

New sawflies (Hymenoptera: Symphyta, Tenthredinidae) from Indonesia, Papua New Guinea, Malaysia and Vietnam, with keys to genera and species

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In total 32 new species of Tenthredinidae are described from Vietnam and 18 new species from Indonesia: *Nesoselandria albotonkinensis* spec. nov., *N. albeotegularissima* spec. nov., *N. devriesiana* spec. nov., *Anapeptomena achterbergiana* spec. nov., *Neostromboceros nigrogiganteus* spec. nov., *N. gracilioides* spec. nov., *N. alboclypeatus* spec. nov., *N. daoensis* spec. nov., *N. phuongensis* spec. nov., *Abusarbidea bicoloristigmata* spec. nov., *Eusunoxa alboapicalis* spec. nov., *Neopoppia tonkinometallica* spec. nov., *Abeleses vietnamensis* spec. nov., *A. metallotonkinensis* spec. nov., *Heptamelus tonkinensis* spec. nov., *Athlophorus devriesi* spec. nov., *Rhopographus vietnamensis* spec. nov., *Xenapatidea hematothoracica* spec. nov., *X. devriesi* spec. nov., *Allantidea achterbergiana* spec. nov., *Neothrinax nigrotonkinensis* spec. nov., *Indotaxonus flavissimus* spec. nov., *Darjilingia vietnamensis* spec. nov., *D. tonkinensis* spec. nov., *D. hoangliensis* spec. nov., *Ferna achterbergi* spec. nov., *Monophadnus bicoloritonkinensis* spec. nov., *Eutomostethus phongdiensis* spec. nov., *Eutomostethus albotegularissimus* spec. nov., *Tenthredo octomaculatus* spec. nov., *T. tricoloritonkinensis* spec. nov. and *T. danangiensis* spec. nov. from Vietnam. *Neostromboceros pleuronotatus* spec. nov., *N. albopedissimus* spec. nov., *N. flavopedis* spec. nov., *N. rubroguinealis* spec. nov., *N. rubromalayensis* spec. nov., *Eusunoxa malaya* spec. nov., *Emphytus danumiensis* spec. nov., *Hemibeleles sulawesiensis* spec. nov., *Neopoppia irregularata* spec. nov., *Tenthredo nigrosabahensis* spec. nov., *T. djampangensis* spec. nov., *Neothrinax kaindiensis* spec. nov., *N. excavata* spec. nov., *N. gedehensis* spec. nov., *Abeleses metallojavanus* spec. nov., *Caliroa nigrojavana* spec. nov., *Nesoselandria sulawesiensis* spec. nov. and *Athlophorus achterbergianus* spec. nov. from Indonesia. *Monophadnus glaucus* Enderlein, 1919; *Monophadnus sumatranus* Enderlein, 1919; *Amonophadnus nigripennis* Benson, 1935; *Amonophadnus nigrojavanus* Haris, 2002; *Corporeaalinus azureus* Forsius, 1925; *Corporeaalinus cyanescens* Forsius, 1925; and *Corporeaalinus jacobsoni* Forsius, 1929, are proposed as new synonyms of *Monophadnus rivalis* Konow, 1906. An identification key is added for the known Tenthredinidae of Borneo, Sumatra, Java, Sulawesi and New Guinea.

Introduction

In this paper the Symphyta collected during RMNH-expeditions to Malaysia, Indonesia and Vietnam are treated. Between 1987 and 2001 several expeditions and extended collecting by Malaise traps in Sabah and North Vietnam took place: 1987 to Malaysia (Borneo, Sabah, Danum Valley with additional material in 1991), 1989-1997 to Indonesia, (1989: SE Sulawesi (Sanggona); 1991: C Sulawesi, (Mamasa, Penannang), SW Sulawesi (Ciakar Alam, Laya); and Bali (Negara, Batuagung), 1993: Sula Islands (Mongole), 1997: SW Sulawesi (Bulusaarung), 1999-2001 to Vietnam, (North: 1999: Hoang Lien; Viet Try, Thanh Son), 2000: Ninh Binh, Cuc Phuong N.P.; Tay Con Linh and 2001: Hoang Lien; and Central: 2001: Thua Thien, Phong Dien N.R.; Bach Ma N.P.).

In addition, a few other species from Malaysia and Papua New Guinea are described

which had been collected earlier and deposited in the natural history museums at Amsterdam and Leiden. In the first part of this study the species of Indonesia, Malaysia and Papua New Guinea are treated and a key is added including all known described Tenthredinidae from this region. Notes on the distribution, flying period or date of collection and host plants are added. In the second part the new species of Vietnam are treated. The checklist of the Vietnamese Tenthredinidae will be published separately. To prepare a key for all the Vietnamese sawflies is too early due to the low number of known sawfly species from this country.

In April 2003 a paper was submitted to "Folia entomologica hungarica" containing part of the material reported here. The manuscript was reviewed and accepted and proofs were distributed, but due to internal problems, which are wholly independent from the author, this paper has not appeared. Therefore, the results of the unpublished paper are summarized in the present paper.

The EFI photographs has been made with an Olympus motorised stereomicroscope SZX12 with AnalySIS Extended Focal Imaging Software.

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The following abbreviations are used:

IEBR	Institute of Ecology and Biological Resources, Hanoi;
PAN	Zoological Museum, Polish Academy of Sciences, Warsaw;
RMNH	National Museum of Natural History, Leiden;
TMA	Hungarian Natural History Museum, Budapest;
ZMA	Zoological Museum, University of Amsterdam;
ZMB	Zoological Museum, Bogor-Cibinong.

Sawflies from the Malaysia, Indonesia and Papua New Guinea

The number of species known from the Malesian area is small compared to the Asian continental region. A total of 106 species and subspecies are listed, including the new species from Indonesia, Malaysia and Papua New Guinea. Only 24 of the species occur also on the Asian continent, the distribution area of 14 of the 23 species does not reach the Malay Peninsula (Wallacean endemics). The distribution of the other 82 species is restricted to the islands. We enumerate 43 species from Java, 39 from Sumatra, 37 from Borneo, 9 from Celebes and 6 from New Guinea (including New Britain Island). Amongst the listed 105 species and subspecies, 20 occur exclusively in Java, 24 species are restricted to Borneo, 11 to Sumatra, 5 to Celebes and 6 species occur exclusively in New Guinea. The Indonesian, Malaysian and New Guinean sawfly fauna is characterised by the high ratio of endemism reaching 100% in New Guinea. The following new species are described below from the region: *Neostromboceros pleuronotatus* spec. nov., *N. albopedissimus* spec. nov., *N. flavopedis* spec. nov., *N. rubroguinealis* spec. nov., *N. rubromalayensis* spec. nov., *Eusunoxa malaya* spec. nov., *Emphytus danumiensis* spec. nov., *Hemibeleles sulawesiensis* spec. nov., *Neopoppia irregulata* spec. nov., *Tenthredo nigrosabahensis* spec. nov., *T. djampangensis* spec. nov., *Neothrinax kaindiensis* spec. nov., *N. excavata* spec. nov., *N. gedehensis* spec. nov., *Abeleses metallojavanus* spec. nov., *Caliroa nigrojavana* spec. nov., *Nesoselandria sulawesiensis* spec. nov. and *Athlophorus achterbergianus* spec. nov.

The first collections, namely the Fruhstorfer and the Shelford collections, were identified and published by Konow (1898a, b), Cameron (1903) and Mocsáry (1909). The types are deposited in Eberswalde, London and Budapest. Enslein (1911, 1912) published the sawflies of the Jacobson collection. Enslein never returned the types to The Netherlands and kept them in his private collection. In this period, Rohwer (1912) also described some new species by elaborating the collection of the Smithsonian Institute. Enderlein delivered the next significant contribution when he published his results in 1919 (Enderlein, 1919). His collection is deposited in the Warsaw Museum. Forsius (1925, 1929, 1934) published about the Corporaal collection and the remainder of the Jacobson material. The Forsius types are deposited mainly in Leiden and some in Amsterdam. He identified the Pendlebury collection as well (Forsius, 1933) and returned the types to the former Selangor Museum in Malaysia. Benson (1935) described a few species from the Leiden collection. Japanese authors (Shinohara, 1998 and Togashi 1981, 1986) recorded four new species from the Maa, Niisato and Hirashima expeditions deposited in the National Science Museum, Tokyo. Haris (2000), published one new species deposited in The Natural History Museum, London. In addition, he identified the Groenendael (Amsterdam) and the Adebratt collections (Lund) (Haris, 2002).

Most of the Oriental genera were revised by Malaise (1944, 1945, 1947, 1961, 1964). The present study is based partly on the revisional work of Malaise, and partly on the revisional works of other contemporary authors (Shinohara, 1998; Smith et al., 2002; Vasu & Saini, 1998). The extensive descriptions in the keys from the mentioned literature, allow to presentation of the first identification keys to the Tenthredinidae fauna of these islands of Indonesia, Papua New Guinea and East Malaysia (Sabah). During the stay in Amsterdam and Leiden, all the available types (as listed by Thomas, 1987) has been checked.

List of species from Malaysia, Indonesia and Papua New Guinea

Valid names are printed in bold, synonyms (indented) and original names (if different) in normal type.

Subfamily Selandrinae [MacGillivray, 1906]

Genus *Abeleses* Enslein, 1911

Abeleses metallocyaneus (Haris 2002)

Emphytus metallocyaneus Haris, 2002

Abeleses metallojavanus spec. nov.

Genus *Athalia* Leach, 1817

Athalia lugens ssp. *proxima* (Klug, 1815)

Tenthredo proxima Klug, 1815

Athalia funebris Forsius, 1929

Athalia lugens var. *tristis* Forsius, 1934

Athalia proxima var. *funebris* Forsius, 1925

Genus *Athlophorus* Burmeister, 1847

Athlophorus achterbergianus spec. nov.

Athlophorus borneensis Malaise, 1947

Athlophorus capreae Forsius, 1936

Athlophorus flavocapreae Haris, 2002

Athlophorus gracilis ssp. *orbitalis* (Konow, 1906)

Athlophorus orbitalis Konow, 1906

Athlophorus jacobsoni Enslein, 1912

Athlophorus klugii Burmeister, 1847

Athlophorus klugii ssp. *javanus* (Enslein, 1912)

Athlophorus javanus Enslein, 1912

Athlophorus klugii ssp. *scurrilis* (Konow, 1901)

Athlophorus scurrilis Konow, 1901

Athlophorus nigrojavanus Haris, 2002

Athlophorus puncticeps Benson, 1935

Athlophorus similis Forsius, 1929

Athlophorus sumatranus Forsius, 1929

Genus *Busarbidea* Rohwer, 1915

Busarbidea jacobsoni (Forsius, 1929)

Canoniades jacobsoni Forsius, 1929

Busarbidea lucti Malaise, 1944

Genus *Canonias* Konow, 1901

Canonias inopinus Konow, 1901

Canonias annulicornis Enderlin, 1919

- Canonias jacobsoni* Forsius, 1929
 Genus *Caliroa* O. Costa, 1859
Caliroa nigrojavana spec. nov.
 Genus *Denticornia* Malaise, 1944
Denticornia subtilis (Benson, 1935)
Stromboceros subtilis Benson, 1935
 Genus *Emphytus* Klug, 1815
Emphytus borneensis Forsius, 1933
Emphytus danumiensis spec. nov.
Emphytus insularis Forsius, 1933
 Genus *Euforsius* Malaise, 1944
Euforsius jacobsoni (Forsius, 1929)
Stromboceridea jacobsoni Forsius, 1929
 Genus *Eusunoxa* Enslin, 1911
Eusunoxa ebena Smith and Saini, 2003
Eusunoxa malaya spec. nov.
 Genus *Hemibeleses* Takeuchi, 1929
Hemibeleses sulawesiensis spec. nov.
 Genus *Heptamelus* Haliday, 1855
Heptamelus javanus Enslin, 1912
Heptamelus ruficinctus Malaise, 1961
Heptamelus rugifrons Malaise, 1961
Heptamelus sipitangensis Haris 2002
 Genus *Malaisea* Forsius 1933
Malaisea malayana Forsius, 1933
 Genus *Neopoppia* Rohwer, 1912
Neopoppia irregularata spec. nov.
Neopoppia metallica Rohwer, 1930
Pseudopoppia metallescens Forsius, 1925
 Genus *Neostromboceros* Rohwer, 1912
Neostromboceros albicalcar (Enderlein, 1919)
Stypoza albicalcar Enderlein, 1919
Neostromboceros albicomus (Konow, 1901)
Stromboceros albicomus Konow, 1901
Stromboceros cenchralis Konow, 1908
Stromboceros metallicus Rohwer
Neostromboceros alpopedissimus spec. nov.
Neostromboceros borneensis Forsius, 1933
Neostromboceros celebensis Forsius, 1931
Neostromboceros coeruleomicans Forsius, 1925
Neostromboceros coneger (Konow, 1901)
Stromboceros coneger Konow, 1901
Neostromboceros karnyi Forsius, 1931
Neostromboceros groenandeli Haris, 2002
syn. nov.
Neostromboceros nigrojavanus Haris, 2002
syn. nov.
Neostromboceros prianganensis Haris, 2002
syn. nov.
Neostromboceros coxalis (Smith, 1857)
Stypoza cyanea Enderlein, 1919
Neostromboceros flavopedis spec. nov.
Neostromboceros hirashimai Togashi, 1986
Neostromboceros javanus (Enslin, 1912)
Stromboceros javanus Enslin, 1912
Neostromboceros iridipennis (Cameron, 1903)
Selandria iridipennis Cameron, 1903
Neostromboceros javanus (Enslin, 1912)
Neostromboceros handschini Forsius, 1934
Neostromboceros laevis (Konow, 1898)
Stromboceros laevis Konow, 1898
Neostromboceros similis Rohwer, 1915
Neostromboceros luchtii Malaise, 1944
Neostromboceros minutus (Enderlein, 1919)
Stypoza minuta Enderlein, 1919
Neostromboceros marbauensis Haris 2002
Neostromboceros peterseni Togashi, 1981
Neostromboceros pictipennis (Konow, 1908)
Stromboceros pictipennis Konow, 1898
Bornea pictipennis Malaise, 1944
Neostromboceros pleuronotatus spec. nov.
Neostromboceros rubroguinealis spec. nov.
Neostromboceros rubromalayensis spec. nov.
Neostromboceros rufa Benson, 1935
Neostromboceros sabahensis Haris, 2002
 Genus *Neothrinax* Enslin, 1912
Neothrinax excavata spec. nov.
Neothrinax gedehensis spec. nov.
Neothrinax pallidicornis Rohwer, 1912
Neothrinax albimaculatus Rohwer, 1912
Neothrinax corvina Malaise, 1944
Neothrinax javana Enslin, 1912
Neothrinax kaindiensis spec. nov.
Neothrinax sumatrana Forsius, 1929
 Genus *Nesoselandria* Rohwer, 1910
Nesoselandria abdominalis (Enslin, 1912)
Anaepetamena abdominalis Enslin, 1912
Nesoselandria albicornis (Forsius, 1929)
Anaepetamena albicornis Forsius, 1929
Nesoselandria annulata Malaise, 1944
Nesoselandria bruneiensis (Haris, 2000)
Aneugmenus bruneiensis Haris, 2000
Nesoselandria imitatrix (Ashmead, 1905)
Paraselandria imitatrix Ashmead, 1905
Nesoselandria jacobsoni (Enslin, 1912)
Anaepetamena jacobsoni Enslin, 1912
Nesoselandria javana (Enslin, 1912)
Anaepetamena javana Enslin, 1912
Nesoselandria montana (Forsius, 1929)
Anaepetamena montana Forsius, 1929
Nesoselandria nigroalata Haris, 2002
Nesoselandria picticornis Malaise, 1944
Nesoselandria rugafrons (Benson, 1935)
Anaepetamena rugafrons Benson, 1935
Nesoselandria sulawesiensis spec. nov.
 Genus *Rhopographus* Konow, 1899
Rhopographus procinctus (Konow, 1898)
Rhopotroceros procinctus Konow, 1898

Jacobsoniella brachycera Forsius, 1929
Genus *Salatigia* Enslin, 1911
Salatigia roepkei Enslin, 1911
Genus *Tala* Malaise, 1935
Tala rufo-balteata (Cameron, 1907)
Siobla rufo-balteata Cameron, 1907
Genus *Tritobrachia* Enderlein, 1919
Tritobrachia tenuicornis Enderlein, 1919

Subfamily Blennocampinae [MacGillivray, 1906]

Genus *Ateloza* Enderlein, 1919
Ateloza pilosa (Konow, 1898)
Monophadnus pilosus Konow, 1898
Ateloza solcicornis Enderlein, 1919
Genus *Messa* Leach, 1817
Messa javana Enslin, 1912
Genus *Senoclidea* Rohwer, 1913
Senoclidea chalybea (Mocsáry, 1909)
Waldheimia chalybea Mocsáry, 1909
Senoclidea comis (Konow, 1898)
Monophadnus comis Konow, 1898
(?) *Senoclidea amala* (Rohwer, 1912)
Senoclidea furva (Konow, 1898)
Monophadnus furvus Konow, 1898
Senoclidea mimetica (Enderlein, 1919)
Monophadnus mimeticus Enderlein, 1919
Senoclidea trichiocerus (Cameron, 1903)
Monophadnus trichiocerus Cameron, 1903
Genus *Monophadnus* Hartig, 1837
Monophadnus javanus Enderlein, 1919
Monophadnus pullus (Benson, 1935)
Amonophadnus pullus Benson, 1935
Monophadnus rivalis Konow, 1906
Monophadnus glaucus Enderlein, 1919
syn. nov.
Amonophadnus nigripennis Benson, 1935
syn. nov.
Amonophadnus nigrojavanus Haris, 2002
syn. nov.

Corporaalinus azureus Forsius, 1925 **syn. nov.**
Corporaalinus cyanescens Forsius, 1925
syn. nov.
Corporaalinus jacobsoni Forsius, 1929 **syn. nov.**
Monophadnus sumatranus Enderlein, 1919
syn. nov.
Genus *Phymatoceroidea* Rohwer, 1916
Phymatoceroidea javana Malaise, 1964
Phymatoceroidea mjobergi Forsius, 1929
Genus *Euthomostethus* Enslin, 1913
Euthomostethus vegetus (Konow, 1906)
Tomostethus vegetus Konow, 1906
Genus *Waldheimia* Brulle, 1846
Waldheimia funebris (Konow, 1898)
Monophadnus funebris Konow, 1898

Subfamily Tenthredininae [Cameron, 1882]

Genus *Tenthredo* Linnaeus, 1758
Tenthredo borneo Shinohara, 1998
Tenthredo corporaali Forsius, 1925
Tenthredo djampangensis spec. nov.
Tenthredo largifasciata (Konow, 1901)
Allantus largifasciatus Konow, 1901
Parastatis indica Kirby, 1881 (preocc. name)
Allantus dudgeoni Cameron, 1907
Tenthredo nigrosabahensis spec. nov.
Tenthredo niisatoi Shinohara, 1998
Tenthredo rugolosa (Mocsáry, 1909)
Allantus rugulosus Mocsáry, 1909
Tenthredo sumatrana (Forsius, 1936)
Allantus sumatranus Forsius, 1936
Tenthredo umbonigera Konow, 1906

Subfamily Nematinae [Cameron, 1882]

Genus *Pristiphora* Latreille, 1810
Pristiphora borneensis Forsius, 1933

Key to subfamilies of the family Tenthredinidae from Malaysia, Indonesia and Papua New Guinea

The subfamily classification of the family Tenthredinidae is not consolidated yet. Several different classifications are available, but in this paper the subgeneric classification of Zombori (1982) has been accepted.

1. Radial cell of fore wing without crossvein (fig. 101). Hind wing with closed cubital and middle cells (fig. 102). Antenna always with 9 segments. Basal and first recurrent vein always convergent (fig. 101). Anal cell of fore wing always with long stem (fig. 101) subfamily **Nematinae**
One genus with one species is recorded. Rare in the tropical regions.

- Radial cell of fore wing divided with crossvein (figs 103-106). Hind wing either with closed or open cubital and middle cells. Antenna with 7-16 segments, but 9 segmented in most species. Relative position of basal and first recurrent veins and shape of anal cell of fore wing variable 2
- 2. Anal cell of fore wing with long stem and either with or without basal loop (fig. 106), if closed and with basal loop, then loop comparatively long (fig. 106). Antenna with 9-16 segments subfamily **Blennocampinae**
7 genera with 14 species are recorded from the area.
- Anal cell of fore wing complete, without stem (fig. 103), if divided into two loops, then with very short loops (fig. 103 and 105). Antenna with 7-15 segments 3
- 3. Second cubital crossvein missing, resulting in an elongate second cubital cell. Fore wing with 3 cubital cells. Antenna always with 9 segments. Anal cell of fore wing always with crossvein (subfamily **Dolerinae**)
This subfamily is still not recorded from the islands.
- Second cubital crossvein always present (fig. 103-105), but first cubital crossvein frequently missing. Fore wing with 3-4 cubital cells. Antenna with 7-15 segments. Anal cell of fore wing either with or without crossvein 4
- 4. Subcosta twice broken just before reaching pterostigma, forming a small widened area between costa and subcosta in front of pterostigma (fig. 103). Basal and first recurrent veins parallel (fig. 103). Antenna with (8-)9 segments subfamily **Tenthredininae**
One genus with nine species is recorded from the area.
- Subcosta straight, without widened area in front of pterostigma (figs 104-105). Relative position of basal and the first recurrent veins variable. Antenna with 7-15 segments subfamily **Selandrinae**
In total 82 species in 21 genera are recorded; therewith, it is the dominant subfamily in the area.

Key to genera of the subfamily Selandrinae from Malaysia, Indonesia and Papua New Guinea

- 1. Antenna with more or less than 9 segments 2
- Antenna with 9 segments 4
- 2. Antenna with more than 9 segments. Hind wing with one or two closed cell medially. Ovipositor normal. Claws variable 3
- Antenna with 7 segments. Hind wing with two closed cell medially. Ovipositor longer than hind tibiae. Claws variable but always with subapical tooth. [Basal and first recurrent veins of fore wing strongly convergent] **Heptamelus** Haliday, 1855
- 3. Hind coxa lengthened so apices of hind femur reaching apex of abdomen (fig. 65). Clypeus truncate. Hind wing with one closed cell medially. Apical and subapical tooth of claws subequal. Antenna with 10 segments. (In general, *Eusunoxa* species have 9-segmented antennae, however, the only species which occur in the islands has 10 segments). [Hind metatarsus as long as or longer than following tarsal segments combined with groove along outer side] **Eusunoxa** Enslin, 1911
- Hind coxa and hind tarsus normal. Clypeus not truncate. Hind wing with two closed cells medially. Claws without subapical tooth. Antenna with 10-12 segments **Athalia** Leach, 1817

4. Cross vein of anal cell of fore wing very short, therefore anal cell seems to be contracted. Antennal segments strongly flattened, triangularly shaped. Metallic bluish sawfly (fig. 92) *Salatigia* Enslin, 1911
 - Fore wing with or without cross vein, if cross vein present, then of normal length and anal cell not contracted. Antennal segments normal. Body variously coloured 5
5. Anal cell of first wing without cross-vein 6
 - Anal cell of first wing with cross-vein 10
6. Claws with large basal lobes and subapical tooth (figs 39, 43). Subapical tooth sometimes a little shorter or longer than apical tooth. Middle supraantennal pit large and lateral supraantennal pits frequently subdivided into twin pits. [Basal and first recurrent vein mostly parallel, in a few species might be convergent. Black or black and red species (figs 75, 79 and 80). Fore wing with 3-4 cubital cells, first cubital cell frequently missing. Anal cell sessile. Apical half of fore wing frequently infumate (otherwise wings may be hyaline or entirely infumate). Third antennal segment longer than fourth] *Neostromboceros* Rohwer, 1912
(Genus *Ateloza* Enderlein, 1919 may run here. This monotypic genus has intermediary position between *Selandrinae* and *Blennocampinae*. The extraordinarily long pubescence on head and thorax clearly differs this genus from *Neostromboceros* Rohwer, 1912. In details, I discuss this genus under the subfamily *Blennocampinae*).
 - Claws without basal lobe or basal lobe hardly visible (figs 36, 40, 41, 49). Lateral supraantennal pits, when present, univided 7
7. Basal and first recurrent vein convergent. Small plump or elongated species and maximally 7.0 mm long. Fore wing with 3-4 cubital cells 8
 - Basal and first recurrent vein subparallel. Medium-sized and always elongated species. Fore wing with 4 cubital cells 9
8. Presternum missing. Anal cell of hind wing petiolate. Basal vein strongly curved. Mesopleuron mostly without a pale spot. [Small, plump sawflies, 3-6 mm. Fore wing with 3 or 4 cubital veins, first cubital vein frequently missing. Hind orbits short and strongly contracted behind the eyes. Subapical tooth somewhat shorter than apical tooth. Mostly brown or black insects, mesopleuron without pale spots. Malar space linear. Mouthparts, antennal segments and tegulae may be brown, black or pale but mesopleuron without pale spot and pronotum without pale margin. Anal cell of hind wing petiolate. Head frequently with a strong horizontal furrow from eye to eye above antennae. Frontal area poorly defined and hardly visible. Hind wing with two closed cells medially (fig. 89)] *Nesoselandria* Rohwer, 1910
 - Presternum present. Anal cell of hind wing sessile or petiolate. Basal vein hardly curved. Mesopleuron always with pale spot. [Parapterum and under side of abdomen basally always pale. Frequently but not always pale are: mouthparts, scapus, and tegulae and pronotal margin. Abdomen frequently with fulvous band. Body 6-7 mm, medium-sized. Temples relatively narrow, head strongly converging behind eyes, carinated only at extreme base. Venation and pterostigma always dark brown to black. Malar space linear. First cubital vein frequently missing. Subapical tooth shorter than apical. Hind wing with two closed cells medially. (figs 83, 84, 90)] *Neothrinax* Enslin, 1912
9. Subapical tooth of claws subequal or little longer and wider than apical tooth. Body black, mouthparts, margin of pronotum, tegulae and parapterum whitish, first-fifth

- (-sixth) abdominal segments reddish. Mesopleuron without pale spot. Wings hyaline, apices of fore wing brownish infusate. Anal cell petiolate ... *Euforsius* Malaise, 1944
- Subapical tooth of claws about half as long as apical tooth (fig. 49). Black with strong bluish lustre, except yellowish white base of tibiae and posterior margins of abdominal tergites, both seventh and eighth abdominal segments with whitish triangular stripe. Anal cell sessile *Denticornia* Malaise, 1944
 - 10. Hind coxa lengthened, hind femur reaching apex of abdomen (figs 52, 53, 65) 11
 - Hind coxa normal, remain removed from apex of abdomen 12
 - 11. Body elongate, metallic bluish (figs 52, 53), hind metatarsus elongate. Claws sometimes with basal lobes and always with smaller subapical tooth (fig. 38). Hind wing in male partially with marginal vein *Abeleses* Enslin, 1911
 - Body more or less plump, without metallic bluish lustre. Hind basitarsus long but laterally compressed. Body mainly black or richly coloured with yellow, orange, white or brown (fig. 65). Claws with or without basal lobe and with smaller subapical tooth *Eusunoxa* Enslin, 1911
- Two species live in the islands of Indonesia and Malaysia, one has 10 and the other has 9-segmented antennae, see also couplet 3 above.
- 12. Basal and first recurrent veins convergent 13
 - Basal and first recurrent veins subparallel 17
 - 13. Claws without inner tooth but with basal lobe (fig. 37). Hind wing with sessile anal cell and without closed middle cell. Small, plump, black sawflies with extensively yellow legs (fig. 60). Cross vein of anal cell of fore wing oblique *Caliroa* O. Costa, 1859
 - Claws with small inner tooth without basal lobe. (figs 42, 44, 45). Anal cell of hind wing sessile or petiolate. Cross vein of anal cell of fore wing variable. Hind wing with one or two closed cells medially 14
 - 14. Larger, elongated species, 7.0-11.0 mm. Subapical tooth of tarsal claws large, sometimes claws with a second inner tooth as in fig. 44 15
 - Small, normal shaped or elongated species, 4.5-6.0 mm. Inner tooth small (figs 42, 45), claws without second tooth. [Claws with basal lobe missing, figs 42, 45] 16
 - 15. Basal and first recurrent veins meet in one point. Large, 10-11 mm species. Third antennal segment longer than fourth. Claws with only one large subapical tooth and without basal lobe. Subapical tooth subequal to apical tooth. Sawsheath extremely widened and apically emarginated. Malar space equal to or longer than diameter of anterior ocellus *Rhopographus* Konow, 1899
 - Basal and first recurrent veins remain far from each other. Smaller species, 7-8 mm. Subapical tooth longer and stronger than apical and behind it with a small second inner tooth, without basal lobe. Malar space shorter than anterior ocellus. [Sawsheath short, rounded. Fourth antennal segment longer than third. Fore wing with 4 cubital cells] *Canonias* Konow, 1901
 - 16. Hind orbits more or less carinated. Inner margins of eyes almost parallel. Anal cell of fore wing with almost perpendicular cross-vein. Hind wing with two closed cells medially. Anal cell petiolate, nervellus connected to petiole. Frontal area distinct. Black species with white pattern. [Males with labrum, palpi, scapus, pedicellus below, pronotal margin, tegulae and legs (except base of coxae and two last tarsal segments)] *Busarbidea* Rohwer, 1915

- Hind orbits carinated only below. Inner margins of eyes very weakly converging ventrally. Anal cell with strongly oblique cross vein. Frontal area not defined. Black (fig. 73) or black with strong metallic bluish lustre. [Hind wing with only one closed cell medially. Males with marginal vein around hind wing. Anal cell sessile. Fore wing with four cubital cells] *Neopoppia* Rohwer, 1912
- 17. Fore wing with 3 cubital veins. Elongated species. Hind wing without closed cell medially. [Anal cell petiolate] 19
- Fore wing with 4 cubital veins. Plump species. Hind wing with or without closed cell medially. (if basal lobe present see genus *Ateloza* Enderlein, 1919 under the subfamily *Blennocampinae*) 21
- 21. Claws without basal lobe 22
- Claws with well developed basal lobe. [Bluish-black. Abdominal segments 2nd-6th reddish. Wings hyaline, apically from the basal part of stigma slightly infuscate.] *Tala* Malaise, 1935
 Genus *Ateloza* Enderlein, 1919, also runs here. This monotypic genus has an intermediary position between *Selandrinae* and *Blennocampinae*. The extraordinarily long pubescence on head and thorax, the extensive red colour of the abdomen (first-sixth segments), the strong infuscation of the fore wing and its large body (more than 10 mm in length) clearly differs this genus from *Tala* Malaise, 1935. In detail, I discuss this genus under the subfamily *Blennocampinae*.
- 19. Abdomen with a distinct constriction subbasally especially between second and third segments (fig. 58). Mesopleuron always coarsely punctate and reticulate. Basal section of subcosta removed from origin of cubitus, distance subequal to first cubital cross-vein or longer. [Colourful sawflies with wasp-like mimicry] *Athlophorus* Burmeister, 1847
- Abdomen normal, without contraction. Elongate species. Mesopleuron never reticulate, mostly inpunctate and shiny. Distance between basal vein and cubitus on subcosta shorter than first cubital cross-vein 20
- 20. Subapical tooth of claws longer than apical tooth. Claws without basal lobe (fig. 50). Black with whitish (or pale) markings. Whitish: clypeus, labrum, spots on mandibles, apical segments of antennae, pronotal angles, mesoscutellum, mesoscutellar appendage. The second abdominal segment, margins of tergites third-fifth(-sixth) and corresponding tergites fulvous. In females, these margins may widen into triangular spots. Legs mostly pale. Medium sized, 8.5-12 mm. Wings hyaline. Fourth antennal segment longer than third *Tritobrachia* Enderlein, 1919
- Claws with basal lobes, subapical tooth always shorter than apical tooth. Variously coloured. Wings frequently infuscate. Third antennal segment mostly longer than fourth. Apical segments of antennae never whitish *Emphytus* Klug, 1815
- 22. Hind wing without closed cell medially. Rather plump species. Anal cell of fore wing with strongly oblique cross vein. Subapical tooth of claws well developed and shorter than apical tooth. Shiny black, white colour restricted only to legs (fig. 69). [Apical halves of wings infumate. Basal lobe missing] *Hemibeleses* Takeuchi, 1929
- Hind wing with one closed cell medially. Stout species. Anal cell of fore wing oblique. Subapical tooth of claws short. Head and antennae black, thorax reddish but mesosternum and partly metasternum black, abdomen black with faint bluish tinge, its four basal tergites more or less reddish brown medially *Malaisea* Forsius 1933
 If hind wing with two closed cell medially see also genus *Rhopographus* Konow, 1899, couplet 15. In this genus, the basal and first recurrent veins are only slightly convergent.

