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Miscellanea Miridologica (Insecta: Heteroptera)

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Abstract

Eurotas Distant, 1884 is transferred from Mirinae, Mirini to Orthotylinae, Orthotylini (new subfamily placement) and *Femurocoris* Carvalho, 1977 is transferred from Mirinae, Mirini to Deraeocorinae, Hyaliodini (new subfamily placement). The following new combinations are suggested: *Apolygus biannulatus* (Poppius, 1915) comb. n. [*Lygus*], *Apolygus bruneinensis* (Carvalho, 1980) comb. n. [*Lygus*], *Apolygus longirostris* (Poppius, 1914) comb. n. [Lygus], *Apolygus umbratus* (Poppius, 1914) comb. n. [*Lygus*], *Guisardinus lineatus* (Carvalho *in* Carvalho & Gross, 1979) comb. n. [*Chrysorrhanis*], *Gutrida mocquerysi* (Poppius, 1912) comb. n. [*Lygus*], *Lampethusa attenuata* (Distant, 1883). comb. n. [*Taedia*], *Lygidolon vittatum* (Reuter, 1903) comb. n. [*Lygus*], *Lygocoris viridiflavus* (Poppius, 1914) comb. n. [*Lygus*], *Lygocoris vittulatus* (Poppius, 1914) comb. n. [*Lygus*], *Neolygus indicus* (Poppius, 1914) comb. nov. [*Lygus*], *Neolygus sondaicus* (Poppius, 1914) [*Lygus*], *Pleurochilophorus sexlineatus* (Delattre, 1949) n. comb. [*Corizidolon*], *Sabactiopus laevipennis* (Poppius, 1914) comb. n. [*Lygus*], *Sabactiopus sublaevis* (Poppius, 1914) comb. n. [*Lygus*], *Sabactus exiguus* (Poppius, 1914) comb. n. [*Lygus*], *Schoutedenomiris schmitzi* (Chérot, 1996) comb. n. [*Trigonotylus*], and *Taylorilygus oceanicus* (Poppius, 1914) comb. n. [*Lygus*]. Lectotypes are designated for *Corizidolon sexlineatum* Delattre, 1949, *Lygus exiguus* Poppius, 1914, *Lygus indicus* Poppius, 1914, *Lygus laevipennis* Poppius, 1914, *Lygus nebulosus* Poppius, 1914, *Lygus oceanicus* Poppius, 1914, *Lygus sondaicus* Poppius, 1914, *Lygus vittatus* Reuter, 1903, and *Miris cruentatus* Brullé, 1832. Two replacement names – *Tropidosteptes costai* Schwartz & Chérot (*nomen novum*) and *Phytocoris garyi* Schwartz & Chérot (*nomen novum*) – are given respectively to *Tropidosteptes scutellatus* Carvalho & Costa, 1993 *nec Tropidosteptes scutellatus* Distant, 1893 and *Phytocoris falcatus* Stonedahl, 1995 *nec Phytocoris falcatus* Linnavuori, 1984. The following taxa are raised to species level: *Neostenotus confluentus* Carvalho & Fontes, 1972 stat. n., *Neostenotus itatiaianus* Carvalho & Fontes, 1972 stat. n., *Neostenotus serranus* Carvalho & Fontes, 1972 stat. n., *Neostenotus similimus* Carvalho & Fontes, 1972 stat. n., *Neostenotus sulinus* Carvalho & Fontes, 1972 stat. n., *Poeas alvarengai* Carvalho, 1975 stat. n., *Poeas atlantica* Carvalho, 1975 stat. n, *Poeas caatinga* Carvalho, 1975 stat. n., *Poeas chapada* Carvalho, 1975 stat. n., and *Poeas*

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cipoa Carvalho, 1975 stat. n. The subgeneric classification of *Hyalopeplus cuneatus* Carvalho *in* Carvalho & Gross, 1979 is discussed.

Key words: Heteroptera, Miridae, taxonomy, new combinations, new subfamily classification, nomina nova.

Introduction

The generic and suprageneric taxonomy of the subfamily Mirinae (Heteroptera, Miridae) remains unsatisfactory (Stonedahl, 1995a; Chérot, 1996a; Chérot & Schwartz, 1998); many genera are insufficiently defined and the intergeneric relationships are generally ignored in the literature.

