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The type-specimens of Heteroptera described by V. Motschulsky

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The species of Heteroptera described by Motschulsky in 1859—1866 are reviewed and for the majority of them (48 species) lectotypes are designated.

The following new combinations, new synonymy, and new species are established: Gerridae: *Gerris insularis* (Motsch.), sp. dist. (not synonym of *G. paludum* F.), = *G. yasumatsui* Miy., syn. n. Miridae: *Lygocoris viridanus* (Motsch.), sp. dist. (not synonym of *L. pabulinus* L.); *Zanchius pistacinus* (Motsch.), comb. n. (from *Leptomerocoris*), = *Z. flavovirens* (Popp.), syn. n.; *Pharyllus distanti* Kerzhner, sp. n. for *P. pistacinus* of Distant, 1904 (not Motsch.). Anthocoridae: *Bilia minuta* (Motsch.), comb. n. (from *Cydnus?*). Lygaeidae: *Macropes dentipes* Motsch., sp. dist. (not synonym of *M. spinimanus* Motsch.), = *M. privus* Dist., syn. n.; *Pachybrachius annulipes* (Bacr.) = *Plociomerus punctulatus* Motsch.,. syn. n.; *Pamerarma distanti* Kerzhner, sp. n. for *Pamera punctulata* of Distant, 1904 (not Motsch.). Plataspidae: *Coptosoma ellia* Walk., sp. dist. (not synonym of *C. variegatum* H.-S.). Pentatomidae: *Rhaphigaster nebulosa* (Poda) = *Menida fusca* Motsch., syn. n.

The following cases are in need of ruling by the Commission: Contradictions between discovered remnants of the types and the designated neotypes of *Micronecta albifrons* (Motsch.), *Hallodapus albofasciatus* (Motsch.) and *Orius tantillus* (Motsch.), misidentified type-species of the genera *Tyraquellus* Dist. and *Pharyllus* Dist., and a forgotten early synonym of *Pentatoma metallifera* Motsch.

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Index words: Motschulsky's Heteroptera, lectotype designations, new synonymy, new combinations.

Victor Motschulsky (1810–1871) was a well-known Russian entomologist who worked principally with Coleoptera, but he also described insects of other orders. In Heteroptera, he established 3 generic and 61 specific names published in 6 papers shortly reviewed below.

Motschulsky 1859a. Page 11 gives a list of 5 new species of Heteroptera collected by Mrs. Gaschkevitsch, the wife of the Russian consul in Japan, during her trip in 1858 along the Amur from Transbaikalia to Nikolaevsk (now Nikolaevsk-na-Amure). All the names are *nomina nuda,* except *Cimex cuprifer,* which is formally available. *Eurydema pulchella* (= *E. gebleri* Kolenati, 1846, see Kiritshenko 1915) was never described by Motschulsky, but he (Motschulsky 1860a) described all the others later under more or less different names: *Cimex cuprifer* as *Tropicoris metalliferus, Cimex decempunctatus* as *Tropicoris decempunctatus, Coptosoma biguttata* as *C. biguttula,* and *Alydus niger* as *A. atratus.*

Motschulsky 1859b. Three new species were described from Ceylon (= Sri Lanka), all collected by J. Nietner (see Nietner 1859 for details) from the "Noura-Ellia" district (Nuwara-Eliya, Central Province), principally in the valley of "Pudul-Aya" (? Pundaluoya of later authors), where Nietner had a plantation in the "commune de Rambodda" (Ramboda, about 11 km NW of Nuwara-Eliya).

Motschulsky 1860a. The paper has always been dated 1859, but it was actually published in 1860, as can be seen from the back of the title page of issue 4: this issue has a censorship permission dated 22.II. (old style, = 5.III.) 1860. Further, acceptance of the number was notified in the meeting of the Moscow Naturalists' Society on 25.II. (= 8.III.) 1860 (see Bull. Soc. Imp. Nat. Mosc. 1860, N 2 Séances; 17), and reprint of the article gives the year as 1860 on the title page and bears a censorship permission dated 1. (13.) III. 1860. Origin of the material on the new species was indicated only in the title of the article: "Environs du fl. Amur, depuis la Schilka jusquà Nikolaëwsk". Thus, the descriptions in this paper seem to concern only those new species of Heteroptera that were collected by Mrs. Gaschkevitsch in 1858, and deposited in Motschulsky's private collection. Therefore, only specimens from this collection are considered as syntypes by us. As a rule, the lectotype is designated from the specimens labelled "Amur", but specimens labelled "Mongol[ia]" and "Daur[ia] m[eridionalis]" and evidently collected by Motschulsky himself from SW and SE Transbaikalia, respectively, are also included in the syntypes. On the other hand, many specimens of *Coptosoma biguttulum, Lelia decempunctata, Pentatoma metallifera,* and *P. semiannulata* collected before 1860 by G. Radde, L. Schrenck and R. Maack and deposited in the collections of the Zoological Institute, Leningrad, are not regarded as syntypes, although Motschulsky certainly used also the collections of this institute when compiling his list of Heteroptera from Amur.

Motschulsky 1861. This paper includes 5 new species of Heteroptera from Japan. They were collected by Mrs. Gaschkevitsch (Motschulsky 1860b) in the vicinity of "Khokodody" (= Hakodate, her residence), and during her trips in "Nipon" (Honshu) and "Eddo" (Hokkaido). In addition, in the notes, a subsequently overlooked but formally available name was given to a species from Greece.

Motschulsky 1863. Several new species of Heteroptera were described from Ceylon (Sri Lanka). They were collected by J. Nietner near Colombo, in "montagnes de Nura-Ellia" (mountains in the vicinity of Nuwara-Eliya) and from "Mt. Patannas", an area specified later (Bull. Soc. Imp. Nat. Mosc., 1866, N 2, p. 393): "Mont Patannas, Sommité Patannas ou simplement Patannas" meaning "les prairies élevées de l'ile de Ceylan" in the vicinity of Nuwara-Eliya (see Nietner 1859). In the notes, there were also diagnoses of some new species from Algeria, Java and Cuba.

Motschulsky 1866. Descriptions of some new Heteroptera collected before 1865 by Mrs. Gaschkevitsch from Japan.

Later, Motschulsky (1869—1870) published a list of the new genera and species established by him. For Heteroptera, this list wrongly included 2 *nomina nuda*, but did not include *Menida fusca*.

Motschulsky's type material

Motschulsky sent syntypes of some of his species to Stål, who indicated their correct systematic position (Stål 1873, 1874, 1876). The types of *Anthocoris funebris* and *Eurydema dauricum*, deposited in the Stockholm Museum, were later examined by Reuter (1884, 1885), and the type of *Monanthia? tingoides* by Drake (not published?) and Péricart (1983). Species of *Coptosoma* from Motschulsky's private collection were examined by Jakovlev (1880). A number of species from the Amur region and Japan were clarified from the original descriptions by specialists of the palearctic Heteroptera, and those from Ceylon by W. L. Distant (who made some errors as well). However, many of the names remained *incertae sedis*.

In the beginning of the 20th century, Motschulsky's badly damaged (mainly eaten up by dermestids) private collection was discovered in Moscow, and placed in the Zoological Museum of the Moscow University. The director of the Museum, Prof. G. A. Kozhevnikov, sent types of 21 palearctic species to Dr. A. N. Kiritshenko and types of 23 species (one from Japan, all others extrapalearctic) to Dr. E. Bergroth. Some badly damaged or somehow overlooked types were not sent to anyone for examination. Kiritshenko (1915) and Bergroth (1921) published results of their studies. Bergroth even gave redescriptions of some lesser known species and notes on all the extrapalearctic species, but because he had not received the types of all the species his statement "the types . . . must be regarded as lost" was incorrect.

Kiritshenko returned the types to the Moscow University. He did not provide the specimens with his labels, but enclosed a hand-written list indicating their identity. This list is now placed in the box with the specimens. Bergroth did not return any of the types he studied, nor did he provide them with his labels, and after his death in 1925 the types, together with his private collection, ended up in the collections of the Zoological Museum, University of Helsinki.

Later examinations of the material

Zhelokhovtzev & Zimina (1968) published a paper on Motschulsky's types of Heteroptera kept in the Zoological Museum, Moscow University, indicating the number and condition of the specimens for 37 species (all other names mentioned by them are *nomina nuda*, never used in the papers of Motschulsky or others). Zhelokhovtzev & Zimina added a printed red label "typus" to the pins with specimens bearing Motschulsky's identification label. The paper by Bergroth (1921) and the fate of the types examined by him were apparently unknown to them.

The types of *Corysus semicruciatus* and *C. brevicollis* were examined by Scudder in May 1965 (Scudder & Popov 1967, Scudder 1970), and *Coptosoma dilatata* by Štys & Davidova-Vilimova (1979). In 1981, the types of three species were examined by G. Schmitz, but the results have not been published up to date. Schmitz reglued the specimens and added his labels on the pins.

