Indian-American New Guinea expedition, (Holotype).

Daulocoris vestitus Hsiao. 1. Saigon, Indochina, 4 July 1924, E. le Moult.

Daulocorisella nov. gen.

A genus in the subfamily Mezirinae. The only species known hitherto is macropterous. The hind tibiae are of the usual form, and the venter does not show a stridulatory organ as in *Artabanus* c.s. or *Strigocoris*. The ventral segments do not show a distinct carina at the base, but in the central parts they show a rather faint transverse furrow at about $^1/_2$ (2nd segment) or $^2/_3$ (3rd-4th segments) of their lengths. Femora unarmed. Midlateral glabrous areas exposed, the outer carina, however, not very strongly developed. Spiracles on second ventral segment visible. Antenniferous tubercles simple, rather blunt. Edge of the abdomen simple. Membrane with distinct veins and with small tubercles. Base of the pronotum widely rounded before the scutellum. Genae only slightly protruding beyond the tylus; with only a small incisure between them. Rostral atrium closed anteriorly, except for a narrow slit. Upper surface finely granulate, and with small, curved hairs on each granule, not forming a matted pattern.

The genus is closely allied to *Hammatoneurum* nov. gen., but the femora are unarmed. From *Mezira* (*Brachyrhynchus*), into which the only species was placed by Distant, it differs by the tuberculiform tufts of hair on the membrane.

Type species: *Crimia lateralis* Walker, 1873, Catalogue of the specimens of Hemiptera Heteroptera in the collection of the British Museum (**7**) : 14.

Daulocorisella lateralis Walk. 1-22. Orissa, Teypone, Central E. India, 1775′, September 1958, P. Susai Nathan.

Illibius laticeps Stål. 1. Rio, Beschke.

Bergrothiessa intermediarius Korm. 1-2. Nova Teutonia, S. E. Brazil, 300-500 m, July 1953 and January 1954, F. Plaumann.

Notoplocoris potensis Drake & Harr. 1-2. Rio, Beschke.

Miorrhynchus longipes Champ. 1. Marcapata, Peru, Staudinger 1930.

Lobocara oblonga Bergr. 1. Coroico, Bolivia.

Cinyphus minutus nov. spec. (fig. 27). First antennal joint hardly extending beyond the apical process of the head (genae). The postocular tubercles acutely pointed, but only slightly produced beyond the eyes. The posterior edge of the head at both sides, between the top of the postocular spine and the neck, straight. Anterior corners of the pronotum rounded, the edge incised at the front edge, so as to form small, blunt tubercles between the lateral edge and the anterior collar. Lateral edges of the pronotum hardly inflexed, coarsely crenulate. Anterior portion of the pronotum with four low, longitudinal bunches, of which the central ones are broadest. The posterior part with more or less regular transverse rows (about 5) of coarse granules behind. Posterior edge only slightly inflexed before the base of the scutellum and faintly sinuate near the lateroposterior corners, that are somewhat swollen.

Scutellum with distinct medial and lateral keels, between which it is distinctly transversely furrowed. Corium reaching slightly beyond the centre of the third connexival segment, coriaceous, with very fine sculpturation and distinct granulate veins. Membrane with a fairly regular network of nerves.

Upper side castaneous; corium blackish towards the apical region. Membrane lighter at the base, blackish on the remaining part, its nerves black. Connexival segments with curved greyish spots in their central parts. Spiracles on the 7th segment (in the ♀) close to the ventral edge, on the 8th segmental lobes subapical.

In its small size, $5^1/_2$ mm, this species differs from those hitherto known. By this circumstance, and by the fact that from both antennae the third and fourth joints are missing, this species is only tentatively assigned to the genus *Cinyphus*.

1. Coroico, Bolivia, Staudinger, (Holotype).

Artagerus crispatus Stål. 1. Pachitea, Peru. — 2. Mapiri, Bolivia. — 3. Marcapata, Peru. (all specimens from Staudinger 1930).

Aphleboderrhis pilosa Stål. 1-2. Marcapata, Peru, Staudinger 1931.

Aphleboderrhis pubescens Walk. 1. Agricultural experiment garden, Paramaribo, Surinam, 13 December 1946, C. Isselt.

Hesus acuminatus F. 1. Maroni, French Guiana, E. le Moult. — 2. Iquitos San Roque, Peru, January 1929, E. le Moult. — 3. Pachitea, Peru, Staudinger 1930.

Hesus angulicollis nov. spec. (fig. 28). A rather distinct species, that is easily recognizable by the nearly rectangular latero-anterior corners of the pronotum. Head broader and not so prolonged as in the *Hesus* species hitherto known. Antennae also distinctly shorter and, especially the first joint, somewhat thicker. Antenniferous tubercles acutangulate, the lateral edges parallel. Postocular tubercles hardly protruding, nearly rectangular.