In order to improve our comprehension of the phyletic relationships and to clarify the classification of the taxa within the subfamily, we suggest new subfamily placements, new combinations (particularly in the so-called *Lygus* complex), new categorical status, and give several lectotype designations. A nomen novum is proposed for *Phytocoris falcatus* Stonedahl, 1995b not *Phytocoris falcatus* Linnavuori, 1984, and for *Tropidosteptes scutellatus* Carvalho & Costa, 1993 not *Tropidosteptes scutellatus* (Distant, 1893).

Material and methods

As in Kerzhner & Josifov (1999) and Schwartz & Foottit (1998), the depositories of the quoted material are abbreviated in the text as follows: BMNH: The Museum of Natural History, London; BPBM: Bernice P. Bishop Museum, Bishop; CFC: coll. F. Chérot, Brussels; CNC: Agriculture and Agri-food Canada, Ottawa; HNHM: Hungarian Natural History Museum, Budapest; HUES: Biology Laboratory, Hokkaido University of Education, Sapporo; ISNB: Institut royal des Sciences naturelles de Belgique, Brussels; MNHN: Muséum national d'Histoire naturelle, Paris; MNRJ: Museu naçional, Rio de Janeiro; MZHF: Zoological Museum, University of Helsinki, Helsinki; ULB: Université Libre de Bruxelles, Brussels.

In recording the label data, we use a semicolon to separate different specimens and a slash to separate the labels of each particular specimen. The "FC n°" is Chérot's unique identification number affixed to some of the examined specimens.

The reader will find a complete chreso-synonymy of the taxa studied here in Carvalho's (1959) and Schuh's (1995) catalogues; in addition to the original descriptions and those in Schuh (1995) we also provide references published after 1995.

Taxonomy

1. Genus *Apolygus* China, 1941: 60 (as n. subgenus) [Type-species by original designation: *Lygaeus limbatus* Fallén, 1807]

1.1. *Apolygus biannulatus* (Poppius, 1914) comb. n.

Lygus biannulatus Poppius, 1914b: 28 (as new species), *Lygus biannulatus*: Schuh, 1995: 809 (catalog, as "*incertae sedis*").

Examined specimen: Holotype by monotypy (female): "Typus" / "*Lygus biannulatus* n. sp." / "Takao 1907" / "Formosa, *Sauter*" (FC n° 910) (HNHM).

1.2. *Apolygus bruneinensis* (Carvalho, 1980) comb. n.

Lygus rufescens Poppius, 1914a: 378 (as new species, the homonymy and replacement name by Carvalho, 1980: 654), *Lygus bruneinensis*: Schuh, 1995: 809 (catalog, as "*incertae sedis*").

Examined specimen: Holotype by monotypy (female): "Typus" / "*Lygus rufescens* n. sp." / "Borneo, Brunei" (FC n° 916) (HNHM).

1.3. *Apolygus longirostris* (Poppius, 1914) comb. n.

Lygus longirostris Poppius, 1914a: 387 (as new species), *Lygus longirostris*: Schuh, 1995: 817 (catalog, as "*incertae sedis*").

Examined specimen: Holotype by monotypy (female): "Typus" / "*Lygus longirostris* n. sp." / "Borneo, Brunei" (FC n° 913) (HNHM).

1.4. *Apolygus umbratus* (Poppius, 1914) comb. n.

Lygus umbratus Poppius, 1914a: 372 (as new species), *Lygus umbratus*: Schuh, 1995: 828 (catalog, as "*incertae sedis*").

Examined specimen: Holotype by monotypy (female): "Typus" / "*Lygus umbratus* n. sp." / "Samanga, S. Celebes, XI.1895. *H. Fruhstorfer*" (FC n° 920) (HNHM).

Discussion: By their habitus, "*L.*" *biannulatus*, "*L.*" *bruneinensis*, "*L.*" *longirostris*, and "*L.*" *umbratus* obviously belong to the *Apolygus – Apolygopsis* group of genera (Yasunaga, Schwartz & Chérot, 2002). Unfortunately, the holotypes are all females, and the best characters to distinguish *Apolygopsis* and *Apolygus* s. str. are found in the male genitalia (specifically, the apical prong of left paramere and the two long, slender, basally fused spiculae sheathed within a trough-shaped sclerite are unique to *Apolygopsis*). Even though we have only females, the head shape and dull dorsum place the four species in *Apolygus*. Accordingly, we suggest the new combinations quoted above.