**Key to genera of the subfamily Blennocampinae
from Indonesia, Malaysia and Papua New Guinea**

1. Antennae with 10 segments. Basal vein and first recurrent veins of fore wing convergent. Basal vein curved. Prepectus not separated. Small, black insects, about 4 mm *Messa* Leach, 1817
- Antennae with 9 segments. Basal vein and first recurrent veins parallel. Basal vein straight. Prepectus often separated. Sawflies of various size 2
2. Small sawflies, body 4.0-4.5 mm. Frontal area almost invisible. Pedicellus long, twice as long as wide. Eyes extremely large. Mainly black, blackish brown sawflies, band of abdomen, palpi, scapus, pedicellus and legs may be pale coloured; bluish or metallic iridescence never occurs *Phymatoceroidea* Rohwer, 1916
- Larger sawflies. Frontal area more or less developed. Pedicellus and eyes normal. Various coloured species 3
3. Prepectus present. Body black, thorax with red pattern. Wings hyaline. Claws without basal lobe. [Basal and first recurrent veins parallel] *Euthomostethus* Enslin, 1913
- Prepectus missing or hardly visible. Thorax unicoloured, never red and black. Wings mostly more or less infusate. Claws various 4
4. Large, body 10-14 mm. Head, thorax and antennae densely covered with long pale pubescence which is about twice as long as diameter of anterior ocellus. Head and thorax black with slightly bluish lustre. Second-sixth abdominal tergites entirely, first and seventh tergites partly red, abdomen otherwise black. [Wings dark infusate. Monotypic] *Ateloza* Enderlein, 1919
- Smaller, body 6-11 mm. Body with normal pubescence and colour various, frequently with metallic lustre and abdomen never red with black apex 5
5. Claws with a large basal lobe, subapical tooth wider and little longer than apical tooth (fig. 48) 6
- Claws without a basal lobe, subapical tooth smaller than apical tooth *Monophadnus* Hartig, 1837
6. Apical halves of wings or complete fore wing brownish infusate. Body frequently with metallic bluish or purplish lustre or abdomen bicoloured and body never entirely black. Antenna shorter, combined fourth-fifth antennal segments shorter than combined sixth-ninth segments *Senoclidea* Rohwer, 1913
- Wings dark infusate. Body entirely black without metallic lustre. Antenna long, elongated, combined fourth-fifth antennal segments together longer than combined sixth-ninth segments *Waldheimia* Brullé, 1846

Genera of the subfamily Tenthredininae

***Tenthredo* Linnaeus, 1758**

Anal cell with cross-vein, situated basally from the middle. Hind coxae normal, not enlarged. First abdominal tergite (propodeum) divided in the middle by a longitudinal furrow, incision triangularly broadened to a membranous area behind. The inner margins of eyes roundly emarginated below and strongly converging below in frontal view.

Antennae normal, filiform or incrassate. The only genus of the subfamily recorded from the area.

Genera of the subfamily Nematinae

Pristiphora Latreille, 1810

First and second recurrent veins of fore wing run into separate cubital cells. Apex of subcosta strongly swollen. Anal cell in hind wing closed. Inner hind tibial spur longer than outer, never equal or subequal. Claws with inner tooth mostly smaller than apical tooth. The species of this genus are very rare in the tropical region. They reach their maximal specific richness in the northern temperate region, mainly in Scandinavia, Siberia and Canada. *Pristiphora* is the only genus of the subfamily recorded from the area.

Genera of the subfamily Selandrinae

Athalia Leach, 1817

The genus *Athalia* Leach, 1817 contains a single species in this region, namely *Athalia lugens* subspec. *proxima* (Klug, 1815).

Head and antennae black. Mouthparts white, scapus with brown spot. Antenna with 11 segments. All antennal segments longer than wide. Pronotum, tegulae, mesonotal lobes, mesosternum, abdominal tergites (except first one) and knees of all legs yellow. Other parts black. Inner hind tibial spur subequal with the maximal width of hind tibia. Wings infusate, pterostigma and venation black. 5.0-7.0 mm. Known from Kamtschatka, India, Malaysia, Taiwan, Borneo, Java, Sumatra, Burma and South China.

Eusunoxa Enslin, 1911

1. Antenna with 10 segments. Claws without basal lobe. Head (including clypeus) yellow with black spot covering entire hind part of head and reaching malar space, thorax yellow; abdomen brownish yellow, sternites and last tergite white, legs whitish yellow with black pattern (fig. 65). 8.0 mm. Male unknown *E. malaya* spec. nov.
Borneo, 150 m, August-September.
- Antenna with 9 segments. Claws with basal lobe. Body black, first and second and basal half of third antennal segments orange, clypeus reddish brown, fore and middle legs dark brown with black, hind leg black, with basal half of tibia white. 8.0 mm. Male unknown *E. ebena* Smith & Saini, 2003
Borneo. Date of collecting unknown.

Neostromboceros Rohwer, 1912

1. Head, thorax and abdomen black with only indistinct white markings (but sometimes black colour faded to brown); labrum, narrow upper pronotal margin, parapterum, narrow posterior margin of tergites, and basal band of tibia pale 2

- At least middle tergites of abdomen largely fulvous or whitish and in one species whole body may be reddish brown 14
- 2. Mesopleuron with large elongated white spot on mesopleuron, as on parapterum, internal half of tegulae, apices of femora and their inner side downwards (fig. 79). [Body dark brownish black without bluish reflection, pterostigma and venation black. Wings hyaline, fore wing infusate apically. Females unknown. Length: 6.7-7.6 mm] *N. pleuronotatus* spec. nov.
Sulawesi, 200 m. October.
- Mesopleuron without large white elongate spot 3
- 3. Frontal area distinctly punctate, rugose, almost flat. [Black with distinct purplish blue tinge. Parapterum and basal stripes of all tibiae white. Clypeus truncate. Postocellar area broader than it is long, subconvex. Malar space linear. Males: about 7 mm, females: 7-8 mm] 4
- Frontal area smooth and shiny or with only fine setiferous punctures 6
- 4. Mesopleuron and complete head covered with distinct but fine punctures. Males are unknown 5
- Mesopleuron impunctate, punctures of head confined to frontal area, with distance between punctures about 4 times diameter of a puncture. Males known. [Sawsheath strongly dilated at apex (cf. fig. 25). Only apical halves of fore wing infusate from base of pterostigma, labrum, narrow upper pronotal margin, all trochanters, and in males very narrow posterior margins of four basal tergites white]
..... *N. lucti* Malaise, 1944
Malay Peninsula, Java, Sipora Island, Siberut Island and Sumatra, 450-1500 m. March, April, June, July and October-January. Host plant: *Diplazium asperum* Blume.
- 5. Sawsheath strongly dilated apically (fig. 25). Head and posterior half of scutellum with scattered and rather coarse punctures, distance between punctures of frontal area about equal to diameter of puncture. Pronotum black; labrum, parapterum, all trochanters and apices of coxae white. Fore wing entirely strongly infusate
..... *N. iridipennis* (Cameron, 1903)
Borneo, 150 m. March-May.
- Sawsheath strongly dilated medially and apically abruptly triangularly narrowed, small, hardly or not visible from above. Head rather finely and more densely punctate, shiny. Labrum brownish, coxae and trochanters black. Fore wing with slightly yellowish tinge, venation piceous *N. borneensis* Forsius, 1933
Borneo, 1000-1680 m. April.
- 6. Postocellar area distinctly longer than wide (7:4). General colour bright metallic blue; labrum, parapterum, narrow pronotal margin, narrow posterior margins of most tergites, all trochanters, and posterior stripes of tibiae (hind tibiae only with basal stripe) whitish. [Lateral furrows reaching posterior margin of head. Males without sinus sexualis. Antennae incrassate medially and three preapical segments distinctly compressed. Subapical tooth of claws much longer than apical tooth. Apices of wings infumate. Large species: 8.0-11.0 mm] *N. coxalis* (Smith, 1857)
Malay Peninsula: Singapore, Malaysia, Sumatra, Java and Bali, 75-1300 m. February, March, April and December.
- Postocellar area subquadrate or wider than long. Differently coloured with legs never dark yellow, mostly white and black 7
- 7. Anterior margin of clypeus truncate or subtruncate 8

- Anterior margin of clypeus roundly and deeply emarginated. [Body nearly entirely black, including mouthparts and antennae. Shiny but without any metallic lustre. Scapus brown with black bases and cenchri white. Legs dark yellow; black: all coxae, apical ring of hind tibiae, apical 4 tarsal segments of the fore and middle legs, hind tarsus entirely. Sawsheath as in fig. 34] *N. flavopedis* spec. nov.
New Guinea. November.
- 8. Antenna distinctly compressed, more or less triangular in cross section. Apices of each flagellar segment of males, except last one, with rather distinct hair-bush medially. General colour black with distinct bluish tinge; at least, hind trochanters and apices of hind coxae whitish. [Lateral furrows of elevated frontal area distinct and curved. Males: 7.0-8.0 mm, females: 8.0-9.0 mm] 9
- Antenna not or hardly compressed, in cross section more or less rounded. Flagellar segments without hair-bush. Shiny coal-black, without bluish tinge 10
- 9. Inner margins of eyes distinctly converging ventrally. All trochanters, apices of coxae, apices of all femora, entire tibiae except a minute black dot at their extreme apices and sometimes a stripe along tarsi beneath whitish. Head slightly narrowed behind eyes. Middle supraantennal pit usually divided into two parts. [Sawsheath as in fig. 9. Males unknown] *N. laevis* (Konow, 1898)
Sumatra, Burma and Assam, 1310-1524 m. February, May and December.
- Inner margins of eyes subparallel in females, in males faintly converging. All tarsi and apical third of all tibiae black. Extreme apices of all femora, all trochanters, apices of coxae whitish. Head strongly narrowed behind eyes. Middle supraantennal pit subdivided into two lateral pits. [Males without distinct sinus sexualis]
..... *N. albicalcar* (Enderlein, 1919)
Sumatra. April and October-December.
- 10. Entire fore wing dark infusate. Medium-sized species: 9.0 mm [Head and thorax entirely black. Only trochanters, knees with white spots and abdominal segments with narrow whitish posterior margins. Frontal area pentagonal surrounded with narrow but distinct carina] *N. celebensis* Forsius, 1931
Sulawesi (Celebes), 400-800 m. February, March and October.
- Wings hyaline or infusate towards the apex. [Smaller species, 6.5-8.0 mm] 11
- 11. Small species: 5.0 mm. Labrum black. [Head, thorax and abdomen entirely black, legs brown, white: trochanters, basal 2/3 of tibiae, basal 4 segments of anterior tarsi. Female unknown] *N. minutus* (Enderlein, 1919)
Sumatra. Flying period unknown.
- Larger species, 6.5-8.0 mm. Labrum always white 12
- 12. Legs dominantly white, basal part of coxae, femora dorsally and hind tarsi white (fig. 75). Parapterum and pronotal margin black, labrum and tegulae mostly white. [Last abdominal tergites without white spots. Tergites with narrow posterior margins. Wings hyaline, apical halves brown infusate. Sawsheath similar to fig. 3. 7.2 mm] *N. albopedissimus* spec. nov.
Sulawesi (Celebes), 1650 m. April.
- Legs rather extensively black. Parapterum white, labrum, and pronotal margin always white. [Clypeus always black.] 13
- 13. Antennal furrows distinct and rather sharp laterally to U-shaped and medially depressed frontal area. Sawsheath similar to in fig. 23. [Malar space almost linear in both sexes. Lateral furrows of the postocellar area reach only half distance towards

- posterior margin of head. Labrum, parapterum, pronotal margin, anterior margin of tegulae, narrow posterior margin of abdominal segments, apices of all coxae, all trochanters, apices or sometimes most of femora and basal part of tibiae white. Inner margins of eyes subparallel in females and strongly convergent in males. Males with sinus sexualis. Males: 6.0-7.0 mm., females: 7.0-8.0 mm] *N. coneger* (Konow, 1901)
 Malay Peninsula, India, Sumatra, Java, Bali and Lombok, 450-2400 m. February, March, May-July, September-December. Host plant: *Christella arida* [D. Don] Holt.
- No distinct furrows laterally to frontal area, only with a gradual elevation from halfway between eyes and U-shaped frontal area. Sawsheath very small, bluntly triangular, hardly visible from above. [Wings completely hyaline. Shiny brown; labrum, posterior margin of pronotum, parapterum, ninth abdominal tergite, a central longitudinal spot on eighth tergite, posterior margin of abdominal tergites, trochanters, cenchri, tibiae more or less and apices of all coxae white; femora black. Postocellar furrows short, removed from posterior margin of head. Male unknown. 6.5 mm] *N. marbauensis* Haris, 2002
 Sumatra. July.
 - 14. Head and thorax entirely black, apical four segments of antennae white; legs dark brown to black except for apical portion of all femora and basal portion of hind femur. [8.0 mm] *N. peterseni* Togashi, 1981
 Papua New Guinea (New Britain). Flying period unknown.
 - Differently coloured with apical antennal segments black 15
 - 15. Clypeus, labrum, second segment of maxillary palpus, lateral side of pronotum, parapterum, two spots on prescutum, mesoscutellum and a large spot on mesopleuron yellow; legs yellow or fulvous. [8.0 mm] *N. hirashimai* Togashi, 1986
 Papua New Guinea (New Britain). February.
 - Differently coloured, and mesopleuron without pale spot 16
 - 16. General colour reddish brown (older specimens may fade to brown, compare them with species above); labrum, posterior margin of pronotum, tegulae, coxae, trochanters, tibiae, tarsi and base of costa yellow; wings hyaline, venation and pterostigma reddish brown. [Head contracted behind eyes, latter slightly converging, malar space linear. Clypeus broadly emarginated. Antennal, lateral and vertical furrows well marked. Postocellar area about as broad as long. Female unknown. 7.0 mm] *N. rufus* (Benson, 1935)
 Java, 700 m. July.
 - At least head black 17
 - 17. Thorax reddish, at least dorsally, wings infusate; labrum, clypeus, scapus and pedicellus white. [Subapical tooth always longer than apical tooth. Head strongly contracted behind eyes. Subgenus *Bornea* Malaise, 1944] 18
 - Thorax black 19
 - 18. Thorax dorsally and mesopleuron reddish. Head and abdomen entirely black. 12.0-13.0 mm. Male unknown *N. pictipennis* (Konow, 1908)
 Borneo. Flying period unknown.
 - Thorax entirely red, except for black band separating mesosternum from mesopleuron. Abdomen dark brown, third-sixth tergites reddish yellow with brown posterior margins and corners. 11.0 mm. Female unknown *N. sabahensis* Haris, 2002
 Borneo. March.

19. Third antennal segment shorter than fourth 20
 - Third antennal segment distinctly longer than fourth 21
20. Coal-black with fulvous abdomen except for black first tergite; most of fore femur, frontal part of fore tibia white. Wings dark infusate. 8.0 mm
 [N. *salomonis* (Forsius, 1927)]
 Solomon Islands. Flying period unknown.
- Head, antennae and thorax black; abdomen red with longitudinal brown band medially; fore and middle tibiae, fore and middle basitarsi, apices of fore and middle femora white. [Sawsheath as in fig. 33. 7.0-8.8 mm. Males unknown]
 N. *rubroguinealis* spec. nov.
 New Guinea. September.
21. Antennal furrows distinct laterally to frontal area from lateral supraantennal pits to outside of posterior ocelli, and continuing as lateral furrows of postocellar area. Wings hyaline. Black, but labrum, pronotal margin, tegulae, and parapterum, legs (except for bases of coxae, bases of femora, apices of tibiae, tarsi) white. Abdomen fulvous medially, first and three or four apical segments black. Fulvous tergites sometimes more or less infusate. [Clypeus truncate. Postocellar furrows deep but not reaching margin of head. Males: 5.0-6.0 mm, females 7.0-8.0 mm]
 N. *javanus* (Enslein, 1912)
 Java, 400-2700 m. January, June and September.
- No antennal furrows laterally to frontal area. Apical halves of wings infusate. Black colour with strong bluish, purplish or greenish tinge. [Antenna stout, more or less incrassate in the middle] 22
22. Head subparallel immediately behind eyes, then roundly narrowed. Lateral supraantennal pits elongate, furrow-like. [Clypeus emarginated. Clypeus, labrum, tegulae, narrow bases of tibiae and hind trochanters whitish. Parapterum and abdomen yellow, sternites somewhat infusate. First tergite dark yellowish brown, sawsheath black. Length: 8.5 mm] N. *coeruleomicans* Forsius, 1925
 Sumatra, 50 m. August.
- Head strongly narrowed behind eyes. Lateral supraantennal pits circular and connected by short furrows with antennal sockets 23
23. Black with strong purplish, bluish tinge. Second-sixth abdominal segments (sometimes also first or only first-fourth segments) reddish yellow. Clypeus emarginated. Anterior margin of clypeus, anterior halves of tegulae, broad bases of tibiae, hind trochanters, apices of hind coxae, middle trochanters partly and sometimes bases of hind basitarsus white. Sawsheath, in dorsal view, strongly broadened basally and triangularly narrowing towards apex. 8.0-9.0 mm. Male unknown
 N. *albicomus* (Konow, 1901)
 Malay Peninsula, Singapore, Thailand, Vietnam and Philippines. April, May, August, November and December. Host plants: *Lygodium flexuosum* [L.] Sw. and *L. microphyllum* [Cav.] R. Br.
- Black with strong blue-green tinge on head and moderately strong tinge on thorax. Second-fifth abdominal tergites reddish. Clypeus truncate. Clypeus, labrum, margin of pronotum, tegulae, parapterum, mesopleural triangular spot, scapus, pedicellus, partly third antennal segment, pair of spots above clypeus at eyes, hind corners of first abdominal segment and legs more or less (see the description below) white. Sawsheath in fig. 20. 10.5 mm. Male unknown N. *rubromalayensis* spec. nov.
 Borneo, 1010 m. November-December.

Nesoselandria Rohwer

1. Lateral antennal pits connected by a furrow. Head, antennae, thorax and abdomen entirely black (or blackish brown), or in one species even light brown but never white. Subgenus *Corrugia* Malaise, 1944 2
- Lateral antennal pits separated, head without horizontal furrow above the antennae. Antenna, thorax or abdomen of several species partly white. Subgenus *Nesoselandria* Rohwer, 1910 5
2. Clypeus, tibia and tarsi entirely white. Body 4.2-5.2 mm. [Clypeus of male brownish white. Sawsheath: fig. 18] *N. sulawesiensis* spec. nov.
Sulawesi (Celebes), 1590-1850 m. April.
- Clypeus and/or tibiae, tarsi brown or blackish brown. Smaller species. [Scapus and pedicellus always brown] 3
3. General colour chestnut or light brown; head dark brown, thorax shiny chestnut brown, abdomen light brown, antennae brown; legs brown only tibiae and basitarsi white with brown apical rings. Body 4.0-5.0 mm. Postocellar area normal. Wings moderately infuscate. [Clypeus widely but slightly emarginated. Head without occipital carina. Sawsheath small, hardly seen from above.]
..... *N. nigroalata* Haris, 2002
Sulawesi and Borneo, 1650 m. February-May.
- Body black or dark brown, only legs and in *N. jacobsoni* also clypeus marked with white. Smaller species. Postocellar area variable. Wings infuscate 4
4. Postocellar area extremely short, 4-5 times as broad as long. Central supraantennal pit missing. Postocellar furrow round and enlarged connected to posterior margin of head by an elongate groove. Clypeus white to brownish white, almost truncate. Legs extensively white, at least coxae, apex of middle and hind tibiae, tarsi except basitarsi black or brown, hind femur white or dominantly white. 3.5-4.5 mm. [Sawsheath very short, not surpassing apex of abdomen.] *N. jacobsoni* (Enslein, 1912)
Malay Peninsula, Java and Sumatra, 420-1372 m. January, February, April and September.
- Postocellar area normal. Central supraantennal pit distinct and deep. Postocellar area broader than long (3:1). Clypeus brown to light brown. Legs black in males, middle of all tibiae pale similar to spots on trochanters, fore and middle basitarsi and extreme base of hind basitarsus. Legs whitish in females, base of coxae, triangular stripes at apex of femora, apices of all tibiae and 3 apical tarsal segments black. 3.0-4.0 mm *N. annulata* Malaise, 1944
Borneo, Java and Sulawesi, 150-1010 m. March and October-December.
5. Frontal area above antennae finely (but distinctly) horizontally wrinkled. [Head, antenna and thorax black, abdomen dark brown; tibiae (except apical rings), and tarsi whitish; femora brown, except hind femur in ventral view. Wings hyaline, but fore wing apically infumate. 3.5-5.0 mm] *N. rugafrons* Benson, 1935
Borneo and Java, 150-1700 m. April-August and November-December.
- Frontal area without horizontal wrinkles 6
6. Abdomen entirely black or dark brown 7
- Abdomen pale at least medio-ventrally, lateral antennal pits never forming a horizontal furrow 8
6. Second and third antennal segments white. Wings hyaline. [Legs nearly entirely white. Only fore coxa and fore femur brown medially. Sawsheath acute, short but

- elongate and clearly visible above, cerci long. Hind occipital carina and occipital furrows hardly visible but present. Third and fourth antennal segments subequal. Males are unknown. 3.7 mm] *N. bruneiensis* (Haris, 2000)
Borneo: Brunei. Flying period unknown.
- Antennal segments black. Wings infusate 7
7. Body and legs extensively black, yellowish: fore tibia anteriorly, apices of middle tibia and of middle tarsal segments. Sawsheath narrow. No horizontal furrow between antennal pits present. 3.0 mm [*N. imitatrix* (Ashmead, 1905)]
Philippines. Flying period unknown.
- Body entirely black, legs entirely yellow. Females are unknown. 3.5-4.0 mm.....
..... *N. montana* (Forsius, 1929)
Sumatra, Malay Peninsula, 1800 m. July.
8. At least fifth and sixth antennal segments entirely pale. [Tegulae whitish. Abdomen pale yellow, apical 3 segments and sawsheath black. Legs pale except the somewhat infusate tarsal segments. Males unknown] 9
- Fourth -ninth antennal segments always black or brown 10
9. Eighth antennal segment black (as ninth segment), seventh segment infusate dorsally. First-sixth antennal segments entirely white. Postocellar area 3 times as broad as long. Scapus longer than pedicellus. 4.0 mm *N. albicornis* (Forsius, 1929)
Malay Peninsula, Borneo and Sumatra between 610 and 1010 m. March, June, November and December.
- Eighth antennal segment whitish, ninth segment entirely black, third-fourth segments almost entirely black (but third segment may be infusate and fourth white) and eighth segment infusate. Postocellar area twice as broad as long. Scapus and pedicellus subequal. 4.5 mm. [Scapus and pedicellus infusate dorsally]
..... *N. picticornis* Malaise, 1944
Borneo. Flying period unknown.
10. Scapus and pedicellus whitish, in males brownish dorsally. Tegulae yellowish. Abdomen whitish but first and 3-4 apical segments black in females; in males sometimes all tergites black and sternites white. 4.0-4.5 mm *N. javana* (Enslin, 1912)
Java, Malay Peninsula, 1000-2000 m. January, August and September.
- Scapus and pedicellus black or brown. Tegulae black. Abdomen whitish but first and apical abdominal segments black. 4.5 mm *N. abdominalis* (Enslin, 1912)
Java and Sumatra, 1200-3000 m. January and June-August.

Athlophorus Burmeister, 1847

1. Wings hyaline, no infusate spots on radial cell 2
 - Wings with an infusate spot covering most or all of radial cells 3
2. Mesoscutellum thorn-like apically, its extreme apex longitudinally carinated. Apical antennal segments black. Fulvous but face below antennae, inner hind orbits half way up, spots above antennal bases, pronotal angles, sides of mesonotal middle lobes, spots on each sides of mesoscutellum, small spots behind cenchri, lower part of pronotum and propleuron, parapterum, middle of mesopleuron except its horizontal black band, upper part of metapleuron, broad stripes of coxae, postero-lateral spots of the tergites and most of the sternites white. Four and half apical antennal segments, spot between antennae, stripes along antennal furrows, stripes along

- lateral postocellar furrows (frequently), stripes on temples, dorso-ventral lines of pronotum, triangular spot on mesonotal middle lobes, spots on lateral lobes (frequently), transverse anterior spot on mesoscutellum, spot behind its appendage, lateral spots on propodeum, basal margin of tergites, two-lobed middle spot on second tergite, longitudinal spots of coxae and femora black. [Third and fourth antennal segments are subequal. Head almost impunctate, strongly shiny.] 10.0-11.0 mm *A. capreae* Forsius, 1936
Burma and Sumatra, 2200-2800 m. Flying period unknown.
- Mesoscutellum slightly convex. Apical antennal segments yellow. Head whitish yellow, large frontal spot down to clypeus, spot of vertex connected to frontal spot, two wide bands connecting eyes with vertex and posterior part of head behind temples black; eighth-ninth antennal segments whitish yellow, sixth-seventh segments dark dorsally, yellow ventrally, third-fifth segments black; prothorax black with double yellow pronotal spots; mesopleuron mainly whitish yellow; mesosternum and lower part of mesopleuron black; mesonotal middle lobes mainly black with whitish yellow V-shaped margins; ground colour of middle lobes whitish yellow but their black spots nearly cover them; mesoscutellum yellow with a longitudinal black band; first abdominal tergite whitish yellow, second and third tergites brown with whitish yellow lateral spots and narrow posterior margins, fourth tergite whitish yellow with a median longitudinal brown line; fifth-ninth tergites dark brown with whitish yellow posterior margins. 10.0-11.0 mm *A. flavocapreae* Haris, 2002
Borneo. September.
 - 3. Scutellum black. [As are entire antenna and main part of thorax; posterior margin of fourth tergite fulvous; narrow margins of tegulae, pronotal angles, spots at bases of all tibiae, spots on trochanters and fore basitarsi mostly sordid white] *A. gracilis* subsp. *orbitalis* Konow, 1906
Malay Peninsula, Burma and Sumatra, 820-1500 m. March, May and June.
 - Scutellum whitish or yellow 4
 - 4. Mainly black or white and black with a few reddish brown spots: only mesosternum and lateral and lower parts of meso- and metanotal sinus reddish brown but no reddish brown spots on head; mesopleuron always black or with a pale patch at upper corner 5
 - Thorax and head more extensively coloured with reddish brown or mainly reddish brown; mesopleuron entirely black or with pale band medially or ventrally 7
 - 5. Head black, labrum, clypeus and inner orbits pale yellow. [Mainly black species; antenna black, scapus pale yellow; thorax black, margins of pronotum, tegulae, mesoscutellum, postscutellum, cenchri, parapterum and dorsally a spot on mesopleuron pale yellow. Abdomen black with pale yellow posterior margins on tergites except entirely black fifth and sixth tergites. 9.0 mm] *A. jacobsoni* Enslin, 1912
Malay Peninsula, Sumatra, Java and Bali, 920-2500 m. January, March, May, October and December.
 - Head whitish with large black dorsal spot 6
 - 6. Mesosternum and lateral and lower parts of meso- and metanotal sinus reddish brown. Head and thorax whitish; a large spot on frontal and postocellar area of head, three almost confluent spots on mesonotum, and spots of pronotum black; antennae blackish, scapus and pedicellus entirely white, third and fourth segments with

- brown stripe; abdomen blackish brown, first segment, triangular lateral spots on second and third tergites anteriorly and posteriorly, and wide posterior margins of sixth-ninth tergites pale *A. sumatranus* Forsius, 1935
Malay Peninsula and Sumatra, 920 m. January, February and September.
- Body without any reddish brown. Head yellowish white with a large blackish brown spot connected to clypeus and reaching posterior margin of head and this spot touching upper hind corner of eyes and with four yellowish white spots; thorax black; tegulae, pronotal margin, mesoscutellum (except posterior margin), two spots on mesopleuron, postspiracular sclerite, posterior margin of mesepimeron, two spots next to mesoscutellum, sides of postscutellum, two small spots next to postscutellum, posterior arrow-like spot on middle mesonotal lobe white; antenna dark brown, scapus and pedicellus yellowish white. First abdominal tergite (= propodeum) brownish black, second-third tergites white with black medial triangle, fourth segment brownish black, following segments brownish black with white band on posterior margins (fig. 58). Last segment nearly entirely white, ovipositor brownish black. 8.3 mm *A. achterbergianus* spec. nov.
Borneo, 150 m. October-November.
 - 7. Head matt and densely punctate dorsally. Head mainly black but at least temple with reddish brown. Thorax without reddish brown. Mesopleuron without pale band 8
 - Head distinctly shiny and densely punctate dorsally. Various coloured but mesopleuron mostly with pale band 9
 - 8. Frontal area and most of temple and four apical antennal segments ventrally reddish brown; labrum, clypeus, funiculus, underside of pedicellus, front orbits, margins of pronotum, first parapterum, tegulae, scutellum, cenchri, metascutellum, fore and posterior margins of first and second tergites, posterior margins of sixth-eighth and tenth tergites, anterior margin of fourth tergite and second-fourth sternites yellow; legs black with yellow spots. Only postocellar area, temples and frontal area densely punctate, dull. [Pterostigma yellow, costa brown.] 12.0 mm
..... *A. puncticeps* Benson, 1935
Java, 800 m. March and July.
 - Band on temple (as elongation of yellow outer orbit), three longitudinal lines on postocellar area, posterior margin of apical tergites from seventh tergite onwards, posterior margin of apical sternites from fifth sternite onwards reddish brown; antenna black, scapus, pedicellus and underside of third antennal segment, clypeus, labrum, spot on mandible, wide inner and outer orbits, supraclypeal spot, double supraantennal spots, narrow margin around pronotum, tegulae, small longitudinal spots on hind corners of middle mesonotal lobes, two small lines next to these spots on neighbouring side of lateral lobes, mesoscutellum, double small spots below cenchri, two small spots next to mesoscutellum, narrow horizontal margin of pronotum, cenchri, narrow hind border of sunken area of mesonotum, a triangular spot on first abdominal tergite, longitudinal band on second tergite, anterior margin of second-fourth abdominal segments, posterior margin of second, third and sixth segments, basal part of ovipositor, and sternites yellow. Head completely densely punctate. 10.5 mm. [Male unknown] *A. nigrojavanus* Haris, 2002
Java, 1400 m. Flying period unknown.