Pronotum with very distinct anterolateral corners; the anterior edge notably incised between these corners and the collar. The lateral edges of the anterior part nearly straight and parallel; those of the posterior part nearly regularly rounded towards the posterior corners, that are situated near the base of the claval sutures. Anterior part of the pronotum with two large, rounded elevations, close together, and with ill-defined lateral elevations, but without a median tubercle anteriorly. Posterior edge widely and regularly inflexed before the bases of scutellum and clavus.

Scutellum with a broad central carina and narrower lateral ones, the surface between them, except for a subbasal quarter, very coarsely transversely furrowed. The nerves on the corium with short transverse carinae, that are more or less continuing on the surface between the nerves. The surface is reddish brown, the membrane ochraceous brown, with distinct brown veins.

Connexival segments with slightly protruding rectangular apical corners. The furrow limiting the midlateral glabrous areas (in our ♀ specimen) distinct, the width of these areas about $^1/_4$ of the remaining part of the connexival segment. Morover there is a very distinct furrow near the lateral edges of 2nd to 6th connexival tergites and on the 2nd to 7th connexival sternites, where its end is curved around the stigma of the 7th segment, that is not so obviously lateral as in the other species.

The whole upper and under surface is covered by a thin ochraceous incrustation, that obscures the underlying sculpture, and shows a pattern of irregular furrows, and, on the connexivum, of fine black punctures.

Length (of the ♀): $10^1/_2$ mm.

1. Nassau Mts., 10.3 km W. of the Marowijne River, 12 March 1949, Surinam expedition (1948-1949), (Holotype).

Hesus cordatus F. 1-3. ?. — 4. Pachitea, Peru, Staudinger 1930. — 5. Marcapata, Peru, Staudinger 1930. — 6. Surinam, Van Brussel, from Fokker's collection. — 7-9. Rio Pachitea, Puerto Inca, Peru, Staudinger 1930. — 10. St. Laurent de Maroni, French Guiana, November 1907, E. le Moult. — 11. São Paulo de Olivença, Brazil, E. le Moult. — 12. Combé, Paramaribo, Surinam, 1 August 1946, D. C. Geyskes.

Hesus flaviventris Burm. 1. Rio, Beschke. — 2. Pachitea, Peru, Staudinger 1930. — 3. Mendés, Brazil, E. le Moult.

Hesus subarmatus Stål. 1. Agricultural experiment garden, Paramaribo, Surinam, 1 July 1938, D. C. Geyskes. — 2-3. Marcapata, Peru, Staudinger 1930. — 4-9. Buena Vista, Sta. Cruz, Bolivia, April 1959, F. H. Walz.

Helenus hesiformis B.-White. 1. Kabel, on the Surinam River, Surinam, 24 September 1938, D. C. Geyskes.

Dysodius ampliventris Bergr. 1. Republiek, S. of Paramaribo, Suriname, 29 September 1959, P. H. van Doesburg Jr.

Dysodius crenulatus Stål. 1-2. Guatemala, Candèze. — 3. Costa Rica, Staudinger 1930. — 4. El General, Costa Rica, from Fokker's collection.

Dysodius lunatus F. 1. Brazil, Calkoen. — 2. Surinam, Van Vollenhoven. — 3. Paramaribo, Surinam, Van Hasselt. — 4. Surinam, Van Brussel, from Fokker's collection. — 5. St. Jean du Maroni, French Guiana, July, E. le Moult. — 6-11. French Guiana, E. le Moult. — 12-20. Maroni, French Guiana, E. le Moult. — 21. ?. — 22-23. Manicore, Rio Madeira, S. America, December 1923, E. le Moult. — 24-25. São Paulo de Olivença, Brazil, July 1925, E. le Moult. — 26, Rio Puyo, Ecuador, 700 m, Staudinger 1930. — 27. Puerto Inca, Rio Pachitea, Peru, Staudinger 1930.

Dysodius lunatus F. subsp. **vandoesburgi** nov. subspec. Mr P. H. van Doesburg Jr. drew my attention to the fact, that the specimens which we are used to name "*Dysodius lunatus*" in reality belong to two different forms. It was his experience that the larger one occurs in the native woods in Surinam, while the smaller one lives principally under the bark of *Erythrina glauca* Willd., a tree that in Surinam is cultivated as a shadow tree in coffee plantations.