2. Genus *Dionconotus* Reuter, 1894: 129 (new name for *Dioncus* Fieber, 1858 preoccupied by *Dioncus* Stimps, 1855) [Type-species by monotypy: *Lygaeus neglectus* Fabricius, 1798].

Dionconotus: Schuh, 1995: 759–760 (catalog).

2.1. *Dionconotus neglectus* (Fabricius, 1798).

Lygaeus neglectus Fabricius, 1798: 542 (as new species), *Miris cruentatus* Brullé, 1832: 72 (as new species) (synonymy by Carapezza & Kerzhner, 1996: 307), *Dionconotus cruentatus*: Schuh, 1995: 761 (catalog, incorrect subsequent use for *D. neglectus* since Fieber, 1861: 269, cf. Carapezza & Kerzhner, 1996), *Dionconotus neglectus*: Carapezza & Kerzhner, 1996: 307 (correction of previous misleading epithet's use, n. syn.), *Dionconotus neglectus*: Kerzhner & Josifov in Aukema & Rieger, 1999: 96.

Examined specimens: Lectotype (male) (present designation) "*Miris cruentatus* Type Brullé, le chiffre 33 est original" (m.) / "Museum Paris, Morée, Brullé, 4187-33" / "33" (square original label, m.) / "type".

Discussion: Carapezza & Kerzhner's (1996) subjective synonymy between *Lygaeus neglectus* Fabricius, 1798 and *Miris cruentatus* Brullé, 1832 is confirmed by the examination of the above-quoted Brullé's type-specimens. Like some others of Brullé's types (Chérot, 1997: 172–173), these specimens were found in the so-called Amyot & Serville collection (box 51), of the older bugs collection housed in the MNHN.

Three other specimens found with the lectotype (one male labelled "*Phytocoris cruentatus* Br." / "Museum Paris, Morée, Brullé, 4187-33" / "type" and two devoid of labels) are of doubtful nomenclatorial value. Only one specimen was mentioned for *Miris cruentatus* Brullé, 1832 (p. 82) in the "Catalogue des animaux sans vertèbres I (A), 1826–1834", the access register of the entomology laboratory of the Paris Museum in which the material of the "Expédition de Morée" was quoted [Dr D. Pluot-Sigwalt and Mr. O. S. G. Pauwels pers. comm.].

Nevertheless, (a) Brullé (1832) usually specified the number of specimens collected in his descriptions. For example, in his description of *Miris infuscatus* (p. 77), Brullé wrote "Trouvé une seule fois", i.e. "Found only one time". Unfortunately, he did not always state the exact number of specimens for multiple collections. For example, in the case of his *Miris lineolatus*, Brullé wrote (pp. 76–77) "Assez commun" ("Relatively common"). In the description of *Miris cruentatus* (p. 78), he wrote "Moins commun que le *M. lineolatus*" ("Less common than *M. lineolatus*"). Consequently, a multiple type-series is possible. (b) Some specimens collected during the expedition were not "immediately" included in the Catalog (Chérot, loc. cit.).

We have some doubt about the exact size of Brullé's type-series. We consequently apply the Recommendation 73F of the International Code of Zoological Nomenclature, hereafter named as "the Code" [International Commission on Zoological Nomenclature – ICZN –, 1985 for the Third Edition - hereafter named the **Third** – and 1999 for the Fourth Edition, hereafter named the **Fourth**]. If the three other specimens were effectively true Brullé's syntypes, they are presently paralectotypes [the Code, Article 74 (a) (iv) of the Third and Article 74.1.3 of the Fourth].

3. Genus *Eurotas* Distant, 1884: 303 (as n. gen., n. sp.) [Type-species by monotypy: *Eurotas nodosus* Distant, 1884] (revised subfamily placement).

Eurotas: Schuh, 1995: 765 (catalog).

Examined specimens: *Eurotas nodosus* Distant, 1884. Lectotype (female) (designation by Carvalho & Dolling, 1976: 802): "Bugaba, Panama, Champion" / "Distant Coll. 1911-383" / "*Eurotas nodosus* Distant" (FC n° NE3) (BMNH); "*Eurotas nodosus* Dist., J. C. M. Carvalho, Det." / "*J. A. Ramos*" / "Colombia: Restrepo, Meta, 02.X.1965" (FC n° NE 116) (MNRJ); "*Eurotas nodosus* Dist., J. C. M. Carvalho, Det." / "Las Cumbres, Panama, (0)9° 06'N., 79° 32'W., L(igh)t Trap, 24.V.1974., Col. *Hank Wolda*" (FC n° NE 117) (MNRJ).