9. Head frequently reddish brown dorsally with more or less black and whitish margins; sometimes brown colour of head more or less replaced by black; antenna black apically; scapus entirely whitish, pedicellus with a dark spot, third segment brown with a black stripe or almost entirely black, and fourth segment broadly brown basally; pale posterior margins of fifth-sixth abdominal tergites present or absent *A. klugii* Burmeister, 1847
 - a. Mesonotum brown, only with a pair of black spots in front of scutellum; fifth-sixth tergites with indistinct pale margins *A. klugii* subspec. *klugii* Burmeister, 1847
Java, 920-1210 m. Flying period unknown.
 - b. Brown colour of head and mesonotum (or only mesonotum) largely replaced by black; fifth-sixth tergites with distinct pale posterior margins *A. klugii* subspec. *scurrilis* (Konow, 1901)
Java, 700-1450 m. October.
 - c. Similar to *A. k. scurrilis*, but pale margins of fifth-sixth tergites absent; complete postocellar area reddish brown *A. klugii* subspec. *javanus* Enslein, 1912
Malay Peninsula, Java, 550-1450 m. January, March, May and June.
- Head black without reddish brown colour, mouthparts, orbits and spots above antennae yellowish white; all abdominal tergites with pale posterior margins; flagellum of antenna entirely black, scapus and pedicellus whitish 10
10. Scutellum acutely longitudinally carinate and with black longitudinal stripe *A. borneensis* Malaise, 1947
Borneo, 1000-1430 m. April.
- Scutellum bluntly roundly carinate and entirely white *A. similis* Forsius, 1929
Borneo and Sumatra, 920-1680 m. March and April.

Neopoppia Rohwer, 1912

1. Body with bluish metallic lustre. Venation and pterostigma brownish black. Smaller, 4.5-5.0 mm. Hind wing of male with marginal vein *N. metallica* Rohwer, 1930
Borneo, Java and Sumatra, 1010 m. May, August, November and December.
- Body without metallic lustre, head and thorax black, abdomen dark brown. Venation and pterostigma brown, but venation of basal half of fore wing white. Larger, 5.5 mm. Male unknown *N. irregulata* spec. nov.
Borneo. December.

Salatigia Enslein, 1911

Monotypic genus: *Salatigia roepkei* Enslein, 1911.

Body entirely black with metallic blue lustre (fig. 92). Legs and antenna black. Wings infusate, venation and pterostigma brown (in old specimens). Antennal segments strongly flattened, triangularly shaped. Fore wing with 4 cubital cells. Basal and first recurrent veins slightly convergent. Cross-vein of anal cell of fore wing very short, therefore anal cell contracted. Hind wing with closed middle and open cubital cell. Claws simple without basal lobe (fig. 46). Clypeus roundly emarginate. Head with sparse and non-uniform punctures, shiny, mesonotal lobes and mesoscutellum smooth and shiny. 8.0 mm.

Java and Sumatra. July.

Heptamelus Haliday, 1855

1. Mesopleuron shiny and impunctate, only with traces of punctures on upper part. Lateral postocellar and interocellar furrows deep. Black with legs (tarsi infuscate), most of abdomen (apical segments black, and more or less also basal tergites), labrum and (more or less brownish) antennal base reddish yellow. 5.0-6.0 mm. Female unknown *H. ruficinctus* Malaise, 1961
Java. Flying period unknown.
- Mesopleuron with more or less distinct punctures. Postocellar furrows missing. Colour pattern different 2
2. Frons transversally wrinkled between antennal sockets and anterior ocellus. Black with scapus, pedicellus and legs mostly white; femoral and tibial apices with dark yellowish infuscation. [Males with pale posterior margins on anterior abdominal tergites]. 4.5-6.0 mm *H. rugifrons* Malaise, 1961
Sumatra and Sulawesi. April and October.
- Frons smooth, not wrinkled. Head and thorax black with labrum brownish white and antenna brown, scapus and pedicellus white and legs dominantly white 3
3. Abdomen yellowish white, only ninth segment and eighth tergite brownish black; sawsheath dark brown; legs entirely white; wings hyaline. 6.7 mm. Male unknown *H. sipitangensis* Haris 2002
Borneo. April.
- Abdomen black, tergites with narrow white posterior margins; legs white but middle and hind tibial apices infuscate. 5.5 mm. Female unknown
..... *H. javanus* Enslein, 1912
Java and Sumatra, 770-920 m. March and October.

Neothrinax Enslein, 1912

1. Posterior margins of middle mesonotal lobes and mesoscutellum always white 2
- Mesonotal lobes without white posterior margins; mesoscutellum white or black ..
..... 3
2. Sawsheath deeply excavated and very short, not exceeding cerci (fig. 21). Head, thorax and antennae black, but posterior margin of middle mesonotal lobes, pronotum, mesoscutellum, clypeus, scapus, pedicellus, and longitudinal spot on mesopleuron white; abdomen dirty white, third-sixth tergites and part of seventh tergite with large brown spots (fig. 83). [Claw as in fig. 41. 7.0 mm] *N. excavata* spec. nov.
Borneo, 1010 m. April.
- Sawsheath normal, not excavated apically and exceeding cerci. Body black with mesoscutellum, mesoscutellar appendage, postscutellum, broad lateral margins of mesonotal middle lobes, pronotum, prepectus, and a large spot on the upper part of mesopleuron white; third-sixth abdominal tergites or all tergites (with brownish infuscation dorsally) and corresponding sternites red; legs largely pale; colour of antenna variable: sometimes only scapus and pedicellus (males), or also part of four and fifth apical segments white (females) *N. pallidicornis* (Rohwer, 1912)
Sumatra, 920 m. Flying period unknown.
3. Abdomen dorsally black. [Scapus and pedicellus black; head black with faint bluish reflection; basal sternites and partly deflexed parts of corresponding tergites whitish;

- base of scutellum and extreme lateral corners of prescutum with small pale spots; femora black with pale apical third; coxae and trochanters black, posterior ones with pale apices; fore and middle tibiae whitish with black stripe; hind tibia strongly infusate; tarsi black; fore wing subinfumate from base of pterostigma onwards. Lateral furrows of postocellar area deep. Clypeus angularly emarginate. 6.5 mm. Female unknown] *N. corvina* Malaise, 1944
Java, 1000-1500 m. Flying period or date of capture unknown.
- Middle abdominal segments fulvous or partly whitish 4
 - 4. Middle abdominal segments fulvous 5
 - First and second abdominal segments white, third and fourth segments fulvous with irregular black spots. [Head, antenna and thorax black; femora white, fore tibia largely black, middle and hind tibiae white with black apical ring (fig. 90); coxae, trochanters and tarsi black. 8.0 mm. Male unknown] *N. kaindiensis* spec. nov.
New Guinea, 2100-2300 m. September.
 - 5. Mesoscutellum and postscutellum with large white median spot. Mesoscutellar appendage and femora white. [Pronotum, part of tegulae, labrum, clypeus, scapus, and pedicellus partly, prepectus and a mesopleural spot white; legs entirely white except for a few tarsal segments of middle and hind tarsi; second-fifth abdominal segments, apical half of first segment red (fig. 84). Claw as in fig. 40. 7.0 mm. Male unknown] *N. gedehensis* spec. nov.
Java, 1450 m. March.
 - Mesoscutellum, postscutellum, mesoscutellar appendage and femora black 6
 - 6. Hind tibia black. Clypeus angularly emarginate. Pedicellus partly white. [Apical abdominal segments and first tergite (except for a red horizontal line medially) black; scapus, prepectus, margins of pronotum, bases of tegulae and a spot on mesopleuron white; legs pale, but femora (except their apices), and tarsus black.] 6.0-6.5 mm. Female unknown *N. sumatrana* Forsius, 1929
Sumatra, 920 m. Flying period unknown.
 - Hind tibia fulvous, only its extreme apex infusate. Clypeus roundly emarginate. Pedicellus black. [Clypeus, labrum, first antennal segment, parapterum and a spot on the mesopleuron white; pronotal margin, tegulae and first abdominal segment black.] 6.0 mm. Female unknown *N. javana* Enslein, 1912
Java, 800 m. Collected in April.

Canonias Konow, 1901

One species is known from the treated area: *Canonias inopinus* Konow, 1901.

Head black, body brown with purplish metallic lustre. Antenna brown, scapus, pedicellus and ventral part of third antennal segment white. Prepectus and upper corner of mesopleuron white. Legs white; base of fore coxa, femora (except their bases and apices), hind tibia medially and hind tarsus brown. Wings hyaline, but apical part slightly infusate. Pterostigma and venation mostly brown, subcosta and veins below subcosta blackish brown. Head hardly punctate, shiny, and thorax smooth and shiny. Body very elongate, antenna long. Sawsheath similar to in fig. 24. Claw as in fig. 44. 7.0-8.0 mm.

Borneo, Sulawesi, Java, Sumatra and Bali; 150-1220 m. January-April, June, October-December.

***Rhopographus* Konow, 1899**

One species is known from the Indo-Malaysian islands: *Rhopographus procinctus* (Konow, 1898). Antenna black and short, about as long as head and thorax combined (without propodeum); scapus and pedicellus yellow. Head black; clypeus, labrum, and triangular supraclypeal area, pronotum, tegulae, upper half of mesopleuron, mesoscutellum and mesoscutellar appendage yellow. Thorax brown, mesonotal lobes dark brown. Abdomen brown, first tergite yellow, other tergites with narrow yellow posterior margins. Legs brownish yellow, hind tibia and femur brown. Wings hyaline, radial cells of fore wing brown infusate. pterostigma fulvous, venation brown. Body impunctate, shiny. Clypeus deeply emarginate. Frontal area surrounded by carina but in its lower part open towards antennae. Head contracted behind eyes. Postocellar furrows deep, nearly reaching posterior margin of head. Basal and first recurrent veins only slightly convergent, nearly subparallel. Cross-vein of anal cell about 90°. Hind wing with closed cubital and middle cells. Sawsheath as in fig. 28.

Malay Peninsula, Java and Sumatra; 910-1500 m. January, February, April and August.

***Busarbidea* Rohwer, 1915**

1. Third antennal segment distinctly longer than fourth. Hind orbits with large punctures. [Black; males with labrum, palpi, scapus, pedicellus below, pronotal margin, tegulae, legs (except for pale base of coxae and two pale apical tarsal segments); in addition females have entire pedicellus, parapterum and five basal sternites white. 5.0-6.0 mm. Colour variation: second-fifth abdominal segments (and sometimes apical half of first segment) reddish] *B. jacobsoni* (Forsius, 1929)
Sumatra and Java, 920-1202 m. March and August.
- Third antennal segment distinctly shorter than fourth. Hind orbits impunctate. [5.0-6.0 mm. Red-banded colour variation not recorded] *B. lucti* Malaise, 1944
Java, 1000-1500 m. Flying period unknown.

***Emphytus* Klug, 1814**

1. Head densely and finely punctate, thorax very densely but superficially punctate, moderately shiny. Head and abdomen black, scapus and pedicellus whitish with rusty shadow, labrum and clypeus light brown or black in males; thorax rusty yellowish brown, abdomen dark brown (in males, only from second abdominal segment onwards); fore wing largely, hind wing only partly dark brown infusate; legs dark brown-brownish black, hind and more or less the middle trochanters, hind femur, hind tibia (except black apical ring) and more or less near knees of fore and middle legs white (fig. 64). 9.0-10.0 mm *E. danumiensis* spec. nov.
Borneo, 150-1000 m. April and August.
- Head mainly impunctate, thorax distinctly punctate. Body mainly black 2
2. Hind basitarsus longer than following tarsal segments combined. Black with lateral corners of clypeus, labrum, pronotal angles, tegulae, parapterum, upper part of mesopleuron, lateral corners of mesonotal middle lobes, mesoscutellum, metathorax partly pale brownish yellow; scapus, base of pedicellus, apices of coxae, trochanters,

apices of femora, knees, bases of fore basitarsus dirty yellow; five basal abdominal tergites brownish yellow *E. borneensis* Forsius, 1933
Borneo, July.

- Hind basitarsus shorter than following tarsal segments combined. Black with only angles of clypeus, outer side of scapus, tegulae, parapterum, and transverse spot at mesoscutellum pale. [Wings not distinctly infusate] *E. insularis* Forsius, 1933
Borneo, August.

Denticornia Malaise, 1944

One species is recorded from the area (Indonesia): *Denticornia subtilis* (Benson, 1935). Metallic blue-black, except for the yellowish white outer side of the tibiae basally and the posterior margin of the abdominal tergites medially. Wings hyaline basally but becoming faintly infusate apically beyond the base of pterostigma. Elongated sawfly with long cylindrical abdomen. Punctuation almost obsolete, the body nearly smooth and shiny. Flagellar segments of antenna with small apical projection beneath (only in males). 8.0 mm.

Java, 1400-1700 m. June.

Abeleses Enslin, 1911

1. Fore wing with three cubital cells. Labrum, trochanters and apices of coxae white. Third antennal segment shorter than fourth (44:51). Head and thorax with dense and moderately deep punctures. 10.0 mm. Male unknown *A. metallocyaneus* (Haris, 2002)
Java, 550 m. December.
- Fore wing with four cubital cells. Body without white colouration (fig. 52). Third antennal segment longer than fourth segment (41:30). 7.0 mm. [Claw as in fig. 38.] Female unknown *A. metallojavanus* spec. nov.
Java, 1450 m. April and May.

Euforsius Malaise, 1944

Monotypic genus: *Euforsius jacobsoni* (Forsius, 1929). Head, antenna and thorax black. Labrum, clypeus, scapus, and pedicellus, most of third antennal segment, hind and lateral pronotal margins and tegulae yellowish white. Third antennal segment more or less black, scapus and pedicellus sometimes with dark spot. First-fifth abdominal segments and sometimes half of the sixth segment red. Other parts of the abdomen black and sometimes propodeum black basally. Legs yellowish white, apical tarsal segments infusate; femora (except their apices) and apical rings of fore and middle tibiae dark brown. Wings hyaline. Fore wing from the middle of pterostigma and apex of hind wing brown infusate. pterostigma and venation dark brown or black. Head contracted behind eyes. Clypeus widely and shallowly emarginate. Antenna short, not longer than head and thorax combined. Fore wing with four cubital veins. Basal and first recurrent veins convergent. Hind wing with one closed cubital and one closed medial cells. Anal cell with short petiole, nearly sessile. Sawsheath as in fig. 26. 8.5-12.0 mm.

Sumatra, 700-1600 m. February, March and August.

***Malaisea* Forsius, 1933**

The genus contains only the type species: *Malaisea malayana* Forsius, 1933.

Head and antenna black. Thorax reddish; mesosternum and part of metasternum black. Wings brownish infusate, hind wing paler. Fore coxa reddish, fore femur reddish but brownish infusate above. Other parts of fore legs and posterior legs completely black. Abdomen with faint bluish lustre, four basal tergites medially more or less reddish brown. Posterior margins of the other tergites pale medially. Frontal area small but well limited. Antennae short and stout. Clypeus slightly emarginate. 9.0 mm. Female unknown.

Malay Peninsula and Java. April.

***Tala* Malaise, 1935**

One species is recorded from Western Java: *Tala rufo-balteata* (Cameron, 1907). Body bluish black, including antennae. Pronotum with whitish margin. Abdominal segments 2nd-6th red. Fore and hind tibiae partly white. Mesonotum finely, head finely and densely punctured, shining. Wings hyaline, apically (from the base of the stigma) slightly infusate. Anal cell of fore wing with strongly oblique cross vein. Basal and first recurrent vein parallell. Number of cubital cells: 4. Claw with large basal lobe and well developed subapical tooth. Apical and subapical teeth are subequal. Antennae incrassate in the middle. Pedicellus twice as long as board. Head narrowing behind the eyes. Malar space linear. Male unknown. Length: 8.0 mm.

South Burma and Western Java. Flying period unknown.

***Tritobrachia* Enderlein, 1919**

Monotypic genus: *Tritobrachia tenuicornis* Enderlein, 1919. Colour as indicated in the generic key. Head strongly narrowed behind eyes. Inner margins of eyes converging ventrally. Postocellar area elevated, postocellar furrows sharp. Fourth antennal segment longer than third. Subapical tooth of claws longer than apical tooth. Claws without basal lobe (fig. 50). Medium sized, 8.5-12.0 mm.

Malay Peninsula: Singapore, Sumatra, Java and Borneo, 125-400 m. February-August and November-December.

***Ateloza* Enderlein, 1919**

Monotypic genus: *Ateloza pilosa* (Konow, 1898).

Head, thorax and antenna black; labrum, clypeus, posterior margin of pronotum and tegulae partly white. Postscutellum red. Legs white, with brown pattern. The extension of the brown colour varies individually, but restricted to the bases of coxae, femora and tibiae. Apical two-thirds of fore wing and half of hind wing strongly infusate, brown. First-sixth abdominal segments (tergites and sternites) and part of the seventh segment red, the rest of the abdomen black. Mainly head and thorax covered with long whitish pubescence, about 4 times as long as the diameter of the anterior ocellus. Anal cell of fore wing petiolate, third (last) anal vein of fore wing straight. However, some

specimens have the complete anal cell faintly indicated which shows that the position of the genus *Ateloza* is in the subfamily *Selandrinae*. Fore wing with four cubital cells. Basal and first recurrent veins subparallel. Anal cell of hind wing petiolate. Hind wing with one closed medial cell. Sawsheath as in fig. 29 and claw as in fig. 47. Length: 10.0-14.0 mm.

India, Thailand, Philippines, Sumatra, Java and Borneo, 125-1020 m. February-August, and November-December.

Monophadnus Hartig, 1837

1. Unicoloured, with mostly metallic or oil-green lustre. Larger species, 7.0-11.0 mm ... 2
- Bicoloured, without clear metallic lustre. Smaller, 6.0 mm. [Black, abdomen brownish-black. Sternites and lateral part of tergites yellow except for dark brown sawsheath and last tergite. Tibiae whitish brown. Wings hyaline. Females: 6.0 mm. Male unknown] *M. javanus* Enderlein, 1919
Java, 1220 m.
2. Black with metallic blue lustre. Apical halves of wings more or less infusate. Females: 8.5-12.0 mm, males: 7.0-7.5 mm *M. rivalis* Konow, 1906
Malay Peninsula, Java and Sumatra, 300-1300 m. January-August, October and December.
- Species with dull oil-green lustre. Wings hyaline, apical part of fore wing slightly infusate. Females: 9.0 mm, males unknown *M. pullus* (Benson, 1935)
Java, 1375 m. June.

Senoclidea Rohwer, 1913

1. Body with intensive bluish or purplish metallic lustre, nearly or entirely unicoloured. Abdomen without whitish band 2
- Body without bluish or purplish metallic lustre, shiny black or blackish brown, more or less with a white or yellowish white pattern 3
2. First-third(-fifth) abdominal tergites more or less yellowish white. Tibiae, hind femur, more or less fore and middle femora, hind coxa, middle and hind trochanters whitish. [Clypeus, labrum, scapus, pedicellus, hind pronotal margin, tegulae, apical halves of wings brown infusate. Infuscation from first cubital cell onwards. Males unknown. 9.0-10.0 mm. Sawsheath as in fig. 31] *S. mimetica* (Enderlein, 1919)
Java and Sumatra, 100-490 m. May, September, November and December.
- First-third(-fifth) abdominal tergites light brown, without yellowish white band. Legs mainly reddish brown, but tibiae (except for their brown apical rings) whitish. [Clypeus, labrum, pronotal dorsal angles and tegulae whitish. Head black, antenna brown, thorax fuscous. 8.0 mm. Males unknown] *S. trichiocerus* (Cameron, 1903)
Borneo. Flying period unknown.
3. Body with intense purple metallic lustre (in old specimens faded to purplish black). Wings dark brown infusate. 9.0 mm. Male unknown *S. furva* (Konow, 1898)
New Guinea. April.
- Body with blue metallic lustre, if with purple metallic lustre, then only the apical half of the wings infusate 4
4. Black with labrum, clypeus, hind coxae, hind trochanters, hind femur, all tibiae (except their more or less darkened apical ring) white. Males with hind tibia largely

black. Basal halves of wings hyaline and apical halves (from level of base of pterostigma) brown infusate. [Scapus and pedicellus entirely or partly yellow or entirely black. Claw as in fig. 48.] Males: 8.0-8.5 mm, female: 8.5 mm

..... *S. comis* (Konow, 1898)
Java, Sumatra, Borneo and Vietnam. 500-920 m. Flying period unknown.

- Black without white pattern. Fore wing brown infusate, hind wing hyaline with infusate apex. Male: 8.5 mm, female unknown *S. chalybea* (Mocsáry, 1909)
Sulawesi. November.

Phymatoceridea Rohwer, 1916

1. Abdomen dark brown to black. Wings hyaline. [Palpi, legs entirely, and in females, scapus and pedicellus whitish.] 4.0-5.0 mm *Ph. mjobergi* Forsius, 1927
Sumatra, 1000-1600 m. May and July.

- Second-sixth abdominal segments brownish white, sometimes including first tergite or only second-third segments). Wings infusate. [Legs (except black hind tibial apices and hind tarsus), palpi and apex of sawsheath white.] 3.5- 4.5 mm
..... *Ph. javana* Malaise, 1964
Java and Bali, 650 m. December.

Waldheimia Brulle, 1846

One species is known from the region: *Waldheimia funebris* (Konow, 1898).

Completely black and slightly shiny. Wings dark infusate with black setae. Clypeus subtruncate. Lateral postocellar furrows deep. Antennae elongate, as long as abdomen. Head rounded and narrowed behind eyes. Antennae, head dorsally, pronotum, mesopleuron and tibiae with very dense black setae. Claws with long inner teeth and well-developed basal lobe. 11.0 mm. Male unknown.

Borneo. Flying period unknown.

Messa Leach, 1817

One species occurs in the region: *Messa javana* Enslin, 1912. Body completely black. Wings greyish infusate. Clypeus subtruncate, very slightly emarginate. Head behind eyes contracted. Head above hardly punctate, shiny. Frontal area not defined. Vertex about twice as wide as long. Head without posterior carina. Antenna with 10 segments. Mesonotum and mesopleuron smooth and shiny. First cubital cell missing, fore wing with three cubital cells. Claws without subapical tooth. 4.0 mm. Female unknown.

Java. October.

Eutomostethus Enslin, 1913

Only one species recorded from the area: *Eutomostethus vegetus* (Konow, 1906). Shiny black. Prothorax, mesonotal lobes, tegulae and mesoscutellum red. Mesoscutellar appendage black. Knees and tibiae whitish. Antenna short and stocky. Malar space linear. Head narrowed behind eyes. Clypeus truncate. Prepectus separated by a furrow; head smooth and shiny. Mesonotum and scutellum shiny with small and separate punctures.

Wings hyaline; pterostigma piceous, venation black. Basal and first recurrent veins parallel. Claws without basal lobe. 7.0-8.0 mm. Male unknown.
Burma, Java and Sumatra, 1300 m. April.

Tenthredo Linnaeus, 1758

- 1. Body elongate; antenna long, antennal segments longer than wide, wings hyaline or with dark apex, body variously coloured. Mesopleuron finely punctate or partly coarsely punctate, shiny. Head finely punctate, shiny. Comparatively large species, length of body 12.0-14.0 mm 2
- Body more stout, wasp-like, antenna short, stout, and incrassate; wings always with brown apical spot or band in radial-cubital area; body black and yellow coloured. Mesopleuron completely coarsely punctate. Head coarsely punctate, shiny. Mostly smaller species, length of body 8.5-12.0 mm and one larger species, 15.0-16.0 mm ... 3
- 2. Mesosternum without thorns, mesopleuron and mesoscutellum obtusely pyramidal. Head and mesonotum finely punctate, shiny, mesopleuron moderately punctate, shiny. Wings hyaline. Yellow; antenna (except first segment), a spot on first antennal segment, a larger star-shaped frontal spot connected to spot on vertex, two small oblique bands on outside of lateral postorbital furrows, middle mesonotal lobes except their V-shaped posterior margins, lateral mesonotal lobes, triangular spot on propleuron, longitudinal band on mesopleuron, metanotum above (except post-scutellum), a small spot on postscutellum, upper half of first abdominal tergite, hind tibia and tarsus, longitudinal lines on fore and middle tibiae and femora, triangular medial spots on each tergite and hind tarsi black. Venation and pterostigma yellow. 12.0-13.0 mm *T. umbonigera* Konow, 1906
Sumatra, 1200 m. Flying period unknown.
- Mesosternum with acutely pointed thorns. Mesopleuron strongly elevated with large and dense punctures above transverse mesopleural carina. Head almost impunctate, shiny. Fore wing yellowish hyaline, darker at apex near radial vein. Black; mouthparts, angles of pronotum, posterior apices of mesonotal middle lobes, paired spots on mesoscutellum and postscutellum, legs, propodeum, and lateral spots on second-sixth tergites yellowish white. Antenna black, relatively short, scapus and pedicellus yellow. 14.0 mm *T. corporaali* Forsius, 1925
Sumatra, 1300 m. May.
- 3. Mesopleuron entirely black 5
- Mesopleuron with a large yellow spot or pattern 9
- 5. Labrum black. Infuscation of fore wing nebulous, reaching from apex nearly to base of wing. [Clypeus, pronotum and apical halves of all abdominal segments yellowish white.] Large: length of body 15.0-16.0 mm *T. largifasciata* (Konow, 1901)
India, Sumatra, Nikobar and Batjan, 300 m. Flying period unknown.
- Labrum yellow or mostly yellow. Infuscation of fore wing restricted to apex forming a longitudinal band or a sharply defined spot. Smaller, length of body 8.0-12.0 mm 6
- 6. All abdominal tergites and sternites with yellow uninterrupted posterior margin. Pronotum, tegulae, mesepisternum, tibiae and tarsi black except for a pale small obscure spot on lateral pronotum, and pale anterior surfaces of fore and middle tibiae. Clypeus with two large yellow spots. Labrum yellow. Fore wing with sharply

- limited infusate spot. 11.0 mm *T. sumatrana* (Forsius, 1935)
Sumatra. Flying period unknown.
- Uninterrupted yellow margins of abdomen on first or first and fourth or eighth tergites; on other tergites missing or only laterally present 7
7. Only first and fourth abdominal tergites with uniformly wide yellow posterior margin. [Clypeus and labrum yellow. Fore wing with a sharply limited infusate spot.] 12.0 mm *T. rugulosa* (Mocsáry, 1909)
Malay Peninsula and Sumatra. Flying period unknown.
- Fourth abdominal tergites with only lateral yellowish margin or with narrow, linear posterior margin 8
8. First abdominal tergite (= propodeum) with uniformly wide yellow posterior margin, fourth tergite with only a narrow, linear posterior margin. Other tergites margined only laterally. Clypeus yellow, labrum with a large median yellow spot. Fore wing with apical infusate bands. 8.5 mm. Female unknown *T. niisatoi* Shinohara, 1998
Borneo, 1000 m. March.
- First abdominal tergite (medially) with wide yellow posterior margin, eighth tergite with narrow yellow posterior margin (fig. 95). Third and fourth tergites only with lateral yellowish posterior margins. Labrum yellow, clypeus with double yellow spots. Apex of fore wing with brown, sharply limited infusate spot. 10.5 mm. Male unknown *T. nigrosabahensis* spec. nov.
Borneo, 1180 m. March-April.
9. Lower part of mesopleuron with a large oval yellow spot confluent with a longitudinal yellow band reaching dorsal side of mesopleuron (fig. 94). Upper part of clypeus yellow. Fore wing with an apical infusate band. [Clypeus and labrum yellow. All abdominal tergites with broad continuous yellow posterior margin.] 11.0 mm. Male unknown *T. djampangensis* spec. nov.
Java, 550-2100 m. February and October.
- Mesopleuron ventrally only with a large, yellowish white spot only. Upper part of labrum black. Fore wing with a sharply limited apical spot. [Clypeus, lower half of labrum, posterior three-quarters of first abdominal segment (propodeum), large lateral spot at posterior margin of third tergite, posterior third or half of fourth tergite, posterior 0.2-0.3 of fifth tergite and large median transverse spots on sixth-ninth tergites yellow.] 10.0 mm *T. borneo* Shinohara, 1998
Borneo, 1460 m. January.

