Flatidae (Homoptera: Fulgoroidea) of Indonesia, exclusive of Irian Jaya

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Key words: Flatidae; Indonesia; systematics; distribution.
Taxa of the fulgoroid family Flatidae (Homoptera) occurring in Indonesia exclusive of Irian Jaya are treated. One hundred twenty seven species are recorded under 50 genera. Keys, descriptions, illustrations and collection data are presented. New genera described: *Insulume*, type species - *Insulume minutum* Medler; *Menora*, type species - *Menora longmina* Medler; *Planata*, type species - *Ormenis taeniata* Schmidt; *Stenume*, type species - *Melicharia karnyi* Baker; *Tormenis*, type species - *Ormenis ornata* Melichar; *Walena*, type species - *Ormenis alba* Melichar. New species described: *Atracis jangis, Atracis servis, Bythopsyrna ebonfana, Flatomorpha biglypta, Flatomorpha disguisa, Flatomorpha rubrata, Idume decolora, Idume stigma, Insulume minutum, Lecopia waitera, Menora longmina, Neomelichara lucentis, Neomelicharia roseola, Seliza incurva, Staliana bicolis, Staliana bufilis, Walena rostra, Zecheuna azira*. New combinations: *Daeda funerula* (Melichar), ex *Farona*; *Daeda siporensis* (Baker), ex *Seliza*; *Flatomorpha fuscomarginata* (Melichar), ex *Melicharia*; *Flatomorpha umbrimargo* (Walker), ex *Paratella*; *Planata limbata* (Distant), *Planata maculosa* (Distant), ex *Paranotus*; *Planata taeniata* (Schmidt), ex *Ormenis*; *Scarpantina rotundata* (Melichar), ex *Dermoflata*; *Stenume kirbyi* (Baker), ex *Melicharia*; *Tormenis ornata* (Melichar), ex *Anaya*; *Walena alba* (Melichar), *Walena exsarola* (Medler), ex *Melicharia*. Neotype: *Flata adscendens* Fabricius, ZMUC; *Cicada pustulata* Donovan, ZMCU. New synonymies (junior synonym followed by senior synonym): *Atracis consocia* Melichar = *Cerfennia tabida* (Gerstaecker); *Atracis nodosa* Gerstaecker = *Staliana inaequalis* (Walker); *Cerynia incurva* Melichar = *Cerynia albata* (Stål); *Cicada pustulata* Donovan = *Neomelicharia cruentata* (Fabricius); *Colobesthes rectilinea* Walker = *Nephesa truncaticornis* (Spinola); *Daeda siporensis* (Baker) = *Daeda funerula* (Melichar); *Daksha unicolor* Karny = *Lawana exaltata* (Walker); *Dermoflata* Melichar = *Scarpantina* Melichar; *Ketumala singapurana* Ghauri = *Daeda siporensis* (Baker); *Neomelicharia impunctata* Karny = *Sanurus flavovenosus* Bierman; *Neomelicharia lactealis* Kirkaldy = *Neomelicharia cruentata* (Fabricius); *Ormenis severa* Melichar = *Idume niveina* (Walker); *Phyma griseopunctata* Schmidt = *Flata guttularis* (Walker); *Phyma waterstradti* Schmidt = *Lawana pryeri* (Distant); *Poeciloptera ocellifera* Walker = *Neomelicharia sparsa* (Fabricius).

Contents

Introduction

The first important collections of flatids in Java and Sumatra were made by Hans Frühstorfer between 1890 - 1896. Frühstorfer's flatids were collected incidental to his major activity in Lepidoptera and his flatid specimens were disposed by sales to several European Museums. Many of these were loaned to Melichar during his monographic revision of the family, 1901-1902. I have examined at least 18 named species in 10 genera with recognizable Frühstorfer collection labels. Melichar's opus magnum on

Flatidae was of great value to workers who followed because he recorded depositories of types and other specimens examined, including those collected by Frühstorfer. Schmidt (1904a, 1904b, 1928) recorded a significant number of new species from collections of Dohrn and Ouwens in Java and Sumatra. At the time Metcalf's (1957) catalog appeared several major collections of Indonesian flatids had been assembled in Museums, namely, Dr MacGillavry and Edw. Jacobson at Amsterdam, and E. leMoult and others at Leiden. These and other collections were an important source of new records or validation of old records that are given in this report.

This publication should be used in conjunction with my publications on Flatidae of Sulawesi (Medler, 1991) and Borneo (Medler, 1996), especially for generic diagnoses that have not been repeated for widespread genera.

In cases where primary types were unavailable, the term plesiotype was used for a representative male or female specimen that was illustrated or measured. The term has no status under taxonomic rules, but a specimen bearing my blue plesiotype label is accurately identified in relation to published data. The depository of the plesiotype is given so that future workers may locate the specimen for examination.

Codens sensu Arnett, et al. (1993) are used to specify museums that loaned specimens for examination. The codens along with names and locations of the depository museums are as follows:

AMNH American Museum of Natural History, New York, NY.
BMNH The Natural History Museum, London, England.
BPBM Bernice P. Bishop Museum, J. Linsley Gressitt Center for Research in Entomology, Honolulu, HI, 96819.
CASC California Academy of Sciences, San Francisco, CA 94118.
DEIC Deutsches Entomologisches Institut, Eberswalde, Finow 1, 1300, Germany
EMAU Zoologisches Institut und Museum, Greifswald, Germany.
HNHM Hungarian Natural History Museum, Budapest, Hungary.
ISNB Institut Royal des Sciences Naturelles de Belgique, Bruxelles,.
MCSN Museo Civico Di Storia Naturale "Giacoma Doria", I-16121, Genoa, Italy.
MMBC Moravian Land Museum, Department of Entomology, Brno, Czech Republic.
MNHN Museum National d'Histoire Naturelle, Paris, France.
MRSN Museo Regionale Scienze Naturali, Torino, Italy.
MVMA Museum of Victoria, Abbotsford, Victoria, 3067, Australia.
MZLU Lund University, Museum of Zoology and Entomology, Helgonavägen 3, Sweden.
MZUN Museo di Zoologia di Napoli, Naples, Italy.
NCSU North Carolina State University Insect Collection, Raleigh, NC 27607.
NHMB Naturhistorisches Museum, Augustinergasse 2, 4001 Basel, Switzerland.
NHMW Naturhistorisches Museum, 3. Zoologische Abteilung, Postfach 417, Wien, Austria.
NHRS Museum of Natural History, Stockholm, Sweden.
NMWC National Museum of Wales, Cathys Park, Cardiff, CF1 3NP, Wales
MRSN Museum Regionale Scienze Naturali, Torino, Italy.
OXUM Oxford University Museum, Oxford, England.
RMNH National Museum of Natural History, Leiden, The Netherlands.
SAMA South Australian Museum, Adelaide, South Australia.

SMTD Staatliches Museum für Tierkunde, Dresden, Germany.
TPNG Department Primary Industry, Konedobu, Box 2141, Papua New Guinea.
USNM US National Museum of Natural History, Smithsonian Institution, Washington, DC, 20560.
ZMAN Zoölogisch Museum, Universiteit van Amsterdam, Amsterdam, The Netherlands.
ZMHB Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.
ZMPA The Polish Academy of Sciences, Institute of Zoology, P.O. Box 1007, Warszawa, Poland.
ZMUC Zoologisk Museum, Universitetsparken 15, DK 2100, Copenhagen, Denmark.
ZMUH Universität Zoologisches Institut und Zoologisches Museum, Hamburg, Germany.

Abbreviations without a stop are used for following words that are cited within parentheses following literature citations:
(cat.) = catalog, (comb.) = combination, (fig.) = figure, (figs) = figures, (pl.) = plate, (rev.) = review, (syn.) = synonym.

Throughout this article the morphological character 'spines' normally refers only to hind leg spines. In keys, the metatibial lateral spines are used (e.g., 0, 1, 2). In descriptions, the spines are given by formula - metatibial lateral: metatibial apical: metatarsal I apical (e.g., 1: 6: 6, 2: 5: 7, etc.).

Measurements are standardized in the following format: Length in mm. Overall in lateral view from anterior margin of head to posterior margin of tegmen. v (vertex), p (pronotum), m (mesonotum), along the dorsal midline; f (frons) from dorsal apex to frontoclypeal suture; t (tegmen) from basal margin to center of apical margin; pcl (postclaval sutural margin) from apex of clavus to intersection with convex arc of sutural angle, or to tip of sutural angle. Width. v (vertex) transversely along intergenal carina or maximum width above eyes; f (frons) maximal point, usually near antennal insertions; t (tegmen) at maximal point between costal and sutural margins at apex of clavus. Measurement parameters on the tegmen are shown (fig. 49).

Table 1. Geographic coordinates of 160 localities providing specimens of Flatidae. Data from Indonesia Official Standard Names Gazetteer, United States Board on Geographic Names, Department of the Interior, Washington, D.C., 1968.

Locality from label	Latitude	Longitude
SUMATRA		
Bandarbaru [Bandar-Boroe]	3°16'N,	98°33'E
Bandar, Kwala	4°05'S,	103°34'E
Batu, Kepulauan	0°18'S,	98°28'E
Bengkulu [Benkoelen]	3°48'S,	102°16'E
Bukittingi [Fort De Kock]	0°19'S,	100°22'E
Labuhandeli [Deli]	3°45'N,	98°41'E
Kuala Simpang [Kualasimpang]	4°17'N,	98°03'E
Labuuhanbadyan [Labuan Badjan]	2°24'S,	96°28'E
Lampong, District in South Sumatra		
Lauttador	3°18'N,	99°15'E

Lawas, District in North Sumatra		
Lebongtandai	3°01'S,	101°54'E
Liwa	5°04'S,	104°06'E
Marang	5°23'S,	104°04'E
Marang-Liwa	5°04'S,	104°06'E
Mentawai, Kepulaun [Islands]	2°00'S,	99°30'E
Medan	2°35'N,	98°40'E
Muara [Moeara]	2°20'N,	98°55'E
Natuna, Kepulaun [Islands)	4°00'N,	108°15'E
Nias, Pulau [Island]	1°05'N,	97°35'E
Obar, Gunung	3°02'N,	97°34'E
Padang	0°57'S,	100°21'E
Palembang [Palambang]	2°55'S,	104°45'E
Penang, Pulau	0°08'S,	98°31'E
Serdang	2°50'S,	106°27'E
Siantar	1°58'S,	98°47'E
Siberut, Pulau	1°20'S,	98°55'E
Sinabang [Sinabong]	2°29'N,	96°23'E
Singgalang, Genung	0°24'S,	100°21'E
Sipura, Pulau [Sipora]	2°12'S,	99°40'E
Solok	0°48'S,	100°39'E
Sukabumi [Soekaboemi]	4°37'S,	103°54'E
Sukaradja [Soekaradja]	2°57'S,	102°41'E
Surabaja [Soerabaja]	4°40'S,	105°43'E
Tandjungmorawa [Tandjong]	3°31'N,	98°49'E
Tandjunggading	3°18'N,	99°20'E
Tebingtinggi	3°36'S,	103°05'E
Tello, Pullu	0°03'S,	98°15'E
JAVA		
Alihan [Alahan]	7°36'S,	109°42'E
Bandung [Bandoeng]	7°05'S,	113°05'E
Bangunredjo [Bandoradjo]	7°21'S,	111°19'E
Banjumas [Banjoemas]	7°31'S,	109°17'E
Banjuwangi [Banjoewangi]	8°12'S,	114°21'E
Banten [Bantan]	2°25'S,	107°43'E
Bengala	6°34'S,	107°30'E
Besar, Gunung [Besser]	5°40'S,	112°40'E
Bogor [Buitenzorg]	6°35'S,	106°47'E
Depok	7°07'S,	110°54'E
Djakarta [Batavia]	6°10'S,	106°76'E
Djampang	6°28'S,	106°43'E
Djampang, Gunung	6°40'S,	107°11'E
Djampangtengah	7°03'S,	106°48'E
Gedangen	7°11'S,	110°41'E
Gede, Gunung [Gedeh]	5°55'S,	106°03'E
Getasan	7°23'S,	110°26'E
Guntur, Gunung [Goentoer]	7°08'S,	105°50'E
Halimun, Genung [Halimoen]	6°50'S,	106°33'E
Kambangan	6°11'S,	105°56'E
Kediri	7°50'S,	112°15'E
Kedungdjati	6°57'S,	109°19'E
Kembang	7°28'S,	110°29'E

Linggardjati [Linggadjati]	6°52'S,	108°28'E
Malang	7°59'S,	112°37'E
Murjo, Gunung [Moeria]	6°36'S,	110°53'E
Pasuruan [Pasoeroean]	7°38'S,	112°54'E
Pekalongan	6°53'S,	109°40'E
Pelabuan, Tandjung [Pelaboean]	6°38'S,	111°31'E
Pelabuhanratu	6°59'S,	106°33'E
Preanger, Residency in Southwest Java		
Radjamandala	6°50'S,	107°20'E
Ragunan [Ragoenan]	6°17'S,	106°49'E
Rembang	7°20'S,	109°30'E
Roban	6°55'S,	110°00'E
Rondo, Palau	6°05'S,	95°06'E
Sakit, Pulau [Purmerend]	6°02'S,	106°44'E
Salatiga	7°19'S,	110°30'E
Salatiga Salan	7°19'S,	110°30'E
Samarang	7°13'S,	107°50'E
Sapudi, Pulau	7°06'S,	114°20'E
Semarang	6°58'S,	110°25'E
Siluwuksawangan [Siloewoeksawangan]	6°56'S,	110°04'E
Sine, Lebak	7°31'S,	111°09'E
Sukabumi [Soekaboemi]	6°55'S,	106°56'E
Sukupura [Soekapoezae]	7°52'S,	113°03'E
Surabaja [Soerabaja]	7°15'S,	112°45'E
Susuru [Soesoeroeh]	7°29'S,	107°34'E
Tangkubanperahu [Tankubanpraku]	6°47'S,	107°39'E
Tasikmalaja	7°20'S,	108°12'E
Tebon	7°34'S,	111°28'E
Tempuran	7°33'S,	110°09'E
Tengger, Gebergte [Pegunungan]	7°55'S,	112°55'E
Tjampea	6°32'S,	106°41'E
Tjiangsana	7°02'S,	106°56'E
Tjibodas	6°44'S,	107°03'E
Tjilatjap	7°44'S,	109°00'E
Tjimerang	7°03'S,	106°53'E
Tjipetir	6°52'S,	106°41'E
Tjirebon [Cheribon]	6°44'S,	108°34'E
Weleri	6°58'S,	110°04'E
Wonosobo	7°22'S,	109°54'E
KALIMANTAN		
Balikpapan	1°17'S,	116°50'E
Barabai [Barabei]	2°35'S,	115°23'E
Buru [Baroe], Pulau	1°22'S,	110°45'E
Kalimantan Timur - East		
Longnawan	1°54'N,	114°53'E
Mahakam, Sungai [Mahakkam]	0°35'S,	117°17'E
Malinau	3°35'N,	116°30'E
Martapura [Martapoera]	3°25'S,	114°51'E
Pajau, Sungai	3°22'N,	117°28'E
Pengaron	3°18'S,	115°06'E
Pontianak	0°02'S,	109°20'E
Sambas	1°20'N,	109°15'E

Sanga, Pulau [Sangay]	2°15'S,	117°08'E
Simpang	1°09'S,	100°51'E
SULAWESI		
Agoeng [Agung]	2°02'S,	115°29'E
Banggai [Bangaya]	1°04'S,	120°02'E
Banggai, Kepulauan [Banggawi]	1°30'S,	123°15'E
Bua, Kraeng	3°04'S,	120°13'E
Kolaka	4°03'S,	121°36'E
Lompobatang, Gunung	5°22'S,	119°58'E
Luwuk	0°56'S,	122°47'E
Makasar [Makassar]	5°07'S,	119°24'E
Malino	0°58'S,	119°36'E
Minahasa, Peninsula	1°00'N,	124°35'E
Mokowu River	3°19'S,	121°40'E
Muna, Pulau Isl	5°00'S,	122°30'E
Palu [Paloe]	0°53'S,	119°53'E
Raha	4°51'S,	122°43'E
Sanggona	3°52'S,	121°46'E
Sulawesi Selatan - South		
Sulawesi Tengah - Central		
Sulawesi Tenggara - Southeast		
Sulawesi Utara - North		
Tolitoli	1°02'N,	120°49'E
Tomohon	1°19'N,	124°49'E
Watuwila, Gunung	3°47'S,	121°34'E
MOLUCCAS		
Ambon, Pulau [Amboina]	3°40'S,	128°10'E
Aru, Kepulauan	6°00'S,	134°30'E
Batjan, Pulau	0°35'S,	127°30'E
Buru, Pulau	3°24'S,	126°40'E
Seram, Pulau [Ceram]	3°00'S,	129°00'E
Halmahera, Pulau [Gilolo]	1°00'N,	128°00'E
Kai, Kepulauan [Kei Islands]	5°35'S,	132°45'E
Mangole, Pulau [Sula Mangoli]	1°53'S,	125°50'E
Morotai, Pulau	2°20'N,	128°25'E
Obi, Pulau	1°30'S,	127°45'E
Pasir Putih, Kampung	0°53'N,	127°41'E
Sula	3°06'S,	126°22'E
Ternate, Pulau	0°48'S,	127°20'E
SUNDA ISLANDS		
Baru [Baroe]	8°33'S,	110°09'E
Dompu [Dompoe]	8°32'S,	118°28'E
Ende [Endeh]	8°50'S,	121°39'E
Flores, Pulau	8°30'S,	121°00'E
Komodo, Pulau	8°36'S,	119°30'E
Lombok	8°30'S,	116°40'E
Sumba, Pulau [Soemba]	10°00'S,	120°00'E
Sumbawa Besar	8°30'S,	117°26'E

Note: 40 names from labels were not found in Gazetteer.

Key to genera of the family Flatidae

1. Tegmina positioned more or less flat, costal margin often undulate; clypeus directed horizontally; usually veins R+S, M; one metatibial lateral spine, rarely two spines; (subfamily Flatoidinae) 47
- Tegmina positioned vertically, costal margin evenly curved; clypeus not horizontal; usually veins R,S,M; zero, one or two metatibial lateral spines; (subfamily Flatininae) 2
2. Claval vein A2 and base of clavus strongly elevated and heavily pustulate; postclaval sutural margin convexly raised; pronotum postocular eminence conical; specimen usually colored brown or black; size small; (tribe Selizini, fig. 43) 44
- Claval vein A2 and base of clavus not elevated in conjunction with strongly raised postclaval sutural margin; pronotum postocular eminence absent, ridgelike or conical; specimen rarely all brown or black; size variable, small to large 3
3. Tegmina more or less elongate triangular, apical margin truncate, sinuate, or narrowly convex; size variable 11
- Tegmina more or less broadly paraboloid, apical margin widely convex; size very large, length more than 15 mm 4
4. Tegmen very wide, costal margin strongly convex from base, precostal margin wider than cell C; veins R,S,M or R+S,M; with or without postocular eminence; (tribe Phromniini, fig. 45) 8
- Tegmen moderately wide, costal margin evenly convex from base, precostal margin and cell C about the same width; veins R,S,M; no postocular eminence; (tribe Ceryniini, fig. 44) 5
5. One metatibial lateral spine 7
- Two metatibial lateral spines 6
6. Antennal segment II outer surface with elongate narrow groove; pro- and mesothorax without black spots; tegmen with two or three black lines apically (fig. 44) ..... ***Cerynia*** Stål
- Antennal segment II clavate without groove, shorter than segment I; pro- and mesothorax with black spots; tegmen without black lines ..... ***Cenestra*** Stål
7. Tegmen vein R with strong basal branch extending into cell C; six to eight large brown spots basally and three narrow crescents apically ..... ***Copsyrna*** Stål
- Tegmen vein R with several weak basal branches extending into cell C; bold black or brown bands and crescents, rarely one black spot basally, or tegmen pruinose .. .. ***Bythopsyrna*** Melichar
8. Pronotum with postocular ridgelike eminence; frons in profile strongly angulate, bituberculate midway between clypeus and dorsum of head; tegmen with submarginal line of apical crossveins ..... ***Lechaea*** Stål
- Pronotum without postocular eminence; frons in profile not angulate or tuberculate; tegmen with or without submarginal line of crossveins 9
9. Antennal segment II strongly tubular; more elongate than segment I; tegmen veins R+S,M; with submarginal line of crossveins; valvulae III with teeth .... ***Flatida*** White
- Antennal segment II not tubular, only slightly longer than segment I; tegmen veins R,S,M; without submarginal line of crossveins; valvulae III without teeth 10

10. Tegmen without large black spot on oblique Cu-M crossvein ..... ***Circumdaksha*** Distant
- Tegmen with large black spot covering oblique Cu-M crossvein ..... ***Poeciloflata*** Melichar
11. Tegmen with submarginal fracture line extending from claval apex at right angle; length from tip of scutellum to fork of claval Y-stem about same length as Y-stem, postclaval sutural margin very short; small brown species about 5 mm long; (tribe Phantiini, fig. 46) ..... ***Mimophantia*** Matsumura
- Specimen not as described 12
12. Intergenal transverse carina at anterior margin of head; recognizable vertex on dorsum of head clearly separated from frons; vertex flat, rugulose; tegmen with strong R+S stem arising from basal node; veins R and S branches extending parallel; one metatibial lateral spine; (tribe Siphantini, fig. 47) ..... ***Siphanta*** Stål
- Intergenal transverse carina at posterior margin of head contiguous to margin of pronotum; vertex remnant displaced posteriorly by strongly convex frons extending on dorsum of head; one or two spines 13
13. Tegmen with three longitudinal veins (R,S,M), or rarely two longitudinal veins (R,S+M), arising at basal node; sutural angle convex or angulate, apical margin convex, truncate or oblique 16
- Tegmen with two longitudinal veins (R+S,M) arising from basal node; tegmen postclaval sutural margin meeting apical margin right angled or acutely angled; (tribe Phyllyphantini, fig. 48) 14
14. Dorsal margin of frons broadly U-shaped; anterior margin of vertex thick; tegmen with submarginal line of crossveins; two metatibial lateral spines ... ***Amasha*** Medler
- Head acutely conical; tegmen without submarginal line of crossveins, one metatibial lateral spine 15
15. Dorsum of conical head with sharp median longitudinal carina (fig. 48) ..... ***Phyllyphanta*** Amyot & Serville
- Dorsum of conical head without median longitudinal carina ..... ***Salurnis*** Stål
16. Pronotum postocular eminence usually cone or wide triangle, rarely a carinate ridge; tegmen postclaval sutural margin convex, weakly angulate or slightly produced; valvulae III variable, with or without teeth 23
- Pronotum postocular eminence a sharp ridge; tegmen apical margin truncate or sinuate, postclaval sutural angle usually right angled or acutely produced, rarely convex; valvulae III with teeth; (tribe Lawanini, fig. 49) 17
17. Head produced, bulbous, obtuse or conical (fig. 54, 55) 20
- Head not produced, truncated (fig. 52) 18
18. Tegmen sutural angle acutely extended; two metatibial lateral spines; size very large (fig. 52) ..... ***Colobesthes*** Amyot & Serville
- Tegmen sutural angle variable; one metatibial lateral spine; size medium to large 19
19. Dorsum of head flat, twice wider than long, truncated anteriorly; frons without median longitudinal carina; tegmen postclaval margin angled; apex without submarginal line of crossveins ..... ***Scarpantina*** Melichar
- Dorsum of head and frons together convex; frons with strong median longitudial carina; tegmen apex parabolic, with submarginal line of crossveins .....

..... ***Flatosoma*** Melichar

20. Head moderately bulbous; tegmen sutural and costal angles convex; apex of tegmen with submarginal line; veins R and Cu boldly outlined in orange (fig. 53) . ..... ***Eumelicharia*** Distant
- Head conical or obtusely produced; tegmen postclaval sutural angle acutely produced or right angled; submarginal lines of crossveins irregular and weakly developed 21
21. Margin between frons and vertex thick, tripartite, the median portion protruding convexly ..... ***Oryxa*** Melichar
- Without noticeable margin between frons and dorsum of head 22
22. Head broadly conical, bulbous or obtusely rounded; tegmen often white with black or fuscous markings (figs 49, 55) ..... ***Lawana*** Distant
- Head narrowly conical; tegmen colour green or stramineous, black markings, if present, interveinal along margins (fig. 54) ..... ***Cromna*** Walker
23. Tegmen membrane showing strong network of crossveins, apical margin slightly sinuate, sutural angle right angled; frons with three longitudinal carinae; valvulae III without teeth, anal plate elongate; (tribe Nephesini, figs 50, 56, 57) 38
- Tegmen membrane without strong network of crossveins, apical margin slightly convex, sutural angle rounded; frons with median longitudinal carina only; valvulae III with teeth, anal plate oval; (tribe Flatini, fig. 51) 24
24. Intergenal carina convex, separating frons from narrow crescent shaped vertex; veins R, S+M arising from basal stem, tegmen with many irregular cells filled by large black spots ..... ***Flatula*** Melichar
- Usually veins R,S,M, rarely veins R+S, M, arising from basal stem; without head and tegmen characters given above 25
25. Disc of frons depressed, lateral margins oval, thinly carinate, frons without median carina, vertex flat ledgelike, twice wider than long ..... ***Miniscia*** Medler
- Disc of frons not concave, margins not oval; frons usually with well developed median carina; vertex not flat ledgelike 26
26. Intergenal carina transverse or slightly convex, positioned adjacent to pronotum; frons convex from clypeal suture to intergenal carina; pronotum postocular eminence not ridgelike; one or two metatibial lateral spines 28
- Intergenal carina angulate or strongly convex, positioned near anterior margin of head clearly delimiting frons from remnant of vertex; pronotum postocular eminence strongly ridgelike and carinate 27
27. Pronotum with sharply raised median longitudinal carina; tegmen apex with several weak irregular lines of crossveins, sutural angle usually angulate, tegmen veins R,S,M arising from basal stem, claval veins not forming Y-stem; two metatibial lateral spines (fig. 51) ..... ***Flata*** Fabricius
- Pronotum with weak median longitudinal carina; tegmen apex with strong submarginal line of crossveins, sutural angle widely convex, tegmen veins R,S,M or R+S,M arising from basal stem, claval veins with Y-stem; one metatibial lateral spine, rarely two spines widely spaced ..... ***Flatoptera*** Melichar
28. One metatibial lateral spine 34
- Two metatibial lateral spines 29
29. Pronotum without elevated median carina, often with pair of longitudinal red

stripes; tegmen sutural and apical margins meeting at sharp right angle; claval veins without Y-stem ..... ***Planata*** Medler
- Not as described 30
30. Overall appearance brown, dark brown or black; species small ..... ***Daeda*** Banks
- Overall appearance green, stramineous or cretaceous; species small to medium 31
31. Tegmen membrane usually with distinct wale extending obliquely from R+C Y-stem ..... ***Walena*** Medler
- Tegmen membrane without oblique wale 32
32. Frons narrow, distinctly longer than wide; tegmen sutural angle angular, apical margin truncated, membrane without oblique crease ..... ***Tormenis*** Medler
- Frons ratio length:width about equal; tegmen sutural angle and apical margin convex, membrane apically with strong diagonal crease 33
33. Dorsum of head shorter than pronotum; apical margin of tegmen more or less truncate, costal angle evenly convex, sutural angle approximately right angled; valvulae III with numerous small teeth on ventral margin, often concealed ..... ***Melicharia*** Kirkaldy
- Dorsum of head about same length as pronotum; apical margin of tegmen shallowly convex, sutural and costal angles more or less evenly convex; valvulae III with 5-6 well spaced teeth on ventral margin..... ***Flatomorpha*** (Melichar)
34. Anterior margin of head conical; tegmen without continuous apical submarginal line of crossveins; size very small (Nias Island) ..... ***Insulume*** Medler
- Anterior margin of head not conical; tegmen with well defined submarginal line of crossveins extending from clavus apex to precostal margin, usually connected with Y-stem of veins C + R 35
35. Lateral carinae of frons slightly incurved above antennal insertions; transverse intergenal carina at posterior margin of head concealed by pronotum; postocular ridge shallow, not carinate; tegmen sutural angle right angled; membrane with strong looplike crease basad of submarginal line, apical margin with numerous black spots between vein terminals ..... ***Kayania*** Distant
- Not as described 36
36. Tegmen usually with strong diagonal wale originating near R+C; small conical postocular eminence, size of specimen small, less than 10 mm long ..... ***Idume*** Stål
- Tegmen membrane without wale 37
37. Frons length:width ratio about equal (1:1); median longitudinal carina well developed on dorsal convexity of frons; tegmen elongate and narrow, apex paraboloid; precostal margin and apical submarginal area of equal width, veins strongly outlined in red ..... ***Menora*** Medler
- Frons elongate, narrow, ratio about 2:1; median longitudinal carina full length of frons but not extending on dorsum of head; tegmen length noticeably more than width (7:5) ..... ***Stenume*** Medler
38. Hind tibiae without lateral spine. Small (8 mm) dark specimen without submarginal apical line of crossveins ..... ***Nullina*** Medler
- Hind tibiae with one or two lateral spines 39
39. Two metatibial lateral spines; Lateral carinae of frons shallowly convex in profile; pronotum with elevated postocular eminence. Length less than 15 mm ..... ***Lecopia*** Medler

- One metatibial lateral spine 40
40. Head elongate conical, sutural angle acute ..... ***Acutisha*** Medler
- Head not conical, sutural angle convex 41
41. Margin between vertex and frons not defined by horseshoelike carina 43
- Margin defined by horseshoelike carina (fig. 59) 42
42. Vertex convex or sloping from median carina ..... ***Sanurus*** Melichar
- Vertex delimited anteriorly by strong horseshoe shaped carinae on dorsal margin of frons; Ovipositor derived, non-piercing; valvulae III without teeth; distribution normally in Sulawesi or Moluccas (figs 58, 59) ..... ***Neomelicharia*** Kirkaldy
43. Tegmen membrane with strong network of crossveins; apical crossveins not configured as a submarginal line; median and lateral carinae of frons parallel (fig. 56, 57) ..... ***Nephesa*** Amyot & Serville
- Tegmen membrane without strong network of crossveins; frons without parallel alignment of frontal carinae; head shallowly convex ..... ***Sabaethis*** Jacobi
44. Veins R+S, M arising; 1 metatibial lateral spine ..... ***Paraflatoptera*** Lallemand
- RSM veins arising, 2 spines 45
45. Head conical, median carina strong; frons slightly longer than wide; Veins of tegmen pale, concolorous with membrane, sutural angle convex, apical submarginal area wider than precostal margin sutural margin convexly narrowed from claval apex ..... ***Zecheuna*** Zia
- Head conical or truncate; sutural margin raised convexly from claval apex 46
46. Head truncate; frons with pair of strong warts ..... ***Meulona*** Zia
- Head conical, intergenal carina curved convexly, no warts on frons ..... ***Seliza*** Stål
47. Metatibia wih 2 lateral spines ..... ***Ortracis*** Medler
- Metatibia with 1 lateral spine 48
48. Vertex not longer than wide, pronotum with nipplelike postocular eminence ..... ***Atracis*** Stål
- Vertex as long as or longer than wide; pronotum without nipplelike postocular eminence 49
49. Pro/mesonotum strongly elevated convexly above horizontal plane of head; vein A1 zigzag or looped, connected to vein A2 by thick crossveins; valvulae III narrowed apically, with 3-5 large, spaced teeth ..... ***Cerfennia*** Stål
- Pro/mesonotum not strongly elevated; vein A1 without loops or zigzag, valvulae III footlike, not narrowed, apical margin with small to medium teeth ..... ***Staliana*** Medler

Subfamily Flatinae Melichar, 1923
Tribe Ceryniini Schmidt, 1912

Genus *Bythopsyrna* Melichar, 1901

Bythopsyrna Melichar, 1901: 224; Metcalf, 1957: 103 (cat.); Medler, 1996a: 27 (Borneo). Type species: *Poeciloptera circulata* Guérin-Méneville.

Diagnosis.— See Medler, 1996a: 27.