Besides a difference in size, there is a difference in the form of the

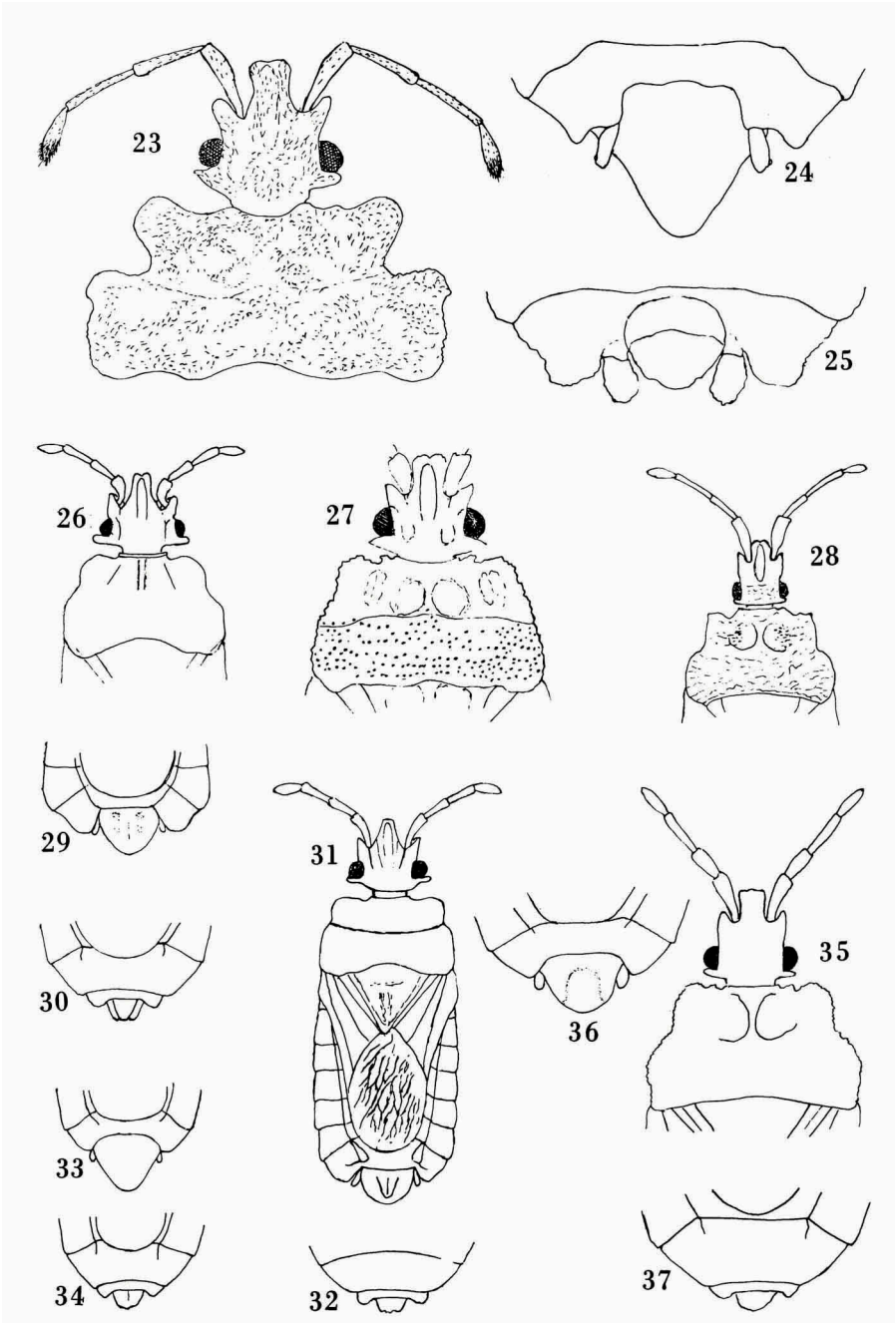

Fig. 23-37. 23, *Usingerida flavosetosa* nov. spec., head and pronotum; 24, *Usingerida flavosetosa* nov. spec., ultimate tergites of ♂ ; 25, *Arictus sundaicus* nov. spec., ultimate tergites of ♂ ; 26, *Daulocoris marginella* nov. spec., head and pronotum; 27, *Cinyphus minutus* nov. spec., head and pronotum; 28, *Hesus angulicollis* nov. spec., head and pronotum; 29, *Mezira bergrothiana* nov. spec., ultimate tergites of ♂ ; 30, *Mezira bergrothiana* nov. spec., ultimate tergites of ♀ ; 31, *Mezira jacobsoni* nov. spec. ♂ ; 32, *Mezira jacobsoni* nov. spec., ultimate tergites of ♀ ; 33, *Mezira modesta* nov. spec., ultimate tergites of ♂ ; 34, *Mezira modesta* nov. spec., ultimate tergites of ♀ ; 35, *Mezira surinamensis* nov. spec., head and pronotum; 36, *Mezira surinamensis* nov. spec., ultimate tergites of ♂ ; 37, *Mezira surinamensis* nov. spec., ultimate tergites of ♀.

pronotum, that is relatively narrower in the smaller form. This causes the actual width, measured across the anterolateral expansions of the pronotum to be the easiest character to distinguish both forms. As, however, intermediate specimens do (rarely) occur, I believe that the smaller form, which I name here *vandoesburgi,* must be regarded an ecological subspecies.

From the original description of Fabricius it is not obvious whether or not the larger form is the typical *D. lunatus lunatus* F., but Fabricius' reference to "Stoll, Cimic. 2. tab. 13. fig. 84" makes it clear that we have to regard the larger form as typical; Stoll's figure has a length of $16^1/_2$ mm, thus evidently is of natural size, in it the width across the pronotal expansions is 9 mm, which agrees very well with the average width in *Dysodius lunatus lunatus* F.