Pristiphora Latreille, 1810

One species is recorded from this region: *Pristiphora borneensis* Forsius, 1933.

Head, thorax, antenna and abdomen black. Coxae black with yellow apices, trochanters and fore legs yellowish. Hind femur black with yellowish knees. Hind tibia yellow with infusate apices. Hind tarsi dominantly black. First and second segments of middle tarsi yellowish, the others infusate. Wings hyaline. Head and thorax practically impunctate. POL:OOL = 1:1. Antennae slender and longer than head and thorax combined. Clypeus subtruncate. Claws subbifid. Sawsheath short and indistinctly excised. 6.0 mm.

Borneo, 1520 m. April.

Description of the new species

Nesoselandria sulawesiensis spec. nov.

(figs 18, 36, 89)

Material.— Holotype, ♀ (RMNH): “**Indonesia**, Sulawesi, nr Mamasa, Penannang, 1650 m, Mal. trap 21, 10-22.iv.1991, C. v. Achterberg, RMNH’91”. Paratypes (4 ♀♀ + 1 ♂): 2 ♀♀ (TMA (1 ♀ from trap 21); RMNH, ZMB (2 ♀♀ from trap 22, 1590 m and from trap 24, 1850 m), topotypic and same date; 1 ♂ (RMNH), topotypic and same date but from trap 22 and 1850 m.

Description.— Head black, supraclypeal and supraantennal area brown. Clypeus and palpi white. Antenna brown, scapus and pedicellus white with brown spots. Thorax dark brown, cenchri white. Abdomen light brown, white: narrow posterior margin of last tergite, a small dorsal spot on sawsheath (fig. 89). Coxae brown with white apices, trochanters white, fore and middle femora brown, hind femur dorsally brown, ventrally white. Tibiae and tarsi entirely white. Head finely, shallowly, moderately densely and uniformly punctate, shiny. Thorax moderately sparsely and uniformly punctate with small shallow punctures, shiny. First and second abdominal tergites smooth and shiny, following tergites with fine sculpture, shiny. Wings hyaline, fore wing apically slightly infusate. Pterostigma and venation moderately light brown. Fore wing with three cubital cells (first cubital cross-vein not visible). Anal cell of hind wing petiolate, nervellus joining petiole perpendicularly. Apex of subcosta strongly swollen. Lateral supraantennal pits situated in an eye-to-eye furrow above the antennae. Clypeus widely but slightly emarginate. Head contracted behind eyes, vertex and temples narrow. Gena linear. Frontal area only slightly rounded. Postocellar furrows very short and deep, reaching posterior margin of head. Sawsheath short, triangular (fig. 18). Claws without basal lobe, subapical tooth well developed, little shorter than apical tooth (fig. 36). Length of body: 4.2-5.2 mm, length of fore wing: 4.5-5.0 mm.

Male: similar to female, but clypeus brownish white; last abdominal tergite with large and white triangle.

Notes.— The new species is unique in the genus *Nesoselandria* Rohwer by its colour. There is no other *Nesoselandria* species, having its clypeus, tibiae and tarsi entirely white.

Caliroa nigrojavana spec. nov.

(figs 19, 37, 60)

Material.— Holotype, ♀ (RMNH): “[**Indonesia**], W. Java, Gedeh, Tjibodas, 1450 m, 21.iv.1940, E. v.d. Vecht-B.”.

Description.— Body, including mouthparts and antennae black without any bluish lustre. Tibiae, tarsi, hind femur, fore and middle femoral apices and hind trochanters yellow, other parts of legs blackish brown (fig. 60). Wings hyaline, apical part of fore wing subinfusate. Fore wing with three cubital cells. Basal and first recurrent veins convergent. Anal cell of hind wing sessile. pterostigma and venation dark brown. head and thorax very slightly and superficially but moderately densely punctate, shiny. Abdominal tergites with very fine and superficial sculpture, shiny. Clypeus widely and slightly emarginate. Postocellar area short, postocellar furrows deep but very short,

similar to a deep puncture. Middle and lateral supraantennal pits well developed. Postorbit (temples) normal about 0.3 times as long as eyes dorsally. Gena absent. Claws without subapical tooth but with a well-developed basal lobe (fig. 37). Sawsheath somewhat dilated in dorsal view, apically truncate (fig. 19). Length of the body: 3.5 mm, length of fore wing: 4.0 mm.

Notes.— The new species is closely related to *Caliroa megomma* Wei, 1997, from China. *Caliroa megomma* has the postorbit extremely narrow, nearly absent, the hind femur brownish black and the clypeus deeply incised. The new species has the postorbit normal, the hind femur yellow and the clypeus slightly emarginate.

Abeleses metallojavanus spec. nov.
(figs 38, 52)

Material.— Holotype, ♂ (RMNH): “[Indonesia], W. Java, Gedeh, Tjibodas, 1450 m, 20.iv.1940, J. v.d. Vecht”. Paratypes 2 ♂♂ (RMNH): “[Indonesia, Java], G[unung] Brengbreg, Djampang Wetan, v.1938, J. v.d. Vecht, Museum Leiden”.

Description.— Body black with strong bluish metallic lustre. Legs and antenna black without metallic lustre (fig. 52). Wings hyaline, apical half of fore wing from base of pterostigma brown infuscate. Pterostigma and venation brownish black. Hind wing with partial marginal vein. Head very densely, strongly, uniformly punctate with moderately large and moderately deep punctures, shiny. Mesonotal lobes moderately densely punctate with small and shallow punctures, shiny. Scutellum moderately densely punctate with medium-sized punctures (smaller than those of head but larger than those of mesonotum), shiny. Mesopleuron densely and uniformly punctate with relatively small but moderately deep punctures, shiny. First abdominal tergite smooth and shiny, the others with fine coriaceous sculpture, shiny. Gena linear, temple narrow. Head contracted behind eyes. Clypeus truncate. Middle and lateral supraantennal pits well developed. Frontal area not outlined. Postocellar furrows short and not reaching posterior margin of head. Claws with subapical tooth shorter than apical tooth and without basal lobe (fig. 38). Length: 7.2 mm, length of fore wing: 7.0 mm.

Notes.— The new species is similar to *Abeleses metallotonkinensis* spec. nov. However, coxae and trochanters of the new species without metallic blue lustre, the infuscation is not restricted to the cubital and radial cells and the third antennal segment longer than the fourth.

Neostromboceros rubromalayensis spec. nov.
(figs 39, 80)

Material.— Holotype, ♀ (RMNH): “[Indonesia, S.W. Sabah, nr Long Pa Sia, Payakalaba, c. 1010 m., 25.xi.-1.xii. 1987, Mal. trap 16, RMNH’87, C. v. Achterberg”.

Description.— Head black with strong blue-green metallic lustre. Clypeus, labrum, bases of mandibles and double spot above clypeus at eyes white. Supraclypeal area brown, impunctate, without any metallic lustre. Antenna black, scapus white but with a black ventro-apical spot, pedicellus white, third antennal segment white with a black longitudinal stripe. Thorax shiny black with slight blue-green metallic lustre. Tegulae,

dorsal and lateral pronotal margins, parapterum, a large triangular spot, presternal furrow and legs white. Fore and middle femora (except their white bases and apices), with a longitudinal stripe on all tibiae and hind femur, tarsi (except for middle and hind basitarsi and hind second tarsal segment with white longitudinal lines) brownish black. Basal half of fore wing yellowish subhyaline, apical half from level of basal vein brown infusate. Hind wing hyaline, with slight infuscation near apices. Pterostigma and venation black. Abdomen brownish black. First abdominal tergite with white hind corners. Second-fifth tergites and second sternite red, third sternite red with a triangular brownish black spot imedially, fourth and fifth sternites with wide red basal band (fig. 80). Head very densely, uniformly punctate, with small and moderately deep punctures, shiny. Mesonotal lobes moderately densely punctate with very small shallow punctures, shiny. Mesoscutellum moderately densely, uniformly punctate with small moderately deep punctures, shiny. Mesoscutellar appendage smooth and shiny. Postscutellum with coriaceous surface, matt. Mesopleuron finely, densely, uniformly and moderately deeply punctate, shiny. Head contracted behind eyes, lateral postocellar furrows deep and reaching posterior margin of head. Frontal area undefined, flat. Middle supraantennal pit missing, lateral supraantennal pits narrow, linear. Head without occipital carina. Clypeus truncate. Third antennal segment rather strongly flattened, fourth antennal segment moderately flattened, other segments normal. Subapical tooth of claws slightly longer than apical tooth (fig. 39). Claws with a large basal lobe. Sawsheath short, dorsally hardly visible, only its apex seen. Mandibles covered with long white setae, antenna with stiff, moderately long back setae (about as long as diameter of anterior ocellus). Length: 10.5 mm, length of fore wing: 11.0 mm.

Notes.— The new species resembles *Neostromboceros pilicornis* (Cameron, 1899). However, *N. pilicornis* has the antenna black, the mesopleural spot minute, and clypeus black with a white spot in the middle and the black colour without any metallic lustre.

Neostromboceros rubroguinealis spec. nov.

(fig. 33)

Material.— Holotype, ♀ (RMNH): “[Indonesia], Nieuw Guinea, Exp. K.N.A.G., 1939, Paniai, 21.ix.1939, Museum Leiden”. Paratype 1 ♀ (RMNH): topotypic, but 14.ix.1939.

Description.— Head, antennae and thorax entirely black without any metallic lustre. Cenchri dark brown. Abdominal tergites and sternites red. Each tergite in the middle with a central spot forming a longitudinal line on the dorsal side of the abdomen. Apical part of ovipositor black. Legs black; white: apices of middle and fore femora, middle and fore tibiae and basitarsi and basal halves of 2nd tarsal segments of the fore legs. Wings hyaline, apically slightly but clearly infusate. Venation black, pterostigma brown with middle black spot. Lateral postocellar furrows deep and short, punctiform not reaching posterior margin of head. Lateral supraantennal pits large and deep. They are widely connected to the large middle supraantennal furrows. Lateral supraantennal pits undivided. Frontal area outlined. Clypeus subtruncate, only very slightly emarginated. Antennal segments cylindrical, not compressed. Ratios of the antennal segments: 9:9:32:35:29:22:17:13:14. OOL:POL:OCL = 10:7:10. Claws with a subapical tooth, wider and little longer than apical one. Basal lobe well developed. Basal and first recurrent veins slightly but clearly convergent. Sawsheath in fig. 33. 7.0-8.8 mm.

Notes.— The new species runs to *Neostromboceros solomonis* (Forsius, 1927). *N. solomonis* differs by having a black propodeum, red abdominal tergites and blackish infusate wings. The new species has the propodeum red with a small brown middle spot, red abdomen with a brown longitudinal band and only apically infusate hyaline wings.

Neothrinax gedehensis spec. nov.
(figs 40, 84)

Material.— Holotype, ♀ (RMNH): “[Indonesia], W. Java, 1450 m, Mt. Gedeh, Tjibodas, 19.iii.1950, J. v.d. Vecht”.

Description.— Head and thorax black; clypeus, labrum, pronotum, halves of tegulae, prepectus, elongated spot of mesopleuron dorso-posteriorly, scapus, pedicellus (except a brown spot), legs entirely (except both brown apical segments of middle tarsus and four apical segments of hind tarsus), cenchri, a large medial spot on mesoscutellum, mesoscutellar appendage entirely and a large medial spot on postscutellum white. Wings hyaline, pterostigma and venation black. Abdomen black, half of first abdominal segment, second-fifth segments entirely (tergites and sternites as well) fulvous, sixth segment fulvous but remainder of abdominal tergites mostly black (fig. 84). Clypeus widely subtriangularly excised. Head contracted behind eyes, lateral postocellar furrows deep and short, not reaching posterior margin of head. Middle and lateral supraantennal pits deep and round. Frontal area slightly outlined. Gena linear. Head, mesoscutellum, mesoscutellar appendage and postscutellum smooth and shiny, mesonotal lobes and mesopleuron nearly smooth and shiny, only with sporadic minute punctures. Saw-sheath short, blunt, hardly visible in dorsal view. Claws as in fig. 40. Length: 7.0 mm.

Notes.— The new species is similar to *Neothrinax sumatrana* Forsius, 1929. *N. sumatrana* has the mesoscutellum, its appendage, the postscutellum, the femora, hind tibia and pronotum (except for its white margin) black. The species of the genus *Neothrinax* are very rare and hard to collect.

Neothrinax excavata spec. nov.
(figs 21, 41, 83)

Material.— Holotype, ♀ (RMNH): “Malaysia, SW. Sabah, nr. Long Pa Sia, Payakalaba, c. 1010 m, 12-13.iv.1987, Mal. trap 13, RMNH/87, C. v. Achterberg”.

Description.— Head, thorax and antennae black; clypeus, scapus, pedicellus, posterior V-shaped margins of mesonotal middle lobes, mesoscutellum, cenchri, parapteron, a longitudinally elongated spot on mesopleuron and legs white; coxae, all femora (except their bases and apices), short apical longitudinal lines on fore and middle tibiae, middle and hind tarsi, a longitudinal line on fore tarsus black or blackish brown. Wings hyaline, pterostigma and venation brown. Abdomen dirty white (at places reddish colour present, bleached?; collected in alcohol 70%). Third-seventh tergites brown dorsally. Head moderately densely, not uniformly punctate with small punctures, slightly shiny (fig. 83). Mesonotal lobes uniformly, densely punctate with small punctures, shiny. Mesoscutellum, mesoscutellar appendage and postscutellum smooth and shiny. Mesopleuron with fine irregular surface sculpture, shiny. First abdominal tergite smooth and shiny, the

others with very fine undefined surface sculpture, shiny. Head slightly contracted behind eyes. Middle and lateral supraantennal pits large and shallow. Lateral postocellar furrows deep, not reaching posterior margin of head. Genae absent. Clypeus truncate. Temples narrow. Subapical tooth well developed but as long as than apical tooth (fig. 41). Claws without basal lobe. Sawsheath very short and deeply excavated apically (fig. 21). In dorsal view, only the projections visible and hardly exceeding cerci. Length: 6.5 mm, length of fore wing: 7.0 mm.

Notes.— The new species is very similar in colour to *Neothrinax pallidicornis* (Rohwer, 1912), but the deeply excavated shawsheath is unique in the genus.

Neothrinax kaindiensis spec. nov.
(fig. 90)

Material.— Holotype, ♂ (RMNH): “**Papua New Guinea**, E. New Guinea, Mt. Kaindi, Wau, 21-2300 m, 18-19.ix.1972, J. v.d. Vecht”.

Description.— Head and antennae black, only apices of mandibles reddish and clypeus dark brown. Thorax black; elongated spot on mesopleuron and parapteron white. Abdomen black, first and second segments white, third and fourth segments reddish yellow with a few black irregular spots (fig. 90). Femora white except for their narrow black bases, middle and hind tibiae white with black apical ring, fore tibia dominantly black, only basally white. Coxae, trochanters and tarsi black. Apical halves of wings slightly but clearly infusate, basal halves hyaline. Venation and pterostigma black. First cubital cross-vein missing, with 3 cubital cells. Basal and first recurrent veins convergent. Anal cell of hind wing petiolate. Nervellus joins petiole right after anal cell. Ratios of antennal segments: 5:4:25:23:20:15:14:13:12. OOL:POL:OCL = 17:9:17. Head smooth and shiny. Middle supraantennal pits large and triangular, lateral supraantennal pits round and about as large as the anterior ocellus. Frontal area not defined. Head strongly contracted behind eyes. Clypeus broadly but only slightly emarginate, nearly subtruncate. Thorax sparsely punctate, shiny. First-fourth abdominal tergites smooth and shiny, the others only with slight undefined superficial surface sculpture, shiny. Claws without basal lobe but with inner tooth.

Notes.— This species does not fit well in the genus *Neothrinax*, because the anal cell is petiolate (not sessile) and the mandible lacks a pit. However, these differences are clearly not enough to establish a new genus for this species. This species is also related to the genus *Busarbia* Cameron, 1899, but it has definitely more in common with *Neothrinax* Enslin, than with *Busarbia* Cameron. The new species has an unique position in the genus due to the above-mentioned character. More or less similarly coloured as *Neothrinax javana* Enslin, 1912. However, *N. javana* has the abdomen extensively fulvous, only the apical segments are black and its clypeus is clearly concave.

Neopoppia irregulata spec. nov.
(figs 22, 42, 73)

Material.— Holotype, ♀ (RMNH): “**Malaysia**: SW. Sabah, Long Pa Sia, Long Semado, 3-5.xii.1987, Mal. trap 13, C. v. Achterberg, RMNH’87”.

Description.— Head and thorax entirely black including antennae and mouthparts, only cenchri brown without any bluish metallic lustre (fig. 73). Abdomen brown. Legs brown, fore tibia and fore and middle tarsi, basal third of middle and hind tibiae white. Wings subhyaline, venation and pterostigma brown, but venation of hind wing and basal half of fore wing up to the middle level of pterostigma white.

Head and lobes of mesonotum and mesopleuron minutely, moderately densely and shallowly sub-uniformly punctate, shiny. Scutellum sporadically punctate with minute and shallow punctures, shiny. Mesoscutellar appendage and postscutellum smooth and shiny. Abdominal tergites with very fine, undefined surface sculpture, shiny. Head without posterior carina, lateral postocellar furrows deep not reaching posterior margin of head. Frontal area clearly defined, hexagonal, sunken and open ventrally. Gena linear. Temples narrow. Mesoscutellum flat. Claws with small inner tooth (fig. 42). Costa strongly swollen before pterostigma. Fore wing with four cubital cells. Second recurrent vein nearly meeting in one point second cubital vein. Basal and first recurrent veins strongly converging. Cross-vein of the anal cell strongly oblique (about 45°). Hind wing with closed cubital and open medial cells. Anal cell of hind wing sessile. Sawsheath as in fig. 22. Length: 5.5 mm, length of fore wing: 5.7 mm.

Notes.— The new species is aberrant (as its specific name indicates) by having no strong metallic bluish lustre as in the other species, *N. metallica* Rohwer, 1930.

Neostromboceros pleuronotatus spec. nov.
(fig. 79)

Material.— Holotype, ♂ (RMNH): “Indonesia: SE. Sulawesi, nr Sanggona, Base Camp, Gn. Watuwila, Mal. trap 13, c. 200 m, 13-15.x.1989, C. v. Achterberg, RMNH’89”. Paratypes: 6 ♂, (RMNH, ZMB), id., but Mal. trap 1, 10-15.x.1989; 6 ♂, (RMNH, ZMB): id., but Mal. trap 1, c. 225 m, 15. 10.x-5.xi.1989; 1 ♂ (RMNH): id., but Mal. trap 12, c. 200 m, 12-15.x.1989; 1 ♂ (TMA): id., but Mal. trap 1, c. 225 m, 15.x-5.xi.1989.

Description.— Body dark brownish black without bluish reflection. Large elongate spot on mesopleuron, parapterum, internal half of tegulae, apices of femora and their inner sides ventrally white (fig. 79). Pterostigma and venation black. Wings hyaline, fore wing infusate apically. Mesopleuron, mesoscutellum, mesoscutellar appendage and postscutellum smooth and shiny. Mesonotal middle and lateral lobes very finely, moderately densely and superficially punctate, shiny. Pronotum densely and finely punctate, shiny. Vertex, temples and frontal area nearly smooth and shiny with sporadic shallow punctures. First-third abdominal tergites smooth and shiny, following tergites with shallow superficial sculpture. Ratios of the antennal segments: 7:5:24:25:20:13:11:10:9. Ratios of hind tarsal segments: 33:14:6:4:9. OOL:POL:OCL = 11:8:13. Length:width of post-ocellar area = 13:15. Length of hind basitarsus:length of inner hind tibial spur = 3:1. Middle and lateral supraantennal pits about of equal size. Lateral pits single. Head contracted behind eyes. Antenna not flattened. Clypeus shallowly but clearly emarginate. Depth of clypeal emargination as deep as about a quarter median length of clypeus. Malar space linear. Claws with basal lobes, subapical tooth slightly shorter than apical tooth. Abdomen without apical membranous patch or sinus sexualis. Head and thorax covered with sparse, short and whitish pubescence not longer than one third of diameter of anterior ocellus. Length: 6.7-7.6 mm, length of fore wing: 6.8-7.4 mm.

Notes.— The new species is related to *Neostromboceros hirashimai* Togashi, 1986 from Papua New Guinea. *N. hirashimai* Togashi differs from it by having the clypeus, the labrum, the lateral sides of the pronotum, the maculae on the prescutum and the mesoscutellum yellow. The new species has these parts brownish black.

Neostromboceros albopedissimus spec. nov.
(fig. 75)

Material.— Holotype, ♀ (RMNH): “Indonesia: Sulawesi, nr Mamasa, Penannang, 1650 m, Mal. trap. 21, 10-22.iv.1991, C. v. Achterberg, RMNH’91”.

Description.— Head and thorax black. Head with violet, thorax and clypeus with metallic blue lustre. Abdomen brown. Labrum, mostly tegulae (except basal brown spot), mostly the legs, posterior margins of abdominal segments (fig. 75) white. Basal part of coxae, femora dorsally and hind tarsi brown, and remainder of legs white. Wings hyaline, apical halves of fore wing brown infusate, venation and pterostigma dark brown. Head smooth and shiny, clypeus moderately densely, deeply and uniformly punctate, shiny. Mesonotal lobes with sporadic, minute punctures, shiny. Mesoscutellum, mesoscutellar appendage and postscutellum smooth and shiny. Mesopleuron finely, minutely and moderately densely punctate, moderately shiny. Abdomen shiny with very fine, superficial, undefined surface sculpture. Ratios of antennal segments: 8:7:2 9:25:20:15:14:13:14. Ratios of hind tarsal segments: 29:8:5:2:7. OOL:POL:OCL = 2:1:2. Length:width of postocellar area = 6:8. Clypeus shallowly and widely emarginate, clypeal emargination as deep as 0.2 times median length of clypeus. Inner margins of eyes slightly convergent. Malar space linear. Postocellar furrows disappear before posterior margin of head. Middle postocellar keel present. Head with narrow postoccipital carina. Supraantennal and supraclypeal pits single and about as large as anterior ocellus. Postocellar area defined. Head contracted behind eyes. Claws with basal lobes, subapical tooth as long as apical tooth but wider. Antenna not compressed. Sawsheath similar to fig. 3. Head and thorax moderately densely covered with whitish pubescence about as long as the diameter of anterior ocellus. Length: 7.0 mm, length of fore wing: 7.2 mm.

Notes.— The new species similar to *Neostromboceros albofemoratus* Rohwer, 1916. *N. albofemoratus* has the fore and middle femora, tibiae and tarsi black. The new species has these parts white, only the femora are partly brown.

Neostromboceros flavopedis spec. nov.
(fig. 34)

Material.— Holotype, ♀ (RMNH): “[Indonesia], Nieuw Guinea, Paniai, 4.xi.1939, Exp. K.N.A.G., 1939, Museum Leiden”.

Description.— Body nearly entirely black, including mouthparts and antenna. Shiny but without any metallic lustre. Scapus brown with black base; cenchri white. Legs dark yellow; all coxae, apical ring of hind tibia, apical four tarsal segments of fore and middle legs, and hind tarsus entirely black. Wings hyaline, apical halves slightly but clearly infusate. Pterostigma and venation brownish black. Middle and lateral antennal pits large and undivided. Frontal area outlined. Lateral postocellar furrow deep, short and

rounded nearly reaching posterior margin of head. Antennal segments normal, not flattened. Ratios of antennal segments: 10:9:32:32:24; other segments missing. Clypeus deeply end roundly emarginate. Postocellar area short, wider than long as 15:8. OOL:POL:OCL = 11:7:8. Mesonotal lobes smooth and moderately shiny. Mesoscutellum only with a few punctures, moderately shiny. Mesopleuron with sporadic punctures, shiny. Claws with well-developed Subapical tooth, subequal with apical tooth. Basal lobe well developed. Basal and first recurrent veins convergent. Sawsheath in dorsal view short, small and acute (fig. 34). Length: 7.5 mm.

Notes.— The new species is related to *Neostromboceros nanus* Malaise, 1944. *N. nanus* has the parapterum and the labrum white; the legs yellowish white; the clypeal emargination triangular and body smaller, 5.5–6.0 mm. The new species has the parapterum and the labrum black; legs dark yellow, the clypeal emargination rounded and the body larger, 7.5 mm.

Eusunoxa malaya spec. nov.
(fig. 65)

Material.— Holotype, ♀ (RMNH): “**Malaysia**: SE. Sabah, nr Danum Valley, Field C., [trail] WON1, Mal. trap. 5, c. 150 m, 23.viii–13.ix.1987, RMNH’87, C. v. Achterberg & D. Kennedy”.

Description.— Antenna entirely whitish yellow. Head yellow with black spot covering entire posterior part of head and reaching downwards to malar space behind eyes including vertex, temples and half of upper frontal area. Thorax yellow. Legs whitish yellow, hind coxa with large brown spots. Hind femur (except for its narrow base), apical half of hind tibia and hind tarsus, black. Abdomen brownish yellow, sternites and last tergite white (fig. 65). Ovipositor white with small apical brown spot. Wings hyaline, venation black, costa and pterostigma yellow. Body smooth and shiny, frontal area moderately deeply, densely and uniformly punctate without shining interspaces. Ratios of antennal segments: 7:5:16:19:17:11:9:9:9:8. Antenna with 10 segments. Ratios of hind tarsal segments: 48:11:8:2:11. OOL:POL:OCL = 4:3:4. Head behind eyes very narrow and contracted. Inner margins of eyes subparallel. Clypeus truncate. Hind basitarsus flattened. Hind wing with open cubital and middle cells. Claws without basal lobe, subapical tooth shorter than apical tooth. Head and thorax moderately densely covered with whitish yellow pubescence 0.7–1.0 times as long as the anterior ocellus.

Notes.— The new species has an unique position in the genus *Eusunoxa* Enslin, 1911, because of its 10-segmented antenna. No other species of the genus possesses this character.

Emphytus danumiensis spec. nov.
(fig. 64)

Material.— Holotype, ♀ (RMNH): “**Malaysia**: SE. Sabah, nr Danum Valley, Field C., [trail] W0N1, Mal. trap. 5, c. 150 m, 2–23.viii.1987, RMNH’87, C. v. Achterberg & D. Kennedy”.

Description.— Head black; clypeus, apical halves of mandibles brown, labrum rusty white. Antenna black; scapus, pedicellus and ventral part of four apical segments yellow. Thorax brownish yellow. Metepisternum with brown band. Legs brown; apex

of fore femur, middle knee, hind femur and hind tibia (except for black hind tibial apical ring) white. Abdomen brown, first tergite and basal anterior band of second tergite brownish yellow (fig. 64). Wings dark brown infuscate, venation and pterostigma black. Vertex and temples finely, uniformly and densely punctate, shiny. Frontal area very densely punctate, hardly shiny. Thorax finely and moderately densely punctate, shiny. First and second abdominal tergites smooth and shiny, other tergites with fine surface sculpture. Ratios of antennal segments: 13:9:32:27:21:17:16:15:16. Ratios of hind tarsal segments: 40:21:6:4:12. OOL:POL:OCL = 12:6:17. Length of the sawsheath:hind tibial length = 49:92. Depth of clypeal emargination:clypeal median length = 7:15. Clypeus deeply and roundly emarginate. Malar space linear. Head subparallel behind eyes. Inner margins of eyes slightly contracted ventrally. Postocellar furrows reaching posterior margin of head. Vertex with middle longitudinal furrow. Claws without basal lobe, subapical tooth shorter than apical tooth. Head and thorax covered with short whitish pubescence about 0.5–0.7 times as long as diameter of anterior ocellus. Length: 11.0 mm, length of fore wing: 9.5 mm.

Notes.— The new species is related to *Emphytus borneensis* Forsius, 1933. *E. borneensis* has the thorax black with numerous brownish yellow spots and five basal abdominal tergites brownish yellow. The new species has the thorax entirely yellowish brown and only the propodeum and base of the second tergite are brownish yellow.

Hemibeleses sulawesiensis spec. nov.
(figs 12, 69)

Material.— Holotype, ♀ (RMNH): “Indonesia: Sulawesi, nr Mamasa, Penannang, 1620 m, 9–12.iv.1991, R. de Jong, at light, RMNH”.

Description.— Shiny black; all trochanters, fore and middle tibiae, fore and middle tarsi (but middle tarsus dorsally brown infuscate), base of hind tibia (0.7 ventrally, 0.3 dorsally) and hind tarsus ventrally yellowish white. Wings hyaline, apical half of fore wing infuscate, pterostigma and venation black (fig. 69). Cenchri brownish white. Head deeply punctate, punctures on vertex and temples moderately dense, on frontal area dense, shiny. Mesonotal lobes shallowly and moderately sparsely punctate, shiny. Mesoscutellum deeply, moderately densely but not uniformly punctate (anteriorly more sparsely, posteriorly more densely and coarsely punctate). Mesoscutellar appendage smooth and shiny. Mesopleuron moderately deeply, uniformly and densely punctate with shiny interspaces. Abdominal tergites with very fine surface sculpture, moderately shiny. Ratios of antennal segments: 6:4:28:22:17:11:8:7:8. Ratios of hind tarsal segments: 42:10:7:4:9. OOL:POL:OCL = 11:5:11. Length of ovipositor:hind tibial length = 47:70. Clypeus truncate. Malar space linear. Inner margins of eyes converging ventrally. Vertex without middle postocellar furrow. Lateral postocellar furrows deep, wide and short. Head contracted behind eyes. Supraantennal and supraclypeal pits deep and longitudinally elongated. Mesoscutellum without carina. Claws with small subapical tooth, basal lobe present but hardly visible. Sawsheath as in fig. 12. Length: 6.9 mm, length of fore wing: 6.8 mm.