Eurotas brasilianus Carvalho & Wallerstein, 1975. Holotype by original designation and monotypy (female): "140" / "*Eurotas brasilianus* n. sp., Det. J. C. M. Carvalho, 1975" / "Holotypus" / "*Alvarenga & Roppa*" / "Sinop, Rio Teles Pires, M(atto Grosso), Brasil, (?)21.XI.1974." (FC n° NE 122) (MNRJ); "*Eurotas brasilianus* C. W., Det. J. C. M. Carvalho, 1987" / "Compared with the type by Carvalho, 197." / "Ouro Preto, Rondônia, Brasil, VII.1986, *Roppa*" (FC n° NE 118) (MNRJ); "Barracão Queimado, M(ato) Grosso, Brasil, XI.1960., *M. Alvarenga* leg." (FC n° NE 119) (MNRJ); "Foz de Iguaçu, Parana, Brasil, 12.XII.1966., Exc. Dept. Zoo." (FC n° NE 120) (MNRJ).

Eurotas reinhardti Carvalho, 1988. Holotype by original designation (male): "537" / "*Eurotas reinhardti* n. sp., Det. J. C. M. Carvalho, 1987" / "Holotypus" / "Lagoa Santa, Minas Gerais, Brasil, *Reinhardt* coll." / "2" (FC n° NE 121) (MNRJ).

Discussion: This genus was included by Carvalho (1959: 90) and by Schuh (1995: 765) in the tribe Mirini of the subfamily Mirinae. The examination of the quoted specimens revealed that they belong to the tribe Orthotylini of the subfamily Orthotylinae (new subfamily placement). The claws as well as the dorsal pilosity are very typical of the latter group. The male genitalic structures, particularly the left paremere and theca (*Eurotas brasilianus* Carvalho & Wallerstein, 1975 cf. Carvalho, 1988, p. 878, Figs 12–14, *Eurotas reinhardti* Carvalho, 1988, cf. Carvalho, 1988, p. 877, Figs 8–10), confirm our placement. Carvalho (1985a: 251) had moreover introduced the genus *Eurotas* in his key of the neotropical Orthotylini. Unfortunately, he did not clearly state the new subfamilial placement and this change was subsquently ignored.

Remark: Contrary to the affirmation of Carvalho (1988: 877), the holotype of *Eurotas reinhardti* Carvalho, 1988 was never returned to Stockholm and is presently housed in Museu Naçional, Rio de Janeiro (holotype number 537).

The species group-name (French "epithet" of the Fourth) "*reinharti*" used by Schuh (1995: 765) is an incorrect subsequent spelling, and should be corrected on the web site.

4. Genus *Femurocoris* Carvalho, 1977 (as n. gen.) [Type-species by original designation and monotypy: *Femurocoris spinosus* Carvalho, 1977] (revised subfamily placement).

Femurocoris: Schuh, 1995: 769 (catalog).

Examined specimens: *Femurocoris spinosus* Carvalho, 1977. Holotype by original

designation and monotypy (male): "*Femurocoris spinosus* n. sp., J.C.M. Carvalho det." / "Holotype" / "R. Straatman light trap" / "New Caledonia, Pouebo, 20 m., 15.I.1964" (FC n° 1026) (BPBM); 1 male: "*Femurocoris spinosus* Carvalho, 1977 Det. F. Chérot, 2000." / "Nouvelle-Calédonie, Rivière Bleue P7, forêt dense, fogging, 21.VII.1992, *Chazeau, Guilbert & Bonnet de Larbogne*" (FC n° 1529) (MNHN) / II; 1 male: "*Femurocoris spinosus* Carvalho, 1977 Det. F. Chérot, 2000." / "Nouvelle-Calédonie, Mont Nondoue, forêt sclérophylle, fogging, 03.VII.1992, *Chazeau, Guilbert & Bonnet de Larbogne"* (FC n° 1528) (MNHN).

Hyaliodes glabratus (Distant, 1888). Holotype by monotypy (female): "*Hyaliodes vitreus* Dist(ant)" / "Holotype" / "*Neocarnus glabratus* Dist(ant)" [manuscript] / "type" / "Coll. IRScNB, Brésil (/) Entre Rios (/) Coll. Camille Van Volxem (/) M. R. Belge (/) 4488" [1] (FC n° 1455) (ISNB).