Several rather recent papers concern examination of the types that have been preserved in the collections in Helsinki (although in some of the papers their location was not indicated): Drake (1956) *Monanthia atra*, Slater, Ashlock & Wilcox (1969) and Slater & Wilcox (1973) *Macropes spinimanus* and *M. dentipes*, Scudder (1968) *Rhyparochromus brevis*, Scudder (1970) *Rhyparochromus fusconervosus*, *Plociomerus bispinus* and *P. rufipes*, Slater & Zheng (in press) *Plociomerus rufipes* and *P. geniculatus*. In March 1965, Scudder added to all Motschulsky's types of Lygaeidae in Helsinki (except *Macropes dentipes*) a label "? syntype", and to all except both species of *Macropes*, his identification label.

In 1983, the long overdue Bergroth's loan of Motschulsky's types was returned to Moscow via Leningrad. But as in many cases concerning Bergroth's collection, some of the specimens had disappeared and types of only 15 species could be found. The number of specimens per species and the condition of the specimens were the same as indicated by Bergroth (1921), except for *Strachia geometrica*, in which only one of the five syntypes was found, and for *Monanthia atra*, in which 3 out of the five syntypes were found. Correspondence with several specialists working on Heteroptera resulted in the discovery of some of the type specimens of *Monanthia atra*, *M. subovata* and *M. tingoides* in the United States National Museum. The specimens were borrowed from Helsinki by Dr. C. J. Drake in 1955, and were not returned until now. Thus, of the types studied by Bergroth (1921), only those of two species of Lygaeidae (*Cymus basicornis* and *Plociomerus obliquefasciatus*) and four species of Miridae *Capsus albipes*, *Deraeocoris piceoniger*, *D. rubrovulneratus* and *D. viridanus*) are still missing.

At our request, Dr. P. Lindskog searched for the types of Motschulsky's Heteroptera in the national collection in Stockholm (Naturhistoriska Riksmuseet). He found syntypes of 15 species; these were subsequently studied by Kerzhner for the present paper. In 1983, Kerzhner also visited Moscow University, examining the types deposited there. In addition, some syntypes are found in the Zoological Institute of the Academy of Sciences of the USSR, Leningrad: the specimens which Motschulsky donated to the former collection of the Russian Entomological Society, and the specimens of *Coptosoma* taken by Jakovlev from Motschulsky's private collection. Thus, for the present paper, all type-specimens of Motschulsky's Heteroptera, which could be located, were excamined by Kerzhner, and some also by Jansson.

Recognition of missing material

In the hope that the types of the few still missing species will be found somewhere, the following remarks are given about the labels of Motschulsky's Heteroptera in his private collection:

The specimens are pinned or glued on pieces of cardboard (sometimes several specimens on the same card), and only the first pin in each series is provided with

an identification label which also contains the distribution record. In the labels, the so-called Lichtenstein's or Ménétriés' colour code (Horn & Kahle 1937, p. 433 & 438) is used for designation of the major geographic areas: white for Europe and Russia, yellow for extrarussian Asia (Japan in slightly darker than other areas), blue for Africa (Northern Africa in light blue, the rest in violet-blue) and green for America (light green for North America, dark green for Central and South America).

Small coloured pieces of paper were used as a further indication of the geographic origin of the specimens: white rectangle with written name (e.g. "Morea") for Europe, red rectangle with written name for Russia, dark yellow square for Japan, pink rhombus plus yellow triangle for Java, blue triangle for Algeria, blue square for Egypt and green triangle or square plus pink square for Habana. For Ceylon, the indication is a light yellow circle, but as the circles were punched rather carelessly, some of the pieces are defective (the shape of half-moon or only the remnants of the circle). In addition, Motschulsky used inscriptions like "C" for Colombo and "P" for coffee plantations, dark red square for the so called "Mt. Patannas", and usually (but not always) lighter red square for mountains near Nuwara-Eliya; these conditional labels are placed in each pin. The principal abbreviations appearing in the Motschulsky's labels are: I. or. = India orientalis, Colom. = Colombo, Ceyl. = Ceylon, Mt. N. E. = mountains near Nura-Ellia (Nuwara-Eliya), Mt. P. = mont Patannas (see explanation above), Daur. m = Dauria meridionalis, Mongol. = Mongolia (in fact, SW Transbaikalia), Sib. or. = Siberia orientalis (evidently southern parts of the USSR Far East).

The material in the Stockholm Museum is relatively well preserved. All specimens are supplied with subsequent (not Motschulsky's) printed or hand-written geographic labels ("Ceylon", "Japan", "Amur"), and with two exceptions, with a subsequently placed hand-written label "Motsch.". In a few cases, Motschulsky's conditional labels (small pieces of coloured paper) and identification labels (all on white paper) are still attached. In some cases, other printed or hand-written labels have been added.

Concluding remarks

Motschulsky did not indicate the numbers of specimens, and thus all his types are primarily syntypes. For *Deraeocoris rubrovulneratus*, Bergroth (1921) inadvertently designated the lectotype by stating that one of the specimens examined must be regarded as the type because the second specimen belongs to another species. For *Corysus semicruciatus* and *C. brevicollis*, lectotypes were designated (but not labeled) by Scudder & Popov (1967) and Scudder (1970), respectively. For the majority of the remaining species, the lectotypes (indicated in bold face letters) are designated in the present paper by Kerzhner. Designation of the lectotype was left undone in three species in which neotypes had already been designated, in one species in which the type series includes a mixture of two species, and in six species for which the material examined by Bergroth (1921) could not be located (although for one of them, *Capsus albipes*, one syntype specimen was found in the Stockholm Museum).

In the following review of the type materials, Motschulsky's data are indicated in parentheses after the bibliographic reference. For each specimen, the sex, state of preservation, the labels (separated by hyphen) and the present location are given. The abbreviations used for the collections are:

NRS = Naturhistoriska Riksmuseet, Stockholm
ZIL = Zoological Institute, Leningrad
ZMHU = Zoological Museum, University of Helsinki
ZMMU = Zoological Museum, Moscow University.

The text of the labels, unless otherwise indicated, is according to Motschulsky's hand-writing. Subsequent labels added by Scudder, Schmitz, Zhelokhovtzev & Zimina and ourselves, are not cited. If the valid name or synonymy of the species has been changed after the publications of Kiritshenko (1915) and Bergroth (1921), references to the corresponding literature are given (except in cases when a genus is reduced to a subgenus or vice versa). The species are listed under their current families in alphabetic order according to their full species names, and cross-references are given if Motschulsky used a generic name that does not belong to the family the species is now considered to belong to.

Family Corixidae

Corixa albifrons Motschulsky 1863:94 (environs de Colombo).

Syntype: sex unknown, destroyed, only part of the right hind tibia with complete tarsi and claw, part of left hind tibia, and part of a middle tibia remaining – yellow circle with hand-written "C", "type", "Corixa albifrons Motsch. I. or. Ceyl. Colom.", ZMMU. Currently *Micronecta albifrons* (Motschulsky, 1863) (see Wróblewski 1968, 1972).

Note. The remnants of the syntype do not include any characters that would with certainty determine which species the specimen belongs to. In the description of *C. albifrons*, Motschulsky stated that the species has three transverse lines across the pronotum. In Ceylon, only two species of *Micronecta* share this character: *M. siva* (Kirkaldy) and *M. fascioclavus* Chen [= *M. albifrons* (Motsch.) sensu Wróblewski (1968)]. In these two species, there is a clear difference in size: *M. siva* has a body length of 2.72-3.36 mm and *M. fascioclavus* 2.11-2.42 mm (Wróblewski 1972). Comparison between measurements taken from the preserved parts of the right hind leg of the syntype and the measurements by Wróblewski (1968, 1972) give the following combinations:

	tarsus 1	—	tarsus 2	—	claw
C. albifrons	0.42	—	0.155	—	0,126 mm
M. fascioclavus	0.45	—	0.17	—	0.14 mm (mean)
M. siva	0.66	—	0.25	—	0.17 mm (mean)

These results clearly indicate that *C. albifrons* falls within the size of *M. fascioclavus*, although it is somewhat smaller than average. *M. siva* can be safely excluded as a considerably larger species. Thus, Wróblewski (1968) seems to have been right in suggesting that *M. fascioclavus* Chen, 1960, is a junior synonym of *M. albifrons* (Motschulsky, 1863). As the remnants of the syntype of *M. albifrons* are insufficient for positive recognition of the species, we recommend acceptance of the neotype designation by Wróblewski (1968), but as fragments of the original type material exist, the case has been submitted to the International Commission on Zoological Nomenclature (Code, Art. 75h).

Family Notonectidae

Notonecta triguttata Motschulsky 1861:24 (Japon).

Lectotype: sex unknown, head, pronotum, legs (except remnants of the middle), base of right hemelytron, and parts of abdomen missing – dark yellow square, "type", "Notonecta triguttata Motsch. Japan", ZMMU.

Note. Motschulsky's collection in ZMMU includes also a female specimen of North American *Notonecta undulata* Say, 1832, labeled with a dark yellow square (= Japan). Labelling of this specimen must be an error and therefore we, contrary to Kiritshenko (1915) and Zhelokhovtzev &

Zimina (1968), do not include this specimen in the type series of *N. triguttata*.