Within the series of *Dysodius lunatus lunatus* F. I could examine (13 ♂ and 22 ♀) the width of the pronotum varies from 7.9 to 9.2 mm (average 8.5) in the ♂ and from 7.9 to 9.7 mm (average 8.8) in the ♀. In the subspecies *D. lunatus F. vandoesburgi* nov. subspec. (31 ♂ and 29 ♀) the variation in the ♂ ranks from 5.8 to 7.0 mm (average 6.3) and in the ♀ from 5.8 to 7.7 [1]) mm (average 6.8).

In general appearance the new subspecies is somewhat narrower behind, often darker, the lateral expansions of the abdomen appear less clumsy, the smooth areas on the anterior part of the pronotum are in general limited medially by a more distinct furrow than in *D. lunatus lunatus* F., the anterolateral corners of the scutellum are tuberculiform, the lobes of the 8th ventral segment are relatively shorter, and do not reach the level of the apex of the 9th segment; in the ♂ there are generally two tubercles on the posterior edge of the ultimate tergite, instead of a transverse ridge, that usually occurs in the typical form, but all these characters hardly hold good in every special case. Moreover the length of the largest specimen of *D. lunatus* F. subsp. *vandoesburgi* nov. ($15^1/_4$ mm) exceeds the length of the smallest specimen of the typical form (14 mm) known to me.

1-2. ?. — 3-4. Columbia, Klug. — 5. Brazil, Calkoen. — 6. Caracas, Van Lansberge. — 7. Columbia, Staudinger. — 8. Brazil. — 9. Paramaribo, 1911, W. C. van Heurn. — 10-12. Surinam, Van Brussel. — 13. Paramaribo, 31 December 1936, A. Smit. — 14. Rio Trombetas, Para, Brazil, E. le Moult. — 15-16. Santarem, Brazil, E. le Moult. — 17. El Naranjo Colonibe, Quesaltenango, Guatemala, E. le Moult. — 18. Maroni, Guiana, E. le Moult. — 19. Puerto Inca, Rio Pachitea, Peru. — 20-22. São Paulo de Olivença, Brazil, 1925, E. le Moult. — 23-24. Paramaribo, 15-18 November 1906, D.

1) Only one specimen has this width; the next narrower is 7.4 mm.

Bolten. — 25. Marowijne, Nassau Mts., 24 February 1949, Surinam expedition. — 26-31. Buena Vista, Sta. Cruz, Bolivia, 400 m, April 1959, F. H. Walz. (Nrs. 1-31 are paratypes). — 32-33. Plantation "De Morgenstond", 6 km N. of Paramaribo, under bark of *Erythrina glauca* Willd., 23 March 1959, P. H. van Doesburg Jr., (Holo- and Allotype).

Moreover the following paratypes (all from Surinam) are in the collection of P. H. van Doesburg Jr.: 15 specimens (and 11 larvae): Plantation "De Morgenstond, 6 km N. of Paramaribo, 23 March 1959; 2 specimens "Between Zanderij and Krabba"; 2 specimens Plantation "La Poule", 6 May 1958; 1 specimen Domburg, Plantation "La Rencontre", 29 June 1958; 1 specimen "Section O" (km. 68 of the railroad to Kabel), 23 March 1959; 1 specimen Sipaliwini, S. Surinam, 6 June 1963; 1 specimen Paramaribo, 25 November 1960; 6 specimens Zanderij, 11 May 1963; 1 specimen Brownsweg, Surinam, 11 August 1958, D. C. Geyskes.

Mezira abdominalis Stål. 1-3. Porto Rico, Klug.

Mezira americana Spin. 1-2. Chile?, Sommer. — 3-28. Cayutué, Chile, C. H. Andreas, 28-29 April 1938.

Mezira australis Walk. 1-3. New South Wales.

Mezira bergrothiana nov. spec. (fig. 29-30). In 1889 (Annali del Museo Civico di Storia Naturale di Genova **27**: 736) Bergroth described his species *Brachyrhynchus triangula.* In 1894 (Entomologisk Tidskrift **15**: 107), however, he withdrew this species, principally because of the occurrence, in New Guinea, of a form, which he regarded intermediate between *Brachyrhynchus membranaceus* F. and *B. triangula* Bergr.

I cannot agree with Bergroth's (1894) views. In the first place because also the ♀ of his *Mezira triangula* is notably different from that of *M. membranacea* F., because of its smaller size, more reddish brown colour, acute posterior corners of the pronotum and a much more rounded abdominal apex, caused by the strongly divergent sides of the 7th segment and the shorter 8th and 9th segments.

This western New Guinean species, which I name *Mezira bergrothiana,* indeed may be called "intermediate" between *M. membranacea* F. and *M. triangula* Bergr. in so far as it has the size of *M. triangula* Bergr. and the colour of *M. membranacea* F. Antenniferous tubercles angular, the lateral sides parallel. Postocular tubercles hardly protruding. Rostrum long, distinctly surpassing the posterior limit of the rostral groove, and sometimes reaching the anterior prosternal edge.