Notes.— The new species is related to *Hemibeleses melanopoda* (Cameron, 1902). *H. melanopoda* has the subapical tooth of the claws larger as shown by Saini & Deep (1992: fig. 5), the mesoscutellum carinate and the head with minute, scattered punctures. The

new species has the subapical tooth very short, the mesoscutellum without carina, and the head with deep and dense punctures.

Athlophorus achterbergianus spec. nov.
(fig. 58)

Material.— Holotype, ♀ (RMNH): “**Malaysia**: SE Sabah, nr Danum Valley, Field C., Malaise trap 14, on trunk, [trail] W3, c 150 m, 20.x.-22.xi.1987, C. v. Achterberg, RMNH’87”.

Description.— Head yellowish white with a large blackish brown spot extending from clypeus to posterior margin of head, spot touching upper hind corner of eye and with four yellowish white spots: a double one near postocellar furrows and a double one near anterior ocellus. Antenna dark brown, scapus and pedicellus yellowish white. Thorax black; tegulae, pronotal margin, mesoscutellum (except for its posterior margin), two spots on mesopleuron, postspiracular sclerite, posterior margin of mesepimeron, two spots next to mesoscutellum, sides of postscutellum, two small spots next to postscutellum and posteriorly with an arrow-like spot on middle mesonotal lobes white. All coxae black with longitudinal white lines. All trochanters white. Fore and middle femora black with white longitudinal line on apical half. Hind femur black. Tibiae white and with apical black ring, ring of hind tibia very wide. Tarsi black but fore basitarsi and second tarsal segment whitish. First abdominal tergite (propodeum) brownish black, second-third tergites white with black middle triangle, fourth segment brownish black, other tergites brownish black with wide white posterior margins. Last segment nearly entirely white, ovipositor brownish black. Wings hyaline, radial cells and upper margins of cubital cells brownish infuscate. Venation dark brown (fig. 58). pterostigma bicoloured: apically dark brown, basal quarter yellow. Frontal area densely and moderately deeply punctate. Temples and vertex more sporadically and moderately deeply punctate with shiny interspaces. Upper half of mesopleuron with deep punctures and shiny interspaces. Lower half moderately sparsely punctate with small punctures, shiny. Mesonotum with uniform, small and dense punctures, shiny. Mesoscutellum with hardly visible surface sculpture, shiny. Mesoscutellar appendage and postscutellum smooth and shiny. Abdominal tergites shiny with very fine surface sculpture. Ratios of antennal segments: 15:5:24:15:13:9:8:6:7. Ratios of hind tarsal segments: 31:8:5:3:11. OOL:POL:OCL = 3:2:3. Length of ovipositor:length of hind tibia = 39:73. Head slightly dilated behind eyes. Clypeus rectangularly emarginate, depth of emargination about 0.3 times the median length of clypeus. Inner margins of eyes subparallel. Fifth-ninth antennal segments flattened. Claws without basal lobe. Subapical tooth little shorter than apical tooth. Sawsheath as in fig. 13. Length: 8.3 mm.

Notes.— The new species is related to *Athlophorus sumatranus* Forsius, 1929. However, *A. sumatranus* Forsius, 1929, has the thorax dominantly white, the propodeum entirely pale and the mesosternum reddish brown.

Neothrinax spec.
(fig. 35)

Material.— 1 ♂ (RMNH): “[**Indonesia**], Neth. New Guinea Exp., Star Range, 3400 m, Bivak 42, 27. vii.1959, Museum Leiden”.

One badly damaged male specimen. Very close to *Neothrinax kaindiensis* spec. nov., however the first-third abdominal tergites are reddish, the femora and fore tibia black (except femoral apices) and the mesopleuron without pale spot. Penis valve as in fig. 35. Antennae, left middle tibia and tarsus are missing.

Tenthredo djampangensis spec. nov.
(figs 93, 94)

Material.— Holotype, ♀ (ZMA): “[Indonesia], Nederlands Indië, W. Java, 1800 ft., Djampang Tengah, x.1941, J.M. van Groenendael”. Paratype, ♀ (RMNH): “[Indonesia, E. Java], Ardjoeno, ± 7000 ft, ii.[19]36, Walsh”.

Description.— Body black; scapus, supraantennal tubercles in dorsal view, labrum, clypeus (except for its narrow black frontal margin), basal half of mandible, outer orbits up to top of head, wide dorsal and lateral margins of pronotum, outer halves of tegulae, a large spot on mesopleuron with a projection up to dorsal mesopleural margin, metepimeron, mesoscutellar appendage, wide posterior margin of first tergite (propodeum), narrow posterior margins of other tergites, sternites except for black basal margins of fourth-seventh sternites and legs yellow (figs 93, 94). Basal halves of coxae, wide lines on femora, on fore and middle tibiae, hind tibia (except for its yellow basal 0.2) and hind tarsus (middle tarsus missing) black to blackish brown. Wings yellowish hyaline. An infusate band from base of pterostigma up to end of fore wing and covering lower half of radial and upper margins of cubital cells. Head coarsely and deeply punctate, shiny. Mesonotal lobes shiny, moderately deeply and moderately sporadically punctate but punctures dense at anterior third of middle lobes. Pronotum sparsely and deeply punctate with large punctures, shiny. Mesopleuron shiny, coarsely and deeply punctate with deep punctures without interspaces medially, but with larger interspaces at posterior quarter. Mesoscutellum densely punctate with moderately deep punctures, shiny. Mesoscutellar appendage and post-scutellum nearly smooth, only with a few punctures, shiny. First abdominal tergite smooth and shiny, other tergites with very fine surface sculpture. Clypeus deeply and broadly emarginate, with straight median part. Head slightly dilated behind eyes and then contracted postero-laterally. Posterior carina of head present but slightly developed. Antenna short, its length subequal to width of head. Antennal segments incrassate. Mesosternum without thorns. Mesopleuron and mesoscutellum strongly and bluntly elevated. Subapical tooth of claws only slightly shorter but much wider than apical tooth. Sawsheath dorsally straight, ventrally rounded. Length: 11.0 mm, length of fore wing: 11.0 mm.

Notes.— The new species is similar to *Tenthredo borneo* Shinohara, 1998, however, *Tenthredo borneo* has upper half of the clypeus black, the yellow lateral spot of the mesopleuron without a projection, the sixth-ninth tergites without yellow posterior margins, only with yellow spots, with a large yellow lateral spot on third tergite, posterior third or half of the fourth tergite yellow, the outer orbits mainly black and the clypeus roundly emarginate.

Tenthredo nigrosabahensis spec. nov.
(fig. 95)

Material.— Holotype, ♀ (RMNH): “**Malaysia**, SW. Sabah, nr Long Pa Sia, Sg. Malabit, c. 1180 m, 3-4.xii.1987, at light, C. v. Achterberg & J. Huisman”.

Description.— Body black (fig. 95); labrum, two large spots on clypeus, scapus, apical half of pedicellus, base of mandible, palpi, small spot on each hind mesonotal corner, double spots on tegulae, posterior margin of first abdominal segment (propodeum) only medially, double small lateral triangular spots on very posterior side of first tergite, double broken stripes on lateral part of third and fourth tergites (only yellow triangles are visible above), narrow posterior margin of eighth tergite, last tergite (except for its narrow basal black margin), all sternites, a small apical spot on sawsheath, apical part of sawsheath, apices of all coxae, apex of fore trochanter, middle and hind trochanters entirely and longitudinal lines on fore tibia and fore femur yellow. All tarsi, middle and hind tibiae brown. Wings yellowish subhyaline, apex of fore wing with brown, sharply limited infusate spot restricted to third-fourth (outer) cubital cells and to second (outer) radial cell and with small extension to first radial cell. Pterostigma and venation light brown. Head, mesopleuron, mesoscutellum and mesoscutellar appendage very densely, deeply and coarsely punctate without interspaces, hardly shiny. Mesonotal lobes very densely but not coarsely punctate with moderately large and moderately deep punctures, without interspaces, nearly matt. First abdominal tergite (propodeum) smooth and shiny, other tergites with coarse coriaceous sculpture, matt. Clypeus widely trapezodially emarginate. Head behind eyes slightly contracted. Supraantennal pits large and round. Frontal area not marked. Lateral postocellar furrows present (but hardly visible because of dense punctures) and reaching posterior margin of head. Head with posterior carina. Mesosternum without thorns, mesopleuron and mesoscutellum strongly and bluntly elevated. Abdominal tergites without median keels. Subapical tooth of claws variable, subequal or little shorter than apical tooth. Sawsheath short, invisible from above. Length: 10.5 mm, length of fore wing: 10.5 mm.

Notes.— The new species is related to *Tenthredo nissatoi* Shinohara, 1998. However, *T. nissatoi* has the clypeus (except its black margin) dominantly yellow, the fourth tergite with a wide posterior margin, and the clypeal incision without a straight part medially and each tergite with lateral yellow margins.

Notes on other species

Monophadnus rivalis Konow, 1906

Monophadnus glaucus Enderlein, 1919: 350. **Syn. nov.**

Monophadnus sumatranus Enderlein, 1919: 350-351. **Syn. nov.**

Amonophadnus nigripennis Benson, 1935: 172 **Syn. nov.**

Corporaalinus azureus Forsius, 1925: 86-87. **Syn. nov.**

Corporaalinus cyanescens Forsius, 1925: 87-89. Type was not found, probably lost. Synonymisation is based on the description. **Syn. nov.**

Corporaalinus jacobsoni Forsius, 1929: 54-55. **Syn. nov.**

Amonophadnus nigrojavanus Haris, 2002: 99. **Syn. nov.**

Material of *Monophadnus sumatranus* Enderlein, 1919.— Holotype, ♀ (PAN): “[Indonesia], Sumatra, Soekaranda, Dr H. Dohrn S.”, “*Monophadnus sumatranus*, Type, Enderlein, ♀, Dr Enderlein, det. 1918”, “Lectotype *Monophadnus sumatranus* ENDERLEIN, 1920, ♀, design. T. Huflejt, 1989”, “*Monophadnus glaucus* End. Malaise, 1938”, Paralectotype: ♀ (PAN): “Sumatra, Soekaranda, Dr H. Dohrn S.”, “Cotypus”, “*Monophadnus sumatranus*, Type, Enderlein, ♀, Dr Enderlein det. 1918”, “Paralectotype, *Monophadnus sumatranus* ENDERLEIN, 1920, ♀, design. T. Huflejt, 1989”.

Material of *Monophadnus glaucus* Enderlein, 1919.— Lectotype, ♀ (PAN): “[Indonesia], Java occident., Sukabumi, 2000’, 1893, H. Fruhstorfer”, “Type”, “*Monophadnus glaucus*, Type, Enderlein, ♀, Dr Enderlein, det. 1918”. Paralectotypes: 5 ♀♀ (PAN): “Java occident., Sukabumi, 2000’, 1893, H. Fruhstorfer”, “Cotype”, “*Monophadnus glaucus*, Type, Enderlein, ♀, Dr Enderlein, det. 1918”; 1 ♀, (PAN): “Java occident., Pengalengan, 4000’, 1893, H. Fruhstorfer”, “Cotype”, “*Monophadnus glaucus*, Type, Enderlein, ♀, Dr Enderlein, det. 1918”; 1 ♂ (PAN): “Java occident., Sukabumi, 2000’, 1893, H. Fruhstorfer”, “Type”, “*Monophadnus glaucus*, Type, Enderlein, ♀, Dr Enderlein, det. 1918”.

Material of *Corporaalinus azureus* Forsius, 1925.— Paratypes: 1 ♂ (ZMA): “Paratype, *Corporaalinus azureus* Forsius, 1925”, “[Indonesia], Sumatra’s O.K., Sibolangit 27.x.[19]21, 550 M, J.B. Corporaal”, “Allotype, *Corporaalinus azureus* n. sp., R. Forsius det.”; 1 ♀ (ZMA): “Paratype, *Corporaalinus azureus* Forsius, 1925”, “Sumatra’s O.K., Siantar 17.viii.1921, Sinpang Raja, 400 M, J.B. Corporaal”, “*Corporaalinus azureus* n. sp., R. Forsius det., ♀”.

Material of *Corporaalinus jacobsoni* Forsius, 1929.— Holotype ♀ (RMNH): “[Indonesia], Fort de Kock (Sumatra), 920 m, 1924, E. Jacobson”, “Museum Leiden, Holotype, *Corporaalinus jacobsoni* Forsius, 1929”, “*Corporaalinus jacobsoni* n. sp. Holotypus, R. Forsius det. female”.

Material of *Amonophadnus nigripennis* Benson, 1935.— Holotype ♀ (RMNH): “Museum Leiden, Holotype, *Amonophadus nigripennis* Benson, 1935”, “Type”, “Genital-prep. # 4”, “[Indonesia], Mt. Gedeh, Tapos, 1000 M., 20-26.i.[19]33, J v.d. Vecht”, “Mus. Leiden”, “Holotype, *Amonophadnus nigripennis* sp. nov., ♀, det. R.B. Benson, 1934”.

Material of *Amonophadnus nigrojavanus* Haris, 2002.— Holotype ♀ (ZMA): “[Indonesia], Nederlands Indië, Jawa, 1800’, Z.W. Priangan, xii.1941, J.M.A. v. Groenendael”, “Holotypus, *Amonophadnus nigrojavanus* spec. nov. det. A. Haris”.

The reason of the numerous synonyms for this species is the variability in its size and in the colouration of the wings. The largest specimens reach 12.0 mm, while the smallest males do not exceed 7.0 mm. The wings may vary from dark to light brown. Additionally, it has been affected by the age of the specimen: usually the pigmentation of the wings of the old specimens has been faded. These species were examined by Malaise and he started to revise the species listed above. Unfortunately he could not complete his revision and publish his results.

Senoclidea amala (Rohwer, 1912) and *S. comis* (Konow, 1898)

Forsius proposed to move *Monophadnus comis* (Konow, 1898) to the genus *Senoclidea* Rohwer, 1913. Studying numerous specimens identified as *S. comis* Konow and *S. amala* (Rohwer, 1912), I did not see any differences between them, their descriptions fully agree and *Senoclidea comis* (Konow, 1898) runs to *S. amala* Rohwer in the key of Vasu & Saini (1998). It is very likely that *S. amala* Rohwer is the male of *S. comis* Konow. For confirmation, it is necessary to check the types in the future. Unfortunately, up to now I have received neither the type nor a photo of *S. comis* (Konow, 1898).

Senoclidea mimetica (Enderlein, 1919)

Material.— Lectotype ♀ (PAN): “[Indonesia], Sumatra, Soekaranda, Dohrn”, “Typus”, “*Monophadnus mimeticus*, Type, Enderlein, ♀, Dr Enderlein, det. 1918”, “Holotype, *Monophadnus mimeticus* Enderlein, 1920, ♀, det. T. Huflejt, 1989”.

The claw structure of the type clearly indicates that this species belongs to the genus *Senoclidea* Rohwer, 1913.

Senoclidea chalybea (Mocsáry, 1909)

Material.— Lectotype ♂ (TMA): “[Indonesia], S. Celebes, Samaga, xi.1985, H. Fruhstorfer”, “*Monophadnus* n. sp. ♂”, “*Waldheimia chalybea* Mocs.”, “Lectotype: *Waldheimia chalybea* Mocsary, 1909, det. A. Haris, 2005”, “*Senoclidea chalybea* Mocs., det. A. Haris, 2005”.

The shortened fourth and fifth antennal segments indicate that this species does not belong to the genus *Waldheimia* Brulle, 1846, but fits rather in the genus *Senoclidea* Rohwer, 1913. Ratios of the antennal segments of the lectotype: 8:7:24:22:20:14:12:7:11. The *Waldheimia* species have the middle antennal segments elongate, fourth and fifth segments clearly longer than the four apical segments together while in the genus *Senoclidea* the fourth and 5th antennal segments are shorter than the four apical segments combined.

Neostromboceros coneger (Konow, 1901)

Neostromboceros groenandeli Haris, 2002: 95-96. **Syn. nov.**

Neostromboceros nigrojavanus Haris, 2002: 93. **Syn. nov.**

Neostromboceros prianganensis Haris, 2002: 93-94. **Syn. nov.**

Material of *Neostromboceros groenandeli* Haris, 2002.— Holotype, ♀ (ZMA): “[Indonesia], Nederlands Indië, W. Java, Priangan, 1935-1939, J.M.A. v. Groenendael”, “Holotypus, *Neostromboceros groenandeli* spec. nov., det. A. Haris”. Paratype, ♀ (ZMA): “Nederlands Indië, W. Java, 1600 ft, Djampang Tengah, 26.iii.1940, J.M.A. van Groenendael”, “Paratypus, *Neostromboceros groenandeli* spec. nov. det. A. Haris”. Material of *Neostromboceros nigrojavanus* Haris, 2002.— Holotype, ♀ (ZMA): “[Indonesia], Jawa, Gedeh, Koningsberger, 31.v.1911, 1625-2400 m”, “Holotypus, *Neostromboceros nigrojavanus* spec. nov., det. A. Haris”.

Material of *Neostromboceros prianganensis* Haris, 2002.— Holotype, ♀ (ZMA): “[Indonesia], Nederlands Indië, W. Jawa, Priangan, 27.x.-3.xi.1941, J.M.A. van Groenendael”, “Holotypus, *Neostromboceros prianganensis* spec. nov., det. A. Haris”, Paratype, ♀ (ZMA): “Nederlands Indië, Jawa, Djampang Tengah, 1800’, 10.ix.1939, J.M.A. van Groenendael”, “Paratypus, *Neostromboceros prianganensis* spec. nov., A. Haris det.”.

The specific differences were based on the infuscation of the wings (hyaline or bicoloured) and on the shape of the sawsheath (elongated or widened). Although the differential diagnoses were clearly indicated in Haris (2002) and the specific differences are distinct I consider the mentioned differences only infraspecific variations. Moreover, the holotype of *N. groenandeli* Haris has a badly deformed sawsheath.

Abeleses metallocyaneus (Haris, 2002)

Material.— Holotype, ♀ (ZMA): “[Indonesia], Nederlands Indië, Jawa, 1800’, Y.W. Priangan, xii.1941, J.M.A. v. Groenendael”, “Holotypus *Emphytus metallocyaneus*, det. A. Haris”.

This species was originally described as *Emphytus metallocyaneus* Haris, 2002, because of the venation of the wings. The elongate hind coxa and its bluish metallic colour clearly indicate that this species belongs to genus *Abeleses* Enslin, 1911. The position of

this species in the genus *Abeleses* is still unique by its unusual wing venation similar to the venation of the genus *Emphytus* Klug, 1815.

New sawflies from Vietnam

There is no faunistic list on the sawfly fauna of Vietnam. The first paper (Shinohara, 2003) on the Vietnamese sawflies discusses only 2 *Conaspidia* species. So far, only a few species have been described from Vietnam (mainly from Tonkin; Malaise, 1945 and Shinohara, 1998). For the identification of the Vietnamese sawflies, the most useful papers are the publications of Malaise (1944, 1945, 1947, 1961, 1964). The recently described species from India and South China appeared in papers by Saini, Vasu and Wei (approximately 100 published papers, not cited here). The following 32 new species are described below from Vietnam: *Nesoselandria albotonkinensis* spec. nov., *N. albotegularissima* spec. nov., *N. devriesiana* spec. nov., *Anaepptamena achterbergiana* spec. nov., *Neostromboceros nigrogiganteus* spec. nov., *N. gracilioides* spec. nov., *N. alboclypeatus* spec. nov., *N. daoensis* spec. nov., *N. phuongensis* spec. nov., *Abusarbidea bicoloristigmata* spec. nov., *Eusunoxa alboapicalis* spec. nov., *Neopoppia tonkinometallica* spec. nov., *Abeleses vietnamensis* spec. nov., *A. metallotonkinensis* spec. nov., *Heptamelus tonkniensis* spec. nov., *Athlophorus devriesi* spec. nov., *Rhopographus vietnamensis* spec. nov., *Xenapatidea hematothoracica* spec. nov., *X. devriesi* spec. nov., *Allantidea achterbergiana* spec. nov., *Neothrinax nigrotonkinensis* spec. nov., *Indotaxonus flavissimus* spec. nov., *Darjilingia vietnamensis* spec. nov., *D. tonkinensis* spec. nov., *D. hoangliensis* spec. nov., *Ferna achterbergi* spec. nov., *Monophadnus bicoloritonkinensis* spec. nov., *Eutomostethus phongdiensis* spec. nov., *Eutomostethus albotegularissimus* spec. nov., *Tenthredo octomaculatus* spec. nov., *T. tricoloritonkinensis* spec. nov. and *T. danangiensis* spec. nov. A checklist of the sawfly species from Vietnam and the typelist of the Vietnamese sawflies will be published separately. The scope of this paper is restricted to the description and illustration of the new species collected during the expeditions of the National Museum of Natural History at Leiden to Vietnam. For the comparison of the new species with those which described earlier, the following papers has been used: Koch (1996), Malaise (1944, 1945, 1947, 1961, 1963), Saini & Vasu (1996), Smith & Saini (2003), Wei & Wang (1995) and Wei (1997a, b).

Description of the new species

Nesoselandria albotonkinensis spec. nov.
(figs 1, 87)

Material.— Holotype, ♀ (RMNH): “N. Vietnam: Tonkin, Tay Con Linh, Cao Bo, c. 1300 m, 16-23.ix.2000, May Phu Quy, RMNH’01”. Paratype, ♀ (IEBR): “N. Vietnam: Tonkin, Tay Con Linh, 1430-1700 m, 14. ix.2000, May Phu Quy, RMNH’01”.

Description.— Head and antenna black, scapus, pedicellus and labrum brown. Thorax dark brown, cenchrus white, tegulae brownish white. Legs entirely white (fig. 87). Abdomen light brown. Wings moderately infusate, pterostigma and venation brown. Head and thorax smooth and shiny. Abdominal tergites with fine surface sculpture. Ratios of the antennal segments: 6:5:16:12:9:7:6:6:6. Ratios of the hind tarsal segments:

22:9:6:2:5. POL:OOL:OCL = 8:8:9. Length of sawsheath:length of hind tibia = 12:25. Clypeus roundly emarginate. Emargination about half as deep as median length of clypeus. Head contracted behind eyes. Head without occipital carina. Supraantennal pit large and wide oval, not connected to lateral pits. Frontal area not defined. Claws with basal lobe. Subapical tooth about as long as apical tooth. Sawsheath very short, hardly visible from above (fig. 1). Length: 3.4–3.5 mm, length of fore wing: 3.8–4.2 mm.

Notes.— The entirely white legs differentiate the new species from all known members of the genus. The new species is related to *Nesoselandria albotegularissima* spec. nov. (see below).

Nesoselandria albotegularissima spec. nov.
(figs 2, 86)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**: Tonkin, Tay Conh Linh, Cao Bo, Xyuen Ho Giang, c. 1300 m, 15-19.ix.2000, K.P. Long & M.P. Quy, RMNH’01”. Paratype, ♀ (IEBR): “NW. Vietnam: Tonkin, Hoang Lien N.R., 15 km W. Sa Pa, c. 1900 m, 15-21.x.1999, Malaise traps, C. v. Achterberg, RMNH’99”.

Description.— Head black, labrum brown, palpi white. Antenna black, scapus and pedicellus dark brown. Thorax dark blackish brown, propodeum, tegulae and cenchri white. Legs entirely white. Abdomen light brown, four basal sternites whitish brown (fig. 86). Wings hyaline, venation and pterostigma brown. Frontal area with very fine horizontal wrinkles. Temples, vertex and thorax smooth and shiny. Abdomen with very fine surface sculpture. Ratios of the antennal segments: 9:8:25:18:16:11:9:9:9. Ratios of the hind tarsal segments: 30:12:6:3:8. OOL:POL:OCL = 8:9:10. Length of sawsheath:length of hind tibia = 20:75. Head contracted behind eyes. Clypeus roundly emarginate, clypeal emargination nearly half as deep as median length of clypeus. Middle supra-antennal pit shallow, horizontally elongated but not reaching lateral pits. Subapical tooth of the claws nearly as long as apical tooth. Basal lobe present. Sawsheath as in fig. 2. Length: 4.2–4.6 mm, length of fore wing: 4.6–4.8 mm.

Notes.— The new species is related to *Nesoselandria albotonkinensis* spec. nov. (see above). But *Nesoselandria albotonkinensis* spec. nov. has the pronotum black and the abdomen light brown. *Nesoselandria albotegularissima* spec. nov. has the pronotum and most of the sternites white.

Nesoselandria devriesiana spec. nov.
(fig. 88)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**, Viet Try, nr Thanh Son, Thoung Cuu, 350–400 m, 11-16.x.1999, Malaise traps, R. de Vries, RMNH99”. Paratype: ♀, (IEBR): same data.

Description.— Head antennae and thorax black, cenchri white, pronotum brown, tegulae blackish brown. Abdomen brown, sternites light brown (fig. 88). Wings infusate, pterostigma and venation black. Legs light brown, apices of tibiae infuscated. Two basal segments of each tarsi white, apical 3 tarsal segments black. Coxae black with brown apices. Head densely and finely granulated, shiny. Thorax smooth and shiny. Abdomen with very fine surface sculpture. Ratios of the hind tarsal segments: 25:10:4:3:8. OOL:POL:OCL:9:10:13. Length of sawsheath:length of hind tibia: 22:69. Clypeus shallowly

emarginated, clypeal emargination about a third as deep as median length of clypeus. Head contracted behind eyes. Frontal area rather flat little raised above the frontal level. Lateral supraantennal pits large and elongated, reaching the middle pit but remaining separated. Subapical tooth of claws subequal with apical tooth. Basal lobe present. Saw-sheath similar to fig. 1. Length: 4.6–4.7 mm, length of fore wing: 4.6–4.7 mm.

Notes.—The new species is related to *Nesoselandria nigroalata* Haris, 2002. *Nesoselandria nigroalata* Haris, 2002 has brown thorax, head without defined frontal area, and with a horizontal furrow above the antennae (subgenus *Corrugia* Malaise, 1944). *Nesoseelandria devriesiana* spec. nov. has black thorax, head with clearly defined frontal area, no horizontal furrow above antennae (subgenus *Nesoselandria* Rohwer, 1910).

Anapeptamena achterbergiana spec. nov.
(fig. 57)

Material.—Holotype, ♀ (RMNH): “NW. **Vietnam**: Tonkin, Hosang Lien N.R., 15 km W. Sa Pa, c 1900 m, 15–21.x.1999, Malaise traps, C. v. Achterberg, RMNH’99”.

Description.—Head, antenna and thorax entirely black, cenchri ivory white, palpi white. Legs white; coxae black (but apices of coxae white), three apical tarsal segments infusate. Abdominal sternites black, first tergite black with two basal brown spots, second tergite black with brown triangle near posterior margin, third–fourth tergites brown, laterally black, fifth–sixth tergites black with lateral brown spots, seventh–ninth tergites black (fig. 57). Wings infusate, pterostigma and venation black. Head and thorax smooth and shiny. Abdomen with very fine surface sculpture. Ratios of antennal segments: 8:2:26:21:15:12:12:10:11. OOL:POL:OCL = 7:4:6. Clypeus subtruncate. Middle and lateral supraantennal pits round and about as large as anterior ocellus. Subapical tooth of claws shorter than apical tooth. Claws without basal lobe. Prepectus present. Length: 4.3 mm, length of fore wing: 4.7 mm.

Notes.—The new species is similar to *Anapeptamena abdominalis* Enslin, 1911. But *A. abdominalis* has the abdomen yellow, with only the first and last tergites black and apices of tibiae black.

Neostromboceros nigrogiganteus spec. nov.
(figs 3, 81)

Material.—Holotype, ♀ (RMNH): “N. **Vietnam**: Vinh Phuc, Tam Dao N.P., c. 1000 m, 18.iv.2001, R. de Vries, RMNH’01”.

Description.—Shiny black, without bluish reflection; labrum, posterior pronotal margin, parapterum, apex of hind coxa, hind trochanters, basal two thirds of hind tibia, narrow basal ring of fore and middle tibiae, membranous patch covering last abdominal tergite and triangular membranous patch on eighth abdominal tergite white. Cenchri yellow. Wings dark, infusate, pterostigma and venation black (fig. 81).

Ratios of antennal segments: 13:8:38. 30:24:19:17:17:18. Width/length of the postocellar area: 28:31. OOL:POL:OCL = 18:20:31. Vertex and temple moderately sparsely punctate with small, moderately deep punctures, shiny. Frontal area densely and irregularly punctate with moderately deep punctures, shiny. Head slightly contracted behind eyes.

Postoccipital carina not reaching upper corner of eye. Clypeus truncate. Frontal area U-shaped. Middle supraantennal basin large. Lateral twin supraantennal pits about as large as anterior ocellus, distinctly separated from each other by their walls without any connecting furrow. Claws with large basal lobe, subapical tooth about as long as apical tooth, but wider. Antennal segments cylindrical. Head and thorax moderately densely covered with whitish pubescence, 0.7–0.8 times as long as anterior ocellus. Sawsheath as in fig. 3. Length: 12.0 mm.

Notes.— The new species similar to *Neostromboceros celebensis* Forsius, 1931. However *N. celebensis* is smaller, has its labrum black, the hind tibia entirely black and the frontal area smooth and shiny.

Neostromboceros gracilioides spec. nov.
(figs 5, 77)

Material.— Holotype, ♀ (RMNH): “NW. **Vietnam**: Tonkin, Hoang Lien, 15 km W. Sa Pa, c. 1900 m, 15–21.x.1999, Malaise traps, C. v. Achterberg, RMNH’99”.