Key to species of the genus *Bythopsyrna*

1. Frons with single median longitudinal dark brown band 6
- Frons with two longitudinal dark brown or black bands separated by narrow median unmarked space 2
2. Tegmen almost completely dark pruinose, white crescent arising from site of R + C; hind wing smoky ..... ***B. tineoides*** (Olivier)
- Tegmen with bold pattern of brown or black longitudinal bands or crescents; hind wing not smoky 3
3. Tegmen discal area solid black or nearly so, posterior margin of black area truncate ..... ***B. ebonfana*** spec. nov.
- Tegmen discal area mostly white with brown or black margins, posterior margin of discal area circular 4
4. Inner dark brown band of tegmen strongly hooked apically ..... ***B. intermedia*** (Schmidt)
- Inner dark brown band band of tegmen not hooked apically 5
5. Tegmen costal margin white from base to inner apical crescent ..... ***B. sumatrana*** Schmidt
- Tegmen costal margin not white ..... ***B. copulanda*** Distant
6. Longitudinal dark brown band along vein R of tegmen broken by unmarked bulla; basal cell not dark, tegmen usually infused with orange basally ..... ***B. illocata*** Melichar
- Longitudinal dark brown band along vein R of tegmen usually intact; basal cell brown or black ..... ***B. circulata*** (Guérin-Méneville)

Bythopsyrna circulata (Guérin-Méneville, 1844)

Poeciloptera circulata Guérin-Méneville, 1844: 361; Medler, 1988a: 13 (Type, Malaysia Coast, Delessert, presumed lost; plesiotype ♂, Indonesia, Solok Padang, ZMAN, fig. I, 4); plesiotype ♀, Indonesia, Solok Padang, P.O. Stolz, ZMAN, here designated.

Bythopsyrna circulata; Melichar, 1901: 225 (pl. II, fig. 6); Schmidt, 1904a: 187 (Sumatra); Metcalf, 1957: 103 (cat.); Medler, 1996a: 28 (Borneo).

Bythopsyrna dohrni Schmidt, 1904a: 188; Medler, 1966a: 28 (lectotype ♂, Sumatra, Sinabong, ZMPA, syn.).

Bythopsyrna rabbowi Schmidt, 1904b; 355; Medler, 1996b: 147 (holotype ♀, Java, Frustorfer, ZMPA, syn.).

Bythopsyrna udei Schmidt, 1904a: 189; Medler, 1996b: 148 (holotype ♀, Sumatra, Sinabong, ZMPA, syn.).

Material.— SUMATRA: Bandarbaroe, ♂, MacGillavry; no specific locality, 3 ♂♂, J.J. de Vost, RMNH. Bandabaru, ♀, 5.x.1919, J.B. Corporaal; Solok Padang, ♂, 2 ♀♀, P.O. Stolz, ZMAN.

Bythopsyrna copulanda (Distant, 1892)

Cenestra copulanda Distant, 1892: 285; Medler, 1990: 167 (type); Medler, 1996a: 29 (holotype ♀, Java, BMNH; plesiotype ♂, Sabah, Tenompok, BPBM).

Bythopsyrna copulanda; Melichar, 1901: 227 (pl. II, fig. 8, comb.); Schmidt, 1904a: 190 (Sumatra); Schmidt, 1928: 132 (Java); Metcalf, 1957: 105 (cat.); Medler, 1996a: 29 (Borneo).

Material.— JAVA: Djampangtenggah, Preanger, 6 ♀♀, iv-1935, E. leMoult, RMNH; Bandoeng, 2 ♀♀, viii.1909, W. Roepke; Brastagi, ♂, v.1918, Corporaal; Djampangtengah, 10 ♀♀, 1800' [549 m], 2.iv.1939-29.iii.1940, J.M.A. v. Groenendael; Mons Gede, ♂, ♀, 4000' [1219 m], viii.1892, H. Frühstorfer; Mt. Tjimerang, 3 ♀♀, 1800' [549m], 2.iv.1939-10/20.iv.1940, J.M.A. v. Groenendael, ZMAN.

Bythopsyrna ebonfana spec. nov.
(figs 60, 61)

Material.— Holotype ♂, allotype ♀, paratypes 78 ♂♂, 40 ♀♀, Indonesia, SW Sulawesi, Karangan, c 30 km NE of Enrekang, 1450 m, gardens, 10-11.xi.1993, J.P. & M.J. Duffels, ZMAN; 4 ♂♂, 4 ♀♀, same label data, BPBM.

Diagnosis.— Morphological characters closely similar to those of *Bythopsyrna circulata* (Guérin-Méneville). Body colour tawny, with extensive black pigmentation, especially in tegmen. Frons lateral margins and genal margins widely black, only faint trace of median black marking; pair of small dots near dorsal margin; most of clypeus black; antennae black; pronotum with pair of large black spots, postocular space black, without eminence; mesonotum anterior and posterior margins each with four large black spots in a row; tegulae black; front and middle legs black, hind legs dark fuscous, apex of tarsal segments I and II with white waxy pads between lateral spines. Discal area of tegmen heavily marked with black, fan shaped, posterior margin of black area truncate, obscure clear spot in center of disc very small, or absent. Overall appearance of markings clearly outlined in photograph of allotype female (fig. 61). Genitalia of holotype male (fig. 60) resembles genitalia of *B. circulata* illustrated by Medler (1996a, fig. 5). Allotype valvulae III footlike, inner surfaces densely covered with filelike teeth; anal segment large, folded lengthwise, such as shown by Medler (1996a, fig. 41).

Measurements.— ♂ holotype, ♀ allotype. Length: overall 23.0, 29.0 mm; v 0.83, 1.00; f 2.16, 2.49; p 1.16, 1.25; m 3.82, 4.74; t 21.58, 24.40; pcl 5.64, 6.14. Width: v 1.58, 1.78; f 1.83, 2.16; t 12.12, 14.11. Hind leg spine formula: 1:6:8, 1:7:8.

Bythopsyna illocata Melichar, 1901

Bythopsyrna illocata Melichar, 1901: 226; Synave, 1980: 7 (type); Medler, 1986d: 166 (lectotype ♂, Sumatra (W), 69, Higgins, ISNB); Medler, 1996a: 29 (species status restored).

Material.— JAVA: Djampangtengah, ♂, 1800 ft [549 m], 10/24.iv.1940, J.M.A. v. Groenendael, ZMAN. SUMATRA: Bengkulu, 4 ♀♀, 1200' [366 m], vi-vii.1935, E. leMoult, RMNH.

Bythopsyrna intermedia Schmidt, 1913

Bythopsyrna intermedia Schmidt, 1913: 191; Medler, 1996a: 30 (lectotype ♀, Kalimantan, Malinau, ZMPA; plesiotype ♂, Sabah, Bundu Tukan, BPBM, fig. 54, fig. 71).

Material.— KALIMANTAN: Malinau, ZMPA: see Medler, 1996a: 30.

Bythopsyrna sumatrana Schmidt, 1904

Bythopsyrna sumatrana Schmidt, 1904a: 191; Medler, 1996b: 148 (lectotype ♂, Sumatra, Sinabong, ZMPA, fig. 2b).

Material.— Sumatra. Known only from the lectotype.

Measurements.— Lectotype ♂. Length: overall 16.5 mm; v 0.50; f 1.49; p 0.58; m 2.66; t 13.11; pcl 5.64. Width: v 1.00; f 1.16; t 6.64. Hind leg spine formula: 1:6:6.

Bythopsyrna tineoides (Olivier, 1791)

Fulgora tineoides Olivier, 1791: 576; type whereabouts unknown.
Bythopsyrna tineoides; Melichar, 1901: 227 (pl. II, fig. 2, comb.); Schmidt, 1904a: 192 (Sumatra); Karny, 1922: 4 (S. Sumatra); Schmidt, 1928: 137 (Java); Metcalf, 1957: 107 (cat.); Medler, 1996a: 30 (Borneo).

Material.— JAVA: Depok, ♀, 25.x.1912, D.O. Mullen; Djampangtenggah, 15 ♂♂, 22 ♀♀, iv.1935, E. leMoult; Radjamandela, ♂, ♀, 1200′ [366 m], xii.1935, E. leMoult; N. Tengger geb., 7 ♂♂, 3 ♀♀, 2000′ [610 m], ii.1931, E. leMoult; RMNH; Bogor, ♀, v.1920, J.B. Corporaal; Bogor ♀, 1921, MacGillavry; Depok, ♀, 18.xii.1949, C. v. Nidek; Linggardjati Cheribon, 1 ♂, 4 ♀♀, 1906-1910, Oudem; Malang, ♂, Groenhart; Preanger, 12 ♂♂, 34 ♀♀, 28.v.-22.ix.1937, J.M.A. v. Groenendael; Salatiga Salan, 2 ♀♀, 3.vi.1916, P. v.d. Goot, ZMAN. SUMATRA: Bengkulu, 3 ♂♂, 11 ♀♀, 2000′ [610 m], leMoult, RMNH. KALIMANTAN: Barabei, Mahakkam, Pontianak; see Medler, 1996a: 30.

Genus *Cenestra* Stål, 1862

Cenestra Stål, 1862c: 68; Metcalf, 1957: 114 (cat.); Medler, 1996a: 26 (Borneo). Type species: *Poeciloptera aurora* Stål.

Diagnosis.— see Medler, 1996a: 26.

Cenestra aurora (Guérin-Méneville, 1834)

Poecilloptera (sic) *aurora* Guérin-Méneville, 1834: 469; Medler, 1988a: 12 (lectotype ♀, Bengala, MZUN, plesiotype ♂, Java, Preanger, ZMAN, fig. I, 3).
Flata matutina Walker, 1851a: 437; Medler, 1990: 150 (lectotype ♀, Java, BMMH, syn.).
Cenestra aurora; Stål, 1862c: 68 (comb.); Melichar 1901: 222 (pl. II, fig. 11); Melichar, 1923: 25 (pl. 2, fig. 18); Metcalf, 1957: 115 (cat.); Medler, 1996a: 26 (fig. 13).
Cenestra aurora var. *matutina*; Melichar, 1901: 223 (comb.); Schmidt, 1928: 136 (Java).

Material.— JAVA: Preanger, ♂, E. leMoult, RMNH; Preanger, 2 ♂♂, 10 ♀♀, 18.vi-20.ix.1937; Goen. Gede slope, ♀, 3000′ [914 m], 30.i.1940; Gng Gedah, Rarahan, ♀, 5000′ [1524 m], 16.vii.1937; Tjiajoenan, Soekanegara, ♀, 1800-2400′ [549-732 m], x.1941; J.M.A. v. Groenendael, ZMAN. SUMATRA: Bengkulu, 4 ♂♂, 15 ♀♀, 1200′ [366 m], vi-vii.1935, E. leMoult, RMNH; Bengkulu, ♀, ex RMNH, BPBM. KALIMANTAN: Toppus; see Medler, 1996a: 27.

Genus *Cerynia* Stål, 1862

Cerynia Stål, 1862c: 68; Metcalf, 1957: 94 (cat.); Medler, 1991a: 30 (Sulawesi); Medler, 1996a: 24 (Borneo). Type species: *Flata albata* Stål.

Diagnosis.— see Medler, 1996a: 24.

Key to species of the genus *Cerynia*

1. Tegmen apex with 1 or 2 marginal smoky or brown bands 3
- Tegmen apex without contrasting smoky or brown bands 2
2. Tegmen normally greenish suffused with red, bulla deep red; frons relatively narrow, antennae green ..... ***C. fulgida*** (Melichar)
- Tegmen normally white, bulla pink or red; frons relatively wide, antennae black or brown ..... ***C. maria*** (White)
3. Tegmen apical margin with one brown band 6
- Tegmen apical margin with two brown bands 4
4. Two bars only arising from claval apex ..... ***C. bilineata*** Ossiannilsson
- Two bars and elongate curved line rising from claval apex 5
5. Tegmen basally uniformly light colored ..... ***C. albata*** (Stål)
- Tegmen basally with dark band along vein C ..... ***C. trilineata*** Melichar
6. One bar only arising from claval apex ..... ***C. monacha*** (Gerstaecker)
- Two bars and elongate curved line arising from claval apex ..... ***C. mixana*** Medler

Cerynia albata (Stål, 1854)
(fig. 44)

Flata albata Stål, 1854: 247; Medler, 1986h: 325 (lectotype ♀, Malacca, NHRS).

Poeciloptera deplana Walker, 1857b: 162; Walker, 1858c: 335; Medler, 1996a: 24 (lectotype ♀, Sarawak, BMNH).

Cerynia albata; Stål, 1862c: 68; Schmidt, 1904a: 183 (Sumatra); Karny, 1922: 4 (S. Sumatra); Metcalf, 1957: 96 (cat.); Medler, 1996a: 24 (Borneo).

Cerynia albata var. *deplana*; Melichar, 1901: 219 (Sarawak); Schmidt, 1904a: 183 (Sumatra); Metcalf, 1957: 96 (cat.).

Cerynia albata var. *incurva* Melichar, 1901: 219; Schmidt, 1904a: 183 (Sumatra); Melichar, 1957: 97 (cat.); Medler 1986e: 48 (lectotype ♂, Ostjava, ZMHB, fig. 1). **Syn. nov.**

Cerynia deplana; Medler, 1990: 140; Medler, 1996a: 24 (syn.).

Material.— JAVA: ♀, Frühstorfer, det. *incurva* Melichar, MMBC; ♂, Frühstorfer, *incurva* det. Melichar, NHRS; G. Moeria, ♀, 2500-3600' [762-1097 m], xii.1935, E. leMoult; Djampangtenggah, 2 ♀♀, iv.1935, E.leMoult, RMNH; Kaui Gebirge, 2 ♀♀, Ostjava, ♂ paralectotype, 1500', det. *incurva* Melichar, ZMHB. SUMATRA: Bengkulu, ♂, ♀, 1200' [366 m], vi-vii.1935, E. leMoult, RMNH; Deli, ♂, L.P. de Bussy; Padang Bedaye, ♂, v.d. Goot; Lauttador, 19 km v. Tebingtinggidell, ♀, 10.x.1948, C. v. Nidek, ZMAN.

Cerynia bilineata Ossiannilsson, 1940
(fig. 1)

Cerynia bilineata Ossiannilsson, 1940: 42 (lectotype ♂, Java, Tjiangsana, Mt. Djampang, MZLU).

Diagnosis.— Genitalia of lectotype are illustrated (fig. 1).

Material.— JAVA: ♂, paralectotype, Tjiangsana, Mt. Djampang, 5 ♀♀, viii.1938, M.E. Walsh, MLZU; Sukabumi, 5 ♂♂, 5 ♀♀, leMoult, NCSU; Djampangtenggah, ♂, iv.1935, E. leMoult, RMNH; Djam-

pangtengah, ♂, 1800' [549 m], 24.iv.1939, J.M.A. v. Groenendaal; Djampang, ♀, ZMAN. SUMATRA: Bengkulu, ♂, 1200' [366 m], vi-vii.1935, E. leMoult, RMNH.

Cerynia fulgida Melichar, 1901

Cerynia fulgida Melichar, 1901: 221; Medler, 1991a: 30 (lectotype ♂, Sulawesi Selatan, Samanga, NHMW).

Material.— SULAWESI: Sulawesi Utara & Selatan; see Medler, 1991a: 30.

Cerynia maria (White, 1846)

Poeciloptera maria White, 1846: 25 (pl. 1, fig. 3); Medler, 1991a: 30 (lectotype ♂, Silhet, BMNH).
Flata completa Walker, 1851: 436; Medler, 1990: 138 (holotype ♀, Silhet, BMNH, syn.).
Cerynia maria; Distant, 1879: 38 (comb.); Melichar, 1901: 220 (pl. II, fig. 13); Medler, 1991a: 30 (fig. 23, Sulawesi Utara).
Cerynia maria var. *completa*; Walker, 1851: 436; Schmidt, 1904a: 184 (Sumatra); Medler, 1990: 138 (syn.).
Cerynia completa; Melichar, 1901: 220 (Sumatra, comb, EMAU).
Cerynia nigropustulata Schmidt, 1904a: 184; Medler, 1986a: 113 (paralectotype, SMTD); Medler, 1986b: 301 (paralectotype, MCSN); Medler, 1987c: 39 (paralectotype, ISNB); Medler, 1996b: 145 (lectotype ♂, Sumatra, Soekaranda, Dohrn, ZMPA, fig. 24).

Material.— SULAWESI: C. Sulawesi, nr Luwuk, Bunga, ♂, ♀, 300 m, 0°56'S, 122°47'E, Malaise trap, 1-14.xi.1989, C. van Achterberg, RMNH.

Cerynia mixana Medler, 1996

Cerynia mixana Medler, 1996a: 25 (new name for *Poeciloptera deplana* Medler, 1990, not Walker, 1857); Medler, 1996a: 25 (plesiotype ♂, Sumatra, Tandjong Morawa, Serdang, ZMAN).

Material.— SUMATRA: plesiotype ♂, *Cerynia fulgida* det. Bierman 1907, B. Hagen; Deli, ♂, ♀, L.P. de Bussy, ZMAN.

Cerynia monacha (Gerstaecker, 1895)

Phromnia monacha Gerstaecker; 1895: 35 (holotype ♀, Sumatra, Frühstorfer, II 27585b, EMAU).
Cerynia monacha; Melichar, 1901: 219 (comb.); Metcalf, 1957: 102 (cat.).

Material.— SUMATRA: Known only from holotype.

Cerynia trilineata Melichar, 1901

Cerynia trilineata Melichar, 1901: 219; Metcalf, 1957: 102 (cat.); Medler, 1986e: 52 (lectotype ♂, Java Sumatra, De Hahn, ZMHB, fig. 4).

Material.— JAVA: Soekaboemi, 3 ♀♀, NCSU; V. Gedeh, ♀, det. Melichar, MMBC; G. Besser, 2 ♂♂, ♀, xi.1938, M.E. Walsh, MZLU; Djampangtengah, ♀, 1800' [549 m], 8.v.1939, J.M.A. v. Groenendaal, ZMAN; 2 ♀♀, paralectotypes, ZMHB. SUMATRA: ♀, det. Melichar, without locality data, but undoubtedly part of original material seen by Melichar, MMBC.

Genus *Copsyrna* Stål, 1862

Copsyrna Stål, 1862c: 69; Metcalf, 1957: 109 (cat.); Medler, 1996a: 54 (Borneo). Type species: *Poeciloptera maculata* Guérin-Méneville.

Diagnosis.— See Medler, 1996a: 54.

Copsyrna maculata (Guérin-Méneville, 1829)

Poeciloptera maculata Guérin-Méneville, 1829: pl. 58, fig. 7; Guérin-Méneville, 1834: 470 (described); Medler, 1988a: 15 (lectotype, no abdomen, Ballanger Voyage, precise locality unknown, MZUN; plesiotype, ♂, W. Java, Djampangtenggah, RMNH, fig. I, 6).

Copsyrna maculata; Stål 1862: 69 (comb.); Melichar, 1901: 224 (pl. II, fig. 10); Schmidt, 1904a: 185 (Sumatra); Melichar, 1914: 108 (Java); Melichar, 1923: 24 (pl. II, fig. 19); Schmidt, 1928: 136 (Java); Medler, 1996a: 55 (Borneo).

Copsyrna maculata var. *ochracea*, Distant, 1892: 286; Schmidt, 1904a: 185 (Sumatra); Medler, 1990: 176 (lectotype, ♀, Malaysia, Sungei Ujong, BMNH, syn.).

Copsyrna alma Schmidt, 1904a: 185; Metcalf, 1957: 111 (cat.); Medler, 1996b: 136 (lectotype ♂, Sumatra, Soekaranda, ZMPA, fig. 6a, b, syn.).

Material.— JAVA: Tjigoeba, ♂, ♀, v.1938, M.E. Walsh, BPBM, ex MZLU; Soekaboemi, ♂, Tjigoeba, 2 ♂♂, 4 ♀♀, v.1938, M.E. Walsh, MZLU; 2 ♀♀, *maculata* det. Signoret; Pfeiffer, no abdomen, NHMW; no precise locality, ♀, *maculata* det. Melichar, NHRS; Preanger, Djampangtenggah, 7 ♂♂, 7 ♀♀, iv-1935, leMoult, RMNH; Soekaboemi, ♀, B.P. Clark, USNM; Batavia, ♀, 2-12.viii.1949, C. v. Nidek; Preanger, ♀, 28.v.1937, J.M.A. v. Groenendael; no precise locality, ♀, v.d. Burgh; 2 ♀♀, 1938, J.J. de Vos; ♂, 2 ♀♀, Museum Natura Artis Migistra, ZMAN. SUMATRA: no precise locality, 2 ♂♂, R. Weber coll. AMNH; no precise locality, ♀, HNHM; Soekaranda, ♀, *maculata* var. *ochracea* Distant, MCSN; Ballimbingam, ♀, 600 m, 4.ix.1950, R. Straatman, ex RMNH, BPBM; Bengkulu, 2 ♂♂, 4 ♀♀, vi-vii.1935; Kuala Simpang, v.1954, A. Sollaart, RMNH; Soekaranda, ♀ paralectotype, i.1894, Dohrn, *alma* Schmidt, ZMPA.

Tribe Flatini Schmidt, 1912

Genus *Daeda* Banks, 1910

Daeda Banks, 1910: 46; Metcalf, 1957: 442 (cat.). Type species: *Daeda puncticlava* Banks.

Diagnosis.— Anterior margin of head slightly convex in dorsal view, median carina of frons strongly tumescent at margin, less elevated toward clypeus; frons as broad as long, convex dorsally, margined posteriorly by transverse intergenal carina next to anterior margin of pronotum, vertex reduced to narrow remnant contiguous to pronotum; pronotum slightly longer than head, convex anterior margin convex, posterior margin concave; postocular eminence a small cone. Costal and sutural margins of tegmen parallel, without constriction of precostal area in vicinity of C+R junction; apical angles nearly uniformly convex, apical margin slightly convex; three longitudinal veins arising from basal stem, vein R crossing elevated bulla, vein S not displaced by bulla, basal origin obscured by cluster of minute pustules, multibranched, vein Cu adjacent to claval suture, oblique Cu-M crossvein; submarginal line enclosing marginal area about same width as precostal margin, most terminal veins furcate at

submarginal line, not branching in submaginal area. Size small, overall colour dark brown; hind leg spine formula 2:6:6.

Distribution.— Southeast Asia, Philippine Islands.

Key to species of the genus *Daeda*

1. Clavus with small oval black foveate spot; female segment VII with median notch, segment VI with median flap ..... ***D. funerula*** (Melichar)
- Clavus without foveate spot; corium with small round dark spot opposite middle of claval suture; female segments without median flap or notch ..... ***D. siporensis*** Baker

Daeda funerula (Melichar, 1902) comb. nov.

Ormenis funerula Melichar, 1902: 72; Schmidt, 1904a: 202 (Sumatra); Medler, 1986h: 328 (lectotype ♀, Malacca, Perak, coll. Haglund, NHRS).

Farona funerula; Melichar, 1923: 96 (Sumatra); Metcalf, 1957: 433 (cat.).

Material.— MALAYSIA: Perak, ♀ with same label data as the lectotype, Melichar collection, Brno Museum. This specimen undoubtedly was part of original series, but type status and depository not recorded in original publication; Selangor, Kepong, ♀, Forest Reserve, 90-180 m, 12.iii.1958, T.C. Maa, BPBM; Selangor, Kuala Lumpur, ♀, 26.viii.1921, H.C. Abraham; 2 ♀♀, 14.vi.1931, ♀, 14.vi.1933, H.M. Pendlebury, ex F.M.S. Museum, B.M. 1955-354, BMNH; CHINA: Checkiang, ♀, 25.iv.1925, Swenson, NCSU.

Daeda siporensis (Baker, 1927) comb. nov.
(fig. 18)

Seliza siporensis Baker, 1927: 400 (holotype, ♀, West Sumatra, Sipora Island, x.1924, ex F.M.S. Museum, BMNH 1955-354, fig. 4); Metcalf, 1957: 409 (cat.). Plesiotype ♂, Medan, Corporaal, RMNH, here designated.

Ketumala singapurana Ghauri, 1971: 637 (holotype, ♂, Singapore, Wallace, BMNH, fig. 7-8), **syn. nov.**

Material.— SUMATRA: Sipora Islands, holotype ♀, BMNH; Medan, plesiotype ♂, 20 m, 18.ii.1921, J.B.Corporaal, RMNH. MALAYSIA: Ulu Gombok, ♂, 6-10.iii.1971, J. & M. Sedlacek, BPBM; Perak, Gunong Kledang, ♂, 2646" [806 m], xi.1916, ex F.M.S. Museum, B.M. 1955-354, BMNH; Singapore, ♂, coll Baker, USNM.

Diagnosis.— Plesiotype genitalia are illustrated (fig. 18).

Measurements.— Holotype ♀. Length: overall 8.0 mm; v 0.25; f 1.00; p 0.50; m 1.66; t 6.81; pcl 1.49. Width: v 0.83; f 1.16; t 3.15. Hind leg spine formula: 2:6:6.

Genus *Flata* Fabricius, 1798

Flata Fabricius, 1798: 511; Spinola, 1839: 421 (logotype): Metcalf, 1957: 154 (cat.); Medler, 1996a: 44 (Borneo).

Type species: *Poeciloptera stellaris* Walker, 1851a: 453, replacement name for *Cicada ocellata* Fabricius, 1775; preoccupied by *Cicada ocellata* DeGeer.

Diagnosis.— See Medler, 1996a: 44.

Key to species of the genus *Flata*

1. Tegmen with scattered black spots ..... ***F. guttularis*** (Walker)
- Tegmen uniformly stramineous ..... ***F. coromandelica*** (Spinola)

Flata coromandelica (Spinola, 1839)

Poeciloptera coromandelica Spinola, 1839: 440; Casale, 1981: 96 (syntypes, MRSN); O'Brien, 1987: 70 (cotypes). Lectotype ♂, paralectotype ♀, Coromandel Coast, Reiche, Spinola coll., MRSN, here designated.

Flata coromandelica; Atkinson, 1886: 74 (comb.).

Nephesa coromandelica; Melichar, 1902: 106 (pl. III, fig. 9). Distant, 1906: 434 (fig. 228); Karny, 1922: 5 (S. Sumatra); Schmidt, 1928: 138 (Java); Metcalf, 1957: 387 (cat.).

Taxonomic note.— The ♂ and ♀ in Spinola's collection at Torino are bonafide syntypes of *P. cormandelica*. In Signoret's collection at Vienna, the holotype ♂ of *alternans* Signoret (unpublished), was named by Melichar as type of *Nephesa coromandelica*. This was a misidentification of *Nephesa rosea* (Spinola). Among earlier authors, only Atkinson, 1886, used the correct generic combination of *Flata coromandelica*. Distribution of *coromandelica* is probably restricted to Southeast India. Presence of this taxon in Java and Sumatra was not confirmed. Karny's specimen (No. 113) from S. Sumatra is a misidentified *N. rosea* based on his description of red coloration in tegmina.

Flata guttularis (Walker, 1857)
(fig. 51)

Nephesa guttularis Walker, 1857b: 160 (holotype ♂, Sarawak, BMNH; Medler, 1990: 144 (fig. 3, BMNH).

Flata guttularis; Stål, 1862b: 490 (comb.); Schmidt, 1904a: 193 (Sumatra); Schmidt, 1928: 137 (Java); Medler, 1996a: 45 (fig. 7, 61, Borneo).

Cryptoflata guttularis; Melichar, 1902: 20 (pl. III, fig. 21) (Sarawak); Distant 1906: 435 (fig. 229); Lallemand, 1939: 73 (Sarawak); Metcalf, 1957: 270 (cat.); Datta, 1979: 10 (figs 4-6).

Phyma griseopunctata Schmidt, 1904a: 197; Medler, 1996b: 141 (lectotype ♀, paralectotypes, Sumatra, Soekaranda, Dohrn, ZMPA).

Lawana griseopunctata; Melichar, 1923; 48 (comb.); Metcalf, 1957: 210 (cat.)

Flata griseopunctata; Medler, 1996b: 141, **syn. nov.**

Material.— KALIMANTAN: E. Bengay [? Sangay]; see Medler, 1996a: 45.

Diagnosis.— Tegmen of *guttularis* is illustrated (fig. 51).

Genus *Flatomorpha* Melichar, 1902

Flatomorpha Melichar, 1902: 28; Metcalf, 1957: 275 (cat.); Medler, 1996a: 67 (Borneo). Type species: *Flatomorpha inclusa* Melichar.

Diagnosis.— See Medler, 1996a: 67.

Key to species of the genus *Flatomorpha*

1. Tegmen light green or stramineous green, apical margins red or faded red (♂ genitalia: fig. 8) ..... ***F. rubrata*** spec. nov.
- Tegmen stramineous or calcareous, without red margins 2
2. Frons marked with pair of fuscous stripes, or faded remnants of stripes 5
- Frons unmarked 3
3. Body and tegmen unicolorous dark stramineous; no fuscous markings ..... ***F. disguisa*** spec. nov.
- Tegmen not unicolorous, variously marked with fuscous 4
4. Tegmen without linear fuscous bands; costal and apical margins narrowly fuscous; clavus sutural margin dark brown (♂ genitalia: fig. 39) ..... ***F. fuscomarginata*** (Melichar)
- Tegmen margins and basal area widely infuscated; without linear band, no crossband basad of submarginal line (♂ genitalia: fig. 38) ..... ***F. inclusa*** Melichar
5. Tegmen center white, outlined by wide fuscous margins; costal margin band white-edged from base to submarginal line; fuscous markings may be faded or lost (♂ genitalia: fig. 40) ..... ***F. umbrimargo*** (Walker)
- Tegmen margins narrowly fuscous; sutural margin of clavus dark fuscous; fuscous stripe with hooked apex extending from bulla nearly to submarginal line; fuscous band basad of submarginal extending across 2/3 width of tegmen (♂ genitalia: fig. 9) ..... ***F. biglypta*** spec. nov.

Taxonomic note.— The brown markings commonly displayed by species in *Flatomorpha* may be variable in some specimens due to fading or loss of colour pigment. Identifications made with use of the above key should be supplemented with reference to characters of male genitalia when possible.

Flatomorpha biglypta spec. nov.
(fig. 9)

Material.— Holotype ♂, Singapore, Baker, USNM. Allotype ♀, Sumatra, R. Weber, AMNH. Paratype ♂, Perak, Doherty, from Ind. Mus., Distant coll., BMNH.

Diagnosis.— Conforms with characters of genus in regard to convex frons margined dorso-posteriorly by intergenal transverse carina, tegmen with three longitudinal veins (R,S,M), submarginal line of crossveins, membrane apical crease, convex apical margin and angles. Head and thorax yellow brown, frons slightly longer than wide, convex lateral margins raised above disc next to eyes; dark brown pair of lateral fasciae converging at dorsum of head, slightly protruding median carina, pronotum anterior margin carinate, tapering off laterad behind eyes, no postocular eminence, dark brown median band, which continues on mesonotum and scutellum. Tegmen white, dark brown stripe on costal margin, apical margin with faint dusky band that extends along postclaval sutural margin, claval margin narrowly dark fuscous from scutellum to apex of clavus; narrow fuscous stripe extending from bulla

nearly halfway to apex of tegmen, terminating in dark fuscous patch basad of fuscous crossband on submarginal line. Submarginal area slightly wider than precostal margin at bulla (7: 5). Holotype genitalia are illustrated (fig. 9).

Measurements.— Male holotype, ♀ allotype. Length: overall 11.5, 12.0 mm; v 0.50, 0.50; f 1.37, 1.49; p 0.50, 0.50; m 1.99, 2.66; t 9.63, 10.46; pcl 2.32, 3.24. Width: v 1.00, 1.08; f 1.33, 1.49; t 4.98, 5.81. Hind leg spine formula: 2:6:6, 2:6:6.

Taxonomic note.— The claval margins of holotype tegmina are lost, but allotype and paratype both show the narrow black brown margin as described. The dark fasciae on frons are not present in the allotype and paratype, but other dark brown makings are present.

Flatomorpha disguisa spec. nov.

Material.— Holotype ♀, Sumatra, Mentawei, Siberoet, 12.ix.1924, #36, H.H. Karny, det. *Melicharia quadrata* Karny, det. *Melcharia karnyi* Baker, USNM.

Diagnosis.— Colour overall dark stramineous. Characters conform with generic diagnosis; frons convex from clypeus to transverse intergenal carina contiguous to anterior margin of pronotum, median longitudinal carina on dorsal half of frons, and nearly full width of pronotum; mesonotum lacking median and lateral longitudinal carinae; pronotum without postocular eminence. Tegmen with three longitudinal veins (R,S,M), vein S with five branches, apical margin slightly convex, oblique, convexity of costal and sutural angles unequal; apical submarginal line continuous with costal vein, submarginal area and precostal margin of equal width; well defined transverse oblique crease extending from near claval apex to near submarginal line; most terminal veins from crease to apical margin not forked. Valvulae III with four-five flat triangular teeth on ventral margin.

Measurements.— Holotype. Length: overall 11.25 mm; v 0.33; f 1.33; p 0.58; m 1.99; t 9.46; pcl 2.99. Width: v 0.75; f 0.91; t 4.98. Hind leg spine formula: 2:5:6.