Posterior corners of the pronotum rather distinct. The whole upper surface and the thoracal sternum rather coarsely granulate, the central parts

of the sternites smooth, distinctly less granulate than in both *M. membranacea* F. and *M. triangula* Bergr.

In the ♂ the sides of the abdomen are straight, and diverging towards the middle of the sixth segment; from there on the edge of the sixth segment is curved inward, the edge of the 7th segment distinctly inflexed at the base and roundedly protruding apically. The genital capsule shows dorsally a distinct central longitudinal elevation, and two shallow, rounded impressions at both sides of it. In the ♀ the 7th tergite is relatively shorter and wider (about $3^2/_3$ × as wide as long) than in *M. membranacea* F. (under 3 × as wide as long). 9th segment with a triangular elevation dorsally and two tubercles below.

In both sexes the first and fourth antennal joints are equal in length, the second and third joints nearly so, and slightly longer than the first and fourth (relative lengths: 9 : 10 : 10 : 9).

Length of the ♂: $8^1/_2$-$10^3/_4$ mm; of the ♀: $10^1/_4$-$11^3/_4$ mm.

In 1957 Kormilev (Ann. Mag. Nat. Hist. (12) **10**: 269) described a new species, *Mezira subtriangula,* from the eastern part of New Guinea and the Solomon Islands, which also is intermediate in the sense indicated by Bergroth. This species is probably closely allied to *M. bergrothiana* nov. spec., but differs in the ♂ by the more backward prolonged connexival parts of the 6th tergite, by the less regular winding of the edges of the 6th and 7th connexival segments and by the sculpture of the genital capsule. In the ♀ the ultimate segments are still more obviously different; the 7th segment in *M. subtriangula* Korm. is longer and relatively less wide, the posterior border more distinctly inflexed. The 9th segment is triangular, with a much broader base than in *M. bergrothiana* nov. spec.

1-6. New Guinea, Ter Porten, (Holo- Allo- and Paratypes). — 7. Tual, Kei Islands, E. le Moult. — 8. Sekru, N. W. New Guinea, 1898, K. Schädler. — 9. "Hoessin Garden", N. New Guinea, 1910, P. N. van Kampen. — 10. Bernhard Camp, Central W. New Guinea, 50 m, July-November 1938, J. Olthof, (Paratype). — 11. Mountain slope above Bernhard Camp, 600 m, 13 April 1939, L. J. Toxopeus, (Paratype). — 12-13. Araucaria Camp, Central W. New Guinea, 800 m, 27-29 March 1939, L. J. Toxopeus (Paratypes). (The specimens 10-13 collected by the Netherlands Indian-American New Guinea expedition). — 14-16. Seta, 18 June 1952, L. D. Brongersma and W. J. Roosdorp, (Paratypes). — 17. Biak Island, N. W. of New Guinea, October-December 1953, Royal Netherlands Navy. — 18. Base, near Sorido, S. coast of Biak, 10-20 February 1955, L. D. Brongersma. — 19-21. Morotai, Bernstein. — Moreover 3 paratypes from Bernhard Camp, Olthof, 2 from Rattan Camp, 1200-1500 m, 14-25 February

1939, L. J. Toxopeus and 1 from Hollandia (Kota Baru), 29 June 1938, L. J. Toxopeus in the collection of the American Museum of Natural History at New York, U.S.A.

Mezira flavicans Stål. 1-2. Onoribo, Surinam, 10 March 1963, P. H. van Doesburg Jr.

Mezira germari Stål. 1-2. Hluhluwe, Zululand, 24-26 October 1938, L. D. Brongersma.

Mezira granosa Stål. (*Brachyrhynchus teter* Bergr.). 1-3. Java, Reinwardt. — 4. Preanger, Java, Staudinger 1930. — 5. Sukabumi, Java, October 1926, E. le Moult.

Mezira granulata Say. 1. Guantanamo, Cuba, E. le Moult.

Mezira granuliger Stål. 1. Independance, Paraguay, Staudinger 1930. — 2-3. Espirito Santo, Staudinger 1930.

Mezira hsiaoi nov. spec. (*Mezira membranacea* Hsiao, Acta Entomologica Sinica **13**: 597, 604).

From the analytical table of Chinese *Mezira* species by Hsiao Tsai-Yu it appears that his *Mezira membranacea* is not the species, which is so well known from the oriental region; this evidently is the reason that induced Hsiao to promote the var. *albipennis* F. of *M. membranacea* F. to specific rank.

The species that I assume to be Mr. Hsiao's *Mezira membranacea* actually differs from *M. membranacea* F. by its much more developed collar, by the absence of postocular tubercles and by the more flatly rounded anterolateral angles of the pronotum. Moreover the lateral edges of the anterior pronotal portion are more divergent, and the anterior part is less wide as compared with the posterior part, about 5 to 7, instead of 4 to 5 in *M. membranacea* F. A peculiarity of this species, that generally is not so obviously developed in *M. membranacea* F. is the presence of longitudinal furrows (about 3 to 5) near the lateral edges of the connexival tergites and sternites.