Family Hydrometridae

Hydrometra, see Gerridae.

Family Gerridae

Hydrometra insularis Motschulsky 1866:188 (Japon).
Lectotype: female, III and IV antennal segments, some legs, and left ventral side of abdomen missing – dark yellow square, "Hydrometra insularis Motsch. Japonia", ZMMU. Currently *Gerris insularis* (Motschulsky, 1866), **sp. dist.** = *Gerris yasumatsui* Miyamoto, 1958, **syn. n.**
Note. Kiritshenko (1915) placed *H. insularis* as synonym of *Gerris paludum* (Fabricius, 1794), and Miyamoto (e.g. 1960, 1961) used the name *G. paludum insularis* for a subspecies from the Far East. Examination of the type showed that Kiritshenko was in error, and *H. insularis* is in fact conspecific with the subsequently described *G. yasumatsui*. According to Kanyukova (1982) the far-eastern population of *G. paludum* does not deserve subspecific rank, but if such subspecies were to be recognised, it should be named as *G. paludum japonius* (cf. next name).

Hydrometra japonica Motschulsky 1866:188 (Japon).
Lectotype: male, damaged, only parts of thorax, left hind leg, and ventral side of abdomen (excluding the genital segment) remaining – dark yellow square, "Hydrometra japonica Motsch. Japan", ZMMU. Currently *Gerris paludum* (Fabricius, 1794), but see also the note under the preceding name.

Family Tingidae

Monanthia atra Motschulsky 1863:91 (mont Patannas).
Lectotype: female, glued on card (the specimen farthest to the left), antennae broken (except for the two basal segments), left hind leg without tibia and tarsus – dark red square and yellow circle glued on top of white square [the card with the specimes has been re-pinned with a narrower pin than the original one, and therefore the original labels have been glued on additional white supporting square; in fact, in the card the original pin prick is behind the specimen farthest to the right, and as the original series has included 5 specimens (Bergroth 1921), it is obvious that Drake cut the card and removed the two specimens originally farthest to the right (see below)], "type" (original label glued on the top of white supporting rectangle), "Ceylon" (hand-written by Drake), "type" (printed on yellow paper), "see Bergroth 1921. RRE XVII -p. 104" (hand-written by Drake), "Abdastartus atratus [sic!] (Motsch.) type" (hand-written by Drake), ZMMU ex ZMHU. **Paralectotypes:** 2♀♀ to the right from the lectotype on the same card, both with antennal segments III-IV missing; 1♂ 1♀ glued on card. the male with right middle leg missing and the female with antennal segments III-IV and most of the legs missing – "Ceylon" (hand-written by Drake), "Monanthia atra Motsch. I. or. Ceyl. Pat." (original Motschulsky's yellow label), red "Paratype" (printed) and "Monanthia atrata [sic!] Motsch" (hand-written by Drake), "see Bergroth 1921 R. R. E. XVII -p. 104" (hand-written by Drake), "C. J. Drake Coll. 1956" (printed), "Abdastartus atratus [sic!] (Motsch.) C. J. D." (hand-written by Drake), ZMMU ex ZMHU ex U. S. National Museum; 1♀ without antennae and with legs somewhat mutilated – "Ceylon" (printed), "Motsch." (hand-written), "Monanthia atra Motsch.", NRS. currently *Abdastartus ater* (Motschulsky, 1863), see Drake (1956).
Note. Drake (1956 and later) incorrectly used *atrus* as masculine form corresponding to *atra* in feminine.

Monanthia nigripes Motschulsky 1863:91 (Algérie).
Lectotype: male, well preseved – blue triangle, "type", "Monanthia nigripes Motsch. Algiria", ZMMU. Currently *Catoplatus carthusianus* (Goeze, 1778).

Monanthia subovata Motschulsky 1863:91 (environs de Colombo).
Lectotype: female, glued on card, antennal segments II–IV and parts of legs missing – "Ceylon" (hand-written by Drake), "see Bergroth 1921, p. 103" (as previous), "type" (original hand-written label glued on the top of supporting red card), red "Paratype" (printed) and "Monanthia subovatus Motsch." (hand-written by Drake), "Monanthia subovata Motsch. I. or. Ceyl. Col." (original yellow Motschulsky's label), "C. J. Drake Coll. 1956" (printed), "Cantacader quinquecostatus (Fieber)" (hand-written by Drake), ZMMU ex ZMHU ex U. S. National Museum. **Paralectotype:** ♀, antennal segments III–IV and hind legs missing – "Ceylon" (printed), "Motsch." (hand-written), "Monanthia subovata Motsch.", NRS. Two further syntypes from ZMMU were examined by Bergroth (1921), but they could not be located for the present study. Currently *Cantacader quinquecostatus* (Fieber, 1844).

Monanthia? tingoides Motschulsky 1863:92 (montagnes de Nura-Ellia).
Lectotype: male, glued on card, antennal segments III–IV, right hemelytron, and parts of legs missing - "Ceylon" (hand-written by Drake), "see Bergroth 1921, p. 103" (as previous), "type" (original hand-written label glued on top of supporting red card), red "Paratype" (printed) and "Monanthia? tingoides Motsch." (hand-written by Drake), "Monanthia tingoides Motsch. I or. Ceyl. Mt. N." (Motschulsky's original yellow label), "C. J. Drake Coll. 1956" (printed), "Cysteochila tingoides (Motsch) Drake type?" (hand-written by Drake), ZMMU ex ZMHU ex U. S. National Museum. **Paralectotype:** ♀, antennal segments III–IV and all tarsi (except left hind) missing, abdomen as preparate – "Ceylon" (printed), "Monanthia tingoides Motsch.", "Paratypus" (printed), "M. tingoides Motsch." (hand-written by Drake), "Repréparé et étudie par J. Péricart 25.I.1981" (written by Péricart), "Cysteochila tingoides Motsch. Paratype" (written by Drake), "RM prep 6890" (printed), NRS. Two further syntypes from ZMMU were examined by Bergroth (1921), but they could not be located. Currently *Cysteochila tingoides* (Motschulsky, 1863).

Family Miridae

Capsus albipes Motschulsky 1863:82 (mont Patannas).
Syntype: female, in good condition – "Ceylon" (printed), "Motsch." (hand-written), "Capsus albipes Motsch. Ceylon", NRS. Three further syntypes from ZMMU were examined by Bergroth (1921), but these could not be located. Currently *Acratheus albipes* (Motschulsky, 1863).

Deraeocoris piceoniger Motschulsky 1863:84 (environs de Colombo).
Six syntypes were examined by Bergroth (1921), but none could be located. Currently *Sthenaridea piceonigra* (Motschulsky, 1863).

Deraeocoris rubrovulneratus Motschulsky 1863:83 (montgnes de Nura-Ellia).
The type series included two species, as can be concluded from the great variation in size mentioned in the original description. Bergroth (1921) examined two syntypes from ZMMU, designated one of them as the type (= lectotype)

and identified the other specimen (paralectotype), as *Proboscidocoris longicornis* Reuter, 1884. Neither one of the type specimens was located during the present investigation. Currently *Proboscidocoris rubrovulneratus* (Motschulsky, 1863).

Deraeocoris viridanus Motschulsky 1863:83 (montagnes de Nura-Ellia).

Three syntypes from ZMMU were examined by Bergroth (1921), but the specimens could not be located during the present work. Currently *Lygocoris viridanus* (Motschulsky, 1863), **sp. dist.** (see note).

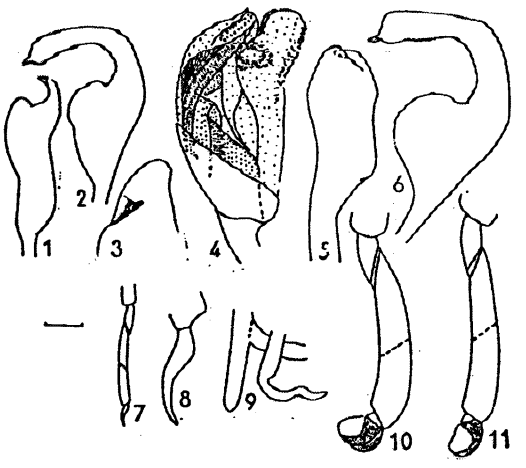
Note. Bergroth (1921) regarded *D. viridanus* as a junior synonym of *Lygus pabulinus* (Linnaeus, 1761) [now *Lygocoris pabulinus* (L.)], and noticed that specimens from the type locality of *D. viridanus* had already been referred to as *L. pabulinus* by Poppius (1911). However, an examination of the specimens studied by Poppius 2♂♂, 1♀ at ZMHU), revealed that they differ from *L. pabulinus* in a well developed keel on the hind margin of head, in the structure of the parameres and aedeagus (Figs. 1–4), as well as in some other characters; certainly this is a different species from the holarctic *L. pabulinus* (Figs. 5–6). Thus, we have restored the name *L. viridanus*, although the types of *D. viridanus*, if ever found, may prove that it is another species of *Lygocoris*.