Taxonomic note.— The holotype is a misidentified syntype of *Melicharia karnyi* Baker, 1927. Although superficially similar to the lectotype of *karnyi*, the presence of two metatibial spines enabled recognition of the species.

Flatomorpha fuscomarginata (Melichar, 1902) comb. nov.
(fig. 39)

Ormenis fuscomarginata Melichar, 1902: 78; Schmidt, 1904a: 202 (Sumatra); Medler, 1986e: 48 (paralectotype); Medler, 1987b: 536 (lectotype, ♀, Sumatra, Deli, NHMW, fig. 8).

Melicharia fuscomarginata; Karny, 1922: 5 (S. Sumatra, comb.); Baker, 1927: 399 (fig. 3b); Metcalf, 1957: 322 (cat.).

Anaya fuscomarginata; Melichar, 1923: 98 (comb.).

Material.— JAVA: Radjamandala, Preanger, 3 ♂♂, ♀, 1200 ft [366m], xii.1935, E. leMoult, RMNH; Tjiajoenan, Soekanegara, ♀, 1800-2400' [549-732 m], x.1941, J.M.A. v. Groenendael, ZMAN. SUMATRA: Siberut Island, 3 ♂♂, 3 ♀♀, ix.1924, B.K. & N.; Sipora Island, ♀, x.1924, B.K. & N.; Mentawei, Sipora Island, 4 ♂♂, 2 ♀♀, 9-31.x.1924, H.H. Karny; Mentawei, Siberoet, 4 ♂♂, 5 ♀♀, 9-26.xi.1924, H.H. Karny; Batu Islan, Pullo Tello, 2 ♂♂, 2 ♀♀, xi.1924, CBK & N, Ex F.M.S. Museums, BMNH; Mantawei, Sipora, ♂, 12.x.1924, H.H. Karny, *quadrata* det. Karny, ZMAN.

Diagnosis.— The genitalia of male specimen from Sipora, ex BMNH, are illustrated (fig. 39). The ventral process arising from the aedeagus apex may be variable; some specimens had much longer processes than the aborted process shown.

Flatomorpha inclusa Melichar, 1902
(fig. 38)

Flatomorpha inclusa Melichar, 1902: 28; Medler, 1986b: 301 (lectotype ♂, Sumatra, Mte Singalang, MCSN, fig. 3); Medler, 1996a: 67 (fig. 64).
Melicharia specularis Jacobi, 1915: 173; Medler, 1986a: 110 (lectotype ♂, W. Sumatra, Padang Pandjang, SMTD, fig. 3).

Material.— SUMATRA: no precise locality, ♀, R. Weber, AMNH; Kuala Simpang, Selelek, ♀, lowland forest, iv.1954, A. Sollaart, RMNH.

Diagnosis.— Lectotype genitalia are illustrated (fig. 38); the figure is redrawn from the original published by Medler, 1986b: 301, fig. 3.

Flatomorpha rubrata spec. nov.
(fig. 8)

Material.— Holotype ♂, Sumatra, Simalur, Sinabang, 13/64, ii.1913, 14/21, Edw. Jacobson, ZMAN. Allotype ♀, Sumatra, Simalur, Sinabang, i.1913, 14/55, Edw. Jacobson, ZMAN. Paratypes, Sumatra, Simalur, ♂ Avilsebel, v.1913; Labuan Badjan, ♂, vi.1913, 64/32; Laulo, ♂, viii.1913; Oerbosch, ♂, vii.1913, 41/28; Salur, 2 ♂♂, viii.1913, 45/96, 45/98; Sibigo, ♂, viii.1913, 46/07; Sinabang, 2 ♂♂, ii.1913, 14/30; vii.1913, 41/26; Edw. Jacobson; Tandjunggadang, ♂, 1000 m, 1926, E. Jacobson; ZMAN; Laulo, ♂, viii.1913, 46/28; Sinabang, ♀, ii.1913, 13/64, oerbosch, ♀, vii.1913, valvulae III mounted on slide; BPBM ex ZMAN.

Diagnosis.— Conforms with generic characters. Dorso-posterior margin of frons delimited by transverse intergenal carina; median carina on anterior margin; pronotum anterior margin sharply carinate, laterad extension short, weak postocular eminence. Tegmen with three longitudinal veins (R,S,M), submarginal line of crossveins apically, membrane with oblique crease arising at claval apex. Colour overall light green or faded stramineous, tegmen margins narrowly marked with red, red orange, or reddish brown. The holotype genitalia are diagnostic, as illustrated (fig. 8).

Measurements.— ♂ holotype, ♀ allotype. Length: overall 10.5, 11.0 mm; v 0.25, 0.25; f 1.33, 1.33; p 0.42, 0.42; m 2.16, 2.16; t 8.96, 9.30; pcl 2.82, 2.99. Width: v 1.00, 1.00; f 1.16, 1.16; t 4.65, 4.81. Hind leg spine formula: 2:6:7, 2:6:7/8.

Taxonomic note.— The costal and sutural angles of *rubrata* tegmen are unequal, with sutural angle more angulate obtuse than evenly convex costal angle. The width of the submarginal area at middle part is about same width as the precostal margin at bulla. Species of the genus with black markings have more evenly rounded apical margin and wider submarginal area. In all species of *Flatomorpha*, the array of longitudinal vein terminals has very few forks from membrane crease to apical margin. Some specimens of *Melicharia quadrata*, sensu Karny, 1922: 4 (S. Sumatra), not *Poeciloptera quadrata* Kirby, 1891, also belong to *Flatomorpha rubrata*.

Flatomorpha umbrimargo (Walker, 1858)
(fig. 40)

Poeciloptera umbrimargo Walker, 1858: 115 (holotype ♂, Sumatra, BMNH); Medler, 1990: 163 (type, fig. 23).
Paratella umbrimargo; Metcalf, 1957: 379 (cat.).
Flatomorpha umbrimargo; Medler, 1990: 163 (comb.).

Material.— SINGAPORE: ♀, #9320, Baker, BPBM; 2 ♂♂, 1902-205, ♂, 1902-232, H.M. Ridley, BMNH; MALAYSIA: Kuala Lumpur, ♂, 350-400 m, 16.ix.1960, J.L. Gressitt; Sungei Linam, ♀, 2-20 m, 20.ix.1960, Palm, J.L. Gressitt, BPBM; Perak, ♂, 500-1500' [152-457 m], 11.xii.1923, M.R. Henderson; Sembilan Isl, Pulau Rumbia, 2 ♂♂, ♀, 20-26.iii.1926, E. Seimund; Langkawi Isl., Telaga Jujoh, ♂, 27.iv.1928, H.M. Pendlebury, ex F.M.S. Museum, BMNH.

Diagnosis.— The holotype genitalia of *umbrimargo* are illustrated (fig. 40); the figure is redrawn from the original published by Medler, 1990, fig. 23. Although male genitalia of *umbrimargo* and *inclusa* are closely alike, the two species are recognized by differences in colour markings. Both type specimens are from Sumatra, but the majority of specimens examined from Malaysia proved to be *umbrimargo*.

Measurements.— Holotype ♂. Length: overall 10.0 mm; v 0.33; f 1.33; p 0.50; m 2.16; t 8.96; pcl 2.32. Width: v 1.16; f 1.33; t 4.32. Hind leg spine formula: 2:6:6.

Genus *Flatoptera* Melichar, 1901

Flatoptera Melichar, 1901: 248; Metcalf, 1957: 364 (cat.); Medler, 1996a: 57 (Borneo). Type species: *Poeciloptera albicosta* Guérin-Méneville.

Diagnosis.— See Medler, 1996a: 57.

Flatoptera albicosta (Guérin-Méneville, 1844)

Poeciloptera albicosta Guérin-Méneville, 1844: 360; Medler, 1988a: 12 (Type specimen of Guérin-Méneville from Malacca not found at MZUN; plesiotype ♂, Malaysia, SE Pahang, BPBM, fig. I, 5); Medler, 1996a: 58 (plesiotype ♀, Malacca, NHRS).
Flatoptera albicosta; Melichar, 1901: 249 (pl. VII, fig. 10, comb.); Metcalf, 1957: 364 (cat.); Medler, 1996a: 58 (Borneo).
Flatoptera minuta major Lallemand, 1939: 73 (pl. VII, fig. 10); Medler, 1996a: 58 (lectotype, ♀, Sarawak, Mt. Dulit, BMNH, syn.).

Material.— KALIMANTAN: Mahakkam; see Medler, 1996a: 58.

Genus *Flatula* Melichar, 1902

Flatula Melichar, 1902: 62; Metcalf, 1957: 413 (cat.); Medler, 1996a: 43 (Borneo). Type species: *Flatula cribrata* Melichar.

Diagnosis.— See Medler, 1996a: 43.

Key to species of the genus *Flatula*

1. Tegmen oblique apically, postclaval sutural angle strongly raised convexly from apex of clavus ..... ***F. cribrata*** Melichar
- Tegmen parabaloid apically, postclaval sutural angle shallowly convex from apex of clavus ..... ***F. stenula*** Medler

Flatula cribrata Melichar, 1902

Flatula cribrata Melichar, 1902: 63 (holotype ♂, Sumatra, Palembang, G. Wolker, ZMUH, pl. VI, fig. 9); Metcalf, 1957: 413 (cat.); Medler, 1992b: 180 (type, fig. 1).

Material.— SUMATRA: Known only from the holotype.

Flatula stenula Medler, 1996

Flatula stenula Medler, 1996a: 44 (holotype ♂, Malaysia, Sabah, Kinabalu National Park, G.F. Hevel, USNM, figs 32, 57).

Material.— SUMATRA: Siantar Naga Haeta, ♀, 400 m, 2.vi.1921, J.B. Corporaal, ZMAN.

Genus *Idume* Stål, 1866

Idume Stål 1866: 238; Melichar, 1902: 27; Metcalf, 1957: 381 (cat.); Medler, 1996a: 59 (Borneo). Type species: *Idume plicata* Melichar (junior syn. of *Nephesa deducta* Walker).

Phyllodryas Kirkaldy, 1913: 22; Metcalf, 1957: 353 (cat.); Medler, 1996a: 59 (syn.). Type species: *Phyllodryas calamina* Kirkaldy (junior syn. of *Nephesa deducta* Walker).

Diagnosis.— see Medler, 1996a: 59.

Key to species of the genus *Idume*

1. Tegmen testaceous, costal margin narrowly infuscated ..... ***I. niveina*** (Walker)
- Tegmen heavily dusted with white wax, without fuscous markings 2
2. Tegmen and body dull white ..... ***I. decolora*** spec. nov.
- Tegmen with wide oblique orange band crossing disc, costal margin apically tinged with orange ..... ***I. stigma*** spec. nov.

Taxonomic note.— Examination of large amount of material has not provided a valid Sumatra or Java record of *Idume deducta*, the type of the genus. The species is common and widespread in Malaysia and may be recognized by distinctive characters of the aedeagus, as illustrated by Medler (1996a, fig. 20).

Idume decolora spec. nov.

Material.— Holotype ♀, Sumatra, Malang, 9.ix.1938, J. Knock, RMNH.

Diagnosis.— Unicolorous, body and tegmen dusted heavily with white waxy powder; no distinguishing markings. Head and thorax as described for genus, frons length: width equal, postocular eminence a small shallow cone; tegmen with veins S, M and Cu forking at approximately same distance from basal node, indistinct faint wale arising from near R+C stem, vein C and apical submarginal line of crossveins defining precostal and apical marginal areas of same width. Valvulae III narrowed apically, margin with four teeth and long setae, strong ovipositor blade, apical segment hoodlike, not longer than valvulae III.

Measurements.— Holotype ♀. Length: overall 6.5 mm; v 0.25; f 0.75; p 0.33; m 1.33; t 5.15; pcl 1.00. Width: v 0.50; f 0.75; t 2.66. Hind leg spine formula: 1:6:6.

Known only from the holotype.

Idume niveina (Walker, 1857)

Poeciloptera niveina Walker, 1857a: 92; Medler, 1990: 151 (holotype (no abdomen), Mt. Ophir, Wallace, BMNH); Medler, 1996a: 60 (Plesiotype ♂, Malaysia, Sabah, Paring Hot Springs, Maa, BPBM, fig. 19).

Ormenis severa Melichar, 1902: 86; Medler, 1986d: 167 (lectotype ♀, Sumatra, Bengkulu, Marang-Liwa, MNHN).

Melicharia niveina; Metcalf, 1957: 324 (cat.).

Melicharia severa; Metcalf, 1957: 323 (cat., junior syn. of *Melicharia lactifera* Walker, in error).

Idume severa; Medler, 1986d: 167 (comb.); **syn. nov.** here designated.

Idume niveina; Medler, 1990: 151 (comb., senior syn. of *Idume deducta* Walker, in error); Medler, 1996a: 60 (Borneo, fig. 19).

Material.— SUMATRA: Mentawei, Sipora, 2 ♀♀, 9.x.1924, H.H. Karny, BMNH; Fort de Kock, ♂, 920 m, 1925, E. Jacobson; Padang, ♂, i.1914, E. Jacobson; Tandjunggadang, ♂, 1200 m, ii.1926, E. Jacobson, ZMAN.

Idume stigma spec. nov.

Material.— Holotype ♀, Sulawesi, Agoeng, 24.vii.1926, F.J. Weyman, RMNH.

Diagnosis.— Overall colour cretaceous, tegmen with distinctive wide red orange band crossing disc diagonally from clavus to costal margin. Right tegmen lost, apex of left tegmen broken and tattered. Measurements incomplete, but frons length 0.75, width 0.66; tegmen width at claval apex 2.49. Hind leg spine formula 1:6:6. Size small, estimated length 6.5 mm.

Known only from holotype. Additional material including a male is needed for satisfactory disposition of this uniquely marked species.

Genus *Insulume* nov.

Type species: *Insulume minutum* spec. nov., monobasic.

Diagnosis.— Head conical, in lateral view protruding above pronotum, narrow remnant of vertex between obscure intergenal transverse carina and margin of pronotum, frons median carina present; pronotum postocular eminence obtusely conical.

Tegmen with three longitudinal veins (R,S,M) arising from basal node, vein S with fork beyond discal area, vein M with fork relatively close to basal node, vein Cu extending alongside sutural margin of clavus without fork, apical margin truncate, without sumarginal line of crossveins, costal and sutural angles bluntly right angled (fig. 37). Valvulae III convex, dorso-ventral margin with eight-ten small teeth, anal plate narrow, blunt at apex (fig. 30). Size small; hind leg tibia with one lateral spine.

Insulume minutum spec. nov.
(figs 30, 37)

Material.— Holotype ♀, Nias, Tring Museum, 1903-62, BMNH.

Diagnosis.— Body and tegmina conforming with morphological characters described for genus. Colour of body and legs pale yellow, tegmina ochraceous, heavily dusted with white waxy powder, veins red orange, margins thinly red. Tegmen illustrated (fig. 37); holotype valvulae III ventral view illustrated (fig. 30).

Measurements.— Holotype ♀. Length: overall 8.5 mm; v 0.50; f 1.25; p 0.42; m 1.66; t 6.31; pcl 2.32. Width: v 0.83; f 0.95; t 3.82. Hind leg spine formula: 1:7:6.

Genus *Kayania* Distant, 1910

Kayania Distant, 1910b: 334; Metcalf, 1957: 279 (cat.); Medler, 1996a: 56 (Borneo). Type species: *Nephesa volens* Walker.

Diagnosis.— See Medler, 1996a: 56.

Kayania volens (Walker, 1857)

Nephesa volens Walker, 1857b: 161 (holotype, ♀, Sarawak, BMNH); Medler, 1990: 164 (type); Medler, 1966: 57 (plesiotype, ♂, Sarawak, Gunong Matang, BPBM, fig. 31).
Kayania volens; Distant, 1910b: 334 (pl. 22, fig. 18); Metcalf, 1957: 279 (cat.); Medler, 1996a: 57 (Borneo).

Material.— SUMATRA: Bengkulu, Marang-Liwa, ♂, Noualhier, MNHN. KALIMANTAN: Pajau, Sungai; see Medler, 1996a: 57.

Genus *Melicharia* Kirkaldy, 1900

Melicharia Kirkaldy, 1900: 294; Metcalf, 1957: 320 (cat.); Medler, 1996a: 64 (Borneo). Type species: *Melicharia sinhalana* Kirkaldy, replacement name for *Poeciloptera quadrata* Kirby, 1891, not *Poeciloptera quadrata* Walker, 1851.

Diagnosis.— See Medler, 1996a: 64.
Distribution.— India, Ceylon, Southeast Asia.

Melicharia sinhalana Kirkaldy, 1900

Poeciloptera quadrata Kirby, 1891: 154 (pl. 6, fig. 8, preoccupied name).
Melicharia sinhalana Kirkaldy, 1900: 295 (nom. nov.); Metcalf, 1957: 325 (cat.).

Distribution.— Ceylon, India. Not found in Southeast Asia.

Old and new combinations.— The following Oriental species assigned to *Melicharia* by Metcalf (1957) have since been transferred to other genera, as follows:
deducta Walker = *Idume deduct;* (Walker); Medler, 1996a: 61.
deducta var. *alba* Melichar = *Walena alba* (Melichar), **comb. nov.**
fuscomarginata Melichar = *Flatomorpha fuscomarginata* (Melichar), **comb. nov.**
karnyi Baker = *Stenume karnyi* (Baker), **comb. nov.**
niveina Walker = *Idume niveina* (Walker); Medler, 1990: 151.
prasina Schmidt = *Ormenoides pehlkei* (Schmidt); Medler, 1996b: 146, **comb. nov.**
severa Melichar = *Idume niveina* (Walker); Medler, 1986d: 167.
specularis Jacobi = *Flatomorpha inclusa* Melichar; Medler, 1986a: 110.
taeniata Schmidt = *Planata taeniata* (Schmidt), **comb. nov.**
tripars Walker = *Idume tripars* (Walker); Medler, 1996a: 61.
unicolor Walker = *Anzora unicolor* (Walker); Medler, 1986g: 206.

Taxonomic note.— *Ormenis proxima* Melichar [Anaya], reported from Sumatra by Schmidt, 1904a: 203, probably is a misidentified *Melicharia*. The original description of *proxima* was based on material from Ceylon. This record is deleted from the Indonesian list pending procurement and examination of Schmidt's ♀ specimen from Sinabong.

Genus *Menora* nov.

Type species: *Menora longmina* spec. nov., monobasic.

Diagnosis.— Frons slightly longer than wide, strong median carina on frons extending from near frontoclypeus to posterior margin of head, vertex displaced by convex dorsum of frons, consisting of narrow remnant bordered by transverse intergenal carina adjacent to anterior margin of pronotum, postocular eminence conical, median longitudinal carina extending across pronotum and mesonotum; additional pair of carinae laterally on mesonotum. Tegmen elongate, apical margin parabolic, three longitudinal veins (R,S,M) arising, vein S displaced by bulla, forked slightly basad of vein M fork, veins strongly reticulated in apical third of tegmen as far as submarginal line of crossveins, no wale, no crease, vein terminals apicad of submarginal line not branched, submarginal area and precostal margin of equal width. Tegmen is illustrated (fig. 34). Size small; hind leg tibia with one lateral spine.

Menora longmina spec. nov.
(figs 7, 31, 34)

Material.— Holotype ♂, N. Sumatra, Mt. Bandahara, 3°45'N, 97°46'E., Bivouac Four, ca. 2430 m, gnarled evergreen mossy forest, Malaise trap, 16-22.vi.1972, J. Krikken, RMNH. Allotype ♀, Sumatra, Genung Teleman, vi.1917, 3/50, Edw. Jacobson, ZMAN; Paratype ♀, Sumatra, Sibajak Vulcan, 1600 m, Mjöberg, NHRS.

Diagnosis.— Conforms with generic diagnosis. Overall colour dull white. Lateral margins of frons narrowly red about halfway to posterior margin, dorsum of frons red U-shaped on each side of median carina; mesonotum median distal half and

scutellum red. Tegmen membrane white; costal, apical, postclaval, and sutural margins thinly red, veins R, S, M, and A1 red; front and middle leg femur apex, tibia and tarsus red. Allotype genitalia in ventral view are illustrated (fig. 31), showing elongated triangular valvulae III with three-four apical teeth. Holotype genitalia damaged, aedeagus and styles lost (fig. 7), but illustrated to show short anal segment.

Measurements.— Holotype ♂. Length: overall 8.0 mm; v 0.21; f 1.00; p 0.33; m 1.33; t 6.64; pcl 1.49. Width: v 0.58; f 0.87; t 2.32. Hind leg spine formula: 1:6:6.

Taxonomic note.— As the aedeagus of the unique holotype is lost, this species cannot be known fully until collection and further study of a male with intact genitalia. Red markings characteristic of the species are labile. The paratype female (NHRS) has entirely lost red colour, but characters of head, tegmen, and genitalia enabled recognition of the species.

Genus *Miniscia* Medler, 1991

Miniscia Medler, 1991a: 22 (Key, Sulawesi); Medler, 1996a: 32 (Borneo). Type species: *Phlebopterum maculatum* Melichar.

Diagnosis.— See Medler, 1991: 22.

Miniscia maculata (Melichar, 1902)

Phlebopterum maculatum Melichar, 1902: 2 (pl. 4, fig. 4); Medler, 1986c: 114 (holotype, ♀, Sulawesi, Tolitoli, HNHM); Medler, 1991a: 23 (plesiotype, ♂, Sulawesi Utara, Dumoga-Bone National Park, BPBM).
Sephena maculata; Metcalf, 1957: 368 (cat.).
Miniscia maculata; Medler, 1991a: 23 (figs 16, 24, comb.); Medler, 1996a: 33 (Borneo).

Material.— SULAWESI: Sulawesi Utara; see Medler, 1991: 23; Sulawesi Tenggara, 2 ♂♂, S. Sanggona, Gn. Watuwila, Centipede Camp, 1100 m, 3°49'S 121°40'E, at light, untouched forest on slope, many slender trees, little vegetation on floor, 1-3.xi.1989, J. van Tol [1989 RMNH Expedition].

Genus *Planata* nov.

Type species: *Ormenis taeniata* Schmidt.

Diagnosis.— Head shorter than pronotum, transverse intergenal carina crossing dorsum of head above eyes; pronotum without carina, or thin remnant only, usually with pair of longitudinal red stripes; postocular ridge weak, incompletely carinate; tegmen submarginal line present, sutural angle subacute, apex sharp or slightly convex; no y-stem of claval veins; size medium; hind leg spine formula 2:7:7.

Planata taeniata (Schmidt, 1904) comb. nov.

Ormenis taeniata Schmidt, 1904b: 368; Medler, 1996b: 148 (lectotype ♂, paralectotype ♀, Sumatra, Soekaranda, i.1894, Dohrn, ZMPA).
Melicharia taeniata; Metcalf, 1957: 326 (cat.).

Material.— Known only from type material.

Taxonomic note.— The genus *Planata* comprises a complex of Oriental species catalogued by Metcalf, 1957, in the African genus *Paranotus* Karsch, 1890, with type species *Poeciloptera rufilinea* Walker. There is superficial resemblance between the two genera, including red stripes on pronotum, and similar shape of tegmen, but they differ in presence or absence of anal veins Y-stem in clavus. Previously named species, *Paranotus limbatus* Distant and *P. maculosus* Distant are here transferred to *Planata* Medler (**comb. nov.**). Also known to the writer are several undescribed species with distribution in SE Asia and India.

Genus *Stenume* nov.

Type species: *Stenume karnyi* (Baker).

Diagnosis.— Frons narrow, elongated, distinctly longer than wide, extending convexly onto dorsum of head, posterior margin defined by intergenal transverse carina; median longitudinal carina well developed full length on frons; pronotum without postocular eminence, mesonotum humped in profile. Tegmen with three longitudinal veins (R,S,M), vein S with two or three branches, crossveins ramifying on disc basad of submarginal line, diagonal crease extending obliquely from claval apex, preapical terminal veins with very few forks in submarginal area. Size small, one metatibial lateral spine.

Key to species of the genus *Stenume*

1. In lateral view, dorsum of frons convex, following same outline as genal margins; tegmen unmarked; apical margin convex, sutural and costal angles similarly convex; aedeagus ventral process not bifid (fig. 41) ..... ***S. karnyi*** (Baker)
- In lateral view, dorsum of frons projecting above genal margins; tegmen with fuscous markings; apical margin oblong-oblique, costal and sutural margins dissimilar; aedeagus ventral process bifid (fig. 42) ..... ***S. kryptala*** spec. nov.

Stenume karnyi (Baker, 1927) comb. nov.
(fig. 41)

Melicharia karnyi Baker, 1927: 398 (fig. 3c, e). Lectotype ♂, West Sumatra, Padang, xi.1924, C.B.K. and N., ex F.M.S. Museum, B.M.1955-354, BMNH, here designated. Paralectotype ♂, West Sumatra, Padang, xi.1924, C.B.K. and N., xi.1924, Baker coll., USNM, here designated.

Material.— No locality label, ♀, Klein, ZMUC; Sumatra, 2 ♂♂, Tandjunggadang, 1000 m, ii.1926, E. Jacobson; ♂, ♀, Fort de Kock, 920 m, i.1924, E. Jacobson; ♂, Padang, i.1914, E. Jacobson; ZMAN.

Diagnosis.— In dorsal view, convex extension of frons on dorsum of head long in proportion to width, noticeably produced in front of eyes. In frontal view, frons longer than wide. Colour uniformly testaceous. Basad of submarginal line there is a diagonal crease that marks a boundary between discal vein reticulation and array of

unbranched terminal veins. Tegmina testaceous, tinged with pale green or faded to uniform ochraceous without markings except sutural and apical margins that may be narrowly fuscous.

Genitalia of paralectotype are illustrated (fig. 41).

Measurements.— Lectotype ♂, ♀ ZMUC. Length: overall 10.0, 10.5 mm; v 0.33, 0.37; f 1.33, 1.29; p 0.42, 0.42; m 2.16, 1.99; t 8.63, 9.13; pcl 1.66, 2.32. Width: v 0.66, 0.71; f 0.95, 1.00; t 4.48, 5.15. Hind leg spine formula: 1:5:6; 1:5:4.

Stenume kryptala spec. nov.
(fig. 42)

Material.— Holotype ♂, Malaysia, Ulu Gombok, 6-10.iii.1971, J.& M. Sedlaceck collectors, BPBM. Allotype ♀, Malaysia, Kuala Lumpur, nr. L. Gardens, 18.ix.1934, H.M. Pendlebury, BMNH. Paratypes, Malaysia, ♂, 20 km N of Kuala Lumpur, Temple Park, 150 m, 15.ix.1960, sweeping, J.L. Gressitt collector, BPBM, ♀, Selangor, Ampang, 14.v.1933, H.M. Pendlebury (ex BMNH) BPBM; ♂, 3 ♀♀, Perak, Batang Padang, Jor Camp, 457 m [1500 ft], 27.v.1923, H.M. Pendlebury; ♂, Kuala Lumpur, 18.xii.1932, H.M. Pendlebury; ♂, ♀, Perak, Doherty, Distant coll. (ex Ind. Mus, BM 1911-383); 2 ♂♂, Pahang, Sungei Renglet, at light, 3500 ft [1067 m], 27.ii.1925, H.M. Pendlebury; ♂, Pahang, Fraser's Hill, 4200 ft [1280 m], 13.vii.1936, H.M. Pendlebury; ♂, Kuala Lumpur, 23.v.1940, *Artocarpus integrifolia* L, fruit stalk, Ent. Div. Agric. Dept, (ex F.M.S. Museum, BM 1955-354) BMNH.

Diagnosis.— Distinguished by shape of frons and dorsum of head and overall mottled brown colour; dark brown mesonotum, lighter brown irregular bands and spots concentrated basally at bulla, in middle of clavus, along submarginal line, and interveinal at apical margin. Genitalia are illustrated (fig. 42).

Measurements.— Holotype, allotype. Length: overall 9.0, 9.0 mm; v 0.29, 0.33; f 1.33, 1.16; p 0.33, 0.42; m 1.83, 1.49; t 7.80, 7.30; pcl 1.99, 1.99. Width: v 0.62, 0.58; f 0.83, 0.71; t 3.15, 3.15. Hind leg spine formula: 1:6:7; 1:6:7.

Genus *Tormenis* nov.

Type species: *Ormenis ornata* Melichar, monobasic.

Diagnosis.— Frons twice longer than wide, median carina present, dorsal margin convex, frons extending dorso-posteriorly on head to transverse intergenal carina at anterior margin of pronotum. Postocular eminence of pronotum weakly developed cone, median dorsal carina absent. Tegmen translucent, three longitudinal veins (R,S,M) arising from basal node, apical margin convex, Submarginal line of crossveins parallel with apical margin along median stretch, strong array of terminal veins with very few forks in submarginal area, membrane without wale or crease apically, vein C extending adjacent to claval suture without branching. Valvulae III with six-ten closely spaced spines on ventral margin. Size small, two lateral spines on hind tibia.

Tormenis ornata (Melichar, 1902) comb. nov.
(fig. 35)

Ormenis ornata Melichar, 1902: 95 (holotype ♂, E Java, Tengger Mt, 4000 ft [1219m], ZMHB); Medler, 1986e: 50 (type, fig. 3, ZMHB).

Anaya ornata; Melichar, 1923: 99 (comb.); Metcalf, 1957: 441 (cat.).

Material.— JAVA: N. Tengger, Pegunungan, ♀, 2000' [610m], ii.1931, E. leMoult, RMNH.

Diagnosis.— Body and tegmina conforming with morphological characters described for genus. Colour of body pale yellow, tegmina pale stramineous; shape and markings of tegmen as shown (fig. 35). Diffuse fuscous band along costal and apical margins and a separate band covering veins R and S from bulla to junction with costal margin. Genitalia characters of holotype illustrated by Medler (1986e: 50, fig. 3).

Measurements.— Holotype ♂, ♀ ex RMNH. Length: overall 7.5, 7.5 mm; v 0.33, 0.21; f 0.91, 1.00; p 0.33, 0.33; m 1.16, 1.33; t 5.96, 6.31; pcl 0.83, 1.16. Width: v 0.46, 0.50; f 0.62, 0.66; t 3.15, 3.40. Hind leg spine formula: 2:6:7, 2:6:7.

Taxonomic note.— General habitus of *T. ornata* resembles but is not congeneric with flatids from Nicobar Islands variously named *Ormenis albicosta* Melichar, 1902, *Anaya nicobarensis* Distant, 1910 and *Ormenis striolata* Melichar, 1902. All Nicobar Island specimens examined by the writer have a diagonal crease on membrane of the tegmen, and frons only slightly longer than wide. The crease is not present in *ornata* and its frons is distinctly longer than wide.

Genus *Walena* nov.

Type species: *Ormenis alba* Melichar.

Diagnosis.— Frons convex, median carina extending dorso-posteriorly to intergenal transverse carina near anterior margin of pronotum, remnants of vertex two triangular spaces above eyes; pronotum postocular eminence conical, pronotum and mesonotum without median carina, lateral carinae of mesonotum reduced to shallow ridges. Tegmen with three longitudinal veins (R,S,M) arising from basal stem, origins of S and M somewhat obscured by pustules, sutural and costal angles equally convex, strong submarginal line of apical crossveins defining relatively narrow area about same width as precostal margin, S vein with two or three branches, vein Cu2 branches entering submarginal line at claval apex; veins 1A and 2A joining in Y-stem basad of claval apex; membrane of tegmen with distinct wale extending from near R + C junction. Size small, two metatibial lateral spines.

Key to species of the genus *Walena*

1. Apical submarginal area of tegmen slightly wider than precostal margin; about eight terminal veins along postclaval margin; male genitalia as shown (fig. 5) ..... ***W. alba*** (Melichar)
- Apical submarginal area of tegmen slightly narrower than precostal margin; about 12 terminal veins along postclaval margin; male genitalia as shown (fig. 6) .. ***W. rostra*** Medler

Walena alba (Melichar, 1902) comb. nov.
(fig. 5)

Ormenis deducta Melichar: 1902: 85 (pl. IV, fig. 20), misidentified, not *Nephesa deducta* Walker, 1857; Melichar, 1914: 108 (Java, misidentified); Schmidt, 1928: 138 (Java, misidentified). Lectotype ♂, paralectotypes 2 ♀, Sumatra, Bengkulu, Marang-Liwa, Coll. Noualhier, 1898, det. *Ormenis deducta* Melichar, MNHN; here designated.

Ormenis deducta var. *alba* Melichar, 1902: 86; Schmidt, 1928: 138 (Java); Medler, 1986h: 325 (lectotype ♂, Java, NHRS, fig. 22).