The corner between the lateral edges of the 6th and 7th abdominal segments is still less pronounced than in *M. membranacea* F., the edges themselves thereby being more rounded, the abdomen more oval, and slightly broader in the centre. Size as in *M. membranacea* F.

1-2. Chapa, par Laos, Upper Tonkin, 1800 m, December 1912-May 1913, Vitalis de Salvaza, E. le Moult, (Holo- and Paratype). — 3-5. Thado, par Cuaras, Province des Vins, 400 m, March-April 1913, Vitalis de Salvaza,

E. le Moult, (Allo- and Paratypes). — 6-9. Tayninh, Cochinchina, E. le Moult, (Paratypes). — 10-15. Datat, Indochina, 23 March 1924, E. le Moult, (Paratypes).

Mezira jacobsoni nov. spec. (fig. 31-32). A medium sized species, that is easly recognizable by its relatively large head with strongly protruding postocular spines. Antenniferous tubercles with blunt tops, and with a laminiferous extension under the antennal base. Rostrum very slightly longer than its groove.

Pronotum and connexivum with fine, and in places indistinct, granulations, on the scutellum and corium the granulations are somewhat coarser. Membrane with numerous fine nervures, that often are anastomosing. Underside of head and thorax distinctly granulate. The metasternum smooth in the middle, as are the central parts of the abdominal sternites. Sternites 3 to 5, and in a lesser degree also sternite 6, with transverse excavations at the sides. The whole upper surface with short, curved, yellow hairs. Colour obscure reddish brown.

Genital capsule of the ♂ relatively large, with dorsally a distinct hump that is limited at both sides by furrows, and that shows a very fine furrow on the top. Lobes of the 8th segment small. In the ♀ the 8th segment is only faintly inflexed posteriorly, the lobes slightly protruding, and not reaching beyond the middle of the protruding parts of the 9th segment.

Length of the ♂: $9^1/_4$-$10^1/_4$ mm; of the ♀: $9^3/_4$-$10^1/_4$ mm.

1-8. Sinabang, Simalur, W. of Sumatra, January 1913, (Holo- Allo- and Paratypes). — 9. Lasikin, Simalur, April 1913, (Paratype). — 10. Siboga, W. Sumatra, August 1913. All specimens collected by E. Jacobson.

Mezira laeviventris Champ. 1-3. Maroni, Guiana, E. le Moult.

Mezira lobata Say. 1-4. Tenessee, Troost. — 5. San Domingo, Museum Berlin.

Mezira membranacea F. 1. Java, Muller. — 2-4. Sumatra, Muller. — 5-7. Sumatra, Ludeking. — 8-46. Rawas, May 1878. — 47-61. Kutur, June 1878. — 62. Surulangun, April 1878. — 63-65. Palembang Highlands, May-June 1878. (the specimens 8-65 collected by the Sumatra expedition). — 66-88. Between Serdang and the Toba-Lake, Dr B. Hagen. — 89-140. Tandjong Morawa, Serdang, Dr B. Hagen. — 141-147. Manna, Sumatra, M. Knappert. — 148-161. Solok, 17 June 1913, P. O. Stolz. — 162. Kepahiang, Sumatra, Van Lansberge. — 163. Serdang, Sumatra, Schagen van Leeuwen. — 164. Singkal, Sumatra, A. L. van Hasselt. — 165. Padang, Sidempuan, H. J. Spitzey. — 166-167. Gunung Kenepai, Pondok, January

1894. — 168-170. Singkarah. — 171. Nagasariba. — 172-181. Lussun region, 3-7 December 1883. — 182. Coastal region, 3-7 December 1883. — 183. Nias island, A. L. van Hasselt. — 184. Sambas, Borneo, May 1890, Th. F. Lucassen. — 185. Ketungan, Borneo expedition, Moret. — 186-194. Tandjong Morawa, Serdang, N. E. Sumatra, B. Hagen. — 195-197. Patuha, Tjigembong, 1200 m, September. — 198. Nanning, Kwangsi, China, E. le Moult. — 199. Fort de Kock, (= Bukittinggi), Sumatra, 920 m, April 1921, E. Jacobson. — 200. Taininh, Cochinchina, October 1923. — 201-208. Lubuksikaping, Western Coast of Sumatra, 450 m, 1926, E. Jacobson. — 209. Baso, W. Coast of Sumatra, 800 m, E. Jacobson. — 210-211. Toboali, Bangka, 9 February 1929, J. van der Vecht. — 212-214. Giesting, Mt. Tanggamus, S. W. Lampongs, S. Sumatra, 600 m, December 1934, M. A. Lieftinck. — 215. Ka Tha Lai, Central Siam, 300 m, 2-7 June 1946, J. E. Jonkers. — 216-218. Niki, Central Siam, April-May 1946, 150 m, J. E. Jonkers. — 219-221. Laut Tadol, S. E. coast of Sumatra, 90 m, 16 October 1950, R. Straatman.