Leptomerocoris? albofasciatus Motschulsky 1863:86 (mont Patannas).

Syntypes: remnants of two specimens glued on one piece of cardboard; on the left apices of rostrum, of a hind leg, and of membranes; on the right fragments of a middle leg, a nearly complete hind leg, apex of rostrum and apex of membrane – dark red square, yellow circle, "type", "Leptomerocoris albofasciatus Motsch. Ceyl. Mt. Patan", ZMMU. Currently *Hallodapus albofasciatus* (Motschulsky, 1863), cf. Carvalho (1952), Schuh (1974), but see also note below.

Note. Distant (1904) identified specimens from Ceylon as *L. albofasciatus*, and gave a description and illustrations of the species. He also designated *L. albofasciatus* as the type species of his new genus *Tyraquellus*, which was later placed as a synonym of *Hallodapus* Fieber, 1858. Schuh (1974, p. 95) designated one of Distant's specimens, a male, as the neotype of *L. albofasciatus*. However, while in the species that Distant and Schuh were dealing with, the middle and hind leg femora are all black, in the remnants of Motschulsky's syntypes the femora are light yellow with a slightly reddish tinge near the apex. This, and a number of other discrepancies from the original description ("valde depressus, antennarum articulis tribus ultimis pedibusque subalbido testaceis geniculis tibiarumque annulis vix distincto infuscatis, antennis articulo 4-o brevissimo") are evident, although some errors in the original description cannot be excluded. Both problems (conflict between the neotype and the re-found original type material, as well as the misidentified type-species) are matters of proposal to the International Commission on Zoological Nomenclature.

The following are observations on the remnants of the syntypes: Length evidently between 3–3.5 mm; rostum yellow, evidently reaching slightly past the hind coxae, its last segment 0.35 mm long and slightly darker than the others; middle and hind legs (coxae missing) light yellow, femora with reddish tinge on apical margin (in the hind femora the tinge reaches to about apical fourth along the hind margin). Motschulsky mentions embrowned ring on tibia, but this was not found in the remnants. Length of hind femur 0.85 mm, hind tibia 1.0 mm. Tarsi (Fig. 7) 3-segmented, slender, segments II and III subequal in length and twice as long as segment I, claws (Fig. 8) yellow, slender, without pulvilli, parembodia not observed but certainly not scale-like. Apex of membrane dark grey. These remnants are not sufficient to place the specimens in any species with certainty.



Figs. 1–11. – Figs. 1–4: *Lygocoris viridanus* (Motsch.), male labeled "Ceylon, Pattipola, 2000 m, 1902, Biró leg.", "Lygus pabulinus L. Poppius det.", 1: right paramere, 2: left paramere, 3: apex of theca, 4: aedeagus. Figs. 5–6: right and left parameres of *L. pabulinus* (L.) from Leningrad area. Figs. 7-8: *Leptomerocoris albofasciatus* Motsch., syntype, hind leg tarsus and enlarged view of its claw. Fig. 9: *Zanchius pistacinus* (Motsch.), lectotype, left hind angle of the genital segment and left paramere schematically drawn from the remnants. Fig. 10: *Bilia minuta* (Motsch.), lectotype, hind tarsus. Fig 11: *B. esakii* Carayon & Miyamoto, female from the Kunashir Island, hind tarsus. – Scale line 0.1 mm for Figs. 1–6, 0.2 mm for Fig. 7, and 0.025 mm for Figs. 8, 10 and 11.

Leptomerocoris alboviridescens Motschulsky 1863:85 (mont Patannas).

Lectotype: destroyed, only small fragments of rostrum, a complete fore leg, hind tibia, and apices of hemelytra remaining – dark red square, yellow circle, "type", "Leptomerocoris alboviridescens Motsch. I. or. Ceyl. Mt. Pat.", ZMMU. Currently *Prodromus alboviridescens* (Motschulsky, 1863).

Leptomerocoris? pistacinus Motschulsky 1863:85 (mont Patannas).

Lectotype: male, destroyed, only two basal segments of both antennae, fragments of rostrum, left hind angle of the genital segment with paramere, and apical half of hemelytra remaining – dark red square, yellow circle, "type", "Leptomerocoris pistacinus Motsch. I. or. Ceyl. Mn. Pat.", ZMMU. Currently *Zanchius pistacinus* (Motschulsky, 1863) **comb. n.** = *Z. flavovirens* (Poppius, 1911), **syn. n.**

Note. The following characters can be observed from the remnants of the lectotype: Body length about 3.7 mm, width about 1.1 mm; antennae yellow, their first segment laterally with red longitudinal stripe of length 0.3 mm and maximal width 0.1 mm (the segment is broadest somewhat basally to its middle), length of segment II 1.3 mm, width 0.05 mm; rostrum yellow, reaching approximately to the base of the male genital segment; apex of abdomen yellowish, left side of the male genital segment with a long finger-like projection (Fig. 9), left paramere as illustrated (Fig. 9); distal half of hemelytra light green, a round white spot near the medio-distal angle of the corium, and anteriorly to the white spot a light brown spot (only distal part present); base and apex of cuneus white; basal two fifths of

membrane green, distal part whitish grey, membranal veins with the same basic colours.

Distant (1904) described the genus *Pharyllus* with *Leptomerocoris? pistacinus* as the type-species. Bergroth (1921) suspected that Distant had misidentified Motschulsky's species, and examination of the type specimen now confirms this. We propose *Pharyllus distanti* Kerzhner **sp. n.** for *Pharyllus pistacinus* Distant, 1904 (p. 434), non Motschulsky 1863. The case of misidentified type-species should be forwarded for consideration to the International Commission on Zoological Nomenclature.

Liocoris glabratus Motschulsky 1863:87, Table 2, Fig. 20 (des montagnes de Nura-Ellia et Patannas).

Lectotype: male, antennae missing – "Ceylon" (printed), "Motsch." (hand-written), "Liocoris glabratus m. Ceylan" NRS. **Paralectotypes:** 1♀, well preserved (only the last segment of both antennae missing) – "Ceylon" (printed), "Motsch." (hand-written), NRS; remnants of two or more specimens glued on a piece of card (one apex of hemelytra and some fragments of legs reglued by Schmitz, and two remnants of legs included as a preparate) – yellow circle, "type", "Liocoris glabratus Motsch. I. or. Ceyl. Mt. N. E.", ZMMU; remnants of evidently four specimens glued on one card (one apex of hemelytra, and some fragments of legs) – dark red square, yellow circle, ZMMU. Currently *Felisacus glabratus* (Motschulsky, 1863).

Note. *F. glabratus* and closely related species from other regions are in need of revision. Poppius (1914) synonymized *Hyaloscytus elegantulus* var. *javanus* Reuter, 1908, with *F. glabratus*, but Carvalho's (1957) statement that Poppius also synonymized Australian *H. elegantulus* Reuter, 1904, with *F. glabratus*, is incorrect.

Liocoris puncticollis Motschulsky 1863:88 (habite les plantations de tabac à la Havane).

Lectotype: sex unknown, without antennae and abdomen, legs partly mutilated, reglued by Schmitz – green square, pink square, "type", "Liocoris puncticollis Motsch. Antilles Havane", ZMMU. Currently *Paracarnus puncticollis* (Motschulsky, 1863), (cf. Cavalho 1955).

Myrmecoris? bimaculatus Motschulsky 1860a:502 (Amur).

The fragments of syntypes, all in ZMMU, are glued on three pinned cards and all labeled "Sib.". The first card contains remnants of the legs of two or more specimens and a small fragment of a female abdomen, and the pin carries an additional label "Myrmecoris bimaculatus Motsch. fl. Amur". The second card contains remnants of one specimen: apex of rostrum, two fore tibiae and tarsi with apices of femora, one middle and one hind tibia with tarsi; this specimen is hereby designated as the **lectotype.** The last card contains small fragments of rostrum and one tarsus only. Currently *Myrmecophyes alboornatus* (Stål, 1858).

Family Anthocoridae

Anthocoris funebris Motschulsky 1863:88 (montagnes de Nura-Ellia).

Lectotype: female (anteriorly on the card), antennal segments III and IV on both sides and all legs on the right side missing – red square, yellow circle, "type", "Anthocoris funebris Motsch. I. or. Ceyl. Mt. N.E.", ZMMU ex ZMHU. **Paralectotypes:** 1♀ (without head and some legs) and an unsexed specimen (hind half of the body and some other details missing) glued on the card with the lectotype; 1♀ with rostrum, and antennal segments II–IV missing – "Ceylon" (printed), "Motsch." (hand-written), "Anthocoris funebris Motsch.", NRS; 1♀ with head and some legs missing – "Ceylon" (printed), "Motsch." (hand-written), NRS. Currently *Lyctocoris (Euspudaeus) funebris* (Motschulsky, 1863) (cf. Carayon 1972).