Melicharia deducta; Melichar, 1914: 108 (Java, Wonosobo, misidentified); Karny, 1922: 4 (S. Sumatra); Metcalf, 1957: 321 (cat., misidentified).

Melicharia deducta alba; Karny, 1922: 5 (comb., S. Sumatra); Metcalf, 1957: 322 (cat.).

Melicharia alba; Medler, 1986h: 325 (species status).

Material.— JAVA: Buitenzorg, 2 ♀♀, F. Muir; Roban, ♂, ♀, F. Muir; Tjibodas, Mt. Gedeh, ♂, 1450 m, 19.ix.1958, J.L. Gressitt; Tjibodas, ♂, 1400-1600 m, 5-8.x.1965, J. Stusak; BPBM; Preanger, Kawal Kamadjan, ♀, 5000' [1524 m], 19.iv.1923, H.M. Pendlebury (BM 1955-354), BMNH; Depok, ♂, ii.1931, Handschin, *deducta* det. Lallemand, ISNB; Bogor, ♂, Kemner; no specific locality, ♀, *deducta* det. Melichar, NHRS; Radjamandala, Preanger, 2 ♀♀, 1200' [366m], xii.1935, E. leMoult, RMNH; G. Goentoer, ♀, iii.1915, Drescher, ZMAN. SUMATRA: no specific locality, ♂, ♀, Frühstorfer, HNHM; no specific locality, 2 ♂♂, Frühstorfer, *deducta* det. Karny, NHMW; Bengkulu, ♂, 1200' [366 m], vi-vii.1935, E. leMoult, RMNH; Fort de Koch, ♂, 920 m, iii.1921, E. Jacobson, det. *Melicharia niveina* Walker, ZMAN.

Diagnosis.— Genitalia of ♂ from Java are illustrated (fig. 5).

Measurements.— ♂ Java: Roban, ♀ Java: Buitenzorg, BPBM. Length: overall 7.0, 8.0 mm; v 0.21, 0.21; f 0.95, 1.00; p 0.33, 0.33; m 1.41, 1.49; t 5.81, 6.81; pcl 1.66, 2.99. Width: v 0.66, 0.71; f 0.83, 0.87; t 3.15, 3.49. Hind leg spine formula: 2:6:6, 2:6:6.

Walena rostra spec. nov.
(fig. 6)

Material.— Holotype ♂, JAVA, Tjibodas, 2.viii.1965, J. Winkler, BPBM. Allotype ♀, JAVA, Tjigoeba, ii.1938, M.E. Walsh, ex MZLU, BPBM. Paratypes: JAVA, Tjigoeba, ♂, ii.1938, M.E. Walsh, ex MZLU, BPBM; BORNEO, ♂, Pascoe, 93-152, BMNH; MALAYSIA, Perak, 1350 m, ♂, 4 ♀♀, 17-20.iii.1958, T.C. Maa, BPBM; Kedah Peak, 2000-3300 ft [610-1005 m], 13 ♂♂, 6 ♀♀, 9-25.iii.1928, H.M. Pendlebury; Pahang, Cameron Highlands, ♂, 5 ♀♀, 4000-5200 ft [1219-1585 m], 10-24.vi.1935, 17.vii.1935, 9-15.v.1939, H.M. Pendlebury; Fraser's Hill, ♂, ♀, 4000 ft [1219 m], 20.vii.1936, 4.vi.1941; Sungei Renglet, ♂, 2 ♀♀, 3500 ft [1067 m], 7-13.iii.1925; G. Benam, ♀, 6300 ft [1920 m], 3.viii.1925; Perak, Larut Hills, ♂, 3 ♀♀, 500-4500 ft [152-1371 m], 22.ii.1932, H.M. Pendlebury; Maxwell Hill, ♀, 3000 ft [914 m], vi-vii.1916; Selangor, Ampang Village, ♀, 1.ix.1936, Bukit Kutu, ♂, 11.ix.1939, H.M. Pendlebury; Siamese Malaya States, Nawngchik, Bukit Besar, 2 ♂♂, 4 ♀♀, 2500 ft [762 m], 2.v.1901, N. Annandale & H.C. Robinson; ex F.M.S. Museum, B.M.1955-354, BMNH.

Diagnosis.— Morphological characters as given for genus. Light green or faded stramineous colour, often obscured by dusting of white waxy powder, margins narrowly pink or light brown. Light colored unmarked specimens are dificult to separate from *alba*, and male genitalia should be relied upon for accurate identification. Genitalia of holotype are illustrated (fig. 6); apex of aedeagus with diagnostic beaklike projection. Valvulae III ventral-apical margin slightly curved, lined with five-six teeth

mingled with setae, anal segment only slightly wider than valvulae III together.

Measurements.— ♂ holotype, ♀ allotype. Length: overall 7.5, 8.5 mm; v 0.33, 0.33; f 1.00, 1.16; p 0.33, 0.33; m 1.66, 1.83; t 6.64, 7.47; pcl 1.66, 1.99. Width: v 0.71, 0.75; f 1.00, 1.04; t 3.49, 3.74. Hind leg spine formula: 2:6:7, 2:6:7.

Taxonomic note.— *Melicharia exsarola* Medler described from Borneo is herewith transferred to *Walena* (**comb. nov.**). The three species now assigned to genus *Walena* are closely similar, but easily distinguished by characters of the male genitalia.

Tribe Lawanini Melichar, 1923

Genus *Colobesthes* Amyot & Serville, 1843

Colobesthes Amyot & Serville, 1843: 522; Metcalf, 1957: 149 (cat.); Medler, 1996a: 38 (Borneo). Type species: *Poecilloptera falcata* Guérin-Méneville.

Diagnosis.— See Medler, 1996a: 38.

Colobesthes falcata (Guérin-Méneville, 1834) (fig. 52)

Poecilloptera [sic] *falcata* Guérin-Méneville, 1834: 469 (holotype ♀, Malaysia Coast, MZUN, pl. 3, fig. 5); Medler, 1988a: 15 (plesiotype ♂, S. Malaya, Buloh, BMNH, fig. I, 1).

Colobesthes falcata; Amyot & Serville, 1843: 523 (Java); Schmidt, 1904a: 195 (Sumatra); Distant, 1906: 424 (fig. 222, Java, Sumatra); Metcalf, 1957: 151 (cat.); Medler, 1996a: 38 (Borneo).

Flata (Colobesthes ?) semanga Distant, 1892: 285 (holotype ♂, Malaysia, Pinang, BMNH, pl. XIII, fig. 6); Schmidt, 1904a: 195 (Sumatra); Schmidt, 1928: 138 (Java); Medler, 1990: 180, syn.).

Colobesthes sumifera Walker, unpublished name; Medler, 1986f: 210 (Sumatra, MVMA, syn.).

Material.— JAVA: Tjimerang, Djampang, ♀; Mt Gede, Lebak Sine, 4 ♂♂, 4 ♀♀, x.1938, Walsh, MZLU; no specific localiy, no abdomen, *falcata* det. Signoret, NHMW; Brussels ♀; Preanger, ♀, E. leMoult, RMNH; Soekaboemi, ♀, 2000' [610 m], 10.v.1939; Bantan, Mt. Bobol, ♀, 2500' [762 m], 8.ii.1940; Djampangtengah, ♂, 1800' [549 m], x.1941; J.M.A. v. Groenendael; no specific locality, 2 ♀♀, v.d. Bergh, ZMAN. SUMATRA: Deli, ♀, Frühstorfer, *semanga* det. Melichar, HNHM; Bengkulu, Marang-Liwa, ♀, 1898, Noualhier, MNHN; ♂, ♀, MVMA; Badang, ♀, 1896, Deli, ♂, *semanga* det. Melichar, NHMW; Bengkulu, ♀, 1200' [366 m], vi-vii.1935. E. leMoult; Laut Tador, ♀, 90 m, 24-viii.1950, R. Straatman, RMNH; Deli, ♀, Waldeich; Medan, ♂, 20 m, 22.iv.1920, Corporaal; no specific locality, ♀, v.d. Bergh, ZMAN; Deli, 3 ♂♂, 2 ♀♀, 1894; Palambang, ♂, ♀, ZMHU; Deli, ♂; Bandar Kwala, ♀, *semanga* det. Melichar, ZMUH. KALIMANTAN: No specific locality, ♀; see Medler, 1996a: 39.

Genus *Cromna* Walker, 1857 (fig. 54)

Cromna Walker, 1857a: 85; Medler, 1991: 29 (Sulawesi); Medler, 1996a: 41 (Borneo). Type species: *Cromna acutipennis* Walker.

Phyllyphanta Distant, 1906: 414 (misidentified); Metcalf, 1957: 180 (misidentified, in part).

Diagnosis.— See Medler, 1996a: 41. *Cromna sinensis* (Walker) is illustrated (fig. 54) to show diagnostic shape of head in this genus.

Cromna acutipennis Walker, 1857
(fig. 4)

Cromna acutipennis Walker, 1857a: 85; Medler, 1986f: 208 (lectotype ♀, Malacca, MVMA); Medler, 1996a: 41 (Borneo). Plesiotype ♂, Java, RMNH, here designated.
Phyllyphanta producta Melichar, 1902: 184 (misidentified, in part).
Phyllyphanta albidosparsa Distant, 1910b: 329 (pl. 22, fig. 5); Metcalf, 1957: 182 (cat.); Medler, 1990: 164 (lectotype ♀, Brunei, BMNH, syn.).
Phyllyphanta cornutipennis; Metcalf, 1957: 189 (error).

Material.— JAVA: Soekaboemi, ♀, NCSU; Djampangtenggah, ♀, iv-1935, E. leMoult; G. Moeria, ♀, 2500-3600' [762-1097 m], xii.1935, E. leMoult; Radjamandala, ♂, ♀, 1200' [366m], xii.1935, E. leMoult, RMNH. SUMATRA: Bengkulu, 2 ♂♂, 2 ♀♀, 1200' [366 m], vi-vii. 1935, E. leMoult, RMNH.

Diagnosis.— Plesiotype genitalia are illustrated (fig. 4).

Measurements.— ♂ plesiotype, ♀ lectotype, excluding damaged tegmina). Length: overall 13.0, 14.0 mm; v 1.00, 0.75; f 2.16, 2.08; p 1.00, 1.00; m 2.16, 2.16; t 9.96, ..; pcl 3.65, ... Width: v 0.75, 0.75; f 1.16, 1.12; t 6.14, ... Hind leg spine formula: 2:6/7:7, 2:7:7.

Genus *Eumelicharia* Kirkaldy, 1901

Walkeria Melichar, 1901: 250 (preoccupied by *Walkeria* Fleming, 1823). Type species: *Flata radiata* Distant.
Eumelicharia Kirkaldy, 1906: 156 (replacement name for *Walkeria* Melichar); Metcalf, 1957: 258 (cat.); Medler, 1996a: 42 (Borneo). Type species: *Flata radiata* Distant.

Diagnosis.— See Medler, 1996a: 42.

Eumelicharia radiata (Distant, 1892)
(fig. 53)

Flata radiata Distant, 1892: 284 (holotype ♀, Sarawak, BMNH); Medler, 1990: 178 (plesiotype ♂, Sarawak, BMNH, fig. 59).
Walkeria radiata; Melichar, 1901: 250 (pl. III, fig. 4); Schmidt, 1904a: 192 (Sumatra).
Eumelicharia radiata; Kirkaldy, 1906: 156; Melichar, 1914: 108 (Java); Metcalf, 1957: 259 (cat.); Medler, 1996a: 42 fig. 17, Borneo).

Material.— SUMATRA: Bekit, Deli, ♂, 1892, H.M. Pantekoek; Lauttador, ♀, 90m, 13.viii.1950, R. Straatman, RMNH.

Genus *Flatosoma* Melichar, 1901

Flatosoma Melichar, 1901: 244; Metcalf, 1957: 61 (cat.); Medler, 1966: 34 (Borneo). Type species: *Flatosoma signoreti* Melichar.

Diagnosis.— See Medler, 1996a: 34.

Key to species of the genus *Flatosoma*

1. Disc of tegmen without markings ..... ***F. signoreti*** Melichar
- Disc of tegmen with small black crescent on cross vein connecting inner branches of veins M1 and M2 ..... ***F. diastola*** Schmidt

Flatosoma diastola Schmidt, 1909

Flatosoma comma Melichar, 1901: 245 (pl. vii, fig. 14, not *Poeciloptera comma*; Walker, 1851).
Flatosoma sp.; Distant, 1906: 496.
Flatosoma diastola Schmidt, 1909: 189 (Nord-Borneo, new name for *Flatosoma comma* Melichar); Metcalf, 1957: 62 (cat.); Medler, 1996a: 34 (holotype, plesiotype, fig. 15). Holotype ♀, Borneo [Kalimantan], Barabei, 1883, A. Pool, ZMAN. Plesiotype ♂, Brunei, Rampayoh, BMNH.
Flatosoma melichari Distant, 1910b: 321 (Sandakan, invalid new name for *Flatosoma comma* Melichar); Medler, 1990: 173 (type).

Material.— KALIMANTAN: see Medler, 1996a: 34.

Diagnosis.— See Medler, 1996a: 34. Hind leg spine formula: 1:6:9, 1:6:8.

Flatosoma signoreti Melichar, 1901

Flatosoma signoreti Melichar, 1901: 244 (pl. IV, fig. 8); Medler, 1986e: 52 (lectotype ♀, Cirndelang, ZMHB).

Material.— JAVA: no precise locality, ♀, paralectotype, H. Frühstorfer, EMAU; Tjipetir, ♀, x.1928, J. v.d. Vecht, RMNH; Mons Gede, ♂, 4000' [1220 m], H. Frühstorfer, MMBC.

Genus *Lawana* Distant, 1906

Phyma Melichar, 1902: 43 (preoccupied name). Invalid original designation of two names as type species.
Lawana Distant, 1906: 420 (new name); Metcalf, 1957: 202 (cat.); Medler, 1996a: 39 (Borneo). Type species; *Flata candida* Fabricius.
Daksha Distant, 1906: 425; Metcalf, 1957: 147 (cat.); Medler, 1990: 24 (type). Type species: *Colobesthes marginata* Walker.

Diagnosis.— See Medler, 1996a: 39.

Key to species of the genus *Lawana*

1. Tegmen disc with black spot or black oblique line 4
- Tegmen disc without black spot or oblique line 2
2. Basal cell fuscous, many apical crossveins heavily infuscated; basal half of tegmen with fuscous dots and pustules ..... ***L. conspersa*** (Walker)
- Basal cell, longitudinal veins and apical crossveins not infuscated 3
3. Veins R and Cu with orange pigmentation basally; head not raised apically in lateral view ..... ***L. candida*** (Fabricius)
- Veins R and Cu without orange pigmentation basally; head conical, apex blunt,

raised apically in lateral view (Timor) ..... ***L. exaltata*** (Walker)

4. Apex of tegmen with fuscous spot on inner row of apical crossveins about midway between sutural and costal margins ..... ***L. optata*** (Melichar)
- Black spot or band of tegmen located at middle of disc 5
5. Discal spot circular, confined to inner branch of vein M2; submarginal lines irregular without infuscation ..... ***L. adscendens*** (Fabricius)
- Discal spot dashlike, oblique, crossing several branches of vein M2. Submarginal lines more or less regular and infuscated 6
6. Apex of male anal segment bifid (Borneo) ..... ***L. pryeri*** (Distant)
- Apex of male anal segment truncated (Indonesia) ..... ***L. partita*** (Melichar)

Lawana adscendens (Fabricius, 1803)
(fig. 3)

Flata adscendens Fabricius, 1803: 46. Neotype ♂, Java, Batavia, xii.1815, Westerman, ZMUC, here designated.

Lawana adscendens; Metcalf, 1957: 204 (cat, only Java valid records); Medler, 1988b: 126 (African records invalid).

Material.— JAVA: No specific locality, ♀, Horsfield, BMNH; Java merid., ♂, 1500' [457 m], 1897, H. Frustorfer; Mons Gede, ♂, 4000' [1220 m], 1898, H. Frühstorfer, *partita* det. Melichar, HNHM; no specific locality, 2 ♀♀, 1898, Bosc, Noulhier, MNHN; no specific locality, ♂, NHMW; Djampangtenggah, Preanger, 3 ♂♂, iv.1935, E. leMoult; Radjamandala, Preanger, ♂, 1200' [366 m], xii.1935, RMNH; Djmpangtengah, 2 ♂♂, ♀, 1500' [457 m], 17.i.1940; Soekaboemi, Djampang Kidoel, ♀, 1000-1500' [305-457 m], 15.xii.1939; Slope Goen. Gede, ♂, 3500' [1067 m], 10.iii.1940; J.M.A. v. Groenendael; ZMAN. SUMATRA: Bengkulu, ♂, ♀, 1200' [366 m], vi-vii.1935, E. leMoult, RMNH; Bengkulu, ♀, ex RMNH, BPBM.

Diagnosis.— Genitalia of neotype are illustrated (fig. 3).

Measurements.— Male neotype, ♀, Batavia, ZMUC. Length: overall 17.0, 18.0; v 0.62, 0.66; f 1.99, 2.16; p 0.79, 0.83; m 3.15, 3.32; t 13.78, 16.27; pcl 5.81, 6.47. Width: v 1.16, 1.41; f 1.49, 1.70; t 8.13, 9.63. Hind leg spine formula: 2:7:9, 2:7:9.

Lawana candida (Fabricius, 1798)
(figs 49, 55)

Flata candida Fabricius, 1798: 518; Evenhuis, 1988: 188 (type). Type, Isle de France [Mauritius]. Depository unknown. Original citation believed to be based on mislabeled specimen actually from Java.

Nephesa lineola Walker, 1870: 175; Medler, 1990: 149 (holotype, ♂, Lombok, BMNH).

Lawana candida; Distant, 1906: 420 (comb.); Bierman, 1908: 161 (Java); Schmidt, 1928: 137 (Java); Jacobi, 1941: 287 (Sunda Island); Metcalf, 1957: 206 (cat.).

Material.— JAVA: Bandoradjo, 2 ♂♂, 2 ♀♀, iii.1914, F. Muir; Jakarta, 4 ♂♂, 4 ♀♀, 9.v-xi.1977, ex *Mussaenda* cultivar, J.T. Medler; Kambangan, ♀, xii.1908, Terry, BPBM; 17 ex, no specific locality; Novara, ♂, MHRS; Batavia, 4 ♂♂, 1904, P. Serre; no specific locality, ♀, 1898, Noualhier, MNHN; no specific locality, ♂, MVMA; Novara, ♂; Signoret, ♀, NHMW; Radjamandala, ♂, 1200' [366 m], xii-1935; N. Tenggar Geb., ♀, 2000' [610 m], ii.1937, E. leMoult, RMNH; no specific locality, 2 ♂♂, 2 ♀♀; Batavia, ♀, 8.ii.1950, C.V. Nidek; Malang, 3 ex, Groenhart; Samarang, 4 ex, E. Jacobson; Tjilatjap, 14 ex, iv.1925, Drescher, ZMAN; Bagoe, 7 ♂♂, ♀, ix.1913, J. Skovgaard, ZMUC; Nglisip, ♂, 300 m, i.1936,

ZMUH; Pelaboean, Ratoe, ♀, Bryant & Palmer, USNM. SUMATRA: Deli, ♀, Frühstorfer, MHRS; Bengkulu, ♀, 1200' [366 m], vi-vii.1935, E. leMoult; Medan, Deli, ♀, 21.v.1925, Juriaanse, RMNH. LESSER SUNDA ISLANDS: Komodo Isl., ♂, ♀, 18.viii.1965, J. Winkler, BPBM; Sula, 2 ♀♀, 27.iii.1927, Rensch, SMTD; West Flores, ♂, 2 ♀♀, 1927, Rensch, ZMHB; Flores, Rekas, ♂, 750 m, 27.v.1951; Flores, Anakoli, ♂, 100 m, 19.vi.1952, J.M.A. v. Groenendael, ZMAN.

Lawana conspersa (Walker, 1851)

Colobesthes conspersa Walker, 1851a: 440; Medler, 1990: 139 (lectotype ♂, East India, BMNH, fig. 36).
Phyma conspersa; Melichar, 1902: 46 (pl. III, fig. 14).
Lawana conspersa; Distant, 1906: 420 (fig. 220, comb.); Melichar, 1914: 108 (Sumatra, Deli); Datta, 1979: 15 (fig. 19-20).

Material.— SUMATRA: Penang Island, 2 ♂♂, ♀, Baker, BPBM; Tamiang, 4 ♂♂, 7 ♀♀, V. Nill, ISNB; Medan, 5 ♂♂, 4 ♀♀, i.1930, on citrus, C.P. Clausen; Deli, 2 ♂♂, ♀, 70' [21 m], vi.1908, L.P. de Bussy, USNM; Medan, ♀, 20 m, 13.vii.1921, x.1917, J.B. Corporaal; Siantar Naga Hoeta, ♀, 400 m, 2.iv.1921, J.B. Corporaal; Deli, ♂, 3 ♀♀, L.P. Bussy; Bal Bajao, Medan, ♂, iv.1915, de Bussy; Und Lawas, ♂, 2 ♀♀, x.1932, *Tephrosia candida*, S. Leefmans, ZMAN.

Lawana exaltata (Walker, 1862)

Colobesthes exaltata Walker, 1862: 312; Medler, 1990: 142 (holotype ♂, Timor, BMNH, fig. 18).
Phyma candida var. *inornata* Melichar, 1902: 47; Medler, 1986h: 330 (lectotype ♂, Timor, NHRS, fig. 24).
Phyma subapicalis Schmidt, 1904b: 361; Medler, 1996b: 148 (holotype ♂, Amboina, Stevens, ZMPA, fig. 15).
Lawana exaltata; Distant, 1910b: 325 (comb.).
Lawana candida inornata; Melichar, 1923: 48 (comb.); Lallemand, 1935: 662 (Flores); Lallemand & Synave, 1953: 246 (Sumba); Metcalf, 1957: 208 (cat.).
Daksha unicolor Karny, 1926: 376 (holotype ♂, Ost-Java, Kendeng III, Idjen, 1400 m, vi.1914, Dammerman, ZMAN). **Syn. nov.**

Material.— SUMATRA: no specific locality, ♀, R. Weber, AMNH. LESSER SUNDA ISLANDS: Soemba, no specific locality, ♀, 1931, P. Lambooy, ZMAN. TIMOR: Balical, ♀, 200-300 m, 14-24.xii.1963, J. Sedlacek, BPBM; 2 ♀♀ paralectotypes, det. v. *inornata* Melichar, MMBC; ♂, 2 ♀♀ paralectotypes, Haglund, NHRS; no specific locality, ♂, RMNH; no specific locality, ♀, ZMAN.

Lawana optata (Melichar, 1902)

Phyma optata Melichar, 1902: 49 (pl. IV, fig. 12); Schmidt, 1904a: 198 (Sumatra); Medler, 1986c: 115 (paralectotype ♀, Sumatra, HNHM); Medler, 1986d: 166 (lectotype ♂, Java, Noualhier, MNHN, fig. 1). Medler, 1986h: 331 (Perak); Medler, 1993d: 441 (paralectotypes ♂, ♀, Java, NHMW).
Lawana optata; Distant, 1910b: 325 (comb.); Schmidt, 1928: 137 (Java); Metcalf, 1957: 212 (cat.).

Material.— JAVA: no specific locality, ♂, ♀, Oberthur, ISNB; no specific locality, 2 ♂♂, ♀, MMBC; Radjamandala, 4 ♂♂, 3 ♀♀, 1938, M.E. Walsh, MZLU; Djampangtenggah, 9 ♂♂, 12 ♀♀, iv-1935, E. le. Moult; Radjamandala, ♂, ♀, 1200' [366 m], xii.1935, E. leMoult; RMNH; Djampangtenggah, 4 ♀♀, 1800' [549m], 24.iv.1939; Tjimadoer, ♂, 9.xi.1939; Tjiajoenan, Soekanegara, ♀, 1800-2400' [549-732], x.1941; J.M.A. v. Groenendael; ZMAN. SUMATRA: Kuala Simpang, ♀, ii.1954, A. Sollaart, BPBM; Lauttador, ♂, 14.i.1951, R. Straatman; Bengkulu, 5 ♂♂, 9 ♀♀, 1200' [366m], vi-vii.1935, E. leMoult, RMNH; Bengkulu, ♀, ex RMNH, BPBM; No specific locality, ♀, 1920, ZMAN.

Lawana partita (Melichar, 1902)

Phyma optata var. *partita* Melichar, 1902: 49; Medler, 1986d: 166 (lectotype ♂, paralectotype, Sumatra, Bengkulu, Marang-Liwa, Noualhier, MNHN, fig. 2, MNHN); Medler, 1993e: 41 (paralectotype, HNHM).

Phyma unipunctata Schmidt, 1904a: 196; Medler, 1986a: 113 (paralectotype, SMTD, syn.); Medler, 1986b: 304 (paralectotype, MCSN); Medler, 1987c: 40 (paralectotype, ISNB); Medler, 1996b: 149 (lectotype, ♂, Sumatra, Soekaranda, Dohrn, ZMPA).

Phyma pura Schmidt, 1904a: 196; Medler, 1996b: 146 (lectotype ♂, paralectotype, Sumatra, 1894, Dohrn, ZMPA, fig. 14a-b, ZMPA, syn.).

Lawana guttifascia obsoleta Karny, 1922: 4 (Lampong, Wai-Lima, misidentified).

Lawana optata partita; Metcalf, 1957: 212 (cat.).

Lawana partita; Medler, 1986d: 166 (status).

Lawana pura; Metcalf, 1957: 213 (cat.).

Lawana unipunctata; Metcalf, 1957: 213 (cat.).

Material.— JAVA: Tiselek, ♂; Java merid, 2 ♀♀, 1500' [457 m], 1897, Frühstorfer, MMBC. SUMATRA: Tamiang, ♀, V. Nill, ISNB; Deli, ♂, Frühstorfer; Bengkulu, 2 ♂♂, ♀, 1200' [366m], vi-vii.1935, E. leMoult, RMNH; no specific locality, ♀, 1920, ZMAN; no precise locality, ♀, 12.ix.1914, Hauschild, ZMUC. NEW GUINEA: Stephansort, ♂, *optata* det. Melichar, NHMW.

Lawana pryeri (Distant, 1880)

Flata (Colobesthes) pryeri Distant, 1880: 153; Medler, 1990: 177 (lectotype ♀, Sabah, Sandakan; paralectotype ♂, N. Borneo [Sabah], Pryer, Distant Coll., BMNH).

Phyma divisa Melichar, 1902: 48; Medler, 1986d: 164 (lectotype ♂, Borneo, MNHN, fig. 4).

Phyma hyalina Schmidt, 1904a: 197; Medler, 1996b: 143 (lectotype, ♂, North Borneo, ZMPA, fig. 13, syn.).

Phyma waterstradti Schmidt, 1904a: 211; Medler, 1996b: 150 (lectotype, ♀, Sabah, ZMPA). NEW SYNONYMY.

Daksha pryeri; Distant, 1910b: 327 (comb.); Metcalf, 1957: 148 (cat.).

Lawana hyalina; Distant, 1910b: 326 (comb.); Metcalf, 1957: 211 (cat.).

Lawana waterstradti; Metcalf, 1957: 214 (cat.).

Lawana divisa; Medler, 1986d: 164 (fig. 4).

Lawana guttifascia; Medler, 1990: 177 [syn., error).

Lawana pryeri; Medler, 1996a: 39 (fig. 18, syn.).

Material.— KALIMANTAN: Barabei, Martapoera, Pengaron; see Medler, 1996a: 40.

Genus *Oryxa* Melichar, 1902

Oryxa Melichar, 1902: 50; Metcalf, 1957: 215 (cat.); Medler, 1996a: 46 (Borneo). Type species: *Oryxa melicharia* Kirkaldy, replacement name for *Cicada truncata* Melichar, not Linnaeus (misidentified).

Pseudoryxa Schmidt, 1904a: 200; Metcalf, 1957: 218 (cat.); Medler, 1996a: 46 (syn.). Type species: *Pseudoryxa carinulata* Schmidt.

Diagnosis.— See Medler, 1996a: 46.

Oryxa melichari Kirkaldy, 1913

Oryxa truncata Melichar, 1902: 50 (misidentified, not *Cicada truncata* Linnaeus. Lectotype ♂, Borneo, Noualhier, MNHN.

Oryxa extendens Melichar, 1902: 51; Metcalf, 1957: 215 (cat.); Medler, 1986d: 164 (lectotype ♀, Borneo, Noualhier, MNHN); Medler, 1996a: 46 (Borneo). Paralectotype ♀, Sumatra, Frühstorfer, 27587, EMAU, here designated.

Pseudoryxa carinulata Schmidt, 1904a: 201 (holotype, ♀, Sumatra, Soekaranda, ZMPA); Metcalf, 1957: 218 (cat.); Medler, 1996a: 46 (syn.).

Oryxa melichari Kirkaldy, 1913: 22 (n name for *truncata* Melichar); Metcalf, 1957: 215 (cat.); Medler, 1996a: 46 (fig. 6, Borneo).

Lawana lilacina Jacobi, 1915: 172 (holotype, ♂, Sumatra, Alahan, Micholitz, SMTD; Metcalf, 1957: 212 (cat.); Medler, 1986a: 110 (fig. 7, syn.).

Material.— SUMATRA: Bengkulu, ♂, 1200' [366 m], vi-vii.1935, E. leMoult, RHMN; no precise locality, ♀, 12.ix.1914, Hauschild, NHRS.

Genus *Scarpantina* Melichar, 1901

Scarpantina Melichar, 1901: 243; Metcalf, 1957: 145 (cat.); Medler, 1996a: 47 (Borneo). Type species: *Scarpantina stigmatica* Melichar.

Dermoflata Melichar, 1901: 245; Metcalf, 1957: 72 (cat.); **syn. nov.** Type species: *Dermoflata rotundata* Melichar.

Diagnosis.— See Medler, 1996a: 47.

Key to species of the genus *Scarpantina*

1. Postclaval sutural margin straight, meeting apical margin at acute angle; disc of tegmen with large reddish brown spot ..... ***S. stigmatica*** Melichar
- Postclaval sutural margin strongly convex; disc of tegmen usually with reddish brown longitudinal stripe ..... ***S. rotundata*** (Melichar)

Scarpantina rotundata (Melichar, 1901) comb. nov.

Dermoflata rotundata Melichar, 1901: 246 (pl. II, fig. 1; pl. IV, fig. 24); Schmidt, 1904a: 192 (Sumatra); Melichar, 1923: 20 (pl. 2, fig. 23); Metcalf, 1957: 72 (cat.); Medler, 1986d: 167 (paralectotype ♀, Sumatra, MNHN); Medler, 1994b: 99 (lectotype ♂, Sumatra, Pulo Penang, ZMUC, fig. 6); paralectotype ♀, N. Sumatra, dessin Wytsm., MMBC, here designated.

Material.— SUMATRA: Bengkulu, ♂, 1200' [366m], vi-vii.1935, E. leMoult, RMNH. BORNEO: W. Melinau Gorge, ♀, 250 m, limestone forest, canopy understory, J.D. Holloway, RGS Mulu exped., BMNH. New record for Borneo.

Taxonomic note.— Each specimen above has 1:7:7 hind leg spine formula.

Scarpantina stigmatica Melichar, 1901

Scarpantina stigmatica Melichar, 1901: 243 (pl. III, fig. 11); Metcalf, 1957: 145 (cat.); Medler, 1996a: 47 (Borneo); Medler, 1987b: 538 (type, fig. 5). Holotype, ♂, Borneo, NHMW.

Material.— New records inadvertently omitted by Medler, 1996a: 47. SUMATRA: no precise locality, ♀, RMNH. BORNEO: Sabah, Sandakan Distr., Rumidi, R. Labuk, ♂, 16-30.ix.1973. KALIMANTAN: Aring, ♀, Distant Coll., 1911-383, BMNH.

Tribe Nephesini Melichar, 1923

Genus *Acutisha* Medler, 1991

Acutisha Medler, 1991a: 19. Type species: *Acutisha sulawesiensis* Medler.

Diagnosis.— See Medler, 1991a: 19.

Acutisha sulawesiensis Medler, 1991

Acutisha sulawesiensis Medler, 1991a: 19 (holotype ♂, Sulawesi, Minahasa, Distant, BMNH, fig. 18).

Material.— SULAWESI: BMNH, ISNB, NHRS, see Medler, 1991a: 19. JAVA: ♀, Rippon Coll, NMWC.