Mezira membranacea F. var. **orientalis** Lap. 222-230. Java, Kuhl and Van Hasselt. — 231-232. Philippines, Semper. — 233-237. Surulangun, April 1878, Sumatra expedition. — 238-259. Rawas, May 1878, Sumatra expedition. — 260. Kutur, June 1878, Sumatra expedition. — 261-267. Tandjong Morawa, Serdang, N. E. Sumatra, Dr B. Hagen. — 268-269. Manna, 1901, M. Knappert. — 270. Singkarah. — 271-273. Upper Mahakkam, 1894, Dr Nieuwenhuis, Borneo expedition. — 274-284. Java, Van Lansberge. — 285-318. Upper Mahakkam, 1894, Dr Nieuwenhuis. — 319-325. Long Blu-u, 1899, Dr Nieuwenhuis, Borneo expedition. — 326. Great Sangir, N. of Celebes, C. E. W. Schröder. — 327. N. E. Borneo, from Fokker's collection. — 328. Katungan, 1894, M. Moret, Borneo expedition. — 329. Formosa, 1908, H. Sauter. — 330-331. Tandjong Morawa, Serdang, N. E. Sumatra, B. Hagen. — 332. Sugu, Simalur, Mach 1913, E. Jacobson. — 333-334. Sinabang, Simalur, April and July 1913, E. Jacobson. — 335-337. Buton, Boloba. — 338. Gorontalo, Celebes, Rosenberg. — 339-341. Sukabumi, Java, E. le Moult. — 342-344. Patuha, Tjigombong, 1200 m, September. — 345. Bodja, Semarang, P. H. van Doesburg. — 346. Ardja Sari, Preanger, Java, A. Kerkhoven. — 347-358. Preanger, Java. — 359. Thado, par Cuaras, Province des Vins, Annam, 400 m, March-April 1913. — 360. Chapa, par Laos, Upper Tonkin, 1800 m, 1912-1913, Vitalis de Salvaza. — 361-382. Sepandjang island. — 383-406. Tayinh, Cochinchina, October-December 1923. — 407. Lao Kay, Tonkin. — 408. Plei Ku, Annam, Indochina. — 409-412. Nanning, Kwangsi, China. — 413-414. Datat, Indochine, 23

March 1924. — 415. Tayninh, Cochinchina, December 1924. — 416-417. Poulocondore, Cochinchina, August 1924. (the specimens 359-417 from E. le Moult). — 418-420. Melawi, W. Borneo, November-December 1924, Blanchemanche. — 421. Buton, Boloba. — 422. Patuha, Tjigombong, 1200 m, September. — 423-427. Merket, 17 August 1925. — 428. Pamenang, 23 October 1925. — 429-485. Pahu, 26-27 October 1925. (the specimens 423-485: O. Posthumus, Djambi expedition). — 486-489. Baso, W. coast of Sumatra, 800 m, March 1926, E. Jacobson. — 490. Saigon, Indochina, 4 July 1924, E. le Moult. — 491-499. Toboali, Banka, 9 February 1929, J. van der Vecht. — 500. Garut, W. Java, October-November 1930, W. C. van Heurn. — 501-522. Tjiliwong, Puntjak pass, Java, 1000 m, June 1932, W. C. van Heurn. — 523-524. Gunung Tjisuru, Djampang, W. Java, December 1932, M. E. Walsh. — 525. Verlaten island, January 1933, Dammerman. — 526-527. Sukabumi, Java, April 1933, F. A. Th. H. Verbeek. — 528-529. Giesting, Mt. Tanggamus, S. W. Lampongs, S. Sumatra, 600 m, December 1934, M. A. Lieftinck. — 530. Mt. Malabar, Pasir Jungh, Preanger, Java, 1600 m, December 1935, F. C. Drescher. — 531-550. Telagawarna, Mt. Puntjak, Preanger, Java, 1480 m, 29-30 March 1936, F. C. Drescher. — 551-553. Gunung Yalimur, Preanger, Java, May 1936, E. le Moult. — 554. Kaliputjung, Penandjung Bay, S. Java, 300 m, July 1936, M. A. Lieftinck. — 555. Penandjung Bay, M. A. Lieftinck. — 556-563. Gunung Tangkuban Prahu, Preanger, Java, 4000-5000′, October 1936, F. C. Drescher. 564-565. W. Java, November 1936, W. C. van Heurn. — 566. Genteng Bay, S. W. Java, March 1937, M. A. Lieftinck. — 567-574. Uko, Gunung Malang, Sukabumi, W. Java, January 1940. — 575-576. Niki, Central Siam, Kwae Noi river expedition, April-May 1946, J. E. Jonkers. — 577-580. Muara Kaman, Samarinda, E. Borneo, 50 m, 20 November 1950, A. M. R. Wegner. — 581-594. Anamalai hills, on *Cinchona*, 3500′, S. India, May 1960, P. Susai Nathan. — 615-616. Sumbawa, Van Lansberge. — 617-618. Formosa, 1908, H. Sauter. — 619. Niki, Central Siam, Kwae Noi river expedition, April-May 1946, J. E. Jonkers.