Anthocoris parallelus Motschulsky 1863:89 (montagnes de Nura-Ellia et environs de Colombo).

Lectotype: destroyed, only rostrum, right antennal segments II-IV, left antennal segments I-II, nearly complete right hind (?) leg and base of the left fore (?) leg remaining – red square, yellow circle, ZMMU. Currently *Scoloposcelis parallelus* (Motschulsky, 1863).

Note. The specimen (in ZMMU) that Motschulsky originally labeled with a yellow circle with a hand-written "C", "type", "Anthocoris parallelus Motsch. I. or. Ceyl. Colom." is so badly destroyed that nothing remains.

Anthocoris tantillus Motschulsky 1863:89 (environs de Colombo).

Syntype: destroyed, only the last two segments of the rostrum, small fragments of two coxae, part of one femur and evidently part of a tarsal segment remaining – red square, yellow circle, "type", "Anthocoris tantillus Motsch. I. or. Mt.N.El.", ZMMU. Currently *Orius tantillus* (Motschulsky, 1863), see Ghauri (1972).

Note. Although Motschulsky indicated the type-locality as Colombo, labels of the syntype show that it was collected from the mountains near Nuwara Eliya. In earlier literature (Bergroth 1921, Zhelokhovtzev & Zimina 1968) it was indicated that the type specimen had been lost. Kerzhner gave this information to Ghauri (1972) who designated the neotype when redescribing the species. The neotype is a male from Pundalu-oya, Ceylon, deposited in the British Museum (Natural History). The neotype and the syntype were collected in the same valley (see above). Because the remnants of the syntype are insufficient for recognition of the species, we recommend acceptance of the neotype designation by Ghauri (1972), but the case should be submitted to the International Commission on Zoological Nomenclature.

Cydnus? minutus Motschulsky 1863:75 (environs de Colombo et le mont Patannas).

Lectotype: sex unknown, destroyed, only antennae, base of rostrum, damaged right side femora with fragments of hind (?) tibia and complete tarsus, and apex of membrane remaining – dark red square, yellow circle, "type", "Cydnus? minutus Motsch. I. or. Colom.", ZMMU. **Paralectotype:** female, destroyed, only the medial part of ventral side of meso- and metathorax and abdomen, middle and hind coxae, and extreme apex of membrane remaining – yellow circle with hand-written "C" (above remnants of other inscriptions), ZMMU. Currently *Bilia minuta* (Motschulsky, 1863) **comb. n.**

Note. The following text is from the original description: "Suboblongus, fere rotundatus, subdepressus, nitidus, punctulatus, puberulus, niger, antennis pedibusque pallido-subalbidis, oculis rufescente-piceis; capite minuto, subtransverso, inter oculos impresso, antennis dimido corporis longitudine articulo 1-o brevi, crassa, 2-do brevissimo, indistincto, 3-o longissimo, 4-o precedentis paulo breviori, 5-o quarto equale, subovato-acuminato; thorace valde transverso, lato, antice angustato-rotundato, medio transversim impresso, punctulato, angulis posticis subacutis, mesonoto exserto, transversim-trapezoidale, convexo, nitido; scutello triangulari, antice transversim impresso; hemelytris brevis, punctulatis, thorace paulo latioribus, lato truncatis, lateribus arcuatis, appendices valde exertis, nigris. Long. ¾ l. - lat. elytr. ½ l. . . . Probablement un genre particuliere, car la construction des antennes diffère beaucoup de celle des autres Cydnus et il se peut même qu'il n'y ait que 4 articles, si le 2-d, qui m'a paru extrémement petit et indistinct, est illusoire".

From the remnants of the type specimens, the following characteristics can be seen: body length about 1.85 mm; ventral side of thorax and abdomen (at least in medial

part), middle and hind coxae (except extreme apices), and apex of membrane black; antennae, rostrum and legs (except coxae) light yellow; ovipositor laciniate, occupying two thirds of the length of the abdomen in interior view (probably about half of the length in exterior view); mesothorax ventrally with median keel; antennae 4-segmented (!), length of the segments II–IV (the first segment is incomplete) 0.26 - 0.19 - 0.21 mm, subequal in width (0.04-0.05 mm); length of rostral segment I (with base drawn inside head) 0.14 mm; legs without spines, tarsi 2-segmented (segment I very short, segment II with traces of subdivision into two); claws small, curved, and with large pseudarolia (pulvilli); structure of tarsi and claws as in members of the genus *Bilia* Distant (cf. Figs. 10-11).

Judging from the genus indicated by Motschulsky, Signoret (1883) placed *C. minutus* with a query as a synonym of *Geotomus pygmaeus* (Dallas, 1851), but Bergroth (1921) suggested a relationship with *Chilocoris*. However, the laciniate ovipositor of the paralectotype shows at once that the species does not belong to cydnids, and is not even a pentatomoid. All the characters indicate that Motschulsky in fact described a member of the peculiar group of tribe Oriini represented in Africa by the genera *Wollastoniella* Reuter and *Bilianella* Carvalho, and in Asia by *Bilia* Distant (Carayon 1958, Carayon & Miyamoto 1960). No representatives of this genus have been recorded from Sri Lanka to date. Two species, *B. fracta* (Distant, 1904) and *B. castanea* (Carvalho, 1951) have been described from India, but both seem to be distinct from *B. minuta*. In ZIL, there is one male collected recently from Sri Lanka by G. S. Medvedev & V. F. Zaitzev, and it evidently belongs to *B. minuta;* in this specimen the colour of antennae and legs is as in the types, the body is black, and the lengths of the antennal segments are 0.09 - 0.36 - 0.21 - 0.21 mm.

Family Cimicidae

Cimex, see Pentatomidae.

Family Lygaeidae

Coryzus [sic!] *brevicollis* Motschulsky 1863:77 (montagnes de Nura-Ellia).

Lectotype (Scudder 1968): female, antennal segments III and IV missing – red square, yellow circle, "type", "Coryzus brevicollis Motsch. I. or. Ceyl. Mt. N.E.", ZMMU. Currently *Bryanellocoris brevicollis* Motschulsky, 1863) (cf. Scudder 1968).

Corysus [sic!] *semicruciatus* Motschulsky 1863:77 (montagnes de Nura-Ellia).

Lectotype (Scudder & Popov 1967): male, apex of membrane and of abdomen, antennal segments II-IV, and some tarsi missing – red triangle, yellow triangle, yellow circle, "type", "Corysus semicruciatus Motsch. I. or Ceyl. Mt. N.E.", ZMMU. Currently *Pylorgus semicruciatus* (Motschulsky, 1863) (cf. Scudder & Popov 1967).

Cymus basicornis Motschulsky 1863:90 (environs de Colombo).

One mutilated syntype was examined by Bergroth (1921), but the specimen could not be found in the collections of ZMHU. Currently *Cymodema basicornis* (Motschulsky, 1863) (cf. Hamid 1975).

Heterogaster ceylanicus Motschulsky 1863:78 ("des montagnes de Nura-Ellia et Patannas, ainsi que des environs de Colombo").

Syntypes: male – "Heterogaster ceylanicus Motsch. I. or. Ceyl. Mt. N.E.", ZMMU; remnants of a female (?) (hemelytra, scutellum, and fragments of two legs) – yellow circle with hand-written "C", ZMMU; remnants of an unsexed specimen (head, antennal segments I and II, fragments of legs and ventral side of thorax and abdomen) – dark red square, yellow circle, ZMMU; 1♀ – light red square, yellow circle, ZMMU; 1♂ (antennae and legs damaged) – "Ceylon" (printed), "Motsch." (hand-written), dark red square, yellow circle, "Heterogaster ceylanicus Motsch. Ceylan", NRS. Currently *Nysius ceylanicus* (Motschulsky, 1863).

Note. G. Schmitz examined the syntypes from ZMMU, reglued them, provided them with his additional labels, and prepared the genitalia of the male and the female. He discovered that the male and the female belonged to two different species earlier described from the palearctic region. Schmitz further labeled one specimen as the lectotype, so that the name given by Motschulsky would remain as a subspecific name. Because the genus *Nysius* is in need of revision, we have decided not to publish a lectotype designation here. According to Zhelokhovtzev & Zimina (1968) Motschulsky's identification label was originally under a badly damaged specimen; the label was apparently placed under another specimen by Schmitz. It seems also that four specimens in ZMMU were originally on three pins. Judging from the current placement of the labels, the "female(?)" is from Colombo, the unsexed specimen from Patannas, and the well preserved female from Nura-Ellia, but the origin of the male cannot be established.

Heterogaster oculatus Motschulsky 1863:78 (Algérie).

Lectotype: female, well preserved, only the last antennal segments missing – blue triangle, "type", "Heterogaster oculatus Motsch. Algiria", ZMMU. Currently *Henestaris laticeps* (Curtis, 1836).

Note. Contrary to the opinion of Zhelokhovtzev & Zimina (1968), one female of *Dimorphocoris* sp. in ZMMU (labeled with blue square) does not seem to belong to the type-series of *H. oculatus*.