Genus *Lecopia* Medler, 1991

Lecopia Medler 1991a: 10 (Key, Sulawesi). Type species: *Lecopia extensa* Medler.

Diagnosis.— See Medler, 1991a: 10.

Key to species of the genus *Lecopia*

1. Tegmina usually green or stramineous 4
- Tegmina unicolorous pink or white 2
2. Tegmina unicolorous pink ..... ***L. roseda*** Medler
- Tegmina white or mostly white 3
3. Tegmina uniformly white (Muna Island) ..... ***L. alabasta*** Medler
- Head, thorax and base of tegmen orange red ..... ***L. waitera*** spec. nov.
4. Postclaval sutural margin meeting apical margin at a right angle or nearly so; tegmen margins usually red from claval apex to costal margin ..... ***L. lurida*** (Melichar)
- Postclaval sutural margins meeting apical margin convexly 5
5. Head and thorax differing in colour from tegmina; precostal margin of tegmen narrowly blue green or white ..... ***L. extensa*** Medler
- Head, thorax and tegmina uniformly stramineous 6
6. Apical margin of tegmen oblique; 10-12 cross veins terminating along postclaval sutural margin ..... ***L. uniformis*** (Melichar)
- Apical margin of tegmen shallowly convex; 4-6 cross veins terminating along postclaval sutural margin ..... ***L. subjecta*** (Walker)

Lecopia alabasta Medler, 1991

Lecopia alabasta Medler, 1991a: 13 (holotype ♂, Sulawesi Selatan, Raha, Muna Isl, RMNH, fig. 5).

Material.— SULAWESI: Sulawesi Selatan; see Medler 1991a: 13.

Lecopia extensa Medler, 1991

Lecopia extensa Medler, 1991a: 11 (holotype, ♂, Sulawesi Utara, Moloso Isl, ISNB, fig. 4).

Material.— SULAWESI: Sulawesi Utara; see Medler, 1991a: 11; ♀, Sulawesi Tenggara, S. Sanggona, foot of Gn. Watuwila, Mokowu river nr. Mokowu camp, 150 m, 3°48'S, 121°39'E, at light along rivulet, largely shaded area, 29-31.x.1989, J. van Tol [1989 RMNH Expedition].

Lecopia lurida (Melichar, 1902)

Sephena lurida Melichar, 1902: 128; Medler, 1987c: 39 (fig. 5); Medler, 1991a: 13 (lectotype, ♂, Sulawesi Selatan, Bua-Kraeng, HNHM).
Lecopia lurida; Medler, 1991a: 13 (fig. 6, comb.).

Material.— SULAWESI: Sulawesi Selatan; see Medler, 1991a: 13; ♀, SW Sulawesi, Mt. Lompobatang area, Malino, 1100 m, 4.vi.1982, M.A. Lieftinck, RMNH, New record.

Lecopia roseda Medler, 1991

Lecopia roseda Medler, 1991a: 12 (holotype, ♂, Sulawesi Utara: Dumoga-Bone National Park, BMNH, fig. 7).

Material.— SULAWESI: Sulawesi Utara; see Medler, 1991a: 12.

Lecopia subjecta (Walker, 1870)

Nephesa subjecta Walker, 1870: 176; Medler, 1990: 350 (holotype, Sulawesi, Makassar, BMNH).
Lecopia subjecta; Medler, 1991a: 11 (comb.).

Material.— SULAWESI: Sulawesi Selatan; see Medler, 1991a: 11.

Lecopia uniformis (Melichar, 1901)

Poeciloflata uniformis Melichar, 1901: 236; Medler, 1986c: 115 (lectotype ♂, Sabah, Kudat, HNHM, fig. 6).
Lecopia uniformis; Medler, 1991a: 12 (fig. 3, comb.).

Material.— SULAWESI: Sulawesi Utara & Sulawesi Selatan; see Medler, 1991a: 12.

Lecopia waitera spec. nov.

Material.— Holotype ♀, Sulawesi Tengara, S. Sanggona, foot of Gn Watuwila, Mokowu river nr Mokowu camp, ♀, 150 m, 3°48', 121°39'E, 29-31.x.1989, RMNH; paratype ♀, Watuwila, Centipede Camp, 1100 m, 1-3.xi.1989, 1989 RMNH Expedition.

Diagnosis.— Shape of postclaval angle and apical margin of tegmen much the same as found in *L. lurida*. Head, thorax and tegmina basally red orange; tegmina heavily dusted with white waxy material. Length of paratype 13.25 mm. Final disposition of the specimens requires study of male genitalia.

Measurements.— Holotype. Length: overall 12.5 mm; v 0.33; f 1.49; p 0.66; m 2.49; t 10.96; pcl 3.32. Width: v 1.33; f 1.58; t 5.81. Hind leg spine formula: 2:5:6.

Genus *Neomelicharia* Kirkaldy, 1902

Colgar Melichar, 1902: 107 (not *Colgar* Kirkaldy, 1900).
Neomelicharia Kirkaldy, 1903: 79 (new name for *Colgar* Melichar); Metcalf 1957: 393 (cat.). Type species: *Flata cruentata* Fabricius 1803.

Diagnosis.— Frons with horseshoe shaped carina enclosing median discal area, lateral marginal space convex dorsally, merging with relatively narrow slightly bowed ledge on dorsum of head; anterior margin of this ledge defined medially by frontal carina, posterior margin delimited by transverse intergenal carina adjacent to anterior margin of pronotum. Frontal carina intercepted by strong median longitudinal carina, which continues across dorsum of head, then weakly crosses pronotum and mesonotum; sharp lateral carina on mesonotum. Pronotum postocular eminence obtusely triangular. Tegmen with three longitudinal veins (R,S,M) arising from basal node, vein Cu with oblique M-Cu crossvein; apical margin slightly convex, ramification of crossveins in apex of tegmen not resulting in submarginal line of crossveins. Female genitalia derived, valvulae much reduced, non-piercing ovipositor, anal segment circular. Size medium, one metatibial lateral spine.

Taxonomic Note.— Melichar (1902: 107) applied the generic name *Colgar* to 21 species having distribution in New Guinea, Indonesia and the Philippine Islands. As *Colgar* sensu Melichar did not represent *Colgar* Kirkaldy (1900: 242), *Neomelicharia* was proposed by Kirkaldy (1903: 79) as a replacement name for this complex of species. Metcalf (1957: 393) cataloged 26 valid names in *Neomelicharia*, including all of the species in *Colgar* sensu Melichar, except *bistriguttata* Stål and *quadriguttata* Walker, which had been designated by Distant as the respective types of his new genera *Neocromna* and *Neodaksha*. In the first couplet of his key, Melichar separated out a group of species that had acutely pointed rather than right angled tegmina, and also lacked the distinct horseshoe shaped frontal carinae that in general characterizes the species of *Neomelicharia* in Indonesia. During a study of type specimens in this group by Medler, the following species were excluded from *Neomelicharia: composita* Melichar, *furtiva* Melichar, *hastifera* Walker, *similata* Melichar, and *tripunctata* Melichar. Also, *calochroma* Walker was selected as the type species of the new genus *Somisha* Medler. Species assigned to *Neomelicharia* by Metcalf (1957) have been transferred to other genera, as listed:

albida Lallemand = *Sanurus dubius* Melichar; Medler, 1987c: 35.
calochroma Walker = *Somisha calochroma* (Walker); Medler, 1991a: 14.
calochroma var. *electa* Melichar = *Somisha electa* (Melichar); Medler, 1991a: 18.
citrinella Lallemand = *Sanurus dubius* Melichar; Medler, 1987c: 35.
composita Melichar = *Neodaksha composita* (Melichar); Medler, 1986b: 300.
furtiva Melichar = *Neodaksha furtiva* (Melichar); Medler, 1986b: 300.
handschini Lallemand = *Lesabes handschini* (Lallemand); Medler, 1988b: 90.
hastifera Walker = *Neocromna hastifera* (Walker); Medler, 1986f: 210.
impunctata Karny = *Sanurus flavovenosus* Bierman, **comb. nov.**
indecora Jacobi = *Sanurus indecora* (Jacobi); Medler, 1986e: 49.

similata Melichar = *Neocromna bistriguttata* (Stål); Medler, 1989: 24.
spumans Breddin = *Somisha spumans* (Breddin); Medler, 1991a: 19.
tripunctata Melichar = *Neocromna bistriguttata* (Stål); Medler, 1992b: 182.

The remaining species of *Neomelicharia* comprise a natural taxon distributed primarily in the Molucca Islands of Indonesia. A key to species and illustrations of the male genitalia are presented to help with identification. As there is considerable variability in colour markings, diagnostic characters of the male genitalia should be used to help confirm determinations.

Key to species of the genus *Neomelicharia*

1. Tegmen margins not widely colored, not widened at tip of clavus; mesonotum without red spots as described 3
- Tegmen margins black, brown or red; spot at apex of clavus twice wider than clavus tip; mesonotum anteriorly with red spot on each side of median red stripe 2
2. Sutural angle obtusely convex; marginal markings usually widely black .... ***N. consociata*** (Walker)
- Sutural angle more nearly right angled; marginal markings usually brown or red . ..... ***N. cicatricosa*** (Stål)
3. Sutural angle convex; tegmen hyaline without spots. Length less than 10 mm .... ***N. lucentis*** spec. nov.
- Sutural angle acute or nearly so 4
4. Pronotum with numerous small red dots. Tegmen filled with red veins, red spots and tiny red dots; discal cell crossvein covered by large red spot with orange halo ring ..... ***N. roseola*** spec. nov.
- Pronotum without small red dots. Tegmen without overall red veins and spots as described 5
5. Tegmina green or tawny 9
- Tegmina white or off-white 6
6. Tegmen clear white without red markings; apex bordered by black band along apical margin, terminal veins white ..... ***N. marginalis*** (Walker)
- Tegmen with red spots of variable size 7
7. Apical angle of postclaval sutural margin filled with black or brown spot, claval apex with black or brown spot, sutural margin usually black or brown basally ... 10
- Apical angle of postclaval sutural margin not brown or black, sutural margin usually without brown or black line basally 8
8. Tegmen with mixed sizes of small to medium red spots; discal cell crossvein with red orange-ringed spot, apical margin slightly smoky, but not black; length less than 13 mm ..... ***N. erubescens*** (Walker)
- Tegmen with numerous small red spots, apical margin black, discal cell crossvein with orange-red halo spot. Length more than 13 mm ..... ***N. centralis*** (Melichar)
9. Tegmen red discal spot with yellow halo; pygofer projecting point blunt and adorned with small spines (fig. 11) ..... ***N. erubescens*** (Walker)
- Tegmen red discal spot usually without yellow halo; pygofer projecting point sharply pointed and without small spines (fig. 14) ..... ***N. cruentata*** (Fabricius)

10. Tegmen membrane with white halo spots narrowly ringed with red, small red spots on crossveins absent or infrequent ..... ***N. sparsa*** (Fabricius)
- Tegmen membrane without white halo spots, many crossveins in apex of tegmen with small red spots at middle of veins ..... ***N. guttulata*** (Stål)

Neomelicharia centralis (Melichar, 1902)

Colgar centralis Melichar, 1902: 111; Medler, 1987b: 535 (lectotype ♂, Morotai, ex Mus. Leyden, NHMW, fig. 1).
Neomelicharia centralis: Metcalf, 1957: 395 (cat.); Medler, 1987b: 535 (paralectotypes).

Material.— MOLUCCAS: Morotai, paralectotypes, 2 ♀♀, NHMW; paralectotype, ♂, MMBC.

Neomelicharia cicatricosa (Stål, 1863)

Nephesa cicatricosa Stål, 1863: 592 (holotype ♂, Batjan mislabelled Buru Isl., Stevens, NHRS; Walker, 1870: 171 (syn.); Medler, 1986h: 325 (fig. 18).
Colgar cicatricosa; Melichar, 1902: 112 (pl. III, fig. 15).
Neomelicharia consociata; Metcalf, 1957: 396, in part (error).

Material.— MOLUCCAS: Batjan, 2 ♂♂, Wallace, 67/66, *cicatricosa* det. Stål; Halmahera, 2 ♂♂, Doherty, 1903-31, BMNH; Halmahera, ♀, Haglund, *cicatricosa* det. Melichar, NHRS; Ternate, 2 ♂♂, Beccari, 1875, *cicatricosa* det. Melichar, MCSN; Halmahera, Kampung Pasir Putih, 2 ♀♀, 1-14.ii.1981, 2 ♀♀, 1-14.vi.1981, A.C. Messer & P.M. Taylor, USNM.

Neomelicharia consociata (Walker, 1862)
(fig. 15)

Poeciloptera consociata Walker, 1862: 314; Medler, 1990: 139 (lectotype ♂, Moluccas, Batjan, Pascoe; BMNH).
Neomelicharia consociata; Metcalf, 1957: 396 (cat.).

Material.— MOLUCCAS: Batjan, ♂, Wallace, Stevens, 1860/6, OXUM; Ternate, 2 ♀♀, Beccari, 1875, *cicatricosa* det. Melichar, MCSN; Kajoa, Pulau, ♂, RMNH; Halmahera Isl., Kampung Pasir Putih, 2 ♂♂, 5 ♀♀, i-ii, vi-vii.1981; Kampung Ruko, ♂, 11.iv.1981, A.C. Messer & P.M. Taylor, USNM; Kampung Pasir Putih, 2 ♂♂, ♀, vi-vii.1981, A.C. Messer & P.M. Taylor, BPBM ex USNM; Tidore Isl., Kampung Guaepaji, ♂, 5-10.vii.1981, A.C. Messer, USNM; Halmaheira, Tobelo, ♂, ♀, M.J. v. Diejen; Halmaheira, ♀, *cicatricosa* det. Gravenstein, coll. MacGillavry, ZMAN. INDIA ARCHIPELAGO: Depiset, ♂, 1867, *cicatricosa* det. Melichar, NHMW.

Diagnosis.— Genitalia of lectotype are illustrated (fig. 15).

Measurements.— ♂, ♀ vouchers from Halmahera, BPBM. Length: overall 11.0, 12.0 mm; v 0.25, 0.29; f 1.33, 1.41; p 0.58, 0.58; m 2.32, 2.32; t 8.80, 9.63; pcl 2.99, 3.32. Width: v 1.08, 1.08; f 1.41, 1.41; t 4.98, 5.64. Hind leg spine formula: 1:6:6, 1:6:6.

Neomelicharia cruentata (Fabricius, 1803)
(figs 12-14, 58, 59)

Flata cruentata Fabricius, 1803: 46. Lectotype ♀, Amboina, No. Z163, ZMUC, here designated.

Cicada pustulata Donovan, 1805: 2 (Type, New South Wales in error, pl. I, fig. 5, Neotype ♂, Java, *pustulata* det. Mel, Museum Westerm., ZMUC). **Syn. nov.**

Nephesa roseigutta Walker, 1858a: 49 (holotype, no abdomen, Cent. Amboina, Pfeiffer, BMNH); Melichar, 1902: 110 (syn.); Medler, 1990: 158 (type).

Nephesa amoena Walker, 1870: 172; Melichar, 1902: 109 (syn.); Medler, 1990: 133 (lectotype, no abdomen, Morotai Isl., Wallace, BMNH).

Nephesa conficita Walker, 1870: 172 (holotype ♂, Halmahera, Wallace, BMNH); Medler, 1990: 138 (type).

Colgar punctulata Melichar, 1902: 114 (pl. IV, fig. 7, mislabelled); Medler, 1987b: 536 (error correction of Melichar 1902, fig. 7).

Neomelicharia conficita; Metcalf, 1957: 395 (cat.); Medler, 1990: 138 (syn.).

Neomelicharia cruentata; Schmidt, 1926: 249 (Buru Island); Metcalf, 1957: 396 (cat.).

Neomelicharia guttulata; Kirkaldy, 1913: 19 (misidentified); Muir, 1923: 239 (pl. V, fig. 14, misidentified); Schmidt, 1926: 249 (Buru Island).

Neomelicharia var. *lactealis* Kirkaldy, 1913: 20; Lectotype ♂, paralectotypes ♂, 4♀, Amboina, F.Muir, BPBM, here designated. **Syn. nov.**

Neomelicharia pustulata; Karny, 1926: 377; Schmidt, 1926: 249 (Buru Island); Metcalf, 1957: 401 (cat.).

Nephesa rubrosparsa Walker, unpublished name; Medler, 1986f: 211 (fig. 2, Moluccas, syn.); Medler, 1990: 159 (Moluccas, syn.).

Material.— CELEBES: Banggai Island, 4 ♂♂, 2 ♀♀, Nieuwenhuis, RMNH. JAVA: no precise locality, ♂, *conficita* det. Melichar, NHMW; no precise locality, ♀, coll. Bosc 1828, *cruentata* Fab., MNHN. MOLUCCAS: Ambon, 5 ♂♂, ♀, F. Muir, 5 ♂♂, 2 ♀♀, Wegner, BPBM; Amboina, 2 ♂♂, Doherty, 1903-31; Ceram, Monseta, 2 ♂♂; Kai Isl, ♂, viii.1909, W. Stalker, 1910-127, BMNH; Batjan, 2 ♀♀, H. Frühstorfer, *conficita* det. Melichar; ♂, ♀, Sula Mangoli, H. Frühstorfer, *cruentata* det. Melichar, HNHM; Amboina, ♂, ♀, *pustulata* det. Melichar; Batjan, 2 ♀♀, H. Frühstorfer; no precise locality, ♂, ♀, ISNB; Amboina, ♀, MNHN; Ambon, 2 ♂♂, Adensamer; Amboina, 4 ♀♀, 1859, Doleschal, ♀, Sula Mangoli, Doherty, *cruentata* det. Melichar; Batjan, ♂, Frühstorfer, *conficita* det. Melichar; ♂, Doleschal, 1859, *pustulata* det. Melichar; Pulau Mangole, [Sula Mangoli], ♀, Doherty, *cruentata* det. Melichar, NHMW; no precise locality, 2 ♂♂, 1862, Stevens, OXUM; Halmahera, ♀, D. MacGillavry, det. *marginalis*, ZMAN; Ternate, no abdomen, Stevens, *pustulata* Donovan, NHRS.

Diagnosis.— Genitalia of specimen of *N. cruentata* from Ambon Isl., BPBM, fig. 14, lectotype of *lactealis* Kirkaldy, fig. 13, and neotype of *pustulata*, fig. 12, are illustrated; same configuration of characters is shown for the three specimens. Head characters of *cruentata* are illustrated (fig. 58-59).

Measurements.— ♂, ♀ lectotype, paralectotype, *Neomelicharia lactealis* Kirkaldy. Length: overall 11.5, 14.0 mm; v 0.33, 0.46; f 1.49, 1.74; p 0.58, 0.66; m 2.32, 2.82; t 9.63, 11.92; pcl 3.32, 4.48. Width: v 1.16, 1.33; f 1.45, 1.66; t 6.14, 7.30. Hind leg spine formula: 1:6:7, 1:6:7.

Neomelicharia cruentata det. Medler, ♂, ♀, Ambon, Muir, BPBM. Length: overall 12.5, 14.0 mm; v 0.33, 0.42; f 1.66, 1.70; p 0.58, 0.66; m 2.32, 2.66; t 10.13, 11.62; pcl 3.98, 4.32. Width: v 1.25, 1.29; f 1.49, 1.58; t 6.47, 6.97. Hind leg spine formula: 1:6:6, 1:6:6.

Neomelicharia erubescens (Walker, 1862)
(fig. 11)

Poeciloptera erubescens Walker, 1862: 313 (holotype ♂, Moluccas, Batchian, Pascoe, BMNH); Medler, 1990: 142 (type, fig. 30).

Nephesa gemmifera Stål, 1863: 592 (holotype ♂, Batjan mislabeled Buru Isl, Wallace, NHRS); Distant, 1910b: 330 (syn.); Medler, 1986h: 328 (type, fig. 19).

Neomelicharia erubescens; Metcalf, 1957: 397 (cat.).

Material.— MOLUCCAS: Batjan, ♂, 67/66, *gemmifera* Stål; BMNH; Amboina, 3 ♂♂, Doleschal, *gemmifera* det. Karny, NHMW; Halmahera, ♀, Haglund, NHRS; Halmahera, Kampung Pasir Putih, ♀, 1-14.vi.1981, A.C. Messer & P.M. Taylor, USNM.

Diagnosis.— Genitalia of holotype are illustrated (fig. 11); note spines on pointed margin of pygofer.

Neomelicharia guttulata (Stål, 1863)
(fig. 10)

Nephesa guttulata Stål, 1863: 591; Medler, 1986h: 328 (lectotype ♀, Batjan mislabelled Buru Isl., Stevens, NHRS).
Colgar destituta Melichar, 1902: 112; Medler, 1986d: 164 (syntype, Halmahera); Medler, 1987c: 37 (lectotype ♀, Obi, Doherty, Frühstorfer, ISNB).
Colgar diversa Melichar, 1902: 113 (pl. IV, fig. 1); Medler, 1986d: 167 (syn.); Medler, 1986c: 113 (lectotype ♂, Batjan, Frühstorfer, HNHM, fig. 5).
Colgar indicata Melichar, 1902: 113; Medler, 1986c: 114 (lectotype ♀, Batjan, Frühstorfer, HNHM.); Medler, 1986d: 167 (syn.); Medler, 1987c: 37 (syn.).
Colgar punctulata Melichar, 1902: 114 (holotype ♀, Batjan, Frühstorfer, NHMW, pl. IV, fig. 7. Note: fig. 7 is *cruentata* Fab., not *punctulata* Mel.); Medler, 1986d: 167 (plesiotype ♂, Batjan Isl., Noualhier, MNHN, fig. 6, syn.); Medler, 1987b: 536 (type).
Neomelicharia guttulata; Kirkaldy, 1913: 19 (comb.); Muir, 1923: 238 (pl. IV, fig. 14); Schmidt, 1926: 249 (Buru Island); Metcalf, 1957: 398 (cat.).
Neomelicharia guttulata var. *lactealis* Kirkaldy, 1913: 20; Metcalf, 1957: 399 (cat.).
Neomelicharia indicata; Jacobi, 1915: 175 (comb.); Metcalf, 1957: 400 (cat.).
Neomelicharia punctulata; Metcalf, 1957: 401 (cat.).
Neomelicharia destituta; Metcalf, 1957: 397 (cat.); Synave, 1980: 4 (lectotype).
Neomelicharia punctulata; Metcalf, 1957: 401 (cat.).

Material.— MOLUCCAS: Batjan, ♀, *diversa* det. Melichar, NHRS; Halmahera Isl., Kampung Dorosago, ♂, ix.1981, P.M. Taylor; Kampung Pasir Putih, 3 ♂♂, 9 ♀♀, i-viii.1981, A.C. Messer & P.M. Taylor, USNM; Kampung Pasir Putih, 2 ♂♂, ♀, v-vi, ix.1981, A.C. Messer & P.M. Taylor, BPBM ex USNM.

Diagnosis.— Genitalia of voucher ♂ ex USNM, Halmahera Isl., are illustrated (fig. 10).

Measurements.— ♂, ♀ *Neomelicharia guttulata* det. Medler, Halmahera, vouchers ex USNM, BPBM. Length: overall 13.0, 15.5 mm; v 0.37, 0.50; f 1.00, 2.16; p 0.66, 0.83; m 2.66, 3.15; t 10.46, 13.28; pcl 3.32, 3.98. Width: v 1.16, 1.41; f 1.74, 1.83; t 5.96, 7.64. Hind leg spine formula: 1:6:6, 1:6:7.

Neomelicharia lucentis spec. nov.
(fig. 16)

Material.— Holotype ♂, allotype ♀, paratypes 2 ♂♂, 3 ♀♀; Halmahera Isl, Naba Dist., Kampung Dorosago, ix.1981, P.M. Taylor, USNM.

Diagnosis.— In males, body colour light testaceous, tegmina translucent, margins smoky brown. In females, body red orange, tegmina nearly completely fuscous, costal margin dark brown, discal area light brown, small white spot on M1-M2 crossvein

and basad of Cu-M oblique vein. Colour variable, ranging from unicolorous light testaceous to various shades of brown or red orange. Holotype genitalia illustrated (fig. 16); pygofer apico-dorsal margin prolonged acutely.

Measurements.— Holotype ♂, allotype ♀. Length: overall 8.0, 9.0 mm; v 0.21, 0.25; f 1.16, 1.33; p 0.46, 0.50; m 1.66, 1.83; t 6.97, 7.30; pcl 1.79, 1.99. Width: v 0.87, 0.95; f 1.16, 1.25; t 3.98, 4.23. Hind leg spine formula: 1:6:7, 1:6:7.

Neomelicharia marginalis (Walker, 1870)

Nephesa marginalis Walker, 1870: 175; Medler, 1990: 150 (lectotype ♀, Halmahera, Wallace, BMNH, syn., error).
Neomelicharia marginalis; Metcalf, 1957: 400 (cat.).

Material.— MOLUCCAS: ♀, Halmahera, ZMAN.

Neomelicharia roseola spec. nov.
(fig. 17)

Material.— Holotype ♂, allotype ♀, paratypes, 3 ♂♂; Halmahera Isl, Jailolo Dist., Kampung Pasir Putih, 1-14.vi.1981, black light, A.C. Messer & P.M. Taylor, USNM.

Diagnosis.— Overall appearance reddish; dorsal median carina red from anterior margin to scutellum;, margins of frons speckled with very fine red dots, pronotum spotted with uniform larger red dots; tegmen with scattered red spots of variable sizes, small on middle of apical crossveins, somewhat larger in sutural cell of clavus and basad of M-Cu oblique vein, and single large spot with orange halo on discal cell crossvein; terminal veins white in dark fuscous apical margin; claval apex dark fuscous; all veins and crossveins red to varying extent. Holotype genitalia illustrated (fig. 17); pygofer apico-dorsal margin extended, acutely pointed; ventral process of aedeagus relatively short.

Measurements.— Holotype ♂, allotype ♀. Length: overall 10.5, 11.25 mm; v 0.37, 0.46; f 1.49, 1.54; p 0.54, 0.54; m 1.99, 2.16; t 8.96, 9.46; pcl 3.15, 3.49. Width: v 1.00, 1.08; f 1.33, 1.33; t 5.31, 5.81. Hind leg spine formula: 1:6:6, 1:6:6.

Neomelicharia sparsa (Fabricius, 1803)

Flata sparsa Fabricius, 1803: 47 (Amboina). Lectotype ♀, Z167, [Amboina], ZMUC, here designated.
Poeciloptera ocellifera Walker, 1858: 112; Medler, 1990: 153 (lectotype ♀, Ceram, Pfeiffer, BMNH). NEW SYNONYMY, here designated.
Cromna centralis Walker, 1870: 182; Melichar, 1902: 113 (syn.); Medler, 1990: 136 (lectotype ♀, Morotai Isl, Wallace, BMNH).
Neomelicharia ocellifera; Kirkaldy, 1913: 20 (Amboina); Metcalf, 1957: 400 (cat.).
Neomelicharia sparsa; Metcalf, 1957: 402 (cat.).

Material.— JAVA: no precise locality, 2 ♀♀, *ocellifera* det. Melichar, ISNB; no precise locality, no abdomen, Bosc, 1828, MNHN. MOLUCCAS: Amboina, ♀, Muir, *ocellifera* det. Kirkaldy; Ambon I. Waai, 70 m, ♀, 26.viii.1961, light trap, ♀, 17.ix.1961, A.M.R. Wagner, BPBM; Amboina, ♀, 1903-31, Doherty; Kai Islands, ♀, viii.1909, W. Stalker, 1910-127, BMNH; Ambon, ♀, Adensamer, *ocellifera* det.

Melichar, NHMW; Ceram, ♀, paralectotype, 58/60, Kirby, BMNH; Ceram, ♀, *ocellifera* det. Melichar, NHRS; Ceram, ♀; Obi Isl., ♀, vi.1914; Halmahera Isl., Kampung Tuguis, Kao River basin, Air Ranan, 1-14.iii.1981, A.C. Messer & P.M. Taylor, *ocellifera* det. Medler, USNM.

Taxonomic Note.— Only the female sex was represented in material examined. There is a need to study the genitalia of a male specimen to substantiate the status of this taxon.

Neomelicharia variegata Schmidt, 1904

Paratella variegata Schmidt, 1904b: 370; Metcalf, 1957: 379 (cat.); Medler, 1986a: 113, 1986b: 304 (syntypes, Obi); Medler, 1996b: 149 (lectotype ♂, Obi, ZMPA).
Neomelicharia variegata; Medler, 1986a: 113, 1986b: 304 (comb.).

Material.— MOLLUCAS: Known only from type materials.

Genus *Nephesa* Amyot & Serville, 1843

Nephesa Amyot & Serville 1843: 527; Metcalf, 1957: 383 (cat.); Medler, 1996a: 48 (Borneo). Type species: *Ricania rosea* Spinola.

Diagnosis.— See Medler, 1996a: 48.

Taxonomic note.— For many years this genus was a catchall for an assemblage of species needing more natural assignment. Strongly developed wide U-pattern of R and Cu veins arising from basal stem, strong ramifications of veins, and development of paired frontal lateral carinae are helpful distinguishing characteristics. Colours and marking patterns are extremely variable, and when dark brown the markings may superficially resemble those found in closely related *Copsyrna* and *Bythopsyrna*.

Key to species of the genus *Nephesa*

1. Tegmen with margins widely black, longitudinal black band medially ..... ***N. ligata*** (Distant)
- Tegmen without black margins and longitudinal black band 2
2. Tegmen apical margin sharply oblique; sutural angle markedly obtuse ..... ***N. truncaticornis*** (Spinola)
- Tegmen apical margin moderately oblique, or truncate; sutural angle variable ... 3
3. Tegmen sutural angle 90 degrees; pigmentation variable, light green, pink or stramineous but never brown or black, scattered white wax spots absent 6
- Tegmen sutural angle rounded; red brown or with brown pigmentation on margins and disc, scattered white spots of wax usually distinct 4
4. Tegmen without large dark round spot near apex of clavus ..... ***N. rorida*** (Walker)
- Tegmen cells without red dots, or very few scattered red dots 5
5. Tegmen light brown or tawny colour; usually heavily dusted with powdery white wax; spots of white wax thinly scattered; apical margin slightly oblique ..... ***N. suffusa*** Walker
- Tegmen dark red brown with numerous white wax spots; apical margin slightly convex, costal and sutural angles with similar configuration .....

..... ***N. albopunctulata*** Melichar

6. Valvulae III elongate, patch of small teeth concealed on inner surface. Distribution: Java and Sumatra ..... ***N. rosea*** (Spinola)
- Valvulae III oval, pad of filelike teeth exposed on apical surface. Distribution: Borneo, Malaysia, Philippine Islands ..... ***N. grata*** (Walker)

Nephesa albopunctulata Melichar, 1902

Nephesa albopunctulata Melichar, 1902: 104; Schmidt, 1904a: 204 (Sumatra); Metcalf, 1957: 386 (cat.); Medler, 1987b: 535 (lectotype ♂, Java, NHMW, fig. 3); Medler, 1987c: 35 (paralectotype, IRSN); Medler, 1994b: 98 (paralectotype, ZMUC).

Material.— JAVA: Known from type materials only. MALAYSIA: Pahang, Rompin Mining Co., 31.iii-8.iv.1961, BPBM.

Nephesa grata (Walker, 1857)

Nephesa grata Walker, 1857b: 160; Walker, 1858b: 107 (Borneo); Metcalf, 1957: 388 (cat.); Medler, 1990: 144 (lectotype, no abdomen, Sarawak, Wallace, BMNH, syn. in error); Medler, 1996a: 49 (fig. 43, Borneo).

Nephesa aegrota Melichar, 1902: 105; Metcalf, 1957: 385; (cat.); Medler, 1986d: 163 (paralectotypes); Medler, 1986h: 324 (lectotype ♂, Palawan, Haglund, NHRS, fig. 25).

Material.— JAVA: No precise locality, ♂, Pfeiffer, NHMW. SUMATRA: Bengkulu, Marang-Liwa, ♀, Noualhier, MNHN; no precise locality, ♀, *Nephesa ferrugata* det. Melichar, ZMHU. KALIMANTAN: Mahakkan, RMNH; see Medler, 1996a: 50.

Nephesa ligata (Distant, 1892)

Cenestra ligata Distant, 1892: 285, Holotype, ♀, Malaysia, Perak, BMNH, pl. XIII, fig. 3; Medler, 1990: 172 (type); Medler, 1996a: 53 (plesiotype, ♂, Sumatra, Soekaranda, ZMPA).

Bythopsyrna ligata; Melichar, 1901: 226 (pl. II, fig. 9, Sumatra, Borneo); Schmidt, 1904a: 189 (Sumatra); Metcalf, 1957: 107 (cat.).