Mezira membranacea F. var. **albipennis** F. 595. Kutur, June 1878, Sumatra expedition. — 596. Sumatra, Ludeking. — 597-601. Tandjong Morawa, Serdang, N. E. Sumatra, Dr B. Hagen. — 602. Between Serdang and the Toba lake, Dr B. Hagen. — 603. Manna, Sumatra, M. Knappert. — 604-608. Solok, Sumatra, 17 June 1913, P. O. Stolz. — 609-610. Tanangtalu, Sumatra, May 1915, E. Jacobson. — 611. Upper Mahakkam, 1894, Dr Nieuwenhuis, Borneo expedition. — 612-613. Dolok Baros, Medan, Sumatra, April-June 1905. — 614. Fort de Kock, (= Bukittinggi), Sumatra, 920 m,

June 1921, E. Jacobson. — 620. Batu Ferringi, Penang island, Malaya, 25 February 1963, M. A. Lieftinck.

Mezira modesta nov. spec. (fig. 33-34). This species is similar to *M. bergrothiana* nov. spec.; it is on the average slightly smaller and of a more reddish colour, like for instance *M. triangula* Bergr. The membrane is lighter than in the allied species, notably towards the end. From *M. jacobsoni* nov. spec. it is easily distinguishable by the less well-developed postocular tubercles. The species is, however, distinct from both by the structure of the ultimate abdominal segments.

In the ♂ the sides of the abdomen are nearly straight, those of the 6th segment only slightly converging backward. The sides of the 7th segment are slightly rounded, notably towards the end, but nowhere inflexed. The genital capsule is more conical, the sides about the middle nearly straight if seen from above. The sculpturation is not unlike that in *M. bergrothiana* nov. spec. In the ♀ the lateral edges of the 7th segment are nearly straight, and convergent. The lateral lobes of the 8th segment are distinctly angular, the lateral edge is in a line with the lateral edge of the 7th segment, the notch between the 7th and the 8th segments is only very small. The sculpturation on the 9th segment is less distinct than in *M. bergrothiana* nov. spec.

Length of the ♂: $8^1/_2$-$9^3/_4$ mm; of the ♀: $9^1/_4$-$9^1/_2$ mm.

1. Sumatra, Muller. — 2. Rawas, May 1878, Sumatra expedition. — 3-23. Tandjong Morawa, Serdang, N. E. Sumatra, Dr B. Hagen, (Holo- Allo- and Paratypes). — 24. Lasikin, Simalur, April 1913, E. Jacobson. — 25. Krakatau, April 1934, K. W. Dammerman.

Mezira moesta Stål. 1. San Domingo, Museum Berlin.

Mezira monedula Stål. 1. Moramga, Forest of Sandrangate, Madagascar, 11 November 1936, H. J. Lam and A. D. J. Meeuse.

Mezira montana Bergr. 1-2. Chapa, Upper Tonkin, 1800 m, December 1912-May 1913, Vitalis de Salvaza. — 3. Laos, 14 March 1920, Vitalis de Salvaza. — 4. Datat, Indochina, 23 February 1924, E. le Moult. — 5. Alahan Pandjang, W. coast of Sumatra, 1500 m, August 1937, F. C. Drescher.

Mezira plana Hsiao. 1. Chapa par Laos, Upper Tonkin, 1800 m, December 1912-May 1913, E. le Moult.

Mezira reducta Van Duzee. 1-2. California, Dupont.

Mezira regularis Champ. 1. San Domingo, Museum Berlin.

Mezira rugosa Sign. 1-11. Liberia, Stämpfli.

Mezira similis Hsiao. 1. Plei Ku, Indochina, E. le Moult.

Mezira surinamensis nov. spec. (fig. 35-37). Pronotum feebly emarginate at the base, the anterior lobe and the scutellum without yellowish tubercles. Antennae not prolonged, the third joint rather stout. Rostrum short, not reaching the end of the rostral groove. Body clothed with short curled hairs, slightly incrustate. Apical edge of the corium rounded. No furrow between the anterior and posterior portions of the pronotum.

This species is somewhat similar to *M. rugicornis* Champ., but differs in having the antenniferous tubercles less pointed and not directed outward, shorter postocular spines and a hardly bifid anterior process of the head.

Colour dark castaneous in the ♂, the ♀ specimen on hand is more reddish, but possibly immature. Membrane greyish brown, with dark nerves, the base smooth, but hardly of lighter colour.

Seventh tergite of the ♂ rather long, the lateral edges nearly regularly rounded; lobes of the 8th segment somewhat protruding. The genital capsule with a distinct U-shaped impression dorsally, and with about 4 coarse transverse ridges ventrally. In the ♀ the 7th tergite is very long; the 8th and 9th tergites only slightly protruding.

Length of the ♂: $8^1/_2$ mm, of the ♀: also $8^1/_2$ mm.

1-2. Coronieway, 208 km E. of Coronie, 16 December 1948, Surinam expedition, (Holo- and Allotype).

Mezira triangula Bergr. 1-184. Tandjong Morawa, Serdang, N. E. Sumatra, Dr B. Hagen.