Description.— Shiny black without bluish shine; anterior wide band of clypeus, labrum, posterior margin of pronotum, large median spots on eighth and ninth tergites, apices of coxae, trochanters, bases of femora, mainly apices of tibiae, sawsheath dorsally and cenchri white (fig. 77). Wings hyaline, venation and pterostigma dark brownish black. Head, mesoscutellar appendage, postscutellum and mesopleuron smooth and shiny. Mesonotal lobes with shallow, small and moderately dense punctures, shiny. Mesoscutellum shiny with a few and moderately deep sporadic punctures. Clypeus truncate. Head contracted behind eyes. Postocellar furrows deep. Median supraantennal pit about as large as anterior ocellus. Lateral supraantennal pits single. Body slender. Subapical tooth smaller than apical tooth and removed from it. Antenna cylindrical. Ratios of antennal segments: 8:5:24:20:19:15:13:12:11. OOL:POL:OCL = 6:3:7. Width: length of postocellar area = 1:1. Head and thorax covered with white pubescence, about $2/3 \times$ as long as diameter of anterior ocellus. Sawsheath as in fig. 5. Length: 7.5 mm.

Notes.— The new species is closely related to *Neostromboceros gracilis* Takeuchi, 1941, from Japan. However, it has the clypeal pattern very different. *N. gracilioides* spec. nov. has a brown anterior clypeal margin and above it a white band, while *N. gracilis* Takeuchi has the clypeus anteriorly entirely white without a brown margin.

Neostromboceros alboclypeatus spec. nov.
(figs 6, 82)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**, Ninh Binh, Cuc Phuong N.P., nr. centre, c 225 m, 14. iv.–1.v.2000, Mai Phu Quy, RMNH’00”.

Description.— Black, without bluish lustre; labrum, clypeus, palpi, dorsal margin of pronotum, cenchri, coxae except their bases, trochanters, bases of femora, fore tibia dorsally, basal third of dorsal surface of middle and hind tibiae white (fig. 82). Wings hyaline, apical half slightly infusate. Venation and pterostigma black. Head, mesopleuron, mesoscutellar appendage and postscutellum smooth and shiny. Mesonotal lobes shiny with small, moderately dense and shallow punctures. OOL:POL:OCL = 13:8:18. Width:

length of postocellar area = 1:1. Clypeus subtruncate. Head contracted behind eyes. Postocellar furrows reaching posterior margin of head. Lateral supraantennal pits single. Supraantennal pits about as large as diameter of anterior ocellus. Antenna with cylindrical segments. Subapical tooth of claws as long as apical tooth. Head and thorax moderately densely covered with white pubescence about as long as the diameter of anterior ocellus. Sawsheath as in fig. 6. Length: 8.0 mm.

Notes.— The new species is similar to *Neostromboceros fuscitarsis* Takeuchi, 1929 and *Neostromboceros tonkiensis* Forsius, 1931. Both of them have the femora white, while the new species has its femora black.

Neostromboceros daoensis spec. nov.
(figs 16, 76)

Material.— Holotype, ♂ (RMNH): “N. **Vietnam**: Vinh Phuc, Tam Dao N.P., c. 1000 m, 19.iv.2001, R. de Vries, RMNH’01”. Paratypes 3 ♂♂, (EIBR, RMNH, HNHM): labelled as holotype, 1 ♂, (RMNH) topotypic but on 15.iv.2001.

Description.— Body shiny black without bluish lustre; labrum, parapterum, narrow posterior margin of pronotum, trochanters, apices of coxae, narrow bases of fore and middle femora, basal half of hind tibia and dorsal longitudinal lines of fore and middle tibiae reaching apical black ring, white (fig. 76). Wings subhyaline, apical halves of fore wing infusate. Venation and pterostigma black. Body smooth and shiny. Clypeus coarsely, deeply and densely punctate. Abdominal tergites from third tergite onwards with slight and superficial sculpture. OOL:POL:OCL = 13:6:24. Length of postocellar area:width of postocellar area = 24:17. Clypeus truncate. Inner margins of eyes converging downwards. Malar space linear. Head slightly contracted behind eyes. Postocellar furrows reaching posterior margin of head although it is hardly visible. Supraantennal pits large, nearly as large as anterior ocellus, double and narrowly connected. Postocellar area longer than wide. Subapical tooth of claws as long as the apical tooth but wider. Head and thorax moderately densely covered with whitish pubescence about as long as diameter of anterior ocellus. Antennae covered with short black setae. Penis valve as in fig. 16. Length: 8.5-9.0 mm.

Notes.— The new species is related to *Neostromboceros khasi* Vasu, 1999. But *N. khasi* Vasu has the labrum, the parapterum and the pronotal margin black and the head with large isolated pit-like punctuation. The new species has the labrum, the parapterum and the pronotal margin white, head smooth and shiny.

Neostromboceros phuongensis spec. nov.
(figs 4, 78)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**, Cuc Phuong N.P., nr centre, c. 225 m, 29.vi.-18.vii.2000, Mai Phu Quy, RMNH’01”.

Description.— Black, without bluish shine; labrum, pronotal margin, parapterum, narrow apices of fore and middle coxae, hind trochanter entirely, second segment of fore and middle trochanters, tibiae extensively, except their black line and apical ring, cenchri, wide posterior margin of first abdominal segment, membranous middle

patches of the seventh-ninth abdominal tergites, apex and lower margin of sawsheath white (fig. 78). Wings subhyaline, apical half slightly infusate, pterostigma and venation black. Head smooth and shiny. Mesonotal lobes moderately densely punctate with small and moderately deep punctures. Mesoscutellum sporadically punctate with large and deep punctures. Mesopleuron, first and second abdominal tergites smooth and shiny. Remining tergites with a shallow coriaceous sculpture. OOL:POL:OCL = 16:6:29. Width:length of postocellar area = 20:29. Clypeus truncate. Lateral supraantennal pits deep, small and single. Middle supraantennal pit slightly smaller than anterior ocellus and hardly visible. Postocellar furrows shallow, hardly visible. Head contracted behind eyes. Subapical tooth of claws larger and wider than apical tooth. Pubescence white, moderately dense and about as long as diameter of anterior ocellus. Sawsheath as in fig. 4. Length: 11.0 mm.

Notes.— The new species resembles *Neostromboceros nigricans* Saini & Vasu, 1999, but this species has the white spots restricted to its legs.

Abusarbidea bicoloristigmata spec. nov.
(fig. 55)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**: Hoang Lien N. P., Fan Si Pan, c. 2100 m, prim. forest base camp, 23-26.x.2001, 22°19'N, 103°47'E, Mai Phu Quy, RMNH'01”.

Description.— Body ivory white; antenna (except lateral white stripe of scapus), rectangular spot of ocellar area, vertex behind, large spot of middle mesonotal lobe, arrow-like spot of hind corner of mesonotum, longitudinal lines of lateral mesonotal lobes, smaller elongated spots next to lateral mesonotal lines, hind corners of mesoscutellum, upper angle of mesepimeron, metanotum, abdominal tergites (except their white margins), sawsheath dorsally, second and and third tarsi, longitudinal lines of tibiae brownish black (fig. 55). Wings hyaline, venation black. Swollen apex of costa white. Pterostigma bicoloured: basal two thirds white, apical third black. Head and thorax smooth and shiny, only middle mesonotal lobes with a few moderately large and shallow punctures. Abdominal tergites with fine transverse sculpture. Ratios of antennal segments: 11:11:32:46:28:17:18:18:15. OOL:POL:OCL = 2:1:3. Length of ovipositor: length of hind tibia = 15:39. Clypeus truncate. Malar space very narrow, about a third diameter of anterior ocellus. Claws without basal lobe. Inner and apical teeth subequal. Sawsheath short, laterally subtruncate. Eyes parallel. Length: 8.5 mm.

Notes.— The new species is related to *Abusarbidea infusata* Wei, 1999. However *A. infusata* Wei has the body yellowish brown, prescutum without arrow-like spot, pterostigma white and sawsheath laterally rounded.

Eusunoxa alboapicalis spec. nov.
(fig. 66)

Material.— Holotype, ♀ (RMNH): “C. **Vietnam**: Thua Thien Hue, Phong Dien N.R., nr base camp, 15 km W. Phong My, 80-210 m, 23.iii.-6.iv.2001, Mal. traps, C. v. Achterberg & R. de Vries, RMNH'01”.

Description.— Antennae black, scapus, pedicellus, third antennal segment ventrally, thorax and interantennal spot reaching clypeus, yellow. Four apical antennal segments

with ventral white spots. Head black with slight purplish reflection; labrum, clypeus, palpi, mandibles largely, yellowish white. Mesonotal lobes yellowish ferruginous. Legs whitish yellow; hind femur (except its basal quarter), wide apical ring of hind tibia and hind tarsi black. Abdomen, ovipositor and cerci white, but five basal tergites yellow and apex of sawsheath black (fig. 66). Wings hyaline, venation and pterostigma black. Body smooth and shiny. Frontal area densely, moderately deeply and uniformly punctate without shiny interspaces. Ratios of antennal segments: 8:5:22:22:17:11:8:8:10. OOL:POL:OCL = 5:4:4. Head contracted behind eyes. Inner margins of eyes slightly convergent. Malar space linear. Head without occipital carina. Middle supraantennal pit deep and about as large as anterior ocellus. Lateral pits invisible. Clypeus truncate. Four apical antennal segments compressed. Claws without basal lobe. Subapical tooth smaller than apical tooth. Hind wing with a closed middle and an open cubital cell. Head and thorax moderately covered with yellowish white pubescence about as long as diameter of anterior ocellus. Antennae with short black pubescence. Length: 8.0 mm.

Notes.— The new species is related to *Eusunoxa buchi* Togashi, 1981. However *E. buchi* Togashi has the third antennal segment shorter than fourth and the middle supraantennal pit distinctly smaller than lateral pits (Wei, 1997a).

Neopoppia tonkinometallica spec. nov.
(fig. 74)

Material.— Holotype, ♂ (RMNH): “NW. **Vietnam**: Tonkin, Hoang Lien N.R., 15 km W. Sa Pa, c. 1900 m, 15-21.x. 1999, Malaise traps, C. v. Achterberg, RMNH99”. Paratype, ♂ (EIBR): same label data.

Description.— Head and thorax black with bluish metallic lustre. Antennae black, four apical segments ventrally white. Abdomen shiny brown with slight violet lustre (fig. 74). Legs black, apical half of fore femur with a yellow longitudinal line. Fore basitarsus and fore second segment and middle basitarsus ventrally white. Cenchri brown. Wings hyaline, fore wing apically slightly infusate. Venation and pterostigma black. Head densely and moderately deeply punctate with shiny interspaces. Mesonotum, mesoscutellum, mesoscutellar appendage and postscutellum smooth and shiny. Upper half of mesopleuron uniformly, moderately densely and finely punctate with small punctures. Lower half of mesopleuron and mesosternum smooth and shiny. Ratios of the antennal segments: 6:4:19:16:10:6:5:5:6. POL:OCL = 1:1:1. Clypeus slightly and broadly emarginate. Head contracted behind eyes. Inner margins of eyes subparallel. Supraantennal pit larger than anterior ocellus. Head without posterior carina. Claw without basal lobe. Inner tooth of claws small, far from apical tooth. Hind wing with marginal vein. Costa apically distinctly broadened. Malar space linear. Length: 4.6-5.1 mm.

Notes.— The new species is related to *Neopoppia metallica* (Rohwer, 1912). However *N. metallica* (Rohwer) has the head smooth and shiny dorsally and the abdomen metallic blue. The new species has head densely and moderately deeply punctate dorsally and the abdomen is shiny brown with violet lustre.

Abeleses vietnamensis spec. nov.
(figs 8, 54)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**, Ninh Binh, Cuc Phuong N.P., nr. centre, c 225 m, 29.xii.2000-3.i.2001, Mai Phu Quy, RMNH’01”.

Description.— Head, antennae and thorax black; labrum, mandibles largely, palpi, supraclypeal triangular spot, supraantennal spots, ventral spot of scapus, apical four antennal segments, apical half of fifth antennal segment, pronotal margin, longitudinal line on hind part of mesopleuron and most of mesepimeron white. Fore leg white, but tibia and femur whitish ferrugineous dorsally. Middle coxae and trochanters white, femur, tibia and tarsus ferrugineous, apex of tibia and base of basitarsi narrowly brown. Hind coxa white with a black longitudinal line apical half also black. Hind trochanter white. Basal half of hind femur ferrugineous, apical half black. Hind tibia ferrugineous with wide apical black ring. Hind tarsus white, but basally basitarsus narrowly black. Wings hyaline, venation black, costa white, pterostigma bicoloured: its upper half white and lower half black. First-second abdominal tergites brownish black (except their white margins), third tergite white, eighth and ninth tergites brownish black with large white maculae. Sternites white, last sternite brownish black as the sawsheath (fig. 54). Head and thorax shiny, superficially and shallowly punctate, punctures hardly visible. First-third abdominal tergites smooth and shiny, remainder shallowly punctate. Ratios of antennal segments: 10:12:38:55:29:17:13:12:15. OOL:POL:OCL = 2:1:2. Clypeus truncate. Head contracted behind eyes. Apical four antennal segments flattened. Claws with basal lobes. Subapical tooth shorter than apical tooth. Cerci very short. Inner margins of eyes slightly convergent. Saw-sheath as in fig. 8. Length: 9.4 mm.

Notes.— The new species is related to *Abeleses birmanus* Malaise, 1961, and *A. versicolor* Malaise, 1961. *A. birmanus* Malaise has the antenna bicoloured (four apical segments black) and the hind legs entirely reddish. *A. versicolor* Malaise has the antenna tricoloured (basally fulvous, medially white, apically black) as the hind leg (respectively white, black and fulvous). *A. vietnamensis* spec. nov. has the antenna bicoloured (with four apical segments white) and hind legs tricoloured (see above).

Abeleses metallotonkinensis spec. nov.
(fig. 53)

Material.— Holotype, ♂, (RMNH): "NW. Vietnam: Tonkin, Hoang Lien N.R., 15 km W. Sa Pa, c. 1000 m, 15-21.x. 1999, Malaise traps, C. v. Achterberg, RMNH'99". Paratype, ♂, (IEBR): same label data.

Description.— Head and thorax metallic blue. Antennae black. Cenchri white. Coxae and trochanters metallic blue. Tibiae and tarsi black. Apex of fore and middle femora and fore tibia (only holotype) ventrally narrowly white. Abdomen black with metallic violet lustre (fig. 53). Wings hyaline, first radial and second-third cubital cells brown. Venation and pterostigma black. Entire body strongly shiny. Ratios of antennal segments: 10:7:33:33:16:12:10:9:9. OOL:POL:OCL = 11:8:11. Clypeus truncate. Malar space linear. Inner margins of eyes slightly convergent. Head contracted behind eyes. Claws bifid, without basal lobes. Body elongate. Length: 8.0-8.6 mm.

Notes.— The new species is related to *Abeleses coeruleus* Rohwer, 1916. *A. coeruleus* Rohwer has the mesoscutellum, labrum and hind trochanters white and the third antennal segment longer than fourth. The new species has the mesoscutellum metallic blue, the labrum and the trochanters black and the third and fourth antennal segments equal in length.

Heptamelus tonkinensis spec. nov.
(fig. 70)

Material.— Holotype, ♂, (RMNH): "N. **Vietnam**, Tonkin, Tay Con Linh, 1430-1700 m, 14.ix.2000, May Phu Quy, RMNH'01".

Description.— Head and thorax black, labrum and mandibles brown. Abdomen dark brown (fig. 70). Tegulae and cenchri white. Antennae dark brown, scapus and pedicellus yellow. Legs entirely light yellow. Wings subhyaline, venation and pterostigma brown, costa white. Vertex, temples, mesonotal lobes and mesoscutellum moderately densely and moderately deeply punctate, shiny. Mesopleuron smooth and shiny with large sporadic punctures. Abdominal tergites with undefined coriaceous surface sculpture. Ratios of antennal segments: 6:6:16:10:11:9:11. Clypeus very slightly and roundly emarginate. Head with postoccipital carina. Inner margins of eyes convergent downwards. Head contracted behind eyes. Inner teeth of claws very small, hardly visible or significantly smaller than apical tooth (N.B.: the shape of claws is variable!). Head and thorax covered with whitish and sparse pubescence about as long as diameter of anterior ocellus. Length: 3.5 mm.

Notes.— The new species is close to *Heptamelus javanus* Enslin, 1912. *H. javanus* Enslin has the tegulae pale brown, its body is larger (5.5 mm), has the large pit in front of the anterior ocellus connected to the lateral postocellar furrows by a short branch. The new species has the tegulae white, is smaller (body: 3.5 mm), and has no pit in front of the anterior ocellus and postocellar furrows without a short branch.

Athlophorus devriesi spec. nov.
(fig. 59)

Material.— Holotype, ♂, (RMNH): "N. **Vietnam**: Vinh Phu, Tam Dao N.P., c. 1000 m, 21.iv.2001, R. de Vries, RMNH'01".

Description.— Head and antennae black; labrum, clypeus, inner ocular margin, scapus (except its black spot), and pedicellus light brown. Thorax red; lower half of mesopleuron, mesosternum, mesepimeron largely, metapleuron and metasternum black. First abdominal segment red except for its black posterior margin. Second-third tergites black, fourth tergite white, second-fourth sternites white, remaining tergites black, genitalia white (fig. 59). Legs black, tibiae with brownish yellow basal line. Wings hyaline, radial cells and most of cubital cells brown infusate. pterostigma and venation black. Ratios of antennal segments: 15:10:32:27:23:15:11:10:6. OOL:POL:OCL = 16:5:21. Head slightly contracted behind eyes. Clypeus roundly and deeply emarginate. Clypeal emargination about half as deep as median length of clypeus. Scutellum raised but not acute. Posterior half of mesoscutellum with longitudinal carina up to its middle. Sub-apical tooth of claws shorter than apical tooth. Claws without basal lobe. Length: 9.5 mm, length of fore wing: 9.3 mm.

Notes.— The new species runs to *Athlophorus heinrichi* Malaise, 1947 and *Athlophorus jacobsoni* Enslin, 1912. However the tricoloured body pattern of the new species (head black, thorax red and abdomen black and white) clearly differentiates the new species from its relatives.

Rhopographus vietnamensis spec. nov.
(fig. 91)

Material.— Holotype, ♂, (RMNH): “C. **Vietnam**: Thua Thien Hue, Phong Dien N.R., nr base camp, 50-100 m, 3.iv.2001, R. de Vries, RMNH’01”.

Description.— Head entirely black, antennae black, only scapus and pedicellus reddish yellow. Thorax black; wide posterior margin of pronotum and tegulae reddish yellow. Legs black, basal third of middle tibia reddish yellow. Abdomen black, third abdominal tergite and sternite reddish yellow. Fifth-eighth abdominal tergites with white posterior margin, ninth tergite white (fig. 91). Wings slightly infusate, the second radial cell entirely and the cubital cells partly dark infusate. Cenchri white. Venation black, pterostigma dark brown. Head, thorax and first-third abdominal tergites entirely smooth and shiny. Other tergites with coarse coriaceous sculpture. Ratios of antennal segments: 12:8:24:16:14:11:9:7:9. OOL:POL:OCL = 13:7:21. Genal length about half as long as diameter of anterior ocellus. Clypeus deeply and roundly emarginate. Antennae strongly flattened. Medial supraantennal pit about as large as anterior ocellus and connected to frontal area. Lateral supraantennal pits missing. Subapical tooth of claws larger and wider than apical tooth. Claws without basal lobe. Body elongate. Head contracted behind eyes. Postocellar furrows deep and reaching posterior margin of head. Inner margins of eyes parallel. Body nearly entirely glabrous; only head and thorax covered with a few white setae. Legs and antenna covered with short and dense dark pubescence. Length: 11.0 mm.

Notes.— The new species is related to *Rhopographus cyathae* Wei & Wang, 1995 but *R. cyathae* Wei & Wang has the thorax entirely black and the antenna not flattened (Wei & Wang, 1995). The new species is also related to *Rhopographus procinctus* (Konow, 1898), however *R. procinctus* (Konow) has the supraclypeal area with yellow spots, its mesopleuron and mesosternum dirty yellow surrounded with black, and hind tarsi pale.

Xenapatidea hemat thoracica spec. nov.
(fig. 99)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**, Ninh Binh, Cuc Phuong N.P., nr centre, c. 225 m, 1-15.v.2000, Mal. tr. II., Mai Phu Quy, RMNH’00”. Paratypes: 3 ♀ + 1 ♂ (IEBR, RMNH): same data but 14.iv.-1.v.2000; 1 ♂ (RMNH): id., but 1.xi.-20.xii.2000; 1 ♀ (HNHM): id., but 15-27.v.2000.

Description.— Head entirely black including mouthparts. Antenna black but scapus and pedicellus with brownish white spots. Thorax entirely ferrugineous. Coxae black with white apices, fore and middle trochanters with black first part and white second part; hind trochanters white. Fore and middle femora black with white apices, hind femur white with two short black stripes. Fore tibia white, middle tibia white with black longitudinal band, hind tibia white with black apical spot. Tarsi black, fore and middle basitarsi mostly whitish brown. Cenchri white. Abdomen and ovipositor black, second tergite and sternite white. Wings hyaline, apical half of fore wing dark infusate. Venation and pterostigma black, apical fifth of costa, subcosta and base of pterostigma white (fig. 99). Metapleuron and metasternum black. OOL: POL: OCL= 12:6:19. Head slightly dilated behind eyes. Clypeus widely, deeply and roundly emarginate. Depth of emargination

about two-thirds as deep as median length of clypeus. Frontal area neither raised nor emarginate. Vertex with median longitudinal keel. Head with very narrow postoccipital carina. Inner margin of eyes parallel. Claws without subapical tooth but with large basal lobe. Sawsheath acutely triangular with straight lateral and apical setae. Postocellar furrows deep and reaching posterior margin of head. Mesoscutellum pyramidal, mesopleuron strongly elevated. Head and thorax moderately densely covered with whitish pubescence 0.7-1.0 times as long as diameter of anterior ocellus. Sawsheath similar to fig. 10. Length of females: 11.0-13.0 mm.

Notes.— The new species is closely related to *Xenapatidea rufoscutellata* Koch, 1996, but *X. rufoscutellata* Koch has the second and third tergites (and sometimes the fourth tergite) more extensively yellow, the propleuron black and the mesopleuron with large punctures.

Xenapatidea devriesi spec. nov.
(figs 10, 98)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**: Vinh Phuc, Tam Dao N.P., c. 1000 m, 17.iv.2001, R. de Vries, RMNH’01”.

Description.— Head black, clypeus yellow. Thorax red, metapleuron and metasternum black. Coxae black, trochanters yellow. Femora black with yellow bases and apices. Tibiae yellow, hind tibia with brown apical ring, fore and middle tibiae with short brown dorsal longitudinal lines starting from tibial apices. Tarsi brown. Abdomen black, but second-third segments yellow (fig. 98). Wings infusate, apical half of fore wing brown, strongly infusate. Pterostigma and venation black. OOL:POL:OCL = 41:12:21. Clypeus widely and broadly emarginate. Clypeal emargination about half as deep as median length of clypeus. Head parallel behind eyes. Cenchri small. Mesoscutellum subpyramidal, blunt. Mesopleuron laterally elevated. Triangular excavation of propodeum large, nearly reaching anterior margin. Sawsheath narrow with slightly curved brown setae (fig. 10). Claws without subapical tooth, basal lobes large. Length: 13.0 mm.

Notes.— The new species is related to *Xenapatidea procincta* (Konow, 1903), however the mesopleuron, the third tergite and its sternite are black in *X. procincta* (Konow).

Allantidea achterbergiana spec. nov.
(figs 11, 56)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**: Ninh Binh, Cuc Phuong N.P., nr entrance, c. 225 m, 14.iv.-1.v.2000, Mai Phu Quy, RMNH’00”.

Description.— Antenna and head black, scapus, pedicellus, labrum and clypeus white. Thorax dorsally red, ventrally black, laterally mostly black, only with a large red spot on mesopleuron and propleuron. Coxae black with white apices, trochanters white. Femora black with narrow white bases and apices. Tibiae white, fore and middle tibiae with short dorsal brown longitudinal line, hind tibia with wide apical black ring. Abdominal tergites white except the three black apical tergites with narrow white posterior margins. Abdominal sternites black (fig. 56). Wings infusate, apical half of fore wing darker. Venation and pterostigma black. OOL:POL:OCL = 2:1:3. Clypeus very

slightly emarginate. Depth of emargination about a quarter as deep as median length of clypeus. Inner margins of eyes slightly contracted. Head slightly contracted behind eyes. Mesoscutellum flat. Propodeum with small excavation. Mesopleuron without elevation. Sawsheath dorsally blunt, setae short, dark and straight (fig. 11). Subapical tooth of claws as long as apical tooth, but wider. Claws with a large basal lobe. Length: 11.0 mm.

Notes.— In the key by Koch (1996), the new species runs to the genus *Allantidea*. The genus contains only one species: *Allantidea bengalensis* (Cameron, 1876). *A. bengalensis* (Cameron, 1876) is bicoloured (body metallic bluish black and yellow). The new species is tricoloured (red, black and white). The new species is similarly coloured as the species of the genus *Xenapatidea* Malaise, 1957.

Neothrinax nigrotonkinensis spec. nov.
(fig. 85)

Material.— Holotype, ♂ (RMNH): “NW. **Vietnam**: Tonkin, Hoang Lien N.R., 15 km W. Sa Pa, c 1900 m, 15-21.x.1999, Malaise traps, C. v. Achterberg, RMNH’99”. Paratypes: 4 ♂, (IEBR, RMNH, HNHM): same label data.

Description.— Body black; clypeus, apical wide margin of labrum, palpi, margin of pronotum, postspiracular sclerite, apices of coxae, trochanters, fore femur ventrally, basal third of hind femur, fore tibia (except its black longitudinal line), middle and hind tibiae (except their black apical ring and longitudinal line), fore and middle tarsi ventrally, white. Hind tarsus yellow (except for the two apical segments dorsally). Cenchri brown. Wings subhyaline, venation and pterostigma brown (fig. 85). Clypeus truncate. Supra-antennal pits round and about as large as anterior ocellus. Subapical tooth of claws smaller than apical tooth. Claws without basal lobe. Length: 5.2-5.5 mm.

Notes.— The new species is related to *Neothrinax corvina* Malaise, 1944. However, *N. corvina* Malaise has the basal sternites, the base of the mesoscutellum and the spots of the corners of the prescutum white, all trochanters black and is larger (6.5 mm). *N. nigrotonkinensis* spec. nov. has all sternites black, no pale spots on the thorax; all trochanters white and is smaller (5.2-5.5 mm).

Indotaxonus flavissimus spec. nov.
(figs 14, 71)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**: Ninh Binh, Cuc Phuong N.P., nr centre, c. 225 m, 17. x.-18.xi.2000, Mai Phu Quy, RMNH’01”. Paratypes: 1 ♂ (IEBR): same label data; 1 ♀ (HNHM): “N. Vietnam: Vinh Phuc, Tam Dao N.P., c 1000 m, 15.iv.2001, R. de Vries, RMNH’01”.

Description.— Body fulvous whitish; coxae, four apical antennal segments, abdominal sternites yellow; interocellar area, two spots on propodeum dorsally, suffused and paired spots on fourth-seventh tergites and sawsheath dorsally, brown. Male more extensively black: spot behind mesopleuron, upper half of metapleuron, two large spots on second tergite, two small spots above cenchri, basin of frontal area and laterally, outer side of frontal carina. Only three apical segments white. Wings yellowish hyaline. Costa and basal half of pterostigma yellow, apex of pterostigma brown, venation black

(fig. 71). Ratios of antennal segments: 20:11:40:38:36:26:21:17:18. OOL:POL:OCL = 21:9:25. Depth of clypeal emargination:median length of clypeus = 11:23. Clypeus rectangularly emarginate. Head subparallel behind eyes. Sawsheath in dorsal view as long as wide (1.0:1.0). Three apical antennal segments flattened. Frontal area outlined and deep. Postoccipital carina reaching vertex, but postocellar area behind without carina. Scutellum blunt but strongly elevated. Postocellar furrows deep and parallel. Claws with hardly visible basal lobe. Subapical tooth wider and a little shorter than apical tooth. Sawsheath as in fig. 14. Female: 11.5-12.6 mm, male: 10.5 mm.

Notes.— The new species is related to *Indotaxonus sinensis* Malaise, 1957. But *I. sinensis* Malaise is a robust species (length of body: 15 mm), with the sawsheath dorsally much longer than its lateral width and the antenna tricoloured (fulvous, black and white). The new species is smaller, has the sawsheath dorsally as long as its lateral width and the antenna is bicoloured (fulvous and white).

Darjilingia vietnamensis spec. nov.
(figs 7, 63)

Material.— Holotype, ♀ (RMNH): “N. Vietnam: Ninh Binh, Cuc Phuong N.P., nr centre, c 225 m, 29.xii.2000-1.i.2001, Mai Phu Quy, RMNH’01”. Paratypes: 1 ♀ (IEBR): same label data; 1 ♀, (RMNH): id., but 18.xi.-28.xii.2000; 1 ♀ + 1 ♂ (RMNH): “NW. Vietnam, Tonkin, Hoang Lien N.R., 10 km SW. Sa Pa, c. 1550 m, 22-29.x.1999, Malaise traps, C. v. Achterberg, RMNH’99”; 1 ♀, (RMNH): “C. Vietnam: Thua Thien Hue, Phong Dien N.R., nr base-camp, 15 km W. Phong My, c 100 m, 22.iii.-6.iv.2001, Mal traps 1-3, C. v. Achterberg & R. de Vries, RMNH’01”.