Nephesa ligata; Medler, 1996a: 53 (fig. 46, comb.).

Material.— SUMATRA: Toerangie, ♀, HNHM; Solok Padang, ♀, P.O. Stoltz, RMNH.

Nephesa rorida (Walker, 1857)

Poeciloptera rorida Walker, 1857b: 161; Medler, 1990: 158 (lectotype, ♀, Sarawak, Wallace, BMNH); Medler, 1996a: 53 (plesiotype, ♂, Malaysia, Sabah, Rumidi, BMNH).

Nephesa rorida; Melichar, 1902: 106 (comb.); Metcalf, 1957: 389 (cat.); Medler, 1996a: 53, fig. 75).

Material.— KALIMANTAN: Mahakkam; see Medler, 1996a: 53.

Nephesa rosea (Spinola, 1839) (figs 56, 57)

Ricania rosea Spinola, 1839: 400 (holotype ♂, Java, Serville, NHMW).

Nephesa rosea; Amyot & Serville, 1843: 528 (comb.); Schmidt, 1904a: 205 (Sumatra); Karny, 1922: 5 (S.

Sumatra); Baker, 1927: 398 (Padang); Schmidt, 1928: 138 (Java); Metcalf, 1957: 390 (cat.); Medler, 1996a: 49 (fig. 63, Borneo).

Poeciloptera completa Walker, 1851: 451 (holotype ♀, Java, BMNH); Medler, 1990: 138 (syn. in error).

Nephesa completa; Stål, 1866: 393 (syn.).

Poeciloptera extricata Walker, 1858a: 52; Medler, 1990: 142 (lectotype ♀, Sarawak, BMNH, syn.).

Nephesa coromandelica Melichar, 1902: 106 (Java, Vulcan Gede); Metcalf, 1957: 387 (cat.).

Nephesa carinulata Schmidt, 1904a: 205; Schmidt, 1928: 138 (Java); Medler, 1996b: 140 (lectotype ♂, Sumatra, Soekaranda, ZMPA, syn.).

Nephesa extricata; Distant, 1910b: 332 (comb.).

Material.— JAVA: Horsfield, ♂, 2 ♀♀, 60-15, BMNH; Soekaboemi, ♀, *coromandelica* det. Lallemand, Soekaboemi, ♀, *rosea* det. Lallemand, Java Merid, 1500', ♀, 1897, Frühstorfer, *coromandelica* det. Melichar, ISNB; Soekaboemi, ♀, NCSU; no precise locality, ♀, Noualhier, ♀, Oberthür, 00-96, MNHN; no abdomen, *rosea* det. A. & S., no abdomen, *rosea* det. Signoret, ♂, Pfeiffer, *rosea* det. Melichar, NHMW; Bogor, ♀, 7.iii.29, J. v.d. Vecht; Preanger, Djampangtenggah, ♂, 12 ♀♀, iv.1935, leMoult; Radjamandala, Preanger, 3 ♂♂, ♀, 1200' [366 m], xii.1935, E. leMoult; G. Moeria, 2 ♂♂, 2500-3600' [762-1097 m], x.1935, leMoult, RMNH; G. Besser, 3 ♂♂, ♀, iii.1938, M.E. Walsh; Mt. Gede, ♂, 7 ♀♀, ix.1938, M.E. Walsh; G. Halimoen, 4 ♂♂, 3 ♀♀, xi.1938, M.E. Walsh, MZLU; Bogor, ♂, viii.1919, W. Roepke; Depok, 2 ♀♀, 18.xii.1949, C. v. Nidek; Djampangtengah, 4 ♂♂, 7 ♀♀, 1500-1800' [457-549 m], 24.iv.1939-10.ii.1940, J.M.A. v Groenendael; Soekaboemi, ♂, ♀, 2000' [610 m], 18.i.1940; Soekaboemi, Djampang Kidoel, ♀, 1000-1500' [305-457 m], 15.xii.1939; Tjiajoenan, Soekanegara, ♂, 2 ♀♀, 1800-2400' [549-732 m], x.1941; J.M.A. v. Groenendael; Getasan, ♀, xi.16, W. Roepke; Salatiga, 3 ♂♂, v.10, viii.17, xi.10, W. Roepke; Goen. Gead, ♂, ix.15, J.B. Corporaal; Preanger, Soesoeroeh, ♀, iv.15, J.B. Corporaal, *coromandelica* det. Spinola; Preanger, Tjilatjap, ♀, xii.1919, MacG; Wonosobo, ♀, 5.1909, E. Jacobson; no precise locality, 2♀, Zehntner; ZMAN; Java, no precise locality, ♀, *coromandelica* det. Signoret, *ferrugata* det. Melichar, NHMW; no locality, ♂, 5 ♀♀, *Nephesa ferrugata* det. Melichar, ZMHU. SUMATRA: Bah Soemboe, ♀, Weber, AMNH; no precise locality, ♂, 2 ♀♀, J. Skovgaard; Bogor, ♀, ZMUC; Bengkulu, 4 ♂♂, 14 ♀♀, 1200 m, vi-vii.1935, E. leMoult; no precise locality, ♀, Müller, RMNH.

Head characters of *N. rosea* are illustrated (fig. 56-57).

Nephesa suffusa (Walker, 1851)

Poeciloptera suffusa Walker, 1851: 446; Medler, 1990: 161 (lectotype, ♂, Java, BMNH).

Nephesa brunnea Melichar, 1902: 104 (comb.); Biermann, 1908: 161 (Java, pl. 4, fig. 7); Metcalf, 1957: 392 (cat.); Medler, 1996a: 51 (Borneo). Lectotype ♂, paralectotype ♀, no locality data, ZMAN, here designated.

Material.— JAVA: no other data, ♀, BMNH; Preanger, Djampangtenggah, ♂, iv.1935, E. leMoult, RMNH; Semarang, ♂, E. Jacobson; Themaat, ♀, 1938, M.C. VerLoren, ZMAN. SUMATRA: Deli, ♀, L.P. deBussy, ZMAN.

Nephesa truncaticornis (Spinola, 1839)

Poeciloptera truncaticornis Spinola, 1839: 429 (pl. 16, fig. 3). Holotype ♀, Java, coll. Serville, coll. Signoret, NHMW, here designated.

Nephesa truncaticornis; Stål, 1870: 773 (comb., Borneo); Melichar, 1902: 103 (pl. III, fig. 6, Borneo); Schmidt, 1904a: 203 (Sumatra); Metcalf, 1957: 392 (cat.); Medler, 1996a: 50 (Borneo).

Colobesthes rectilinea Walker, 1870: 180; Medler, 1990: 157 (lectotype ♀, Sumatra, Wallace, BMNH). **Syn. nov.**

Nephesa rectilinea; Distant, 1910b: 332 (comb.); Metcalf, 1957: 388 (cat.).
Nephesa aurora Kirkaldy, 1913: 23 (holotype ♀, Amboina, BPBM); Metcalf, 1957: 386 (cat.); Medler, 1987a: 119 (type, syn.).

Material.— Java, Sumatra, Moluccas, known only from type material.

Genus *Nullina* Medler, 1991

Nullina Medler, 1991a: 21. Type species: *Nullina nigritans* Medler.

Diagnosis.— See Medler, 1991a: 21.

Nullina nigritans Medler, 1991

Nullina nigritans Medler, 1991a: 22 (holotype ♀, Sulawesi Utara, Dumoga-Bone National Park, BMNH).

Material.— SULAWESI: 3♀♀ paratypes, BMNH, BPBM; see Medler 1991a: 21.

Genus *Sabaethis* Jacobi, 1916

Semidalis Jacobi, 1915: 170 (preoccupied). Type species: *Semidalis micholitzi* Jacobi.
Sabaethis Jacobi, 1916: 314 (new name); Metcalf, 1957: 362 (cat.); Medler, 1991a: 20 (Sulawesi).

Diagnosis.— See Medler, 1991a: 20.

Sabaethis subflava (Melichar, 1902)

Paratella subflava Melichar, 1902: 119 (pl. III, fig. 8); Medler, 1987c: 39 (lectotype, ♀, Flores, Iles de la Sonde, ISNB).
Sabaethis subflava; Medler, 1987c: 39 (comb.); Medler, 1991a: 20 (revision).

Material.— LESSER SUNDA ISLANDS: Flores, ISNB, ZMUH; see Medler, 1991a: 20.

Genus *Sanurus* Melichar, 1902

Sanurus Melichar, 1902: 29; Metcalf, 1957: 278 (cat.). Type species: *Sanurus dubius* Melichar.

Diagnosis.— Anterior margin of head slightly produced obtusely, margin with convex intergenal tranverse carina that separates frons from vertex on dorsum of head, vertex with lateral margins of median discal area weakly defined; frons with U- or V-shaped carinae, intercepted dorsally by strong median longitudinal carina that extends from apex of head to scutellum; anterior margin of pronotum with transverse wrinkle and pair of dimplelike pits, postocular eminence wide triangular cone, connecting with downcurved lateral carina of pronotum; mesonotum lateral carinae connected across anterior margin. Tegmen slightly widened apically, apical margin shallowly convex, submarginal area with strong reticulation of crossveins in irregular lines, but no strong submarginal line; two or three longitudinal veins (R,S,M or R+S,

M) arising from basal node, vein S with two branches, anal veins forming Y-stem at apex of clavus. Size small, one metatibial lateral spine.

Key to species of the genus *Sanurus*

1. Frons with V-carina, frons slightly longer than wide, Flores and adjacent islands .. .. ***S. dubius*** Melichar
- Frons with U-carina, l:w ratio about equal, Java, Lombok 2
2. Lombok. Aedeagus without dorsal concave spinelike process ... *S.* ***indecora*** Jacobi
- Java. Aedeagus with dorsal concave process ..... ***S. flavovenosus*** Bierman

Sanurus dubius Melichar, 1902

Sanurus dubius Melichar, 1902: 29; Melichar, 1914: 108 (Java); Metcalf, 1957: 278 (cat.); Medler, 1986c: 113 (lectotype ♂, Sumba, Frühstorfer, HNHM, fig. 15); Medler, 1986d: 164 (paralectotypes, Sumbawa).

Sanurus venosus Melichar, 1902: 30; Schmidt, 1904a: 194 (Sumatra); Schmidt, 1928: 138 (Java); Metcalf, 1957: 278 (cat.); Medler, 1986d: 167 (lectotype ♀, Sumbawa, Noualhier, MNHN, syn.).

Neomelicharia albida Lallemand, 1935: 665 (figs 3-4); Metcalf, 1957: 394 (cat.); Synave, 1980: 1 (paratype); Medler, 1987c: 35 (paralectotype); Medler, 1988b: 84 (lectotype ♂, Flores, Ende, xii.1931, NHMB, syn.).

Neomelicharia citrinella Lallemand, 1935: 666; Metcalf, 1957: 395 (cat.); Medler, 1987c: 35 (paralectotype); Medler, 1988b: 84 (lectotype ♂, Flores, Endeh, xii.1931, NHMB, fig. 1, syn.).

Siphanta insularis Jacobi, 1941: 289; Metcalf, 1957: 289 (cat.); Medler: 1986a: 110 (paralectotype, Endeh); Medler, 1986e: 49 (lectotype ♀, Flores, Endeh, 3.iii.1927, ZMHB, syn.).

Material.— FLORES ISLAND: Type specimens, Ende, ♂, *albida*; Ende, ♂, *citrinella*, NHMB; ♀, ISNB; ♀, Frühstorfer, HNHM; Ende, ♀, *insularis*, SMTD; ♀, ZMHB. SUMBA ISLAND: ♂, paralectotype, *dubius*, HNHM; Rua, 3 ♀♀, 29-31.viii.1949, Bühler & Sutter, ISNB; ♂, Rippon, NMWC. SUMBAWA ISLAND: Raba, ♂, 20.v.1949, Bühler & Sutter, ISNB; ♂, 2 ♀♀, paralectotypes, *dubius*, MNHN. LESSER SUNDA ISLANDS: Komodo Island, ♂, 5 ♀♀, 16.viii.1965, J. Winkler, BPBM.

Sanurus flavovenosus Bierman, 1910
(fig. 25)

Sanurus flavovenosus Bierman, 1910: 39 (pl. 2, fig. 16); Schmidt, 1904a: 194 (Soekaranda); Melichar, 1914: 108 (Wonosobo); Schmidt, 1928: 138 (Tasikmalaja); Metcalf, 1957: 278 (cat.). Lectotype ♂, Java, Samarang, E. Jacobson, ZMAN, here designated.

Neomelicharia impunctata Karny, 1926: 377 (holotype, ♂, Java, Siluwuksawangan near Weleri, v.d.Meer-Moor, ZMAN); Metcalf, 1957: 399 (cat.); **syn. nov.**

Material.— JAVA: Pasuruan [Pasoeroean], 2 ♂♂, vii.1932, R. Awibowo, #25, on young leaves of *Mango*, BM 1948-536, BMNH; Banjoewangi, ♂, xii.1936, C. Franssen, from young fruits of *Persea gratissima*; Murjo, Gunung (Moeria), ♂, ♀, leMoult; Pasuruan [Pasoeroean], ♂, vii.1932, R.Awibowo, #25, on young leaves of *Mango*; (no abdomen); C.422, no other data, RMNH; ♂, without specific locality, det. *dubius* by Melichar; Banjumas [Banjoemas], 2 ♂♂, ♀, 9.x.1936, J. v. Groenendael, ZMAN.

Diagnosis.— Lectotype genitalia are illustrated (fig. 25).

Sanurus indecora (Jacobi, 1941)

Neomelicharia indecora Jacobi, 1941: 289 (holotype ♂, Lombok, Namigda, Rensch, MMHB); Metcalf, 1957: 399 (cat.); Medler, 1986e: 49 (type, fig. 14).
Sanurus indecora; Medler, 1986e: 49 (comb.).

Material.— LESSER SUNDA ISLANDS: known only from the holotype.

Tribe Phantiini Melichar, 1923

Genus *Mimophantia* Matsumura, 1900

Mimophantia Matsumura, 1900: 212; Metcalf, 1957: 190 (cat.); Medler, 1996a: 35 (Borneo). Type species: *Mimophantia maritima* Matsumura.
Microflata Melichar, 1902: 9. Type species: *Microflata stictica* Melichar.

Diagnosis.— See Medler, 1996a: 33. The characteristic shape of the tegmen enables recognition of the genus (fig. 46).

Mimophantia maritima Matsumura, 1900
(figs 2, 46)

Mimophantia maritima Matsumura, 1900: 212; Melichar, 1902: 17 (pl, fig. 5); Kirkaldy, 1913: 22 (Amboina); Melichar, 1914: 108 (Java); Metcalf, 1957: 191 (cat.); Fang, 1989: 128 (fig. 4); Medler, 1996a: 34 (Borneo). Syntypes - Japan, Akashi, Kobe. Location(s) unknown.
Microflata stictica Melichar, 1902: 10 (pl. V, fig. 2); Jacobi, 1915: 169 (syn.); Metcalf, 1957: 141 (cat.); Medler, 1986h: 334 (lectotype ♂, Australia Boreal, NHRS, fig. 5).

Material.— JAVA: BPBM; Semarang, 3 ♂♂, 5 ♀♀, ix.1909-ii.1910, E. Jacobson; 2 ♀♀, 40 m, 27.viii.1926-6.i.1927, Fr. Verbeek; Semarang, ♀, teak forest, 30.vi.1926, Kalshoven, ZMAN. MOLUCCAS: Amboina, 18 ♂♂, 8 ♀♀, F. Muir, BPBM.

Diagnosis.— Genitalia of ♂ from Samarang, ZMAN, are illustrated (fig. 2).

Meaurements: ♂ from Samarang. Length: overall 5.0 mm; v 0.50; f 0.83; p 0.37; m 1.00; t 4.15; pcl 0.91. Width: v 0.54; f 0.75; t 2.32. Hind leg spine formula: 2: 8: 22.

Tribe Phromniini Melichar, 1923

Genus *Circumdaksha* Distant, 1910

Circumdaksha Distant, 1910b: 328; Metcalf, 1957: 153 (cat.); Medler, 1991a: 5 (Key, Sulawesi). Type species: *Circumdaksha rufosparsa* Distant (junior syn. of *Lechaea rubropunctata* Melichar).

Diagnosis.— See Medler, 1991a: 5.

Key to species of the genus *Circumdaksha*

1. Tegmen with about 10 large yellowish orange spots associated with aggregations of 3-4 strong cross veins ..... ***C. labeculata*** (Distant)

- Tegmen without large yellowish orange spots as described 2
2. Tegmen without alignments of red or reddish purple spots; apical crease outlined in red extending diagonally from claval apex to near costal margin .... ***C. roseovenosa*** (Melichar)
- Tegmen cell C and disc each with lengthwise row of at least 3 red or reddish purple spots 3
3. Spots on tegmen red; membrane apical crease not outlined ....***C. rubropunctata*** (Melichar)
- Spots on tegmen reddish purple; membrane apical crease outlined in purple .... ***C. chloroleuca*** (Walker)

Circumdaksha chloroleuca (Walker, 1870)

Flata chloroleuca Walker, 1870: 180; Medler, 1990: 11 (holotype ♂, Sulawesi, Makassar, BMNH).
Poeciloflata chloroleuca; Metcalf, 1957: 65 (cat.).
Circumdaksha chloroleuca; Medler, 1991a: 7 (fig. 1, comb.).

Material.— SULAWESI: Makassar, see Medler, 1991a: 7; Sulawesi Tenggara, Mokowu River, nr Gng Watowila NE of Kolaka, 200 m, ♂, 29-31.x.1989, J.P. Duffels, ZMAN. New record. SUMATRA: Lebong Tandai; see Medler, 1991a: 7.

Circumdaksha labeculata (Distant, 1892)

Flata labeculata Distant, 1892: 284; Medler, 1990: 46 (holotype ♂, Sulawesi, Minahasa, BMNH, fig. 58).
Lechaea labeculata; Metcalf, 1957: 71 (cat.).
Circumdaksha labeculata; Medler, 1991a: 6 (fig. 2, comb.).

Material.— SULAWESI: Sulawesi Utara, see Medler, 1991a: 6.

Circumdaksha roseovenosa (Melichar, 1901)

Lechaea roseovenosa Melichar, 1901: 233 (pl. 6, fig. 12); Medler, 1991a: 8 (holotype ♀, Sulawesi Tengah, Kalana Ebene, DEIC).
Circumdaksha roseovenosa; Medler, 1991a: 8 (comb.).

Material.— SULAWESI: Sulawesi Tengah; see Medler, 1991a: 8.

Circumdaksha rubropunctata (Melichar, 1901)

Lechaea rubropunctata Melichar, 1901: 234; Medler, 1986e: 52 (holotype ♀, Sulawesi, ZMHB).
Cicumdaksha rufosparsa Distant, 1910b: 328 (pl. 22, fig. 7); Medler, 1990: 180, (holotype ♂, Sulawesi, Makassar, BMNH, fig. 69); Medler, 1991a: 7 (syn.).

Material.— SULAWESI: see Medler, 1991a: 7.

Genus *Flatida* White, 1846

Poeciloptera (Flatida) White, 1846: 26; Metcalf, 1957: 26 (cat.); Medler, 1996a: 20 (Borneo). Type species: *Poeciloptera (Flatida) tricolor* White.

Phromnia Stål, 1862c: 68. Type species: *Cicada limbata* Fabricius.

Diagnosis.— See Medler, 1996a: 20.

Key to species of the genus *Flatida*

1. Tegmen without visible trace of looped band; colored green, light brown or pale stramineous; three longitudinal veins (R, S, M) 3
- Tegmen with wide fuscous band extending apically from bulla, then looping back to near apex of clavus; if tegmen faded, or reddish, or heavily dusted with wax deposit, then view with transmitted light to detect trace of band; two longitudinal veins (R+S, M) 2
2. Basal half of tegmen strongly red; looped band indistinct due to deposit of white wax ..... ***F. montivaga*** (Distant)
- Tegmen without red coloring, looped band usually distinct ..... ***F. floccosa*** (Guérin-Méneville)
3. Mesonotum and clavus orange testaceous, remainder of tegmen green ..... ***F. hilaris*** (Gerstaecker)
- Mesonotum, clavus and tegmina uniformly concolorous green, stramineous, or light tawny; antenna segment II black; apices of legs fuscous or black, fore and mid tibiae fuscous ..... ***F. intacta*** (Walker)

Flatida floccosa (Guérin-Méneville, 1829)
(fig. 45)

Flata floccosa Guérin-Méneville, 1829: (pl. 58, fig. 8); Melichar, 1901: 208 (1902, pl. I, fig. 9); Schmidt, 1904a: 182 (Sumatra); Medler, 1988a: 15 (neotype ♂, Java, Soekaboemi, fig. I, 2, NCSU).

Flata bombycoides Guérin-Méneville, 1844: 361; Schmidt, 1904a: 183 (Sumatra); Medler, 1988a: 13 (lectotype (no abdomen), Malacca, MZUN); paralectotype ♀, Malacca, Guérin-Méneville, NHRS, here designated.

Flata flaccida Walker 1858a: 50; Melichar, 1901: 208 (syn.); Medler, 1990: 143 (holotype from Hindostan not found. Specimen from Malacca in BMNH cited in error by Medler).

Phronima hamifera Walker, 1870: 181; Medler, 1990: 144 (holotype ♂, Sumatra, Wallace, BMNH, syn.).

Phronima prunifera Walker, 1870: 181; Melichar, 1901: 208 (syn.); Medler, 1990: 155 (holotype ♂, Sumatra, Wallace, BMNH).

Phromnia ardens Gerstaecker, 1895: 36; Melichar, 1901: 208 (lectotype ♂, W.Java, Frühstorfer, EMAU, syn.).

Phromnia floccosa; Schmidt, 1928: 136 (Java).

Flatida bombycoides; Metcalf, 1957: 29 (cat.); Medler, 1988a: 13 (syn.).

Flatida floccosa; Metcalf, 1957: 32 (cat.); Medler, 1996a: 21 (Borneo).

Material.— JAVA: No specific locality, var. *hamifera* det. Melichar, Mons Gede, 4000', ♂, 1898, Frühstorfer, Soekaboemi, ♂, leMoult, ISNB; G. Halimoen, 3 ♂♂, ♀, xi.1938, M.E. Walsh, MZLU; Soekaboemi, 4 ♂♂, 6 ♀♀, leMoult, NCSU; no specific locality, ♀, *floccosa* det. Melichar, NHRS; Djampangtenggah, ♂, 2 ♀♀, iv.1935, E. leMoult; Sukabumi, ♀; Soekapoeza, ♂, 10.ix.1938, J. Knock, RMNH; Djampangtengah, 5 ♂♂, 5 ♀♀, 1800' [549 m], 6.v.1939, J.M.A. v. Groenendael; Preanger, 2 ♀♀, 11.vi.1937, J.M.A. v. Groenendael; Tjimerang, ♂, ♀, 1800' [549 m], 28.iv.1939, J.M.A. v. Groenendael; Timaloer, ♀, *flaccida* det. Gravestein, ZMAN. SUMATRA: no specific locality, ♂, 5 ♀♀, AMNH; Nias, 3 ♂♂, 2 ♀♀, Franck, CASC; Insel Nias, ♀, MZLU; Nias Island, ♀, det. *bombycoides* Melichar, NHMW; Bengku-

lu, ♂, 5 ♀♀, 1200' [366 m], vi-vii.1935, E. leMoult, RMNH; Deli, 2 ♀♀, L.P. de Bussy; Nias Island, ♂, ♀, 1857, ZMAN; KALIMANTAN: Balik Papan, Mahakkam (Medler, 1996a: 22).

Flatida hilaris (Gerstaecker, 1895)

Phomnia hilaris Gerstaecker, 1895: 36. Holotype ♀, Sumatra (specimen not found).
Flata hilaris; Melichar, 1901: 207 ("Type im Greifswalder Museum" not verified).
Flatida hilaris; Metcalf, 1957: 33 (cat.); Medler, 1996a: 23 (Borneo).

Material.— SUMATRA: Lauttador, ♀, 19 km v. Tebingtinggidell, 10.x.1948, C. v. Nidek, ZMAN; no precise locality, ♀, Hauschild, 12.ix.1914, ZMUC.

Flatida intacta (Walker, 1851)

Flata intacta Walker, 1851a: 435; Medler, 1990: 147 (lectotype ♂, Silhet, BMNH).
Flatida intacta; Metcalf, 1957: 34 (cat.); Medler, 1996a: 23 (fig. 1, Borneo).

Material.— SUMATRA: Medan, ♂, Shouteden; Natuna Kepuluan, 2 ♂♂, ♀, Frühstorfer, ISNB.

Flatida montivaga (Distant, 1892)

Phromnia montivaga Distant, 1892: 284 (holotype ♀, Sabah, Mt. Kina Balu, BMNH, pl. 13 fig. 5); Medler, 1990: 174 (type).
Flatida montivaga; Metcalf, 1957: 43 (cat.); Medler, 1966a: 22 (Borneo).

Material.— JAVA: ♀, Djampangtengah, 1800' (549 m), viii.1939, J.M.A. v. Groenendael, ZMAN.

Genus *Lechaea* Stål, 1866

Lechaea Stål, 1866a: 236; Metcalf, 1957: 70 (cat.); Medler, 1991a: 5 (Sulawesi). Type species: *Poeciloptera dentifrons* Guérin-Méneville.

Diagnosis.— See Medler, 1991a: 5.

Lechaea dentifrons (Guérin-Méneville, 1844)

Poeciloptera dentifrons Guérin-Méneville, 1844: 360; Medler, 1988a: 13 (holotype ♀, Malacca, MZUN; plesiotype ♂, Malaya, Bentong, BMNH, fig. II, 1).
Lechaea dentifrons; Stål, 1866b: 393 (comb.); Melichar, 1901: 232 (pl. 3, fig. 2); Schmidt, 1928: 136 (Sumatra); Metcalf, 1957: 70 (cat.); Medler, 1991a: 5 (Sulawesi).

Material.— SUMATRA: Known only by Schmidt's record (1928: 136).

Genus *Poeciloflata* Melichar, 1901

Poeciloflata Melichar, 1901: 235; Metcalf, 1957: 65 (cat.); Medler, 1991a: 8 (Sulawesi, key). Type species: *Cicada modesta* Donovan.

Diagnosis.— See Medler, 1991a: 8.

Key to species of the genus *Poeciloflata*

1. Tegmen usually sordid white or stramineous, sometimes with faded wide tawny bands apically; both angles of apical margin evenly convex ..... ***P. modesta*** (Donovan)
- Tegmen apically with three broad red cross bands; apical margin oblique, sutural angle obtuse ..... ***P. viridana*** (Donovan)

Poeciloflata modesta (Donovan, 1805)

Cicada modesta Donovan, 1805: 2 (pl. 1, fig. 4). Type unknown.
Poeciloflata modesta; Melichar, 1901: 236 (comb.); Metcalf, 1957: 66 (cat.); Medler, 1991a: 9 (Sulawesi).
Poeciloflata viridana luteofasciata Melichar, 1901: 236; Medler, 1986c: 114 (holotype ♂, Sulawesi Selatan; Samanga, HNHM, fig. 4, syn.).

Material.— New records. SULAWESI: Sulawesi Selatan, no specific locality, ♀, xii.1936; Sulawesi Utara, Tomohon, ♀, Berendsten Kate; RMNH; Pendolo, ♀, W side of Lake Posso Gardens, 23.x.1993, J.P. & M.J. Duffels, ZMAN.

Poeciloflata viridana (Donovan, 1805)

Cicada viridana Donovan, 1805: 1 (pl. 1, fig. 3). Type unknown.
Poeciloflata viridana; Melichar, 1901: 235 (comb.); Medler, 1991a: 9 (Sulawesi).

Material.— New records. SULAWESI: Laschao, ♀, 28.viii.1935, Menado, ♀, Van Braeckel, no specific locality, ♂, 2 ♀♀, A. Kolbe, ISNB; Bantimoeroeng, ♀, iv.1938; Biromaroe Paloe, ♂, 1500 m, x.1936, J.M.A. v. Groenendael, ZMAN.

Tribe Phyllyphantini Melichar, 1923

Genus *Amasha* Medler, 1992

Amasha Medler, 1992a: 24. Type species: *Amasha decepta* Medler.

Diagnosis.— See Medler, 1992a: 24.

Amasha decepta Medler, 1992

Amasha decepta Medler, 1992a: 25 (holotype ♂, Thailand, Doi Suthep, BPBM, figs 50-53).

Material.— SUMATRA: Gunung Teleman, paratype ♀, v.1917, E. Jacobson, ZMAN.

Genus *Phyllyphanta* Amyot & Serville, 1843

Phyllyphanta Amyot & Serville, 1843: 523; Metcalf, 1957: 180 (cat.); Medler, 1991a: 28 (Sulawesi); Medler, 1992a: 3 (review); Medler, 1996a: 35 (Borneo). Type species: *Poeciloptera producta* Spinola.

Diagnosis.— See Medler, 1992: 3, 1996a: 35. The characteristic shape of the tegmen is shown (fig. 48).

Key to species of the genus *Phyllyphanta*

1. Vertex acutely conical; tegmen sutural angle acute, prolonged ..... ***P. producta*** (Spinola)
- Vertex broadly triangular; tegmen sutural angle nearly right angled, scarcely prolonged ..... ***P. declivis*** (Jacobi)

Phyllyphanta declivis (Jacobi, 1941)

Lawana declivis Jacobi, 1941: 289; Medler, 1986e: 47 (lectotype ♀, Sumbawa Besar, ZMHB); Medler, 1992a: 6 (plesiotype ♂, Thailand, Blangkassi, RMNH).
Phyllyphanta declivis: Medler, 1986a: 108 (comb.); Medler, 1992a: 6 (fig. 5-6, revision).

Material.— LESSER SUNDA ISLANDS: Sumbawa Besar, paralectotype ♀, SMTD.

Phyllyphanta producta (Spinola, 1839) (fig. 48)

Poeciloptera producta Spinola, 1839: 432; Medler, 1991a: 28 (neotype ♂, Batavia, ZMUC, fig. 17).
Phyllyphanta producta; Melichar, 1902: 55 (pl. IV, fig. 3, Borneo); Schmidt, 1904a: 202 (Sumatra); Medler, 1991a: 28 (Sulawesi); Medler, 1992a: 5 (fig. 1-4, rev); Medler, 1996a: 35 (Borneo).

Material.— JAVA: BMNH, NHMW, RMNH, ZMAN. SUMATRA: AMNH, NHMW, RMNH, SMTD, ZMAN. KALIMANTAN: RMNH, ZMAN. SULAWESI: NHMW, MNHN. MOLUCCAS: MNHN. See Medler, 1992: 5.

Genus *Salurnis* Stål, 1870

Salurnis Stål, 1870: 773; Medler, 1991a: 27 (Sulawesi); Medler, 1992: 7 (revision), Medler, 1996a: 36 (Borneo). Type species: *Salurnis granulosus* Stål.

Diagnosis.— See Medler, 1996a: 36.

Key to species of the genus *Salurnis*

1. Mesonotum with median longitudinal carina well developed; lateral carina on each side of mesonotum ..... ***S. kryala*** Medler
- Mesonotum with median longitudinal carina absent or obscure; 2 lateral carinae on each side of mesonotum 2
2. Pro- and mesonotum uniformly green or stramineous ..... ***S. bipinctata*** (Walker)
- Pro- and mesonotum with median brown band ..... ***S. granulosa*** (Stål)

Salurnis bipunctata (Walker, 1862)

Poeciloptera bipunctata Walker, 1862: 312; Medler, 1990: 136 (lectotype ♂, Siam, BMNH, fig. 2).
Salurnis bipunctata; Medler, 1990: 136 (comb.); 1992a: 11 (fig. 13, revision).

Material.— SUMATRA: Penang Island, ♂, Baker, BPBM.

Salurnis granulosa Stål, 1870

Salurnis granulosa Stål, 1870: 774; Melichar, 1902: 41 (pl. 3, fig. 20); Metcalf, 1957: 195 (cat.); Medler, 1986h: 328 (holotype ♂, Philippine Islands, NHRS, fig. 9); Medler 1992a: 8 (fig. 7-10, revision).

Material.— SULAWESI UTARA: see Medler, 1991a: 28.

Salurnis kryala Medler, 1992

Salurnis kryala Medler, 1992a: 13 (holotype ♂, Sabah, Tawau, Hirashima, BPBM, fig. 16); Medler, 1996a: 37 (Borneo).

Material.— Medler, 1992a: 13. JAVA: Paratypes, ♂, ♀, RMNH. KALIMANTAN: Paratype ♀, ZMHB.