Wagner (1967) claimed that *H. laticeps* occurs only in Europe, and the specimens from NW Africa should be referred to as a distinct species, *H. oculatus,* because they have more raised eyes, smaller body and shorter antennae, and the male genitalia are also somewhat different. During the present investigation we have studied the type of *H. oculatus,* and altogether 3♂♂ and 11♀♀ from Morocco and Tunisia, as well as 8♂♂ and 11♀♀ from Spain, France, Italy and Greece, but we cannot confirm any differences between the European and African materials. On the contrary, we found that Wagner's (1967) data on the proportion vertex : eye are incorrect for both populations; our measurements gave 3.7 – 4.9 for the females (4.1 for the type specimen) and 3.6 – 4.1 for the males, with no differences between the African and European specimens. In this connection, we also examined the specimens that Lindberg (1959) reported from Armenia as *H. laticeps,* but they appeared to belong to *H. halophilus* Burm. At our knowledge, all the records of *H. laticeps* from the USSR are erroneous.

Lygaeus cruciger Motschulsky 1860a:502 (Amur).

Lectotype: destroyed, only the fore tibiae and tarsi remaining – "Amur", "Lygaeus cruciger Motsch. Amur.", ZMMU. Currently *Tropidothorax cruciger* (Motschulsky, 1860).

Note. Oshanin (1906) and Slater (1964) incorrectly cited *L. crucifer* as the original spelling.

Macropes dentipes Motschulsky 1859b:108 (Ceylan).

Lectotype: male, damaged, dorsal side (except head and fore margin of pronotum), antennae, rostrum, genital segment, legs (except fore margin of the right fore femur and right middle and hind legs) missing – dark red square, yellow circle, "Macropus [sic!] dentipes Motsch. I. or. Ceyl. Mt. N.E.", ZMMU ex ZMHU. Currently *Macropes den-*

tipes Motschulsky, 1859, **sp. dist.**, = *M. privus* Distant, 1909, **syn. n.**

Note. Slater & Wilcox (1973) stated that the type of *M. dentipes* had largely been destroyed, and without being sure, placed the name as a synonym of *M. spinimanus*. Examination of the remnants of the lectotype and of Motschulsky's original description have led us to a different opinion. As stated by Motschulsky, *M. dentipes* differs from *M. spinimanus* in having the hemelytra posteriorly black (without a white margin), and in the femora and tibiae for their colour (greater part darker brown). Investigation of the lectotype revealed that on the fore margins of the fore femur there are at least two small (more basal) and two large (more distal) equidistant spines, the auricles of the metathoracic scent glands are small and ovoid, and the hind margins of the hind femora are not protruding. Of the four species of *Macropes* known to date from Sri Lanka (Slater 1979), such a combination of characters is found only in *M. privus*. *M. australis* (Distant) is a much larger species with very light colours; in *M. spinimanus* the fore femora have spines in the apical half only (judged from the lectotype female examined), its membrane nearly always has a white distal margin, its metathoracal scent gland auricle is narrow and curves slightly cephalad, and the hind femora of males often have a ventral protrusion in the middle; in *M. dilutus* Distant the distal part of membrane is always white, the fore femora are equipped with numerous spines of variable sizes, the fore femora and tibiae are concolourous dark brown to nearly black, and metathoracal auricle is like that of *M. spinimanus*. Slater & Wilcox (1973) emphasize the uniformly dark, nearly black membrane (except its extreme anterior end) as a characteristic feature of *M. privus*.

Macropes spinimanus Motschulsky 1859:108 (Ceylan), 1863: Tab. 3, Fig. 19.

Lectotype: female, damaged, dorsal side of thorax and most of abdominal dorsum missing, but head, fore margin of pronotum, scutellum and hind wings, extreme part of abdomen and legs on one side remaining – yellow circle, "type", "Macropus [sic!] spinimanus Motsch. I. or. Ceyl. Mt. N.E.", ZMMU ex ZMHU.

Plociomerus bispinus Motschulsky 1863:81 (montagnes de Nura-Ellia).

Lectotype: male, all right side legs, left hind leg, and central part of membrane missing – red square, yellow circle, "type", "Plociomerus bispinus Motsch. I. or. Ceyl. Mt. N.", ZMMU ex ZMHU. Currently *Primierus bispinus* (Motschulsky, 1863).

Note. *P. indicus* Distant, 1901, is a distinct species, not a junior synonym of *P. bispinus* (cf. Scudder 1970).

Plociomerus flavipes Motschulsky 1863:80 (environs de Colombo).

Lectotype: male, antennae and rostrum missing – yellow circle with handwritten "C", "type", "Plociomerus flavipes Motsch. I. or. Ceyl. Colombo", ZMMU ex ZMHU. Currently *Pachybrachius flavipes* (Motschulsky, 1863) (cf. Slater 1979).

Plociomerus geniculatus Motschulsky 1863:81 (environs de Colombo).

Lectotype: male, damaged, only head with rostrum and antennal segment I, fore margin of pronotum, ventral side of thorax, apex of abdomen, and left fore and right hind legs remaining – yellow circle with hand-written "C", "type", "Plociomerus geniculatus Motsch. I. or Ceyl. Colomb.", ZMMU ex ZMHU. Currently *Stigmatonotum geniculatum* (Motschulsky, 1863) (cf. Slater 1979).

Plociomerus javanus Motschulsky 1863:80 (Batavia).

Lectotype: damaged, sex unknown, ventral side of meso- and metathorax, scutellum, one hemelytron, and middle legs remaining – pink rhomb, yellow triangle, "type", "Plociomerus (Say) javanus Motsch. Java Batavia", ZMMU ex ZMHU. Currently *Horridipamera nietneri* (Dohrn, 1860) cf. Slater (1964), Malipatil (1978).

Plociomerus obliquefasciatus Motschulsky 1863:80 (Batavia).

Bergroth (1921) examined two syntypes, one of which was badly damaged; the specimens could not be located for the present study. Currently *Pseudopachybrachius gutta* (Dallas, 1852) (cf. Malipatil 1978).

Plociomerus punctulatus Motschulsky 1863:79 ("des environs de Colombo, mais aussi en Egypte ou je l'ai pris sous les chardons désséchés").

Lectotype: female (judged from the fore tibia), destroyed, only left fore coxa, femur and tibia, right fore tibia and tarsus (without claws), apex of left middle tibia and tarsus, and left hind leg remaining – yellow circle with handwritten "C", "type", "Plotiomerus [sic!] punctulatus Motsch. I. or. Ceyl, Colomb.", ZMMU. **Paralectotype:** female, destroyed, only ventral side of prothorax, right fore leg, left fore coxa, tibia and tarsus, right middle femur, and lateral and apical parts of the right hemelytron remaining – light blue square, ZMMU. Currently *Pachybrachius annulipes* (Baerensprung, 1859) = *Plociomerus punctulatus* Motschulsky, 1863, **syn. n.**

Note. Distant (1904) misidentified Motschulsky's species. *Pamera punctulata* (Motsch.) sensu Distant was transferred to *Pamerarma* Malipatil, 1978, by Zheng & Zou (1981, p. 603). As no other names for this species are known to us, we propose *Pamerarma distanti* Kerzhner **sp. n.** for *Pamera punctulata* of Distant 1904, p. 54.

Plociomerus rufipes Motschulsky 1866:188 (Japan).

Lectotype: sex unknown (probably female), damaged, antennal segments III–IV on the right and II–IV on the left side, membrane, right corium, apex of abdomen, left fore leg, right middle leg, and right hind leg missing – dark yellow square, "type", "Plociomerus rufipes Motsch. Japon", ZMMU ex ZMHU. Currently *Stigmatonotum rufipes* Motschulsky, 1866) (cf. Scudder 1970).

Plociomerus ustulatus Motschulsky 1863:81 (Havane).

Lectotype: female, damaged, head, as well as fore and middle legs missing – green triangle, pink square, "type", "Plociomerus ustulatus Motsch. Antil. Havana", ZMMU ex ZMHU. **Paralectotype:** sex unknown, damaged, antennae, legs, and abdomen missing, glued to the right on the card with the lectotype. Currently *Pseudopachybrachius vinctus* (Say, 1832) (cf. Malipatil 1978).

Rhyparochromus brevis Motschulsky 1863:78 (mont Patannas).

Lectotype: male, well preserved – dark-red square, yellow circle, "type", "Rhyparochromus brevis Motsch. I. or. Ceyl. Mt. P.", ZMMU ex ZMHU. Currently *Siniasinensis brevis* (Motschulsky, 1863) (cf. Scudder 1968).

Rhyparochromus fusconervosus Motschulsky 1863:79 (environs de Colombo).

Lectotype: male, somewhat damaged, antennae, tarsi, right hemelytron, and left fore and middle legs missing – yellow circle with hand-written "C", "type", "Rhyparochromus fusconervosus Motsch. I. or. Ceyl. Colom.", ZMMU ex ZMHU. **Paralectotype:** female, somewhat damaged, antennae (except segment I on the right) and legs (except left hind femur) missing, glued behind the lectotype on the same card. Currently *Suffenus fusconervosus* (Motschulsky, 1863).