Description.— Head black, labrum and clypeus white. Antenna black, apex of sixth segment narrowly, seventh segment entirely and palpi white. Thorax black, wide margins of pronotum, tegulae, most of mesoscutellum, parapteron, two longitudinal spots on each mesopleuron and cenchri white. Coxae white with black basal part. Femora brownish yellow with white base. Hind femur black apically. Fore and middle tibiae and tarsi brownish yellow with wide apical dark ring. Hind tarsus white but basal two thirds of basitarsus black. Wings hyaline, venation brownish black. Costa light brown, basal fifth of pterostigma white, remainder brownish black. Abdomen dark brownish black; first-third tergites with wide and the other tergites with narrow white margins; eighth abdominal tergite with white marginal triangle; ninth abdominal tergite white; second-fourth sternites white, others black with white narrow posterior margin. Ovipositor black, cerci white (fig. 63). Body impunctate, smooth and shiny. Ratio of OOL: POL: OCL= 12: 5: 12. Ratios of antennal segments: 12:7:26:29:27:22:19:17:17. Head with distinct but narrow occipital carina. Postocellar furrows deep, subparallel. Frontal area with ocellar area strongly raised. Frontal basin elongate and narrowing ventrally. Supra-antennal area without pits. Clypeus rectangularly emarginate, clypeal emargination about 0.4 times as deep as median length of clypeus. Mesoscutellum flat. Claws with basal lobe. Subapical tooth a little longer and wider than apical tooth. Sawsheath acute with straight setae (fig. 7). Malar space linear and about half as long as the diameter of anterior ocellus. Hypopygium triangular. Length of body: 7.5-8.0 mm (♀) or 5.7 mm (♂). Length of fore wing: 6.8-7.2 mm (♀) or 5.6 mm (♂). Male similar to female, but smaller, mesopleural spots small and narrow, pterostigma entirely, and the basal four-fifths of hind basitarsus black.

Notes.— The new species is related to *Darjilingia icar* Saini & Vasu, 1996. *D. icar* Saini et Vasu has a white triangular spot on the supraclypeal area, an white arrow-like mark on the middle lobe of the mesoscutum, the scapus and the pedicellus fusco-ferrugineous and the propodeum entirely black, the hypopygium nearly subparallel-sided and OOL:POL:OCL = 6:4:7.

Darjilingia tonkinensis spec. nov.
(fig. 62)

Material.— Holotype, ♂ (RMNH): “NW. **Vietnam**: Tonkin, Hoang Lien N.R., 15 km W. Sa Pa, c. 1900 m, 15-21.x.1999, Malaise traps, C. v. Achterberg, RMNH’99”. Paratypes: 2 ♂♂, (IEBR, RMNH), with same labeldata.

Description.— Head black; clypeus, labrum, mandible (except apex), palpi and sub-triangular supraclypeal spot white. Three basal segments of antenna ferrugineous, fourth-seventh segments black and eighth-ninth white. Thorax black; pronotal margins, tegulae, arrow-like spot on hind corner of middle lobe of mesoscutum, parapterum, two longitudinal spots on mesopleuron, cenchri and most of mesoscutellum white. Fore and middle coxae white, basally black. Hind coxa black, apically white. Trochanters whitish ferrugineous. Fore and middle tibiae, femora and tarsi ferrugineous, apical segment of fore tarsus brown and apex of middle femur black. Hind tibia and femur ferrugineous but femoral apices black. Hind tarsus white, only basitarsus black with white apex. Wings hyaline; pterostigma and venation brownish black. Costa dominantly brown. Abdomen mainly black, first abdominal segment entirely black, second-fifth segments with wide, other segments with narrow white posterior margins. Second-fifth tergites with a brownish white triangular spot (fig. 62). First-fifth sternites mostly white. Body smooth and shiny, only mesopleuron punctate with moderately dense and moderately deep punctures. OOL:POL:OCL = 2:1:2. Frontal area raised. Frontal basin large, contracted towards antennae. Supraantennal area without pits. Posterior carina complete but very narrow. Mesoscutellum flat. Claws with basal lobe. Subapical tooth little wider and longer than apical tooth. Length: 6.8-7.0 mm, length of fore wing: 7.0 mm.

Notes.— The new species is related to *Darjilingia similis* Saini & Vasu, 1996; *D. gribodoi* (Konow, 1896) and *D. flagellaria* Saini & Vasu, 1996.

Darjilingia similis Saini & Vasu has the seventh-ninth antennal segments white, the mesopleuron impunctate, basal half of the pterostigma fulvous, OOL:POL:OCL = 1:1:1 and third-fourth antennal segments subequal. *D. gribodoi* (Konow) has the hind basitarsus and the abdomen fulvous, the seventh-ninth antennal segments white and the third segment black. *D. flagellaria* Saini & Vasu has the seventh-ninth antennal segments white, mesopleuron impunctate, third antennal segment black, clypeal emargination frilled and all antennal segments flat.

Darjilingia hoangliensis spec. nov.
(fig. 61)

Material.— Holotype, ♂ (RMNH): “NW. **Vietnam**: Tonkin, Hoang Lien N.R., 15 km W. Sa Pa, c. 1900 m, 15-21.x.1999, Malaise traps, C. v. Achterberg, RMNH’99”. Paratype: 1 ♂ (IEBR): with same labeldata.

Description.— Head black; clypeus, labrum, palpi and seventh-ninth antennal segments white; rest of antenna black. Thorax black; hind pronotal margin, most of mesoscutellum and cenchri white. Tegulae whitish fulvous. Fore and middle coxae white with black base. Fore and middle trochanters white. Fore and middle femora, tibiae and tarsi fulvous. Hind coxa black with white apical spots. Hind femur and hind tibia ferrugineous, basal third of hind femur and the apical ring of hind tibia black. Hind tarsi white, basal two thirds of hind basitarsus black. Wings hyaline, pterostigma and venation dark brown. Abdomen black, first segment entirely black, second-fourth (fifth) segments with yellowish posterior margins (fig. 61). Most of body smooth and shiny. Mesonotal lobes with sporadic, moderately large and moderately deep punctures. Mesopleuron with small and moderately dense punctures. Abdominal tergites shiny with fine coriaceous surface sculpture. Ratios of antennal segments: 8:4:22:19:18:15:11:9:13. Ratios of the hind tarsal segments: 41:18:13:4:8. OOL:POL:OCL = 10:5:8. Length of inner hind tibial spur:length of hind basitarsus = 18:41. Clypeus deeply and roundly emarginate, clypeal emargination half as deep as median length of clypeus, clypeal margin even. Length of genae about a third of diameter of anterior ocellus. Claws with basal lobe. Subapical tooth of claws little longer and wider than apical tooth. Mesoscutellum flat. Length 6.0-6.5 mm, length of fore wing: 6.0-6.5 mm. Variation: mesoscutellum of paratype only with a small yellow spot.

Notes.— The new species is similar to *Darjilingia glabra* Saini & Vasu, 1996. *D. glabra* Saini & Vasu has a white supraclypeal triangular spot and a black mesoscutellum (Saini & Vasu, 1996).

Ferna achterbergi spec. nov.
(figs 17, 68)

Material.— Holotype, ♂ (RMNH): "NW. Vietnam: Tonkin, Hoang Lien N.R., 15 km W. Sa Pa, c. 1900 m, 15-21.x.1999, Malaise traps, C. v. Achterberg, RMNH'99".

Description.— Head mainly black; inner and outer orbits, clypeus, labrum, palpi, supraclypeal area, gena and base of mandible white. Antenna black. Thorax dorsally mainly black; tegulae, margin of pronotum, arrow-like spot on posterior corner of middle lobe of mesoscutum, middle spot of mesoscutellum, cenchri, thorax laterally and ventrally white; hind upper corner of mesopleuron and mesepimeron and a spot above hind coxa black; mesosternum brown. Abdominal tergites black with white posterior margins. Sternites yellowish white, apical sternite brown. Legs yellowish white (fig. 68). Wings hyaline, venation and pterostigma brown. Head and thorax smooth and shiny. Mesonotal lobes with hardly visible and sporadic punctures. Abdominal tergites from the second tergite on with undefined surface sculpture. Ratios of antennal segments: 13:9:33:4 3:39:31:27:26:28. Ratios of hind tarsal segments: 42:19:16:8:13. OOL:POL:OCL = 3:2:4. Head contracted behind eyes. Clypeus subtriangularly emarginate. Clypeal emargination about 0.3 times as deep as median length of clypeus. Inner margins of eyes subparallel. Subapical tooth of claws little shorter than apical tooth. Claws without basal lobes. Penis valve as in fig. 17. Length: 5.1 mm.

Notes.— The new species runs to *Ferna saggitata* Saini & Vasu, 1997 in the key by Saini & Vasu (1997). *F. saggitata* Saini & Vasu has the supraclypeal area black and its penis valve convex as figured by Saini & Vasu (1997).

Monophadnus bicoloritonkinensis spec. nov.
(figs 15, 72)

Material.— Holotype, ♀ (RMNH): “NW. **Vietnam**: Tonkin, Hoang Lien N.R., 10 km SW. Sa Pa, c. 1550 m, 22-29.x.1999, Malaise traps, C. v. Achterberg, RMNH’99”.

Description.— Head and antenna black, labrum, clypeus, palpi (except basal segments) white. Thorax black; pronotum and tegulae yellow, cenchri white. Femora yellow with brown bases. Tarsi infusate, tibiae white with black apical rings, fore and middle tibiae with additional longitudinal lines. Coxae and trochanters white, bases of coxae black. First-fifth abdominal segments yellow, first segment basally black. Second-fifth tergites with paired brown spots. Sixth-ninth segments black with white posterior margins (fig. 72). Hypopygium yellow medially. Ovipositor black, cerci white. Body smooth and shiny. Ratios of antennal segments: 7:7:13:10:9:8:7:7:7. Hind tarsal segments = 22:10:6:3:7. Length of ovipositor:length of hind tibia = 40:53. OOL:POL:OCL = 4:4:5. Inner margins of eye parallel. Clypeus very shallowly and broadly emarginate, nearly truncate. Frontal area raised. Lateral supraantennal pits invisible, middle pit subequal with the anterior ocellus. Claws without basal lobe. Inner fore tibial spur forked. Sawsheath narrow, setae short and straight (fig. 15). Length: 5.8 mm, length of fore wing: 6.0 mm.

Notes.— The new species resembles *Monophadnus javanus* Enderlein, 1919. *M. javanus* Enderlein has the abdominal tergites, the femora and the pronotum black. The new species has the first-fifth tergites medially, pronotum and tegulae yellow and the femora black and yellow.

Eutomostethus albotegularissimus spec. nov.
(figs 27, 51)

Material.— Holotype, ♀ (RMNH): “C. **Vietnam**, Thua Thien Hue, Phong Dien n. r., nr base-camp, 15 km W. Phong My, 50-100 m, 23.iii.-6.iv.2001, Mal. traps 6-9, C. v. Achterberg & R. de Vries, RMNH’01”.

Description.— Head and antennae black, clypeus brown, palpi whitish brown. Thorax dark brown, tegulae and cenchri white. Legs white, coxae and bases of femora with light brown spots. Apical two-three tarsal segments more or less infusate. Wings hyaline, pterostigma and venation brown. Basal and first recurrent veins convergent. Hind wing with one closed middle cell. Abdomen brown. Head, mesonotal lobes and mesoscutellum sparsely and minutely punctate, shiny. Mesopleuron smooth and shiny. First-fourth abdominal tergites smooth and shiny, other tergites with very sparse minute punctures. Head strongly contracted behind eyes, without posterior carina. Lateral postocellar furrows deep, and rounded, ending next to posterior margin of head. Frontal area defined; middle and lateral supraantennal pits deep. Clypeus slightly emarginate, subtruncate. Gena very narrow, linear. Sawsheath narrow and acute in dorsal view. Claws without basal lobes, with small inner tooth (fig. 51). Sawsheath as in fig. 27. Length: 5.2 mm.

Notes.— The closest relative of the new species is *Eutomostethus assmensis* (Rohwer, 1912). However, the white tegulae of the new species clearly differentiate it from this species, which has its tegulae entirely black.

Eutomostethus phongdiensis spec. nov.
(fig. 67)

Material.— Holotype, ♂ (RMNH): “C. **Vietnam**: Thua Thien Hue, Phong Dien N.R., nr base camp, 12 km W. Phong My, c. 60 m, C. v. Achterberg & R. de Vries, RMNH’01”.

Description.— Antenna and head black, scapus, pedicellus, labrum, clypeus, palpi, most of mandible and facial spot white; facial spot very narrow above clypeus but widened dorsally, reaching antennae and having double w-shaped break dorsally, and reaching inner margins of eyes. Thorax black, pronotum, tegulae and upper half of mesopleuron white. Legs white, hind tarsus and three apical segments of middle tarsus black. Abdomen brown (fig. 67). Wings hyaline, venation and pterostigma brown. Body smooth and shiny. Ratios of antennal segments: 7:4:19:24:20:20:17:14:14. Ratios of hind tarsal segments: 12:6:3:2:4. OOL:POL:OCL = 3:2:2. Clypeus broadly and shallowly emarginate. Clypeal emargination about 0.3 times as deep as median length of clypeus. Malar space linear. Inner margins of eyes convergent. Head contracted behind eyes. Middle and lateral supraantennal pits round and about as large as anterior ocellus. Subapical tooth of claws as large as apical tooth. Claws without basal lobe. Length: 6.3 mm, length of fore wing: 6.2 mm.

Notes.— The new species is unique in the genus. All species of the genus has a black or black and red thorax. No other species are known with a white and black coloured thorax.

Tenthredo octomaculatus spec. nov.
(fig. 96)

Material.— Holotype, ♀ (RMNH): “N. **Vietnam**, Vinh Phuc, Tam Dao N.P., c. 1000 m, 19.iv.2001, R. de Vries, RMNH’01”.

Description.— Body ferrugineous with black markings: third-ninth antennal segments, apical half of pedicellus, basal stripe of hind femur, hind tarsus, most of pronotum, small triangular spot on base of mesoscutellum, two spots between mesoscutellar appendage and postscutellum, posterior margin of postscutellum, anterior margin of propodeum, a stripe between mesopleuron and mesopleural epimeron, a stripe between metapleural epimeron and metapleural episternum and a stripe behind metapleural episternum; further three stripes on mesonotum: one wider and triangular stripe on middle lobes and a pair of stripes on lateral lobes connected to each other by a horizontal stripe; eight spots on head: one medially on posterior margin of vertex, a pair of elongated spots near postocellar furrows, a spot inside interocellar area, a pair of elongated spots near lateral ocelli, a spot in front of anterior ocellus and a spot at supraantennal pit. Fourth and following abdominal tergites, anterior margins of all tergites, middle tarsus and apices of fore tarsal segments dark ferrugineous. Clypeus, labrum, mesopleuron and mesopleural epimeron yellow. Wings yellowish, subhyaline, costa and pterostigma yellow, venation black (fig. 96). Head nearly smooth and shiny with sporadic shallow punctures. Mesonotal lobes finely, moderately densely punctate with small punctures, shiny. Mesoscutellum sparsely punctate with moderately deep punctures. Mesoscutellar appendage and postscutellum smooth and shiny, latter with

a few isolated punctures. Mesopleuron shiny with moderately deep and dense isolated punctures. Third and following abdominal tergites finely and densely punctate, shiny. Ratios of antennal segments: 21:13:52:39:34:28:23:21:21. OOL:POL:OCL = 24:8:21. Head with distinct postoccipital carina, behind eyes dilated, and posteriorly contracted at posterior angles of temples. Clypeal emargination trapezoid. Depth of clypeal emargination: median length of clypeus = 9:28. Mesopleuron subpyramidal, but blunt. Mesosternum without thorn. Claws without basal lobe, subapical tooth about as long as apical tooth but wider. Head and thorax moderately densely covered with ferrugineous pubescence about two-thirds as long as diameter of anterior ocellus. Length: 14.0 mm, length of fore wing: 14.0 mm.

Notes.— The new species is unique among the ferrugineous *Tenthredo* species by having eight spots on the head, which distinguish it from all the other *Tenthredo* species.

Tenthredo tricoloritonkinensis spec. nov.
(fig. 97)

Material.— Holotype, ♀ (RMNH): "NW. Vietnam, Tonkin, Hoang Lien N.R., 15 km W. Sa Pa, c. 1900 m, 15-21.x.1999, Malaise traps, C. v. Achterberg, RMNH'99". Paratype: 1 ♀ (IEBR): same label data.

Description.— Head black; clypeus, labrum, mandible largely, palpi and triangular spot at lower posterior orbit white. Antenna tricoloured: scapus ferrugineous, second-fifth segments and most of sixth black, apical part of sixth and seventh-ninth segments white. Thorax black, margins of prothorax all around, most of tegulae, mesoscutellar appendage (except its median longitudinal line), cenchri and a rectangular median spot behind postscutellum white. Base of coxae black, coxal apices white, trochanters whitish ferrugineous, all femora, middle and hind tibiae ferrugineous, inner side of fore tibia whitish ferrugineous, dorsally ferrugineous, tarsi whitish, second and third basitarsi ferrugineous. Wings: subhyaline, costa ferrugineous, pterostigma and venation black. Abdomen black, lateral margin and a median large triangular spot on first segment (propodeum), second sternite and tergite laterally, third segment entirely except two lateral brown spots on tergite, two lateral spots on fourth tergite, two small spots on fifth tergite, a large spot on seventh tergite medially and eighth tergite entirely white. Ovipositor black, cerci white (fig. 97). Vertex and temples shallowly and moderately densely punctate, shiny. Frontal area densely, finely and moderately deeply punctate. Mesonotal lobes uniformly, moderately deeply and densely punctate. Mesopleuron very densely and moderately coarsely punctate without interspaces. Ratios of the antennal segments: 16:8:38:41:33:29:23:21:21. OOL:POL:OCL = 3:1:3. Head contracted behind eyes. Clypeus roundly emarginate. Depth of clypeal emargination: median length of clypeus = 1:3. Mesoscutellum acute and pyramidal. Mesopleuron pyramidal. Mesosternum without thorn. Subapical and apical teeth of claws subequal. Body slender and elongate. Length: 10.4 mm, length of fore wing: 10.0 mm.

Notes.— The new species runs in the key by Malaise (1945) to *Tenthredo amabilis* Malaise, 1945. *T. amabilis* Malaise is a pale yellow species with black markings and bicoloured antennae (black and white). The new species is black with some white markings and tricoloured antennae.

Tenthredo danangiensis spec. nov.
(fig. 100)

Material.— Holotype, ♀ (RMNH): “C. **Vietnam**: Thua Thien Hue, Bach Ma N.P., nr Da Nang, c. 1150 m, 8.iv.2001, C. v. Achterberg, RMNH’01”.

Description.— Antennae black, scapus and basal spot of pedicellus yellowish white. Head black; clypeus, palpi, labrum and base of mandible white. Thorax black; hind pronotal margins, tegulae, anterior half of mesoscutellum, mesoscutellar appendage (except a small black spot at its posterior margin), a small spot behind postscutellum and cenchri yellowish white. Abdomen black, second-fourth segments with narrow yellow posterior margins, eighth-ninth segments and basal sternites yellow. Wings yellowish infusate, apex of fore wing light brown infusate. Venation dark brown, costa and pterostigma yellow. Head with shallow, sporadic, moderately large punctures, shiny. Mesonotum with moderately dense, small punctures, shiny. Mesopleuron densely and coarsely punctate. Mesoscutellar appendage and postscutellum smooth and shiny. First and second abdominal segments smooth and shiny, following segments with fine coriaceous sculpture. Ratios of abdominal segments: 18:9:39:34:30:25:19:17:18. OOL:POL:OCL = 19:6:16. Clypeus roundly emarginate. Mesoscutellum blunt, subpyramidal. Mesopleuron laterally elevated. Mesosternum without thorn. Length: 11.0 mm, length of fore wing: 12.0 mm.

Notes.— The new species runs in the key by Malaise (1945) to *Tenthredo kumaonensis* (Rohwer, 1921). *T. kumaonensis* (Rohwer) has a band below the antennae, the cheeks, the mesopleural spot, the spot above the hind coxa, the sawsheath and the sternites mainly sordid white. These parts are black in the new species. The upper part of mesopleuron is shiny and sparsely punctate in *Tenthredo kumaonensis* (Rohwer) but densely and coarsely punctate in the new species.

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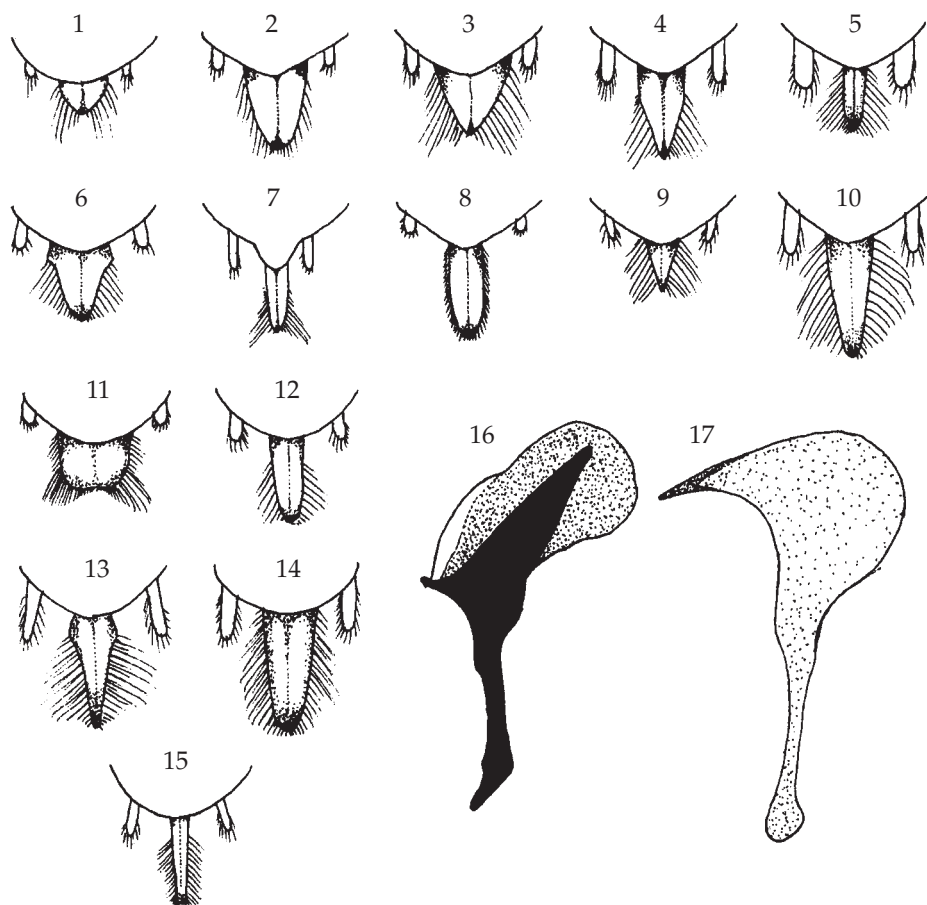


Fig. 1, *Nesoselandria albotonkinensis* spec. nov.; fig. 2, *N. albotegularissima* spec. nov.; fig. 3, *Neostromboceros nigrogiganteus* spec. nov.; fig. 4, *N. phuongensis* spec. nov.; fig. 5, *N. gracilioides* spec. nov.; fig. 6, *N. alboclypeatus* spec. nov.; fig. 7, *Darjilingia vietnamensis* spec. nov.; fig. 8, *Abeleses vietnamensis* spec. nov.; fig. 9, *Neostromboceros laevis* (Konow, 1898); fig. 10, *Xenapatidea devriesi* spec. nov.; fig. 11, *Allantidea achterbergiana* spec. nov.; fig. 12, *Hemibeleles sulawesiensis* spec. nov.; fig. 13, *Athlophorus achterbergianus* spec. nov.; fig. 14, *Indotaxonus flavissimus* spec. nov.; fig. 15, *Monophadnus bicoloritonkinensis* spec. nov.; fig. 16, *Neostromboceros daoensis* spec. nov.; fig. 17, *Ferna achterbergi* spec. nov. 1-15, sawsheath and cerci, dorsal aspect; 16-17, penis valve.

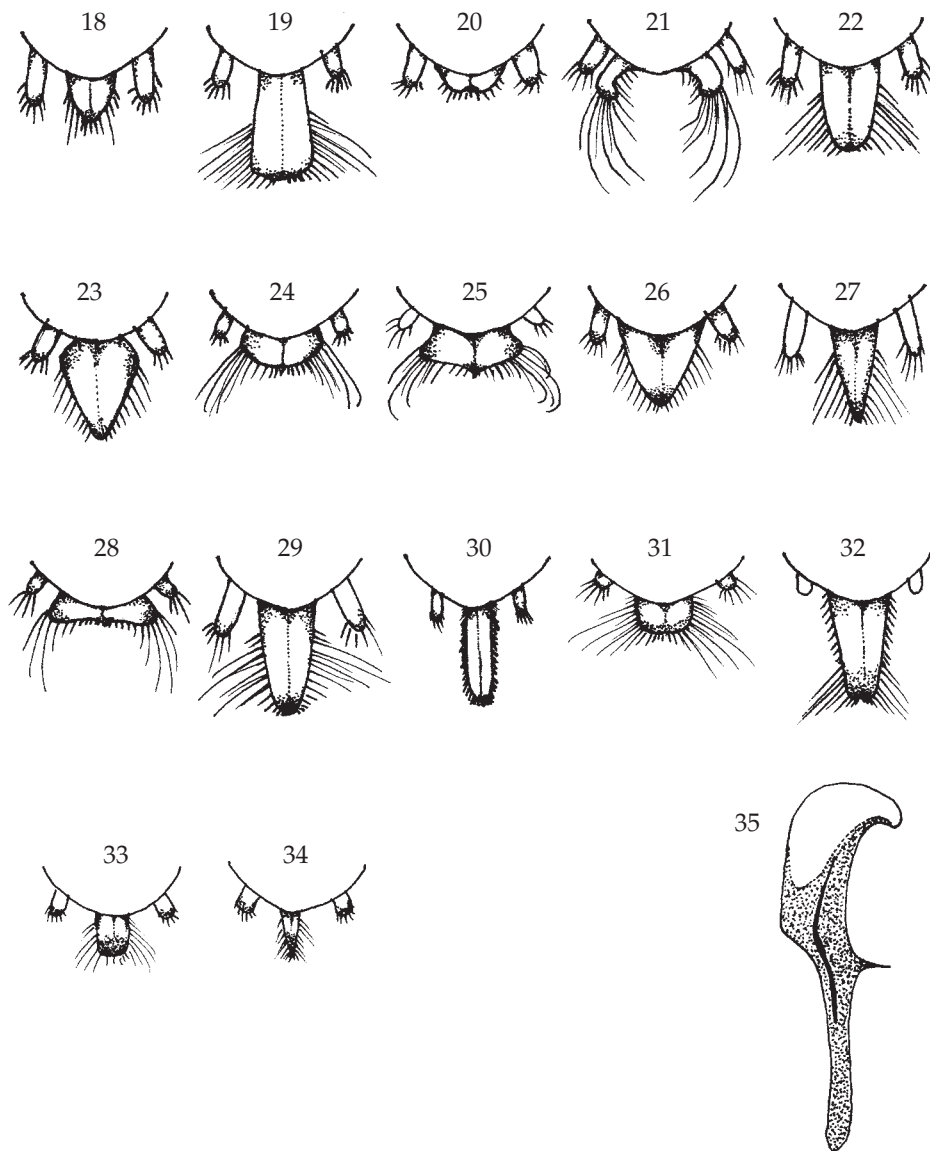


Fig. 18, *Nesoselandria sulawesiensis* spec. nov.; fig. 19, *Caliroa nigrojavana* spec. nov.; fig. 20, *Neostromboceros rubromalayensis* spec. nov.; fig. 21, *Neothrinax excavata* spec. nov.; fig. 22, *Neopoppia irregulata* spec. nov.; fig. 23, *Neostromboceros coneger* (Konow, 1901); fig. 24, *Canonias inopinus* Konow, 1901; fig. 25, *Neostromboceros iridipennis* (Cameron, 1903); fig. 26, *Euforsius jacobsoni* (Forsius, 1929); fig. 27, *Eutomostethus albotegularissimus* spec. nov.; fig. 28, *Rhopographus procinctus* (Konow, 1898); fig. 29, *Ateloza pilosa* (Konow, 1898); fig. 30, *Monophadnus rivalis* Konow, 1906; fig. 31, *Senoclidea mimetica* (Enderlein, 1919); fig. 32, *Abeleses metallocyaneus* (Haris, 2002); fig. 33, *Neostromboceros rubroguinealis* spec. nov.; fig. 34, *N. flavopedis* spec. nov.; fig. 35, *Neothrinax* spec. 18-34, sawsheath and cerci, dorsal aspect; 35, penis valve.