Tribe Selizini Melichar, 1923

Genus *Meulona* Zia, 1935

Meulona Zia, 1935: 530; Metcalf, 1957: 200 (cat.). Type species: *Meulona parva* Zia.

Diagnosis.— Head truncate, frons Y-shaped carina crossing near middle, frons angular lengthwise from Y-shaped carina, extending dorsally to border of pronotum, dorsum concave. Pronotum with small, nipplelike postocular eminence. Tegmen with short R+S stem, vein S forked apicad of vein M fork, vein Cu extending alongside claval suture for full length, one fork with convex branch bypassing claval apex to join submaginal line at postclaval sutural margin. Submarginal line and terminal veins thickened, not forking in submarginal area. Clavus heavily pustulate basally, vein A2 strongly raised, Y-stem thickened. Size small. Two posttibial lateral spines.

Distribution.— Southeast Asia.

Meulona parva Zia, 1935
(fig. 26)

Meulona parva Zia, 1935: 530 (holotype ♀, Tonkin, Hoa-Binh, de Cooman, MNHN, fig. 3); Metcalf, 1957: 201 (cat.); Medler, 1993b: 55 (type). Plesiotype ♂, Java, Jakarta [Batavia], Mäklin, ZMAN, here designated.

Material.— JAVA: Jakarta, ♂, Mäklin, ZMAN.

Diagnosis.— Plesiotype genitalia are illustrated (fig. 26).

Measurements.— Male plesiotype. Length: overall 7.5 mm; v 0.42; f 1.00; p 0.42; m 1.66; t 6.31; pcl 1.66. Width: v 0.71; f 1.04; t 2.82. Hind leg spine formula: 2:6:10.

Genus *Paraflatoptera* Lallemand, 1939

Paraflatoptera Lallemand 1939: 74; Medler, 1996a: 70 (Borneo). Type species: *Paraflatoptera transversa* Lallemand.

Microliza Medler, 1991a: 32. Type species: *Microliza epicis* Medler.

Diagnosis.— See Medler, 1996a: 70.

Key to species of the genus *Paraflatoptera*

1. Tegmen colour ivory white with broad irregular band across middle third ..... ***P. calixis*** (Medler)
- Tegmen colour overall light brown ..... ***P. epicis*** (Medler)

Paraflatoptera calixis (Medler, 1991)

Microliza calixis (Medler), 1991a: 33 (holotype ♂, Kalimantan Timur, Mahakkam, RMNH, fig. 30).
Paraflatoptera calixis; Medler, 1996a: 71 (comb.).

Material.— KALIMANTAN: Known only from the holotype.

Paraflatoptera epicis (Medler, 1991)

Microliza epicis Medler, 1991a: 32 (holotype ♂, Sulawesi Utara, Dumoga-Bone Ntional Park, BMNH, figs 21, 22).
Paraflatoptera epicis; Medler, 1996a: 70 (comb.).

Material.— SULAWESI: Known only from the holotype.

Genus *Seliza* Stål, 1862

Seliza Stål, 1862b: 312; Metcalf, 1957: 404 (cat.); Medler, 1991a: 31 (Sulawesi); Medler, 1996a: 68 (Borneo). Type species: *Poeciloptera vidua* Stål.

Diagnosis.— See Medler, 1996a: 68. The characteristic shape of the tegmen is illustrated (fig. 43).

Key to species of the genus *Seliza*

1. Head nearly truncate, weak median carina on frons ..... ***S. variata*** Melichar
- Head conical, apex with strong median carina on frons 2
2. Head longer, acutely produced; apical ventral process of aedeagus elongate, reaching pygofer ..... ***S. vidua*** (Stål)
- Head shorter, obtusely produced; apex of aedeagus with short sickle shaped dorsal process and elongate strongly recurved ventral process ... ***S. incurva*** spec. nov.

Seliza incurva spec. nov.
(figs 23, 23a)

Material.— Holotype ♂, Sumatra: Sim, Labuan Badjan, vi.1913, 41/33, E. Jacobson, ZMAN.

Diagnosis.— Morphological characters as given for genus. Closely similar to *S. vidua.* in brown coloration and size, but distinguished by unique configuration of

aedeagus apical processes, as illustrated for holotype in figs 23, 23a.

Known only from holotype.

Seliza variata Melichar, 1902

Seliza variata Melichar, 1902: 137 (holotype, ♀, Java, NHRS, pl. 7, fig. 8); Melichar, 1914: 109 (Semarang); Medler, 1986h: 336 (type); Medler, 1996a: 70 (plesiotype, ♂, Sarawak, Mt Dulit, BMNH, fig. 34, 50, Borneo).

Material.— JAVA: Samarang, ♂, vii.1909, E. Jacobson, RMNH. KALIMANTAN: ♂, Müller, RMNH; see Medler, 1996a: 70.

Seliza vidua (Stål, 1854)
(fig. 43)

Poeciloptera vidua Stål, 1854: 248 (holotype, ♀, Malaysia, Malacca, NHRS); Medler, 1991a: 31 (plesiotype, ♂, Brunei, Bukit Retak, BMNH).

Seliza vidua; Stål, 1862b: 312 (comb.); Melichar, 1902: 137 (pl. VII, fig. 11); Metcalf, 1957: 410 (cat.); Medler, 1991a: 31, (Sulawesi); Medler, 1996a: 68 (Borneo).

Material.— JAVA: Depok, ♀, 9.x.1949, C. v. Nidek; Gedangen, ♀, Seneng, ♀, 11 m, 10.i.1931, teak forest, L. Kalshoven; Bogor [Buitenzorg], ♀, 9.vi.1932, on *Citrus* spec., T.T. Mo; Semarang, ♂, 12 m, 17.iv.1931, teak-forest, L.G.E. Kalshoven; Salatiga, ♀, P. v.d. Goot, ZMAN. SUMATRA: Fort de Kock, 2 ♂♂, 2 ♀♀, 920 m, vi.1922, on *citrus*, E. Jacobson; ZMAN. SULAWESI: Sulawesi Tengah & Utara, see Medler, 1991: 31; C. Sulawesi, nr. Luwuk, Salodik, 2 ♀♀, 400-500 m, 1-14.xi.1989, Malaise trap, C. van Achterberg, new record, RMNH.

Genus *Zecheuna* Zia, 1935

Zecheuna Zia, 1935: 532; Metcalf, 1957: 472 (cat.). Type species: *Zecheuna tonkinensis* Zia.

Diagnosis.— Head conical, strong median carina on frons which is convex dorsoposteriorly, extending to transverse intergenal carina above anterior margins of eyes; well defined narrow vertex with median suture between frons and pronotum. Tegmen with two longitudinal veins (R+S, M), precostal margin twice wider basally than width of area delimited by submarginal line of crossveins; apical margin parabolic, coarse network of cells basad of submarginal line; clavus slightly elevated basally, veins A1 and A2 Y-stem thick ridgelike. Size small, two metatibial lateral spines.

Key to species of the genus *Zecheuna*

1. Apical margin of tegmen diagonal; postclaval sutural margin raised convexly from claval apex; spine formula 2:7:7 ..... ***Z. tonkinensis*** Zia
- Apical margin of tegmen parabolic; postclaval sutural margin not raised from claval apex; spine formula 2:6:6/7 ..... ***Z. azira*** spec. nov.

Zecheuna azira spec. nov.
(figs 22, 29, 32, 36)

Material.— Holotype ♂, W. JAVA, Pelabuhan Ratu, 12-13.x.1977, P.H. v. Doesburg, RMNH. Allotype ♀, LESSER SUNDA ISL, Komodo Pulau 19.viii.1965, J. Winkler, BPBM. Paratypes: ♀, JAVA, Roban, F. Muir; ♀, LESSER SUNDA ISL, Komodo Pulau, 19.viii.1965, J. Winkler, BPBM; no abdomen, SUMATRA, East Coast, Siantar Naga Haeta, 400 m, 2.vi.1921, J.B. Corporaal, ZMAN.

Diagnosis.— Conforms to description of genus. Vein S displaced by bulla, apparently merged in a short stem, but a short free segment arises from basal stem. Specimens are variable in coloration, usually colorless, devoid of dark markings; tegmen membrane heavily dusted with white waxy deposit. Head and thorax shown in dorsal view (fig. 29). Tegmen paraboloid apically (fig. 36). Holotype genitalia are illustrated (fig. 22). Female genitalia shown in left lateral view (fig. 32).

Measurements.— Holotype ♂, allotype ♀. Length: overall 7.0, 8.5 mm; v 0.50, 0.50; f 1.00, 1.00; p 0.42, 0.42; m 1.99, 1.41; t 6.31, 6.64; pcl 1.00, 0.83. Width: v 0.66, 0.66; f 0.91, 0.91; t 2.99, 2.99. Hind leg spine formula: 2:6:7; 2:6:7.

Zecheuna tonkinensis Zia, 1935
(fig. 21)

Zecheuna tonkinensis Zia, 1935: 533 (fig. 4); Metcalf, 1957: 472 (cat.). Lectotype ♂, Tonkin, Reg. de Hoa Binh, 1926, A. de Cooman, here designated.

Material.— Paralectotypes ♂, ♀, Tonkin, Hoa Binh, Cooman; ♀, Tonkin, Hoa Binh, Oberthür/Cooman, det. Yonyon Zia, MNHN.

Diagnosis.— Colour pattern distinctive, tegmen pale with green veins basally, membrane fuscous apically, small fuscous spots scattered around bulla, clavus medially with poorly defined fuscous spot. Illustration of Zia (fig. 4) apparently was based on the paralectotype male, but details of venation poorly rendered. Lectotype genitalia are illustrated (fig. 21).

Measurements.— Lectotype ♂, paralectotype ♀. Length: overall 7.0, 9.0 mm; v 0.37, 0.42; f 0.83, 1.08; p 0.37, 0.50; m 1.33, 1.83; t 5.96, 7.14; pcl 1.16, 1.49. Width: v 0.62, 0.66; f 0.83, 1.00; t 2.99, 3.32. Hind leg spine formula: 2:7:7; 2:7:7.

Tribe Siphantini Melichar, 1923

Genus *Siphanta* Stål, 1862
(fig. 47)

Siphanta Stål, 1862: 69; Metcalf, 1957: 231 (cat.); Fletcher, 1985: 3 (revision). Type species: *Poeciloptera acuta* Walker.

Siphantoides Distant, 1910a: 305; Metcalf, 1957: 245 (cat.); Fletcher, 1985: 3 (syn.). Type species: *Siphantoides conspicua* Distant.

Parasalurnis Distant, 1910a: 309; Metcalf, 1957: 199 (cat.); Fletcher, 1985: 3 (syn.). Type species: *Poeciloptera roseicincta* Walker.

Lombokia Distant, 1910b: 323; Metcalf, 1957: 250 (cat.); Fletcher, 1985: 3 (syn.). Type species: *Lombokia everetti* Distant.

Diagnosis.— See Fletcher, 1985: 3. The tegmen of *Siphanta acuta* (Walker) is illustrated (Fig. 47) to show characteristic pattern of venation.

Siphanta patruelis (Stål, 1859)

Phyllyphanta patruelis Stål, 1859: 283 (holotype ♂, Philippine Islands, Manilla, NHRS); Medler, 1986h: 331 (type, fig. 13).

Siphanta patruelis; Stål, 1862: 69 (comb.); Bierman, 1908: 161 (Java); Melichar, 1914: 108 (Java); Metcalf, 1957: 239 (cat.); Medler, 1989: 7 (figs 9, 17, 41); Fletcher, 1985: 19 (figs 33-34, 101, 189-193).

Siphanta togo Kirkaldy, 1906: 454; Metcalf, 1957: 240 (cat.); Fletcher, 1985: 19 (syn.); Medler 1987a: 123 (lectotype: ♂, Queensland, Cairns, BPBM, fig. 3).

Siphanta javana Kirkaldy, 1913;21; Fletcher, 1985: 19 (syn.); Medler, 1987a: 122 (lectotype ♂, Java, Pekalongan, Muir, BPBM, fig. 2).

Siphanta togo maculata Lallemand, 1935: 662; Fletcher, 1985: 19 (syn.).

Material.— BALI: ♀, W. Doherty, 1903-31, BMNH; JAVA: Pekalongan, 2 ♂♂, ♀ paralectotypes, F. Muir, *Siphanta javana* det. Kirkaldy; Tjampea, ca 75 km W of Bogor, ♀, 100 m, 23.x.1960, H. Hamann; S. Coast Tankubanpraku, 3 ♂♂, ♀, 27.ix.1960, J.L. Gressitt; Rinia Isl., ♀, 22.viii.1965, J. Sedlacek; Sapudi Isl, 2 ♀♀, 30.viii.1965, J. Sedlacek, BPBM; Pasoeroean, ♂, vii.1932, on Mango, R. Awibowo; Ragoenan, ♂, 18.v.1933, on *Citrus*, C. Franssen, BM 1948-536, BMNH; Batavia, ♀, Stal, "Typus", NHRS; Pelabuhan Ratu, 6 ♂♂, 3 ♀♀, 12-13.x.1977, P. v. Doesburg; Purmerend Baai v. Batavia, ♂, 14.iii.1937, J. v.d. Vecht; Bogor, ♂, Semarang Teak Forest, 15.vi.1921, L. Kalshoven; Depbang, Rembang, ♀, 6.i.1925, G. Verbeck; Preanger, Djampangtenggah, ♀, iv.1935, leMoult; Rembang, ♀, 40 m, 24.ix.1927; Verbeek; Semarang, ♀, 40 m, 27.vii.1926, Verbeck; Semarang teak forest, ♀, 1931, L.G.E. Kalshoven; Soerabaja, ♀, 1.vi.1929. W.C. v. Heurn; Java Orient, ♀, 1821, C. Maulie, *Siphanta patruelis* det. Bierman, 1907; RMNH; Batavia, ♀, 4.109, Bryant & Palmer, USNM; Salatiga, ♀, P. v.d. Goot; Semarang, ♂, ♀, E. Jacobson; Tjipetir, ♂, ♀, viii.1919, W. Roepke, ZMAN. LESSER SUNDA ISLANDS: Lombok, ♀ holotype, 2500 ft. [762 m], vi.1896, Everett, *Lombokia everetti* det. Distant; Sunda-Exp. Rensch, 3 ♂♂, 4 ♀♀, ii-vi.1927, *Lombokia everetti* det. Jacobi, SMTD; Flores, Ende, 2 ♂♂, 2 ♀♀, 12-15.vi.1927; Endeh, 2 ♂♂, 10-16.vi.1927; W. Flores, Rana Mesa, ♂, 20-30.vi.1927, Soembawa Besar, 10 ♂♂, 4 ♀♀, 24.iv.1927; Soembawa, Gatoe Doelang, ♀, 10-15.iv.1927; O. Soembawa, Dompoe, 2 ♀♀, 24-25.v.127; Sumbawa, 5 ♂♂, 8 ♀♀, 26.iv.1927; Sunda Expedition Rensch, *Lombokia everetti* det. Jacobi, ZMHU. TIMOR: Raimundo, ♀, C.I.E. A.3570, BMNH; Komodo Isl, 3 ♂♂, 3 ♀♀, 16-19.viii.1965, J. Winkler; Timor Isl, Dili, 5 m, ♀, 25-27.xii.1963, J. Sedlacek, BPBM.

Subfamily Flatoidinae Melichar, 1901

Genus *Atracis* Stål, 1866

Atracis Stål, 1866: 250; Medler, 1988a: 18 (rev); Medler, 1991a: 24 (Key, Sulawesi); Medler, 1996a: 71 (Borneo). Type species: *Flata pyralis* Guérin-Méneville.

Uxantis Stål, 1870: 775 (subgenus); Metcalf, 1957: 466 (cat.); Medler, 1988a: 18 (syn.); Fletcher, 1988: 11 (key). Type species: *Atracis (Uxantis) consputa* Stål.

Franciscus Distant, 1910b: 337; Metcalf, 1957: 513 (cat.). Type species: *Flatoides fasciatus* Walker.

Grapaldus Distant, 1914: 355; Metcalf, 1957: 455 (cat.). Type species: *Grapaldus corticinus* Distant.

Diagnosis.— See Medler 1996: 71.

Key to species of the genus *Atracis*

1. Frons with 3 longitudinal carinae, lateral pair of carinae V-shaped (Sulawesi) ..... ***A. crenata*** Medler
- Frons with median longitudinal carina only 2
2. Tegmen precostal margin with longitudinal zig-zag line of crossveins extending from base to C+R junction (Sulawesi) ..... ***A. consputa*** Stål
- Tegmen precostal margin without longitudinal zig-zag line of crossveins 3
3. Overall appearance dark brown, this coloration imparted by pigmentation of numerous tiny dots dispersed on pronotum and membrane of tegmina, and saddlelike concentration of veins and crossveins (Sulawesi) ..... ***A. taenia*** (Schmidt)
- Overall appearance red, this coloration imparted largely by pigmentation of veins and numerous tiny dots dispersed on pronotum and membrane of tegmina (*reversa* complex, identifications by examination of male genitalia) 4
4. Aedeagus without elongated dorsal process 6
- Aedeagus with elongated dorsal process 5
5. Dorsal process of aedeagus with same contour as margin of aedeagus, apex of process hooked (Java) ..... ***A jangis*** spec. nov.
- Dorsal process convex, bowed away from dorsal margin of aedeagus, apex of process pointed (Sulawesi) ..... ***A. servis*** spec. nov.
6. Ventral process of aedeagus short, stubby (Sumatra) ..... ***A. reversa*** (Melichar)
- Ventral process of aedeagus curved, elongated (Sulawesi) ... ***A. solennis*** (Melichar)

Atracis consputa Stål, 1870

Atracis (Uxantis) consputa Stål, 1870: 776; Medler 1986h: 326 (lectotype, ♂, Philippine Islands, NHRS); Medler, 1988a: 18 (comb.); Medler, 1991a: 26 (Sulawesi Utara).
Uxantis consputa; Melichar, 1902: 163 (pl. ix, fig. 8); Metcalf, 1957: 467 (cat.).

Material.— SULAWESI: Sulawesi Utara, see Medler, 1991a: 26; New records: ♀, Kendari, vi.1974, O. Beccari, MCSN; ♀, Sulawesi Tenggara, S. Sanggona, Gn. Watuwila, Centipede Camp, 1100 m, 3°49'S 121°40'E, at light, untouched forest on slope, many slender trees, little vegetation on floor, 1-3.xi.1989, J. van Tol [1989 RMNH Expedition].

Atracis crenata Medler, 1991

Atracis crenata Medler, 1991a: 25 (holotype ♂, Sulawesi Utara, Dumoga-Bone National Park, BMNH, fig. 27).

Material.— SULAWESI: known only from the holotype.

Atracis jangis spec. nov.
(fig. 19)

Material.— Holotype ♂, Java, Depok, 9.x.1949, C. v. Nidek, ZMAN.

Diagnosis.— Distinguished from related species in *reversa* complex by characters

of genitalia such as illustrated for holotype (fig. 19). Length 9.75 mm. Hind leg spine formula 1:5:lost.

Known only from the holotype.

Atracis reversa (Melichar, 1902)

Uxantis reversa Melichar, 1902: 164 (pl. 7, fig. 21); Metcalf, 1957: 466 (cat.); Medler, 1986c: 115 (lectotype ♀, Singapore, Biro, HNHM); Medler, 1993e: 41 (plesiotype ♂, Sumatra, Montes Battak, Frühstorfer, HNHM, fig. 10).
Atracis reversa; Medler, 1988a: 18 (comb.); Medler, 1996a: 72 (fig. 53, Borneo).

Material.— SUMATRA: Bengkulu, 2♀, 1200' [366m], vi-vii.1935, E. leMoult, RMNH.

Atracis servis spec. nov.
(fig. 20)

Material.— Holotype ♂, Sulawesi, Djampea, Lemba-Lembang, iii.1939, J.M.A. v. Groenendael, ZMAN.

Diagnosis.— Distinguished from related species in *reversa* complex by distinctive characters of holotype genitalia illustrated (fig. 20). Length 10.0 mm. Hind leg spine formula 1:5:5.

Known only from the holotype.

Atracis solennis (Melichar, 1902)

Uxantis solennis Melichar, 1902: 164 (holotype ♂, Sulawesi Selatan, Bua-Kraeng, HNHM); Metcalf, 1957: 469 (cat.); Medler, 1986c: 115 (type, fig. 13).
Atracis solennis; Medler, 1988a: 18 (comb.); Medler, 1991a: 25 (Sulawesi Utara).

Material.— SULAWESI: Sulawesi Selatan, Sulawesi Utara, see Medler, 1991a: 25.

Atracis taenia (Schmidt, 1904)

Uxantis taenia Schmidt, 1904a: 206 (holotype ♀, Sumatra, Soekaranda, ZMPA); Metcalf, 1957: 470 (catalog); Medler, 1996a: 72 (plesiotype ♂, Brunei, Kuala Belalong, BMNH, fig. 74).
Atracis taenia; Medler, 1988a: 18 (combination); Medler; 1996a: 72 (Borneo, fig. 74).

Material.— SUMATRA, BRUNEI, SARAWAK, see Medler, 1996a: 72.

Diagnosis.— See Medler, 1996a: 72.

Genus *Cerfennia* Stål, 1870

Flatoides (Cerfennia) Stål, 1870: 774 (subgenus). Type species: *Flatoides (Cerfennia) philippinus* Stål.
Rabocha Melichar, 1923: 109; Metcalf, 1957: 473. Type species: *Flatoides philippinus* Stål.
Cerfennia; Metcalf, 1957: 473 (cat.); Medler, 1991a: 26 (Sulawesi); Medler, 1996a: 73 (Borneo).

Diagnosis.— See Medler 1996a: 73.

Key to species of the genus *Cerfennia*

1. Pro-mesonotum not humped, dorsum plane relatively flat ... ***C. scripta*** (Melichar)
- Pro-mesonotum upraised by moderate to strong hump 2
2. Tegmen with brown crossband adjacent to distal margin of bulla, corium heavily dusted with white wax (Sulawesi) ..... ***C. celebensis*** (Melichar)
- Tegmen without crossband as described 3
3. Vertex lateral margins parallel; scutellum raised, black; clavus with 2 black spots; length 15 mm or less ..... ***C. javana*** (Melichar)
- Mesonotum with Y-carina anteriorly; scutellum not strongly raised; clavus without spots; length 16 mm or longer 4
4. Tegmen orange-yellow, 3 large dark patches in precostal margin formed by concentration of small black dots ..... ***C. carinata*** (Melichar)
- Tegmen tomentose, brown or dark brown lines and dots .. ***C. tabida*** (Gerstaecker)

Cerfennia carinata (Melichar, 1902)

Atracis carinata Melichar, 1902: 183 (holotype ♀ [abdomen lost], Java, Noualhier, MNHN); Medler, 1986d: 164 (type, fig. 7).
Cerfennia carinata; Metcalf, 1957: 474 (cat.); Medler, 1986d: 164 (fig. 7).

Material.— Known only from holotype.

Cerfennia celebensis (Melichar, 1902)

Atracis celebensis Melichar, 1902: 183 (holotype ♀, Sulawesi, Minahassa, BRNO).
Cerfennia celebensis; Metcalf, 1957: 474 (cat.); Medler, 1991a: 27 (Sulawesi).

Material.— SUMATRA: Atjeh, 1916, ♀, G. Herman, ZMAN, SULAWESI: Sulawesi Utara, holotype ♀ only.

Cerfennia javana (Melichar, 1902)

Atracis javana Melichar, 1902: 182 (holotype ♂, Ost-Java, Frühstorfer, ZMHB); Schmidt, 1904a: 377 (Java); Medler, 1986e: 49 (type, fig. 10).
Cerfennia javana; Metcalf, 1957: 474 (cat.); Medler, 1986e: 49 (comb.).

Material.— JAVA: no precise locality, ♀, 60-15, E.I.C. Horsfield, BMNH; Djampangtenggah, 3 ♀♀, iv.1935, RMNH; ♂, ♀ Gedankan vak, ZMUA; Tjibodas, ♂, 14-22.viii.1922, Dr. Th.M, ZMUC. SUMATRA: Solok, ♀, Frühstorfer, NHMW. LESSER SUNDA ISLANDS: Flores, Baru, ♀, RMNH.

Cerfennia scripta (Melichar, 1902)

Atracis scripta Melichar, 1902: 188 (holotype ♀, Borneo, MMBC); pl. 8, fig. 18); Metcalf, 1957: 495 (cat.); Medler, 1996a: 74 (plesiotype ♂, Borneo, Kalimantan, Müller, ZMAN).
Stâliana scripta; Medler, 1988a: 18 (comb.).
Cerfennia scripta; Medler, 1996a: 74 (comb.; Borneo).

Material.— BORNEO, KALIMANTAN, SABAH, SARAWAK, see Medler, 1996a: 74.

Cerfennia tabida (Gerstaecker, 1895)

Atracis tabida Gerstaecker, 1895: 34 (holotype ♀, Sumatra, Frühstorfer, II 27387, EMAU); Melichar, 1902: 191 (Borneo); Metcalf, 1957: 496 (cat.); Medler, 1996a: 75 (plesiotype ♂, Brunei, BMNH).
Atracis consocia Melichar, 1902: 181 (holotype ♀, N.O. Sumatra, Tebingtinggi, Schulthess, MMBC, pl. IX, fig. 15); Metcalf, 1957: 481 (cat.). **Syn. nov.**
Staliana tabida; Medler, 1988a: 18 (comb.).
Cerfennia tabida; Medler, 1996a: 75 (figs 3, 36, comb.).

Material.— SUMATRA: Deli, Obar Cangkak, ♀, 1894, M. Ude, *consocius* det. Melichar, ZMNB. KALIMANTAN: ♀, Borneo, 1886, Baczes, NHMW; Borneo: ♀, Sambas, 1891, Borscha, RMNH.

Measurements.— From ♀ specimen, Deli, det. *consocia* Mel, ZMNB. Length: overall 15.0 mm; v 1.12; f 1.99; p 0.58; m 2.49; t 11.75; pcl 3.50. Width: v 0.91; f 1.33; t 5.50. Hind leg spine formula: 1:6:6.

Genus *Ortracis* Medler, 1996

Ortracis Medler, 1996a: 80. Type species: *Eurybrachys conserta* Walker.

Diagnosis.— See Medler 1996a: 80.

Ortracis conserta (Walker, 1857)

Eurybrachys conserta Walker, 1857b: 155; Medler, 1990: 139 (lectotype ♂, Sarawak, Wallace, BMNH); Medler, 1996a: 81 (fig. 9, Borneo).
Flatoides principalis Stål, 1865: 159 (holotype ♀, Malacca, Ligor, NHRS); Melichar, 1902: 208 (pl. 9, fig. 6); Medler, 1986h: 332 (type).
Ortracis principalis; Medler, 1996a: 81 (syn.)
Ortracis conserta; Medler, 1996a: 80 (comb.; Borneo).

Material.— SUMATRA: Gun. Telaman, ♂, v.1917, 3/14. E. Jacobson, ZMAN.

Genus *Staliana* Medler, 1988

Staliana Medler, 1988a:18 (new name for *Atracis* auctorum, not Stål); Medler, 1996a: 76 (Borneo).
Atracis; Metcalf, 1957: 478 (cat.). Type species: *Elidiptera inaequalis* Walker.

Diagnosis.— See Medler, 1996a: 76.

Key to species of the genus *Staliana*

1. Frons without median carina. Tegmina colour buff, without distinct markings, veins strongly orange ..... ***S. bufilis*** spec. nov.
- Apex of frons with short median carina. Tegmina colour grayish, brownish or blackish, veins darkened with brown or black dashes 2

2. Costal margin slightly undulate; mesonotum with 3 black longitudinal bands ..... ***S. inaequalis*** (Walker)
- Costal margin straight or nearly so, not undulated; mesonotum bands or spots variable or absent 3
3. Length usually more than 15 mm. Tegmina broad, flattened; precostal margin with 4 dark brown patches; basal part of tegmen uniformly black brown, apical part mostly white from claval apex ..... ***S. bicolis*** spec. nov.
- Length usually less than 14 mm. Tegmina without costal patches and without strong contrast of basal brown and apical white colors 4
4. Tegmina appearing brown or dark brown; dark markings longitudinal, veins black spotted ..... ***S. lurida*** (Melichar)
- Tegmina appearing gray testaceous; dark markings aligned transversely across bullae, forming band or faint remnants of band; sometimes clear glassy area in corium across from claval apex ..... ***S. obtecta*** (Melichar)

Staliana bicolis spec. nov.
(fig. 33)

Material.— Holotype ♀, W. Celebes [Sulawesi], Paloe Loda, 1300 m, iv.1937, J.M.A. v. Groenendael, ZMAN.

Diagnosis.— Left lateral view of female genitalia illustrated (fig. 33).

Measurements.— From holotype ♀. Length: overall 18.0 mm; v 1.16; f 2.32; p 0.83; m 3.15; t 13.62; pcl 2.99. Width: v 1.16; f 1.66; t 6.31. Hind leg spine formula: 1:6:7.

Staliana bufilis spec. nov.
(fig. 27)

Material.— Holotype ♂, Sumatra, Medan, 20 m, 10.iv.1921, J.B. Corporaal, ZMAN.

Diagnosis.— Holotype genitalia are illustrated (fig. 27).

Measurements.— Holotype ♂. Length: overall 15.0 mm; v 1.33; f 2.32; p 0.83; m 2.66; t 10.96; pcl 2.32. Width: v 1.00; f 1.49; t 4.81. Hind leg spine formula: 1:6:8.

Staliana inaequalis (Walker, 1858)
(fig. 24)

Elidiptera inaequalis Walker, 1858b: 74; Medler, 1986h: 328 (type); Medler, 1990: 146 (lectotype, ♂, Sarawak, Wallace, BMNH, fig. 14).
Elidiptera inaequalis var. b, Walker, 1858b: 74; Medler 1990: 146 (syntype, ♀, Borneo, BMNH).
Atracis inaequalis; Stål, 1866: 250 (Sarawak); Melichar, 1902: 198 (Sarawak); Metcalf, 1957: 486 (cat.).
Atracis nodosa Gerstaecker, 1895: 35 (holotype, ♂, Sumatra, Frühstorfer, II 27386, EMAU); Metcalf, 1957: 491 (cat.); **syn. nov.**
Staliana inaequalis; Medler, 1988a: 18 (comb.); Medler, 1996a: 77 (fig. 25, Borneo).

Material.— SUMATRA: Holotype ♂, *Atracis nodosa*, junior synonym of *S. inaequalis*.

Diagnosis.— Holotype genitalia of *nodosa* are illustrated (fig. 24) to show same characters as *inaequalis*.

Measurements.— Holotype ♂ of *Atracis nodosa* Gerstaecker.

Length: overall 13.0 mm; v 0.83; f 1.83; p 0.75; m 2.32; t 9.96; pcl 1.99. Width: v 0.91; f 1.37; t 4.32. Hind leg spine formula: 1:6:7.

Staliana lurida (Melichar, 1902)
(fig. 28)

Atracis lurida Melichar, 1902: 197; Schmidt, 1904a: 207 (Sumatra); Baker, 1927: 400 (Siberut, Pulau); Schmidt, 1928: 140 (Java); Metcalf, 1957: 489; Medler, 1987b: 536 (lectotype ♀, Java, 1866, Baron Warsberg, NHMW). Plesiotype ♂, Java, no specific locality, Zehntner, *lurida* det. MacGillavry, ZMAN, here designated.
Staliana lurida; Medler, 1988: 18 (comb.).

Material.— JAVA: Djampangtenggah, Preanger, ♂, iv.1935, E. leMoult; no precise locality, no abdomen, Müller, RMNH; Mont Kawi, ♀, ex coll. R. Oberthür, ISNB. SUMATRA: ♀, Müller, ZMAN.

Diagnosis.— Plesiotype genitalia are illustrated (fig. 28).

Measurements.— From plesiotype ♂. Length: overall 13.5 mm; v 1.00; f 1.83; p 0.58; m 2.16; t 10.29; pcl 2.49. Width: v 0.83; f 1.33; t 4.48. Hind leg spine formula: 1:6:7.

Staliana obtecta (Melichar, 1902)

Atracis obtecta Melichar, 1902: 189 (holotype ♀, Borneo, BRNO); Metcalf, 1957 (cat.); Medler, 1996a: 78 (Plesiotype ♂, Brunei, BMNH, fig. 72).
Staliana obtecta: Medler, 1988: 18 (comb.); Medler, 1996a: 78 (fig. 72, Borneo).