Stenogaster? lugubris Motschulsky 1859b:108 (Ceylan).

Lectotype: male, glued nearest to the right fore corner on

a card together with another male and a female (and remnants of a further two or more specimens) – red square, yellow circle, "Stenogaster lugubris Motsch. I. or. Ceyl. Mt. N.E.", ZMMU ex ZMHU. **Paralectotypes:** the male and the female with the lectotype as above; 2♂♂ and 3♀♀ glued on three cards and placed on two pins, both pins labeled "Stenogaster lugubris Motsch. Ceylan", one of them marked (in Russian in Kiritshenko's handwriting) "from the coll. of Russ. ent. Soc., as said by Sokolov type of Motsch.", ZIL; 1♂ – "Ceylon" (printed), "Motsch." (hand-written), "Stenogaster lugubris Motsch. Ceylon", NRS; 3♀♀– "Ceylon" (printed), "Motsch." (hand-written), NRS. Currently *Oxycarenus lugubris* (Motschulsky, 1859).

Family Coreidae

Maccevethus lativentris Motschulsky 1866:188 (Japon).
Lectotype: female, legs, antennae, and apex of hemelytra partly missing – dark yellow square, "Maccevethus lativentris Motsch. Japonia", ZMMU. Currently *Hygia (Colpura) lativentris* (Motschulsky, 1866).

Menenotus tuberculipes Motschulsky 1866:187 (Japon).
Lectotype: sex unknown, without abdomen and also legs and antennae partly missing – dark yellow square, "Menenotus tuberculipes Motsch. Japon", ZMMU. **Paralectotypes:** specimen of unknown sex, abdomen, antennae, and middle and hind legs missing – dark yellow square, ZMMU; 1♂ only ventral side of meso- and metathorax, bases of wings and hemelytra, one middle and both hind legs remaining – dark yellow square, ZMMU. Currently *Molipteryx fuliginosa* (Uhler, 1860).

Family Alydidae

Alydus atratus Motschulsky 1860a:502 (Amur).
Lectotype: sex unknown, antennae, some legs, apical part of abdomen, and membranae missing – "Amur", "Alydus niger [sic!] Motsch. Amur", ZMMU. Currently *Alydus calcaratus* (Linnaeus, 1758).

Family Rhopalidae

Corysus and *Coryzus,* see Lygaeidae.

Maccevethus, see Coreidae.

Family Plataspidae

Coptosoma biguttula Motschulsky 1860a:501 (Amur).
Lectotype: male, well preserved – "Amur", ZMMU. **Paralectotypes** belonging to *C. biguttula:* glued on the same card as the lectotype are one specimen without dorsal side of abdomen, genital sclerites, and scutellum, as well as legs of another specimen, ZMMU; 2♂♂ and one mutilated specimen on one card – "Daur. m.", ZMMU; 1♂ and two damaged females and badly damaged specimen on one card – "Daur. m.", ZMMU; 1♂ – "Amur", "Motsch." (both hand-written), "Coptos. biguttulum Motsch. Stål" (written by Stål), NRS; 1♂ 4♀♀ on separate pins – "Amur", "Motschul." (both labels in Russian, written by B. Jakovlev), "B. Jakovlev's coll." (printed in Russian), ZIL; 1♂, 2♀♀ glued on one card – "Coptosoma biguttula Motsch. Amur", "from the coll. of Russ. entom. Soc., as said by Sokolov a type of Motschulsky" written in Russian by A. N. Kiritshenko, ZIL; 1♀ – "102" (printed on yellow paper), "Captosoma [sic!] biguttula Motsch. Mong. fl. Amur", ZIL. **Paralectotypes** belonging to *C. capitatum* Jakovlev, 1880: 1♀ with head, legs, and genital sclerites missing – red semicircle, "Copsosoma [sic!] biguttula Motsch. Sib. or.", ZMMU; 1♂ 2♀♀ on separate pins – golden circle (indicates that these specimens are syntypes of *C. capitatum*), "Amur", "Motschul." (both labels written by Jakovlev in Russian), "B. Jakovlev's coll." (printed in Russian), the male is also labeled "Coptosoma capitatum Jak. B. Jakovlev det." (the name of the species written by A. N. Kiritshenko, the rest printed), ZIL. Currently both species are distinct: *Coptosoma biguttulum* Motschulsky, 1860, and *C. capitatum* Jakovlev, 1880.

Note. Motschulsky considered *Coptosoma* as of femine gender (cf. his *C. ceylonica*) and *biguttula* evidently as an adjective (cf. his *Schirus* [sic!] *triguttulus*). However, because *Coptosoma* is in fact of neuter gender, *biguttula* has to be corrected to *biguttulum.*

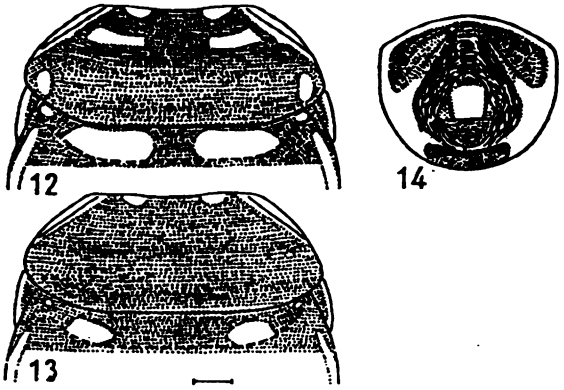
Captosoma [sic!] *ceylonica* Motschulsky 1863:74 (montagnes de Nura-Ellia), name preoccupied by *C. ceylonica* Dohrn, 1860.
Lectotype: male – red square, yellow circle, "type", "Coptosoma ceylonica Motsch. Mt. Nura Ell. Ceylon", ZMMU ex ZMHU. **Paralectotypes:** 1♂, head missing, glued on the same card with the lectotype; 1♂ – red square, yellow circle, ZMMU ex ZMHU. Currently *Coptosoma ellia* Walker, 1867 (new name for *C. ceylonica* Motsch.), **sp. dist.** (? = *C. minima* Atkinson, 1889).

Note. Bergroth (1921) placed *C. ceylonica* Motsch., *C. ellia, C. minima,* and many other names as synonyms of *C. variegatum* (Herrich-Schäffer, 1838), originally described from specimen(s) of unknown origin, received from Sturm under the name "*Thyreocoris flavipes* F.". The type(s) is/are evidently lost. Two specimens from Germar's collection in the Zoological Museum, Humboldt University, Berlin, DDR, labeled "Bintang" (= an island near Singapore) and apparently identified by Herrich-Schäffer himself as *C. variegatum,* probably belong to two different species (Kuhlgatz 1901). As is evident from the material in the ZIL collection, the original description and the figure of *C. variegatum* remind a number of related oriental species in the colour scheme, but none of these have a body length as great as 3.75 mm as indcated by the scale line in the Herrich-Schäffer's figure. On the other hand, Herrich-Schäffer's (1838) remark "die kleinste mir bekannte Art der Gattung" indicates that the scale line may be erroneous. The schematic drawing of the male genital segment given by Herrich-Schäffer is somewhat similar to that of a species from the Philippines examined during the present investigation by Kerzhner (body length of ♂ 2.75 mm). In the types of *C. ceylonica* Motsch. the male genital segment (Fig. 14) is quite different, and as *C. ellia* is the earliest "synonym" of *C. variegatum,* we have restored this name. *C. minimum* (from Pundaluoya) is probably a synonym of *C. ellia. C. pygmaeum* Montandon, 1896, was described from areas now belonging to Sri Lanka, India and Indonesia, but if the lectotype will be designated by the later remark of Montandon (1900, p. 536) "*C. pygmaeum* Montd. typique de Ceylan", *C. pygmaeum* may also prove to be a synonym of *C. ellia.*

Figs. 12-13 show variation in the yellow patterns in *C. ellia* from Sri Lanka. Between the extreme patterns, all kinds of intermediate forms are found, but the specimens have identical male genitalia. This indicates that there is a need for taxonomic revision of those *Coptosoma* species in which slight differences in the yellow patterns are regarded as important in the recognition of the species. In this connection it might be useful to mention that besides *C. ellia,* two closely related species with different form of hairy area

near the upper margin of the genital segment, are also found in Sri Lanka.

Coptosoma dilatata Motschulsky 1860a: 501 (Amur).
Lectotype: female, genital sclerites and parts of legs and antennae missing – "Amur", ZMMU. **Paralectotypes:** remnants (head and prothorax) of one specimen – "Amur", "Coptosoma dilatata Motsch. Amur", ZMMU; 1♂, head, prothorax, legs, and genital segment missing – "Mongol.", ZMMU; 3♀♀ on separate pins – "Amur", "Motsch." (both labels in Russian, written by B. Jakovlev), "B. Jakovlev's coll." (printed in Russian), ZIL. Currently *Coptosoma scutellatum* (Geoffroy in Fourcroy 1785).