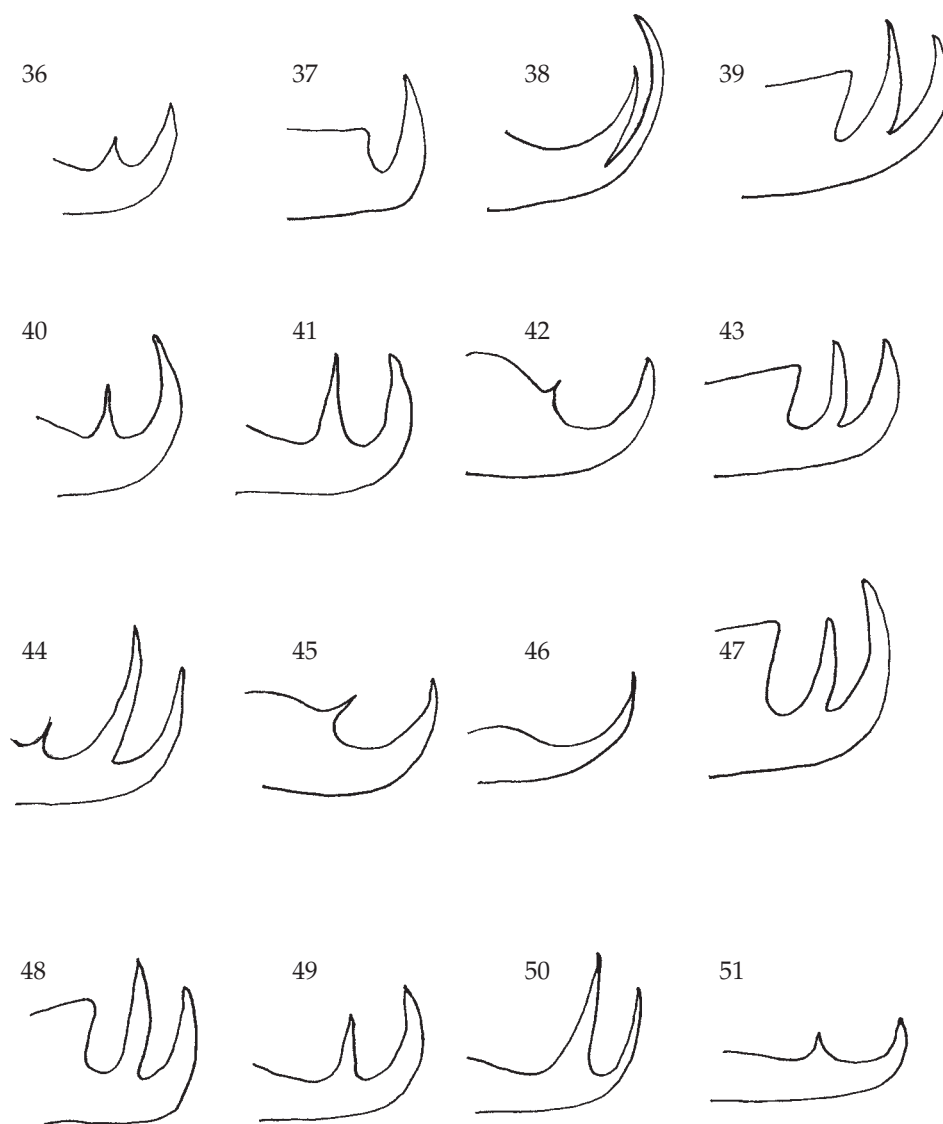


Fig. 36, *Nesoselandria sulawesiensis* spec. nov.; fig. 37, *Caliroa nigrojavana* spec. nov.; fig. 38, *Abeleses metallojavanus* spec. nov.; fig. 39, *Neostromboceros rubromalayensis* spec. nov.; fig. 40, *Neothrinax gedehensis* spec. nov.; fig. 41, *N. excavata* spec. nov.; fig. 42, *Neopoppia irregularata* spec. nov.; fig. 43, *Neostromboceros celebensis* Forsius, 1931; fig. 44, *Canonias inopinus* Konow, 1901; fig. 45, *Neopoppia metallica* Rohwer, 1930; fig. 46, *Salatigia roepkei* Enslein, 1911; fig. 47, *Ateloza pilosa* (Konow, 1898); fig. 48, *Senoclidea comis* (Konow, 1898); fig. 49, *Denticornia subtilis* (Benson, 1935); fig. 50, *Tritobrachia tenuicornis* Enderlein, 1919; fig. 51, *Eutomostethus albotegularissimus* spec. nov. 36-51, tarsal claws, lateral aspect.



Fig. 52, *Abeleses metallojavanus* spec. nov., holotype; fig. 53, *A. metallotonkinensis* spec. nov., holotype; fig. 54, *A. vietnamensis* spec. nov., holotype; fig. 55, *Abusarbidea bicoloristigmata* spec. nov., holotype; fig. 56, *Allantidea achterbergiana* spec. nov., holotype; fig. 57, *Anapeptamena achterbergiana* spec. nov., holotype; fig. 58, *Athlophorus achterbergianus* spec. nov., holotype.

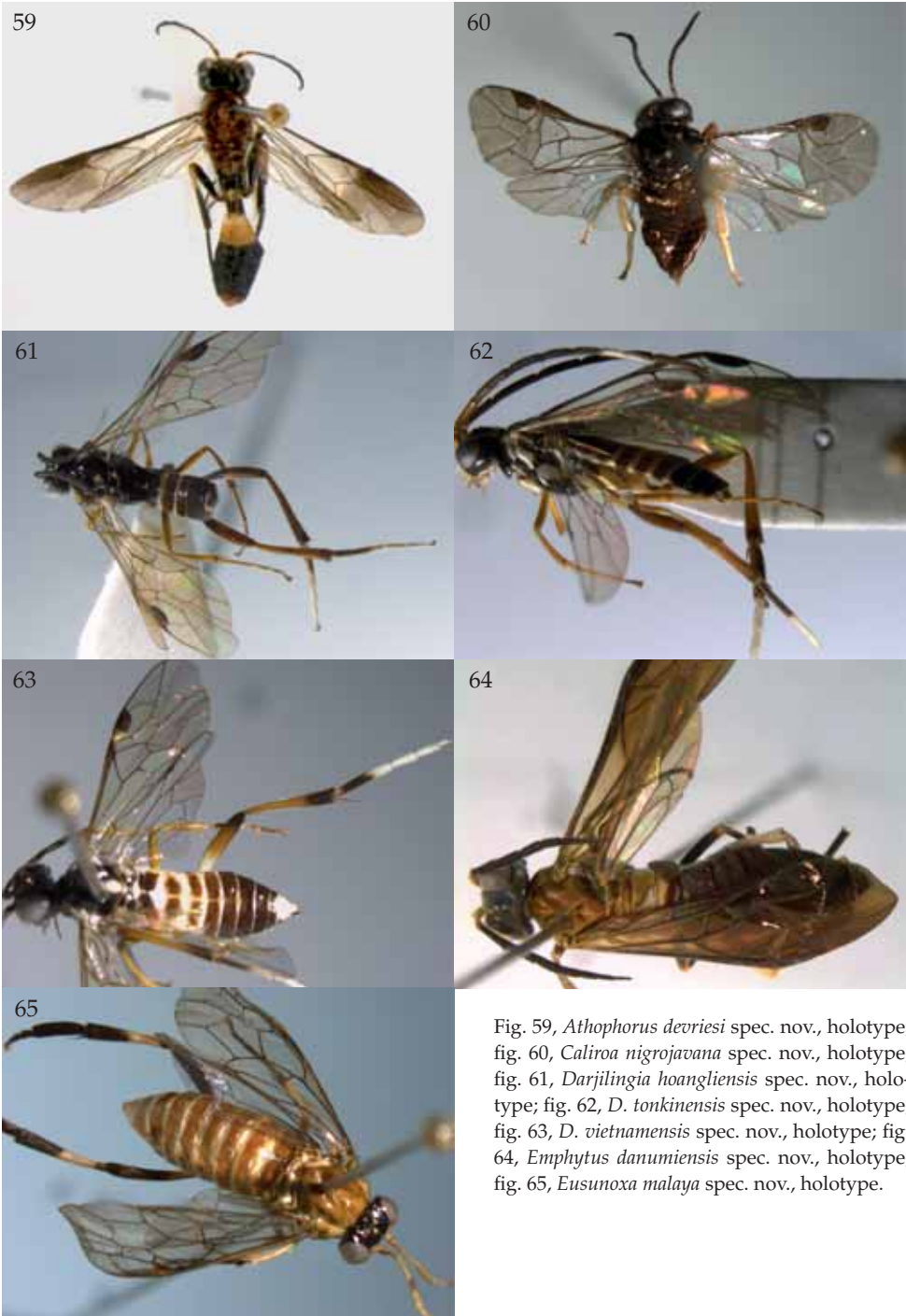


Fig. 59, *Athophorus devriesi* spec. nov., holotype; fig. 60, *Caliroa nigrojavana* spec. nov., holotype; fig. 61, *Darjilingia hoangliensis* spec. nov., holotype; fig. 62, *D. tonkinensis* spec. nov., holotype; fig. 63, *D. vietnamensis* spec. nov., holotype; fig. 64, *Emphytus danumiensis* spec. nov., holotype; fig. 65, *Eusunoxa malaya* spec. nov., holotype.

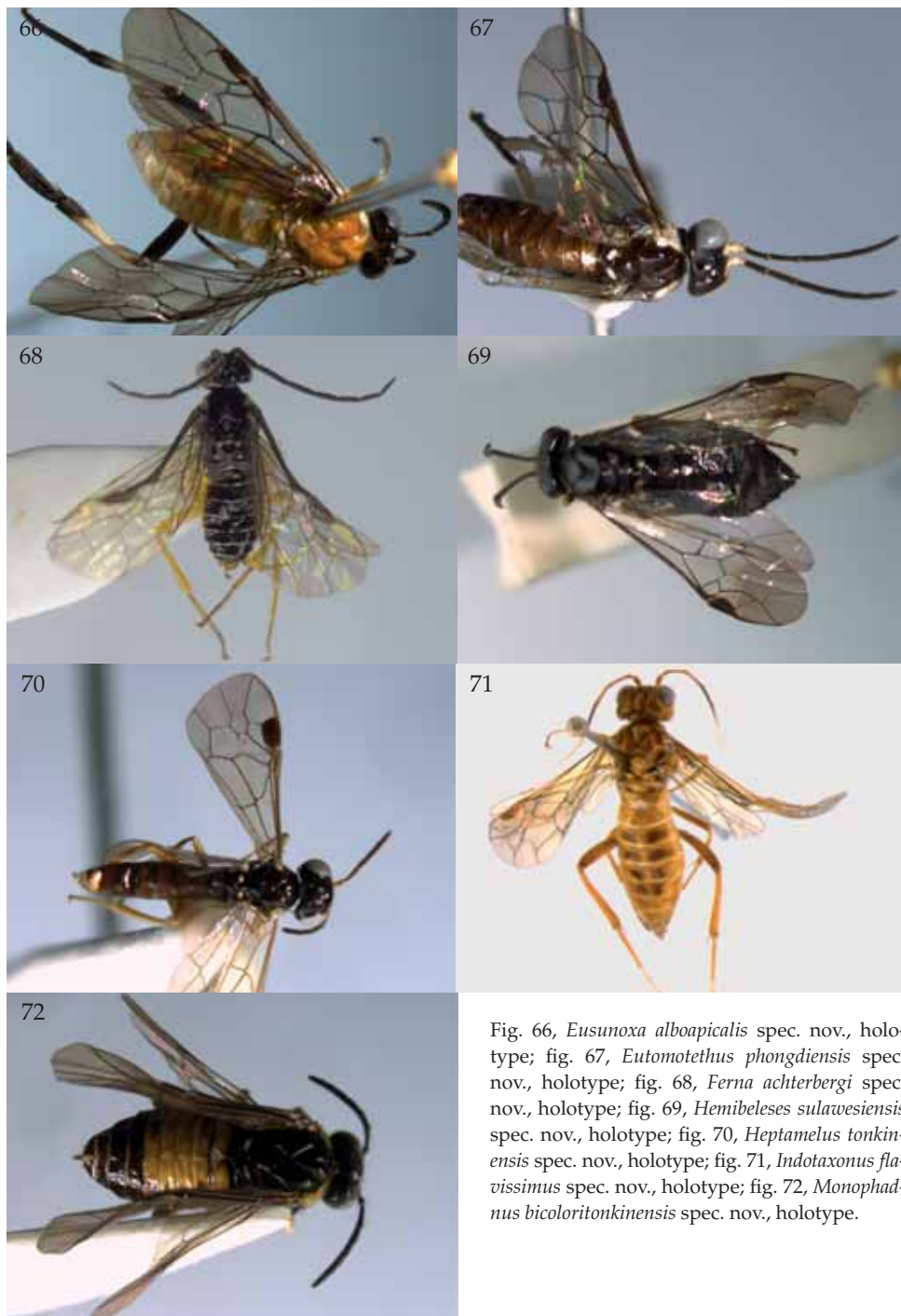
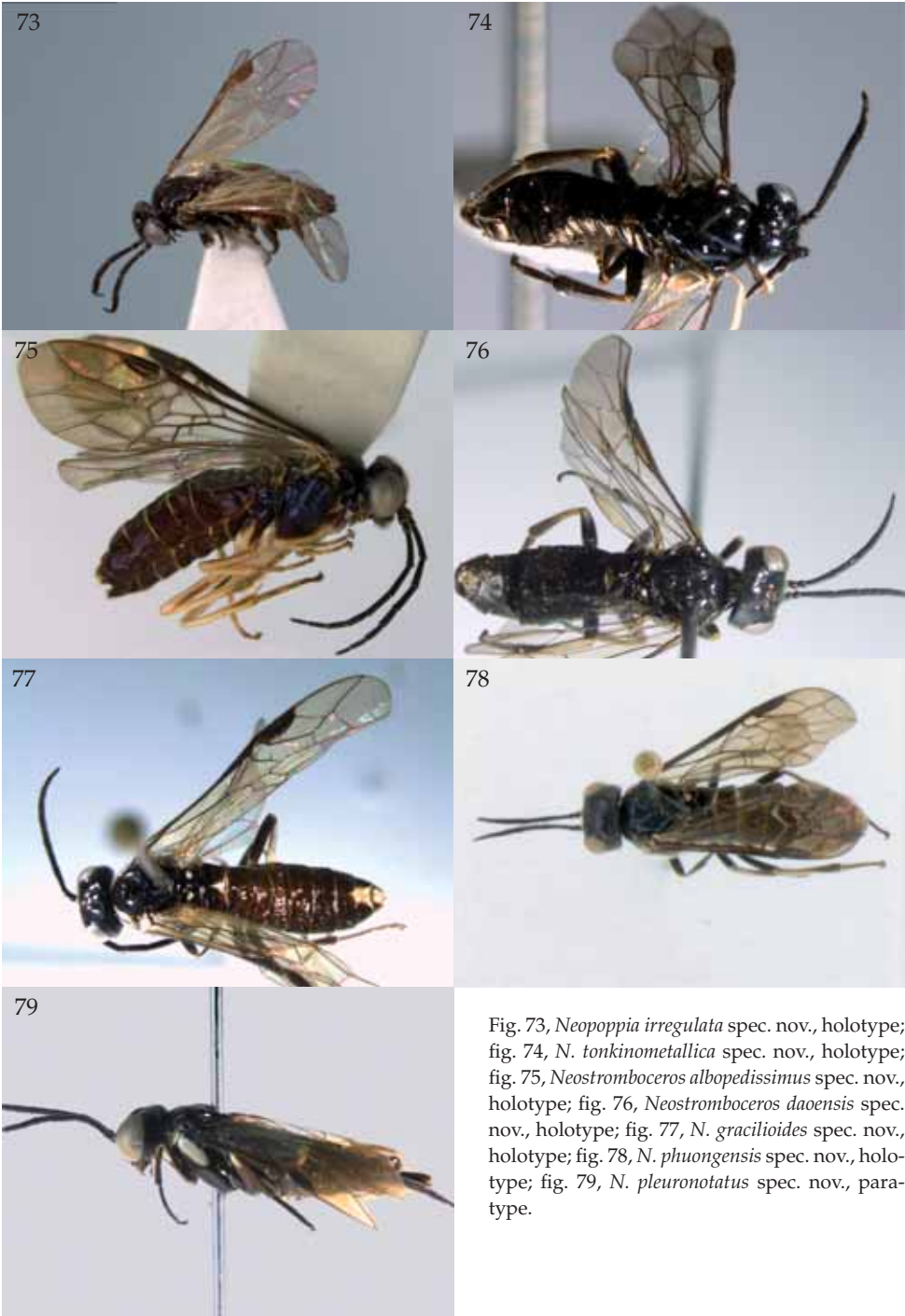


Fig. 66, *Eusunoxa alboapicalis* spec. nov., holotype; fig. 67, *Eutomotethus phongdiensis* spec. nov., holotype; fig. 68, *Ferna achterbergi* spec. nov., holotype; fig. 69, *Hemibeleses sulawesiensis* spec. nov., holotype; fig. 70, *Heptamelus tonkinensis* spec. nov., holotype; fig. 71, *Indotaxonus flavissimus* spec. nov., holotype; fig. 72, *Monophadnus bicoloritonkinensis* spec. nov., holotype.



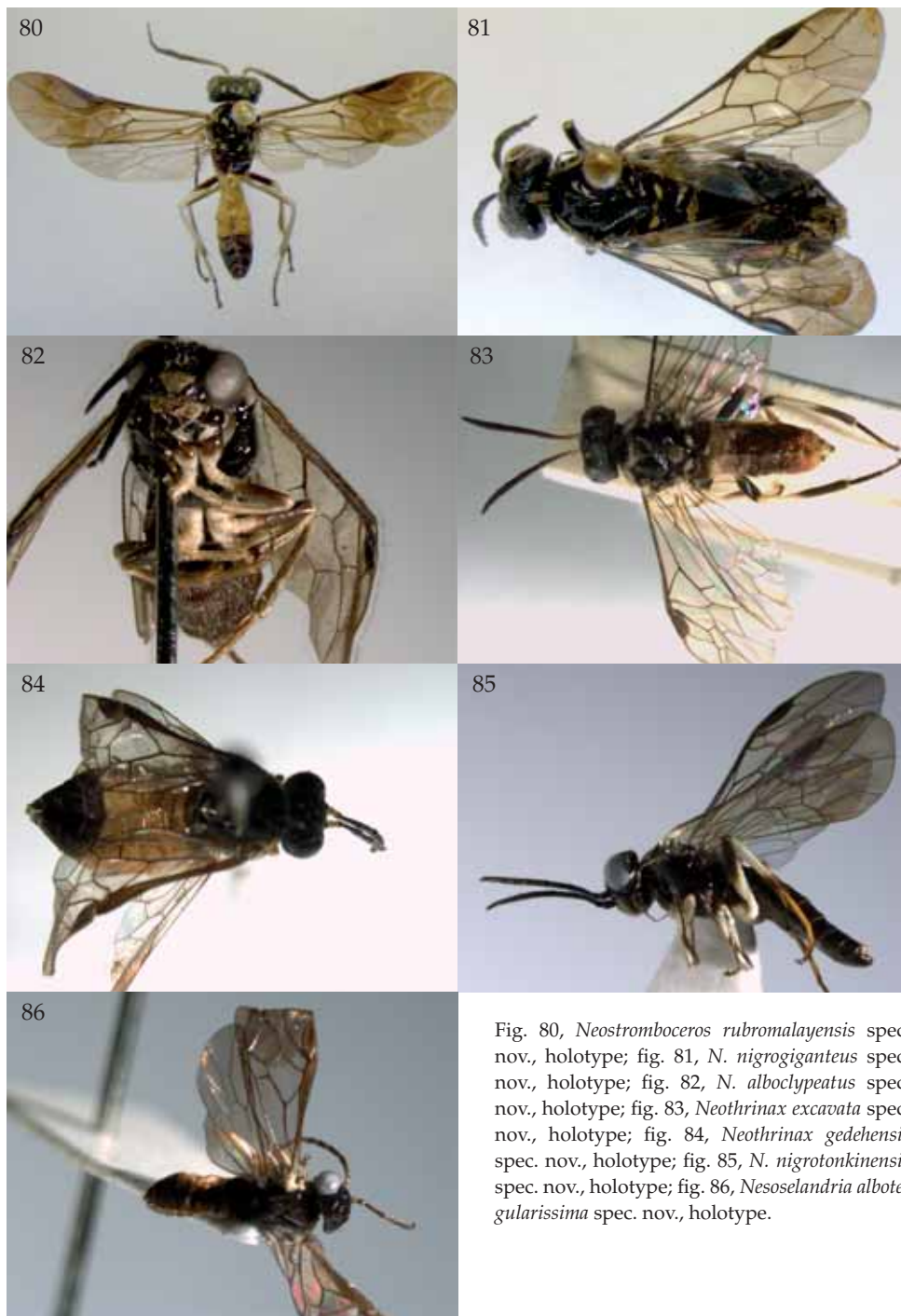
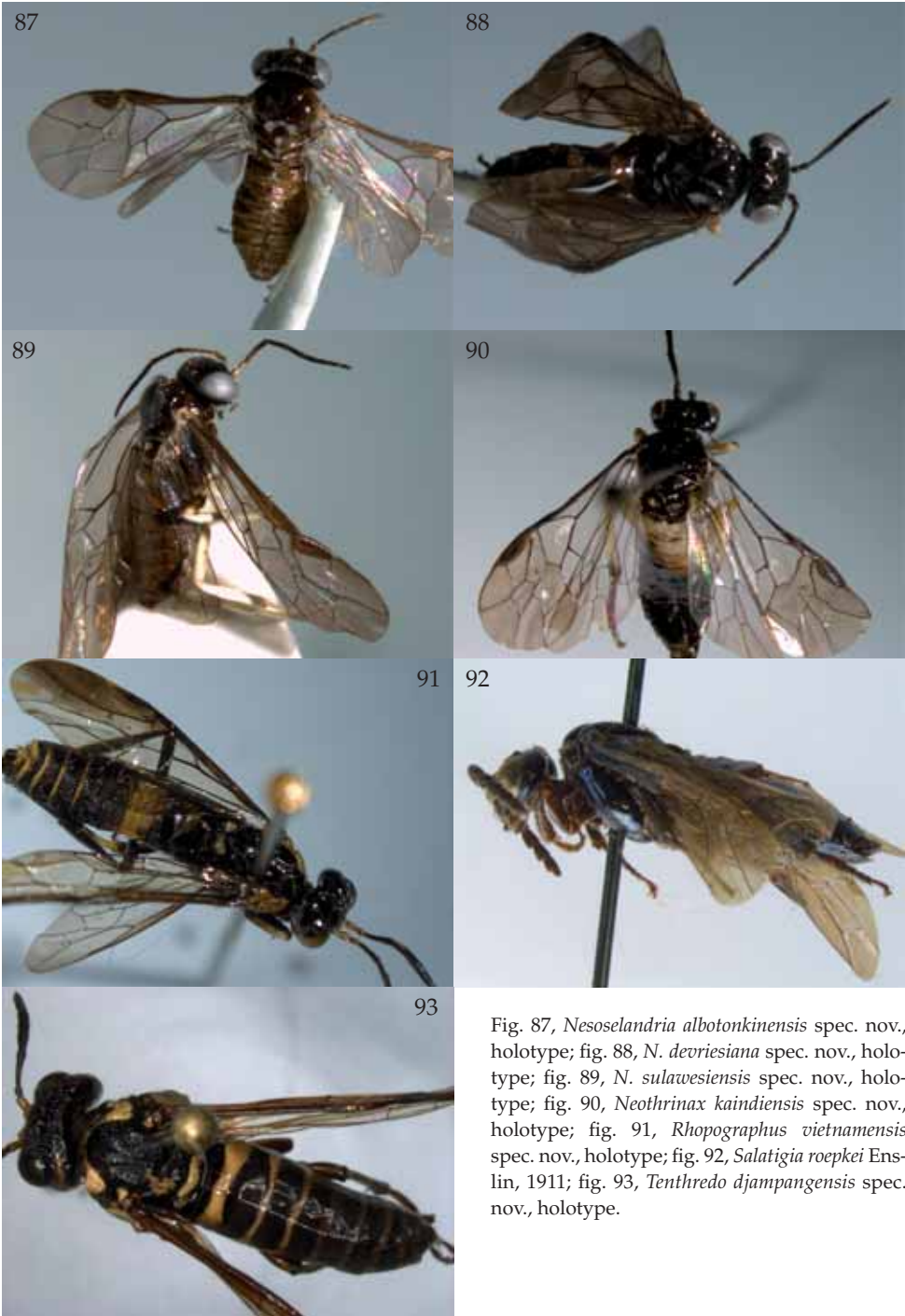


Fig. 80, *Neostromboceros rubromalayensis* spec. nov., holotype; fig. 81, *N. nigrogiganteus* spec. nov., holotype; fig. 82, *N. alboclypeatus* spec. nov., holotype; fig. 83, *Neothrinax excavata* spec. nov., holotype; fig. 84, *Neothrinax gedehensis* spec. nov., holotype; fig. 85, *N. nigrotonkinensis* spec. nov., holotype; fig. 86, *Nesoselandria albogularissima* spec. nov., holotype.



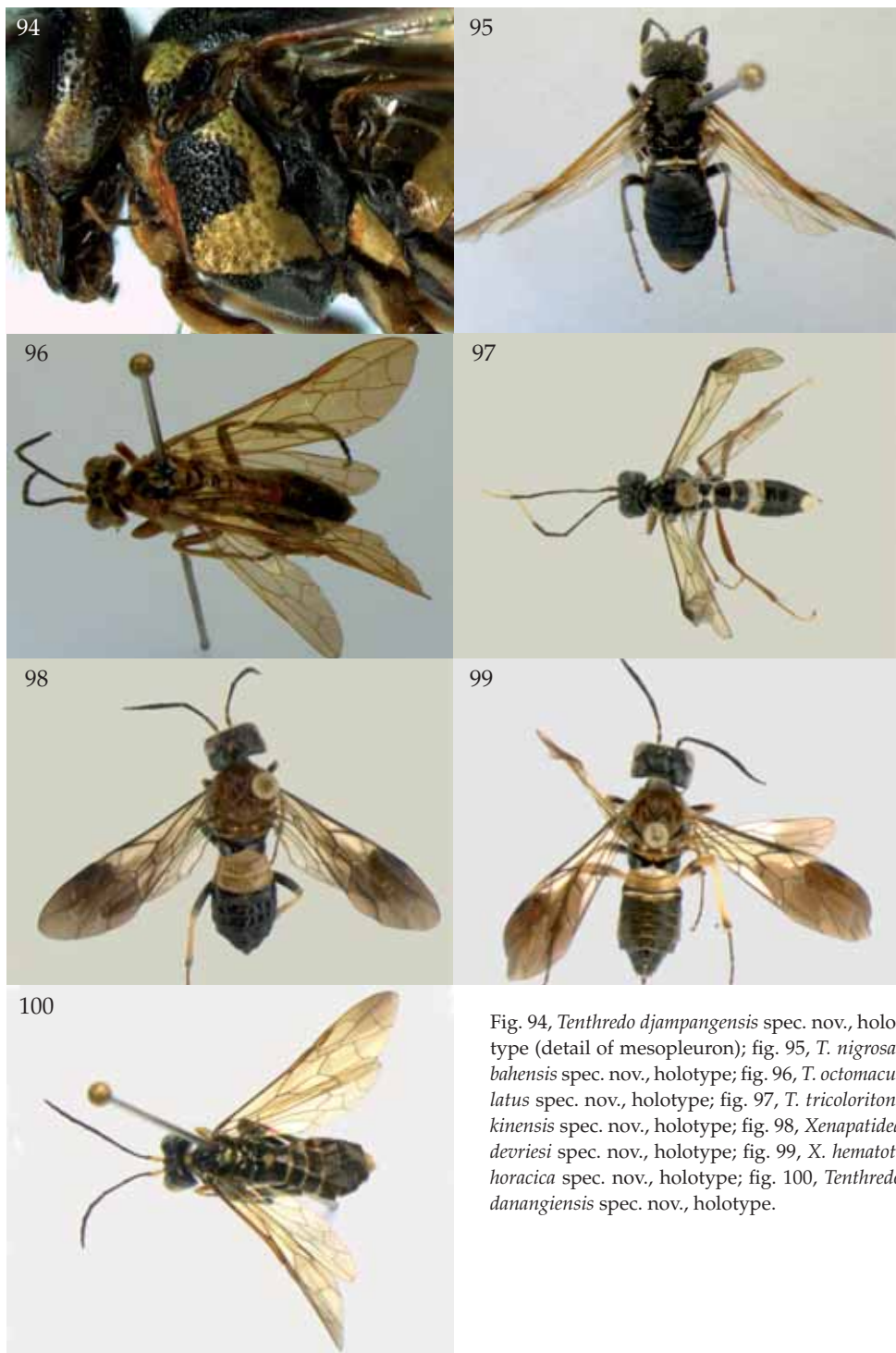


Fig. 94, *Tenthredo djampangensis* spec. nov., holotype (detail of mesopleuron); fig. 95, *T. nigrosabahensis* spec. nov., holotype; fig. 96, *T. octomaculatus* spec. nov., holotype; fig. 97, *T. tricoloritokinensis* spec. nov., holotype; fig. 98, *Xenapatidea devriesi* spec. nov., holotype; fig. 99, *X. hematohoracica* spec. nov., holotype; fig. 100, *Tenthredo danangiensis* spec. nov., holotype.

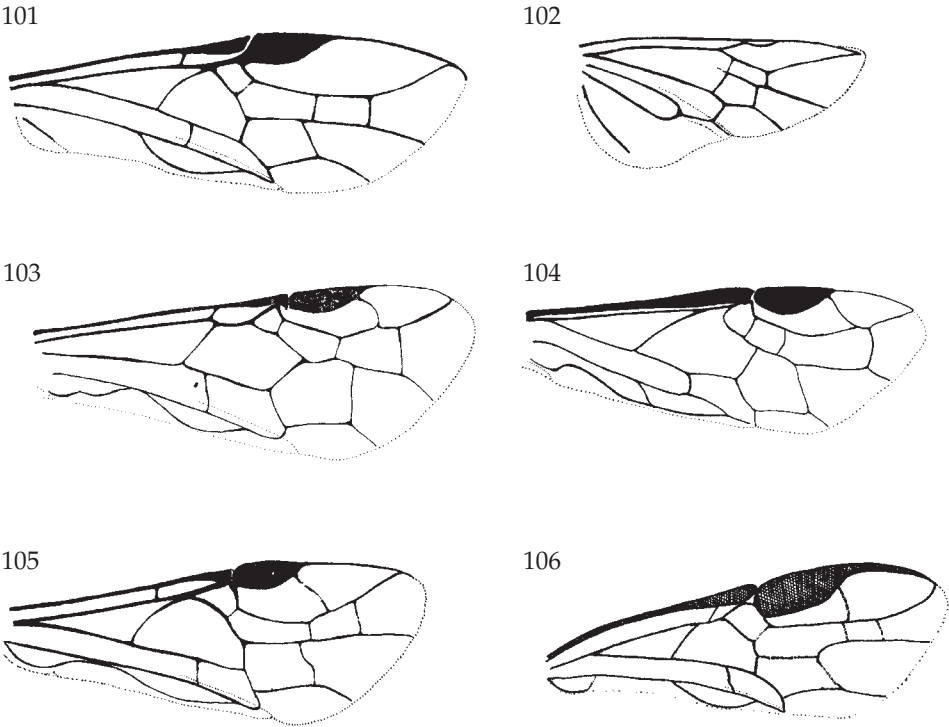


Fig. 101, typical fore wing of Nematinae (after Zombori, 1982); fig. 102, typical hind wing with two closed middle cells (after Zombori, 1982); fig. 103, typical fore wing of Tenthredininae (after Zombori, 1982); fig. 104, typical fore wing of Selandrinae, with complete anal cell (after Zombori, 1982); fig. 105, typical fore wing of Selandrinae, anal cell with two loops (after Zombori, 1982); fig. 106, typical fore wing of Tenthredininae (after Zombori, 1990).