Material.— KALIMANTAN: Barabei, 1883, A. Pool, *lurida* det. Melichar, ZMAN. WEST SULAWESI: Paloe Biromaroe, ♂, x.1936; G. Rangkoenau Paloe, ♂, xi.1936, J.M.A. v. Groenendael, ZMAN.

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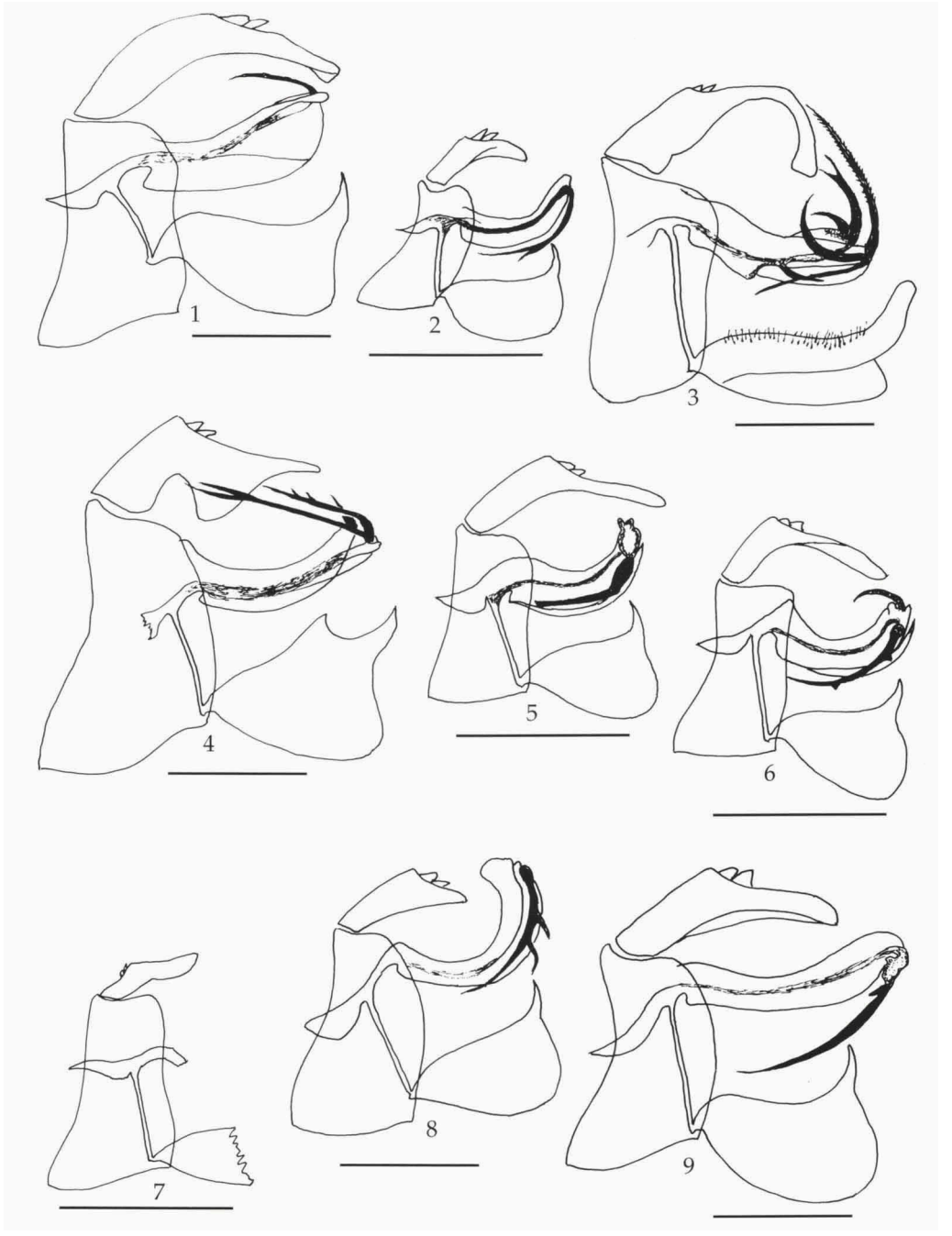
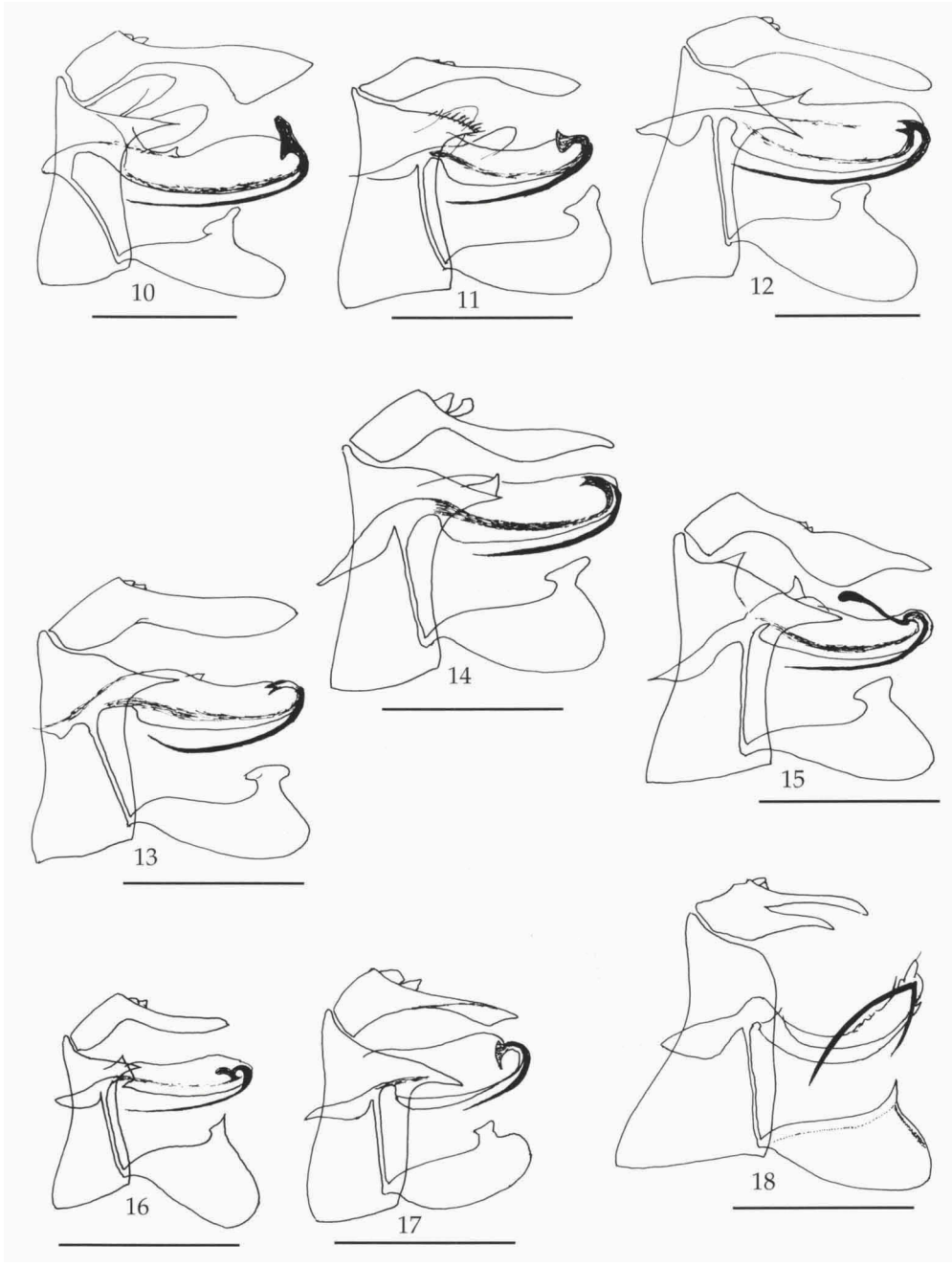
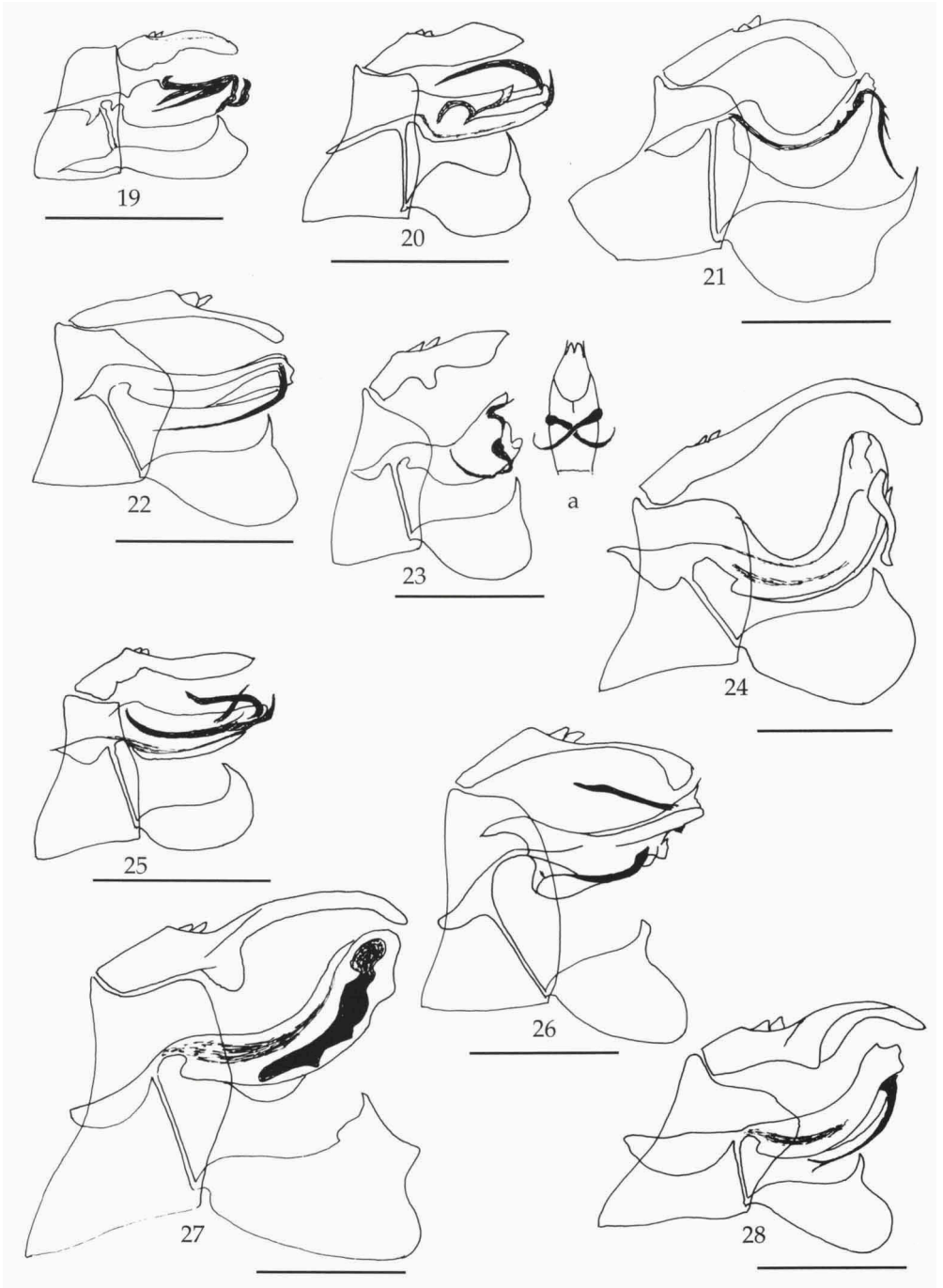


Figs. 1-9. Male genitalia, left lateral view: 1, *Cerynia bilineata* Ossiannilsson; 2, *Mimophantia maritima* Matsumura; 3, *Flata adscendens* Fabricius [*Lawana*]; 4, *Cromna acutipennis* Walker; 5, *Ormenis alba* Melichar (*Walena*]; 6, *Walena rostra* Medler; 7, *Menora longimina* Medler; 8, *Flatomorpha rubrata* Medler; 9, *Flatomorpha biglypta* Medler. Scale bar = 1 mm.



Figs. 10-18. Male genitalia, left lateral view: 10, *Nephesa guttulata* Stål [*Neomelicharia*]; 11, *Poecilopteraerubescens* Walker [*Neomelicharia*]; 12, *Cicada pustulata* Donovan [*Neomelicharia cruentata* (Fabricius)]; 13, *Neomelicharia lactealis* Kirkaldy [*Neomelicharia cruentata* (Fabricius)]; 14, *Flata cruentata* Fabricius [*Neomelicharia*]; 15, *Poeciloptera consociata* Walker [*Neomelicharia*]; 16, *Neomelicharia lucentis* Medler; 17, *Neomelicharia roseola* Medler; 18, *Seliza siporensis* Baker [*Daeda*]. Scale bar = 1 mm.



Figs. 19-28. Male genitalia, left lateral view: 19, *Atracis jangis* Medler; 20, *Atracis servis* Medler; 21, *Zecheuna tonkinensis* Zia; 22, *Zecheuna azira* Medler; 23, *Seliza incurva* Medler; 23a, ventral view; 24, *Atracis nodosa* Gerstaecker [*Staliana inaequalis* (Walker)]; 25, *Sanurus flavovenosus* Bierman; 26, *Meulona parva* Zia; 27, *Staliana bufilis* Medler; 28, *Atracis lurida* Melichar [*Staliana*]. Scale bar = 1 mm.

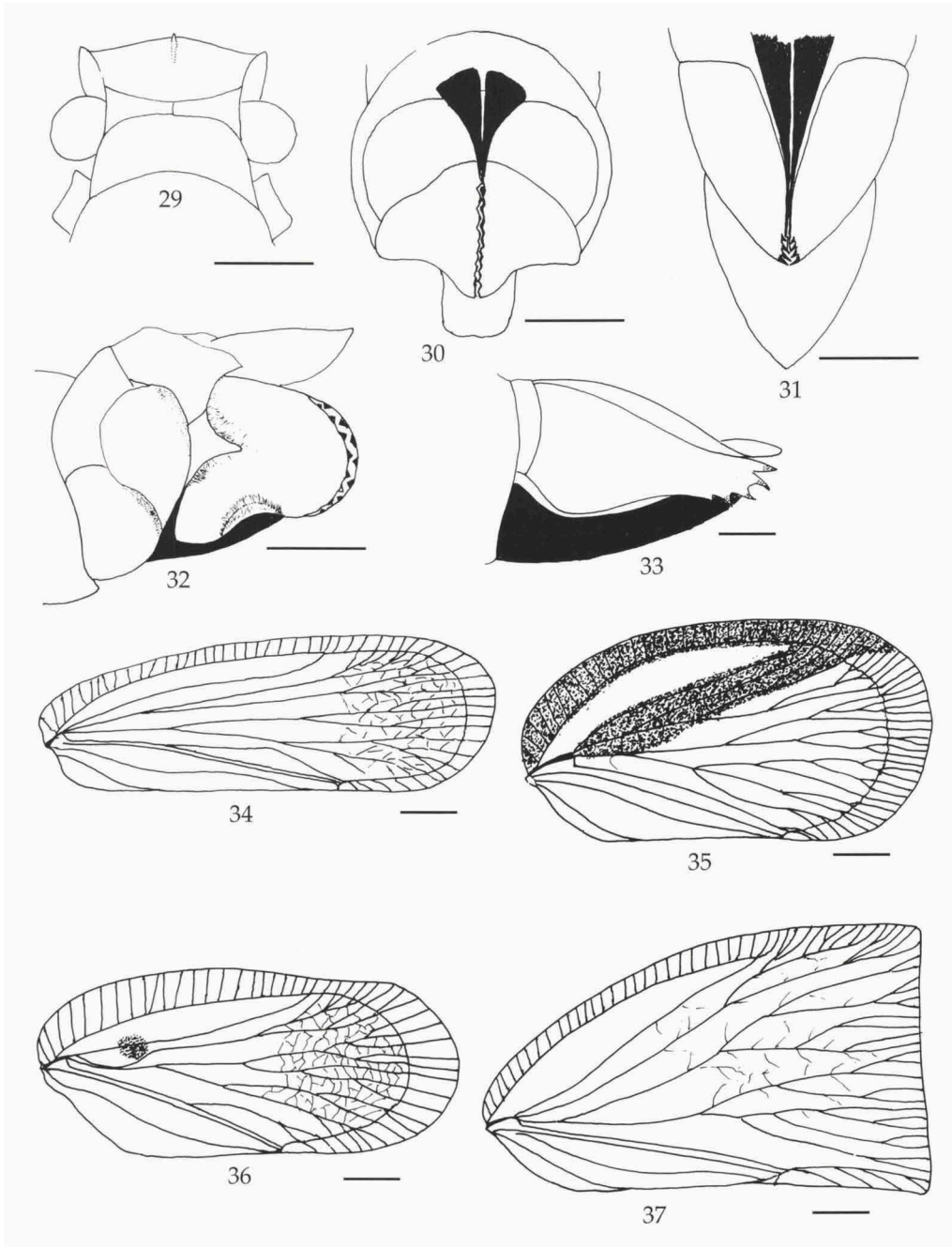
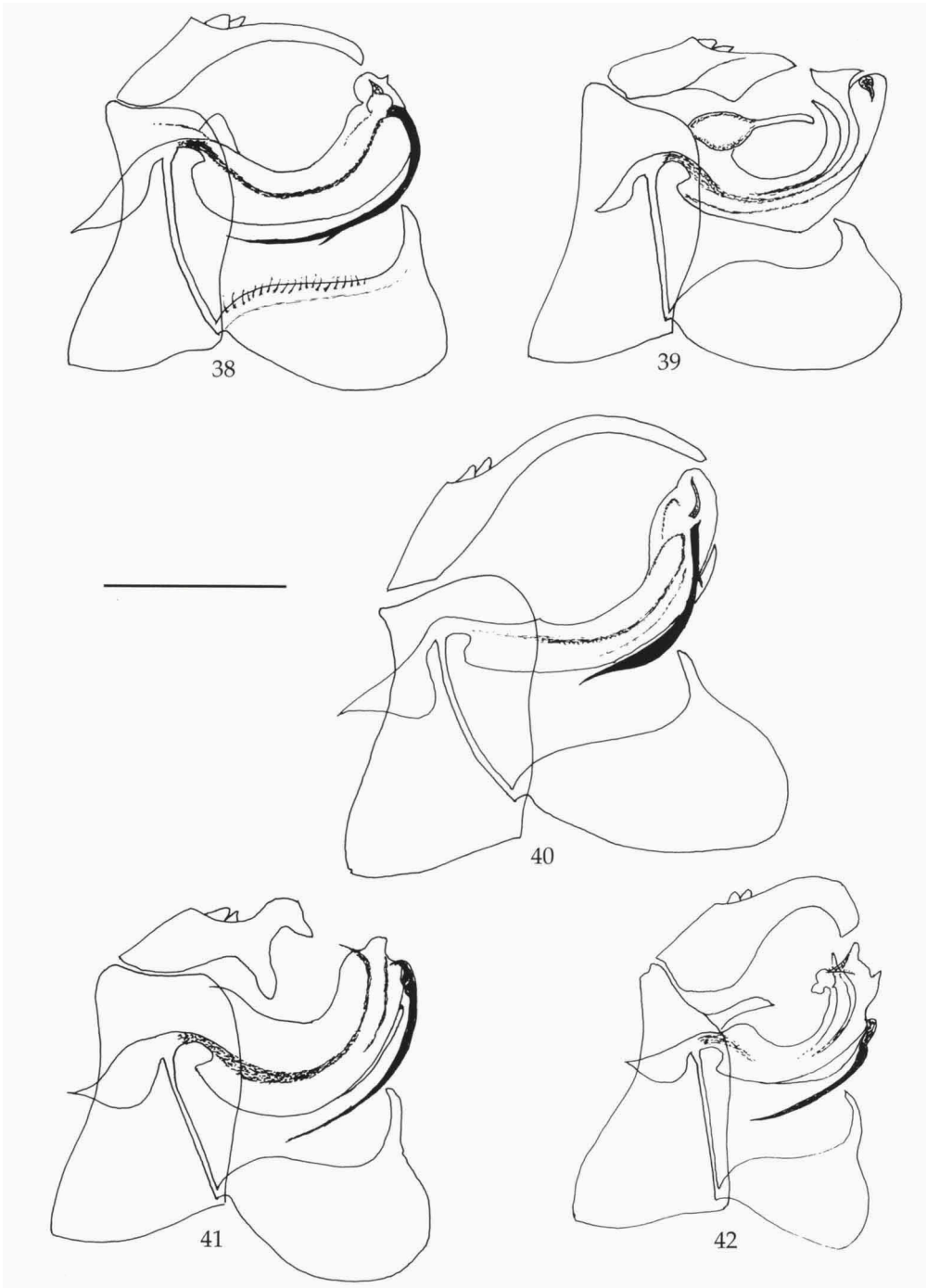


Fig. 29, Head and thorax dorsal view: *Zecheuna azira* Medler; Figs. 30-31, Female genitalia, ventral view: 30, *Insulume minutum* Medler; 31, *Menora longmina* Medler; Figs. 32-33, Female genitalia, left lateral view: 32, *Zecheuna azira* Medler; 33, *Staliana bicolis Medler*; Scale bar = 0.5 mm. Figs. 34-37, Left tegmen: 34, *Menora longmina* Medler; 35, *Ormenis ornata* Melichar [*Tormenis*]; 36, *Zecheuna azira* Medler; 37, *Insulume minutum* Medler. Scale bar = 1 mm.



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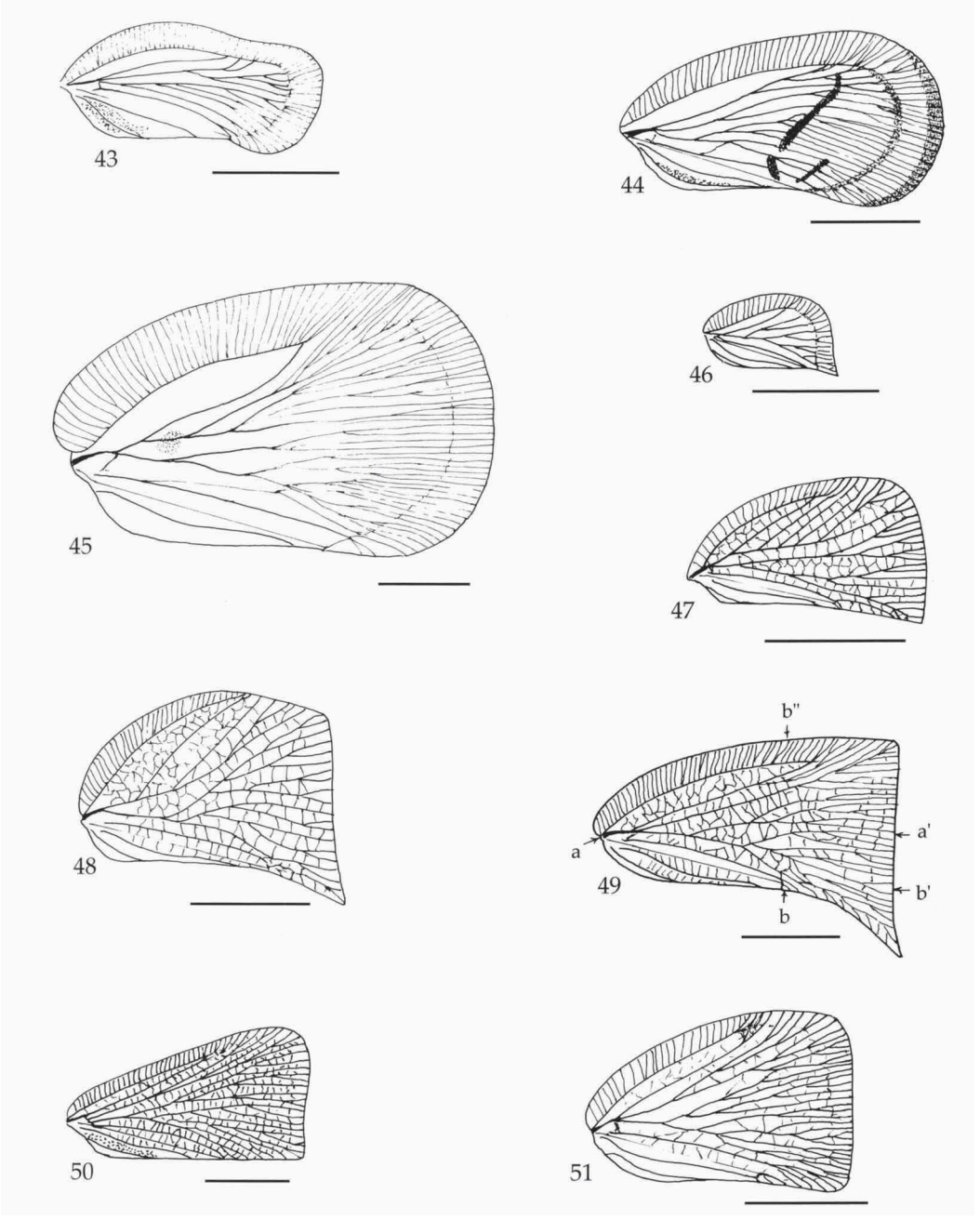
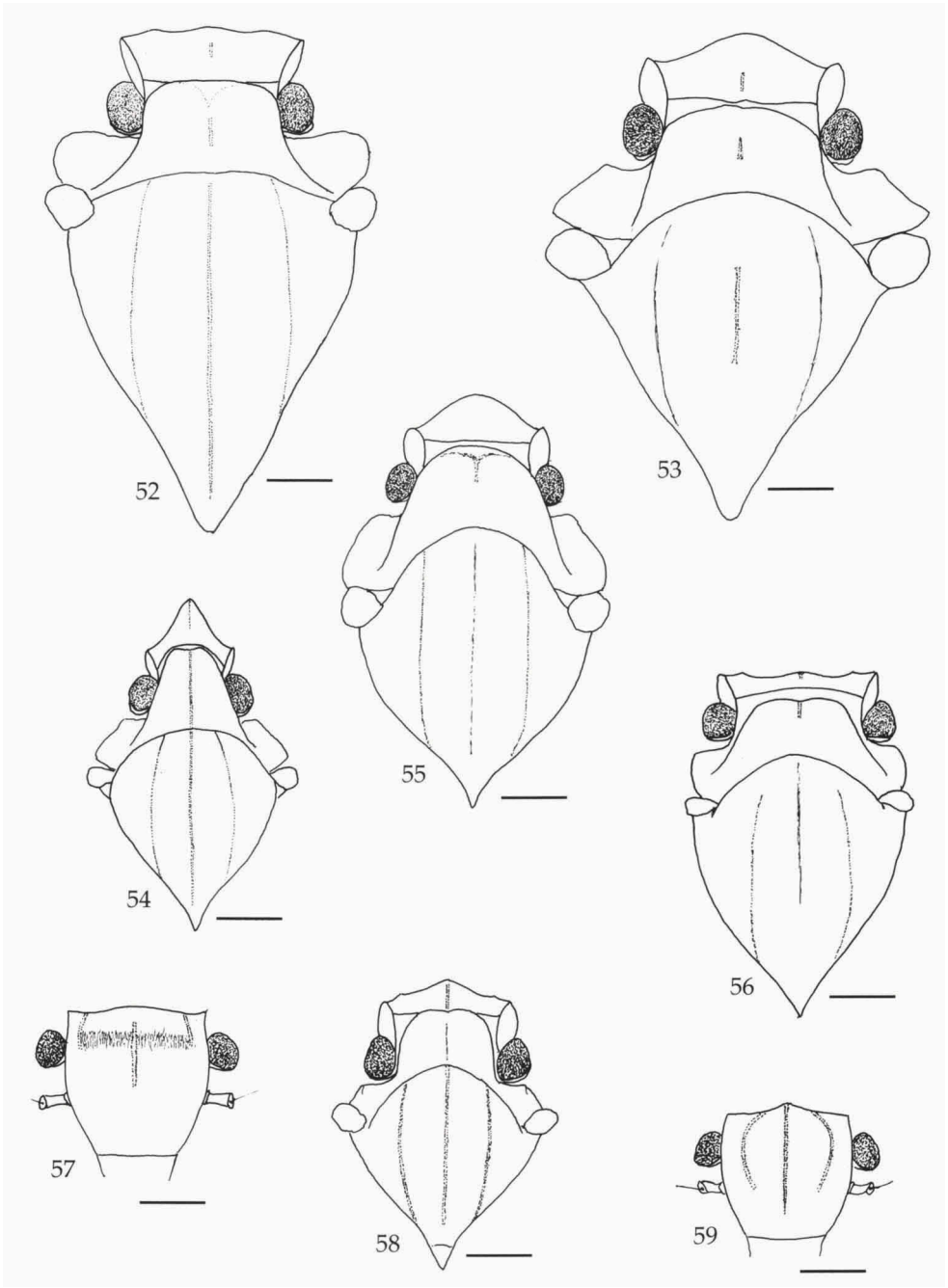


Figs. 43-51, Shape and venation of left tegmen of type genera of flatid tribes: 43, Selizini, *Seliza vidua* (Stål); 44, Ceryniini, *Cerynia albata* (Stål); 45, Phromniini, *Flatida floccosa* (Guérin-Méneville); 46, Phantiini, *Mimophantia maritima* Matsumura; 47, Siphantini, *Siphanta acuta* (Walker); 48, Phyllyphantini, *Phyllyphanta producta* (Spinola); 49, Lawanini, *Lawana candida* (Walker), Measurement parameters: a-a' = length, b-b' = postclaval sutural margin, b-b" = width; 50, Nephesini, *Nephesa rosea* (Walker); 51, Flatini, *Flata guttularis* (Walker). Scale bar = 5.0 mm.



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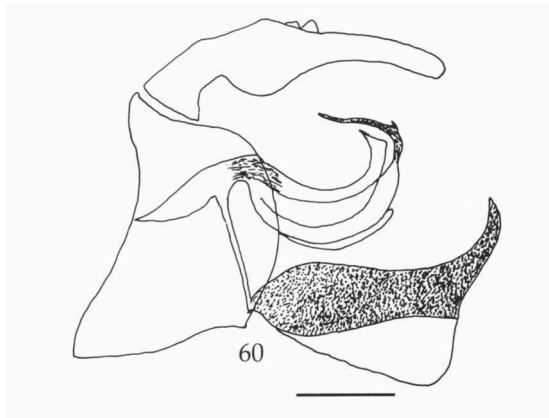

Fig. 60. Male genitalia, left lateral view: *Bythopsyrna ebonfana* Medler. Scale bar = 1 mm.

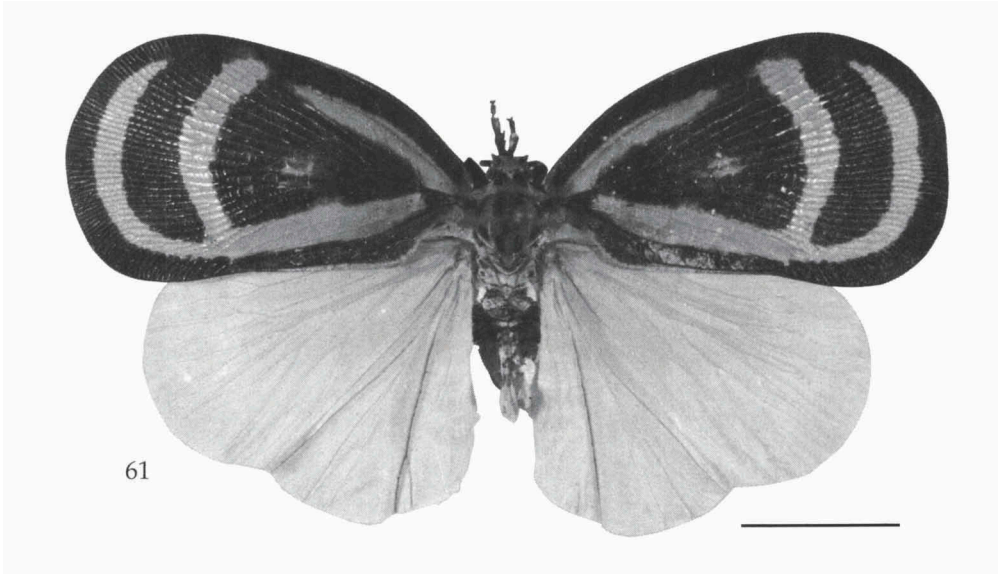

Fig. 61. Dorsal view of *Bythopsyrna ebonfana* Medler, allotype. Scale bar = 5 mm.

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Synonyms are in italics