Figs. 12–14. *Coptosoma ellia* Walker. 12–13: pronotum and base of scutellum on a light coloured male (12, specimen from Kandy) and a dark coloured male (13, specimen from Matale); 14: rear view of the male genital segment, specimen from Kandy. – Scale line 0.25 mm for Figs. 12–13 and 0.15 mm for Fig 14.

Family Cydnidae

Cydnus, see Anthocoridae

Schirus [sic!] *triguttulus* Motschulsky 1866:186 (Japon).
Lectotype: sex unknown, antennae, apex of abdomen, and nearly all of the membranes missing – dark yellow square, "Schirus triguttulus Motsch. Japonia", ZMMU. Currently *Adomerus triguttulus* (Motschulsky, 1866), (cf. Wagner 1963).

Family Pentatomidae

Arma abbreviata Motschulsky 1866:187 (Japon).
Lectotype: male, legs and antennae partly missing – dark yellow square, "Arma abbreviata Motsch. Japonia", ZMMU. **Paralectotype:** male, legs and antennae partly missing – dark yellow square, ZMMU. Currently *Carbula humerigera* (Uhler, 1860).

Cimex angulosus Motschulsky 1861:23 (Japon).
Lectotype: male, antennae and legs partly missing – dark yellow square, "type", "Cimex angulosus Motsch. Japan", ZMMU. **Paralectotypes:** 1♂, 3♀♀ on separate pins, all more or less damaged – dark yellow square, ZMMU; 1♀ – "Japan" (printed), "Motsch." (hand-written), "Arma angulosa Motsch. Typ." (written by Stål), "Paratypus" (printed), NRS. Currently *Palomena angulosa* (Motschulsky, 1861).

Cimex cuprifer Motschulsky 1859a:23 (Amur).
Formally an available name ("un grand *Cimex cuprifer* m., d'un vert plus ou moins cuivré"). As indicated by Motschulsky (1870), the same species was described by himself (Motschulsky 1860) as *Tropicoris metalliferus*. *C. cuprifer* is a nomen oblitum, overlooked even in catalogues, and it should be rejected in favour of the generally used *Pentatoma metallifera*. For types, see *Tropicoris metalliferus*.

Eurydema daurica Motschulsky 1860a:502 (Amur).
Lectotype: female, in relatively good condition – "Amur", "Eurydema daurica Motsch. fl. Amur", ZMMU. **Paralectotypes:** 1♂, parts of left side of head, of hemelytra, and of abdomen missing – glued on the same card as the lectotype; 1♂, abdomen partly damaged, and 1♀ (?), abdomen, dorsal side of head, and part of pronotum missing – "Amur", ZMMU; 1♀, abdomen and left hemelytron damaged – "Amur", "Eurydema daurica Motsch. Amur", "from the coll. of Russ. entom. Society, as said by Sokolov a type of Motschulsky" (written in Russian by A. N. Kiritshenko), ZIL; 3♂♂, 1♀ glued on one card – "Amur" (printed), "Eurydema daurica Motsch." (hand-written, but not by Motschulsky or Stål), NRS. Currently *Eurydema dominulus* (Scopoli, 1763).

Note. The type status of the NRS specimens is somewhat doubtful because, in difference to other syntypes in NRS, the label "Amur" is printed, the label "Motsch." is absent, the identification label is not written by either Motschulsky or Stål, and the card on which the specimens are glued is much thicker than that used by Motschulsky. However, as Stål (1866) indicated (with an asterisk) having studied Motschulsky's types, and as no other relevant specimens could be found in NRS, the above four specimens are labeled as paralectotypes.

Eurydema rugosa Motschulsky 1861:22 (Japon).
Lectotype: female, legs and segments of right antenna partly missing – dark yellow square, "type", "Eurydema rugosa Motsch. Japan", ZMMU. **Paralectotypes:** 1♂ (pinned), and 1♂ 1♀ glued on one card, all slightly damaged – all with dark yellow square, ZMMU; 1♀, legs and antennae partly missing – "Japan" (printed), "Motsch." (hand-written), dark yellow square, "Eurydema rugosa Motsch. Japan", "abd. supra nigro, connexivo rubro" (hand-written), NRS.

Graphosoma crassa Motschulsky 1861:22 (Japon).
Lectotype: female, antennae partly missing – dark yellow square, "type", "Graphosoma crassa Motsch. Japonia", ZMMU. **Paralectotypes:** 1♂ 1♀ on separate pins, antennae and legs partly missing – dark yellow square, ZMMU. Currently *Graphsoma rubrolineatum* (Westwood, 1837).

Menida fusca Motschulsky 1861:23 (Morée).
Formally this name [overlooked in all later publications and not listed even by Motschulsky (1870) himself], is available because it was published in the following text: "une seconde éspèce (*Men. fusca* M.) presque le double plus grande [que *M. violacea*] se trouve en Morée. **Lectotype:** sex unknown, head, legs, and abdomen missing – "Morea", "Menida fusca Motsch. Morea", ZMMU. Currently *Rhaphigaster nebulosa* (Poda, 1761) = *Menida fusca* Motschulsky, 1861, **syn. n.**
Note. As *M. fusca* is an available name, *M. violacea* will be the type species of the genus *Menida* Motschulsky, 1861, by subsequent designation (Distant 1902), not by monotypy.

Menida violacea Motschulsky 1861:23 (Japon).
Lectotype: female, well preserved – dark yellow square, "type", "Menida violacea Motsch. Japan", ZMMU. **Paralectotype:** ♀, legs and apical segments of antennae and rostrum missing – dark yellow square, ZMMU.

Mormydea [sic!] *basicornis* Motschulsky 1866:187 (Japon).
Lectotype: female, genital sclerites missing, legs and antennae partly missing – dark yellow square, "Mormydea basicornis Motsch. Japonia", ZMMU. Currently *Palomena angulosa* (Motschulsky, 1861).

Strachia geometrica Nietner 1861:8 (collected by A. Brown from Badulla); Motschulsky, 1863:75 ("Nietner l'a prise communément dans les plantations de café").
Lectotype: female, antennae and legs damaged – red square with letter "P", yellow circle, "type", "Strachia geometrica Motsch. I. or. Ceyl. Mt.", ZMMU ex ZMHU. Currently *Antestia cruciata* (Fabricius, 1775).
Note. Kirkaldy (1909) correctly credited the name to Nietner (1861), who published it (with the reference "Motsch. in litt.") describing the body form two years before Motschulsky published his description. In the Zoological Museum of the Humboldt University, Berlin, DDR, there are six specimens labeled "7079", which refers to the inventory book text "*Pentatoma cruciata* Fab., 3 Exemplaren, Ceylon, Nietner". This is an obvious contradiction between the collection and the inventory book in the number of specimens and thus, it is impossible to conclude which ones of the specimens really belong to Nietner's material. The specific name used in the inventory book indicates that Nietner possibly sent to Berlin material collected after 1861. Judging from Nietner's indication "Motsch. in litt." the material from Motschulsky's collection certainly form part of Nietner's type series. Bergroth (1921) examined five syntypes, but only one of them was found at the present. According to the facts above, it is regarded justifiable to designate this specimen as the lectotype.

Tropicoris decempunctatus Motschulsky 1860a:501 (Amur).
Lectotype: sex unknown, only pronotum, scutellum, and base of right hemelytron remaining – "Amur", "Tropicoris 10punctatus Motsch. Amur", ZMMU. **Paralectotype:** ♂, genital segment missing – "Amur", "Motsch." (both hand-written), "Stål" (printed), "10punctatus Motsch. Typ" (written by Stål), "Paratypus" (printed), NRS. Currently *Lelia decempunctata* (Motschulsky, 1860).
Note. Motschulsky's private collection in ZMMU also contains another specimen, a somewhat damaged male of this species. It is labeled with a dark yellow square (= Japan), and certainly does not belong to the type series.

Tropicoris metalliferus Motschulsky 1860a:501 (Amur).
Lectotype: sex unknown, head, abdomen, and legs missing – "Amur", "Tropicoris metalliferus Motsch. Amur", ZMMU. **Paralectotypes:** three specimens, all without head, abdomen, and legs – each carrying a different label as follows: "Daur. m.", "Mongol.", and "fl. Amur", ZMMU; 1♀, antennae and legs partly missing – "Amur", "Motsch." (both hand-written), "Stål" (printed), "metallifer [sic!] Motsch. Typ" (written by Stål), "Paratypus" (printed), NRS. Currently *Pentatoma metallifera* (Motschulsky, 1860).

Tropicoris semiannulatus Motschulsky 1860a:501 (Amur).
Lectotype: sex unknown, head, prothorax, legs, and abdomen missing – "Mongol.", "Tropicoris semiannulatus Motsch. Amur", ZMMU. **Paralectotype:** ♂ – "Amur", "Motsch." (both hand-written), "Stål" (printed), "semiannulatus Motsch. Typ." (written by Stål), "Paratypus" (printed), NRS. Currently *Pentatoma semiannulata* (Motschulsky, 1860).

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