Hyaliodes vitreus (Distant, 1884). 3 females: "*Hyaliodes vitreus* (Distant, 1884) L. A. A. Costa, (Det. 19)99" / "Brasil, Brasilia, (Embrapa), IX.1997, *Maria O*. Coll." (FC n° 1442–1444) (CFC).

Montagneria nigroscutellatum (Distant, 1920). Holotype (female): "New Caledonia" / "Up Hovailou, 07.VIII.1914, *Montague P. D.*" (BMNH).

Discussion: The genus *Femurocoris* was described from New Caledonia by Carvalho (1977: 625) in the tribe Mirini of the subfamily Mirinae. The examination of the quoted specimens revealed that they belong to the tribe Hyaliodini of the subfamily Deraeocorinae (new subfamily placement). The claws of the holotype are not in very good condition. Nevertheless, they lack parempodia and pulvilli, unlike typical Mirini (including the so-called Hyalopelini). This is also obvious on specimen FC n° 1528 preserved in MNHN, which also has an obvious large basal tooth on each claw, a deraeocorine attribute. The secondary gonopore is surrounded by sclerotized plates (Carvalho, 1977: 625, Fig. 7), a feature found only in the Deraeocorinae (Razafimahtratra, 1981: 21). The *Femurocoris* habitus, particularly the pronotal and hemelytral structures, are relatively close to those of some *Hyaliodes* spp. The dorsal pilosities, the punctations of pronotal disk, the callosities fused and reaching the lateral pronotal sides, the yellow, weakly tumid, drop-like scutellum, the glassy-hyaline hemelytra bearing a rank of deep punctation along clavo-corial and embolio-corial sutures, are nearly the same. However, the two genera differ by some other characters, for example the head shape, sulcation and punctation [such surface structure is lacking in *Hyaliodes* spp. but present in *Femurocoris* and some other Hyaliodini, e.g., *Obudua* Linnavuori, 1974 (Akingbohungbe, 1979)], and the metafemoral structure. In Akingbohungbe's key (loc. cit.) of the hyaliodines genera of the World, *Femurocoris* runs to the couplets including *Paracarnus* Distant, 1884 and *Hyaliodocoris* Knight, 1943. Car-

1. The name "*Liocoris glabratus* M. S.?" quoted by Distant (1888: 82) is a *nomen nudum* (cf. Distant, *loc. cit*., Carvalho, 1945: 15, *contra* Carvalho, 1989: 480). The label bearing this name according to Distant (*loc. cit*.) is apparently lost (Synave, 1967). The junior author did not find it.

valho's genus differs from these notably by the metafemoral structures. It is also separated from *Montagneria* Akingbohungbe, 1978, the single other hyaliodine genus known from New Caledonia (Schuh, 1995), by the pronotal and scutellar structures.

Remark: Schuh (1995: 641) includes the following reference in the chresosynonymy of *Hyaliodes vitreus* (Distant, 1884): "*Hyaliodes vitreus*: Synave, 1967A: 19 [type material]". The quoted specimen is not a type of *Hyaliodes vitreus* (Distant, 1884). It is the holotype by monotypy of *Hyaliodes glabratus* (Distant, 1888). According to Carvalho (1953: 113, 115; 1957: 48) [*contra*, for example, Carvalho, 1989: 480], Synave (loc. cit.) considers *H. glabratus* as a junior subjective synonym of *H. vitreus*. However, the Brussels' type remains nomenclatorialy the name-bearing type of the nominal taxon *glabratus* Distant, 1888, independently of any subsequent synonymy [the Codes, the Third, Article 61 (a) and the Fourth, Article 61.1.3].

5. Genus *Guisardinus* Carvalho *in* Carvalho & Gross, 1979 (as new genus) [Type-species by original designation: *Guisardinus neoguineanus* Carvalho *in* Carvalho & Gross, 1979].

5.1. *Guisardinus lineatus* (Carvalho *in* Carvalho & Gross, 1979) comb. n.

Chrysorrhanis lineatus Carvalho *in* Carvalho & Gross, 1979: 436–437 (as new species); *Chrysorrhanis lineatus*: Schuh, 1995: 675.

Examined specimens: *Guisardinus lineatus* (Carvalho, 1979). Paratype (female): "B.M.N.H." / "*Guisardinus lineatus* n. sp." (original Carvalho's label) / "Paratipo" / "Brit. Mus. 1964-26" (verso) / "*L. Gressitt* coll." / "Ta Han. Hainan. Id. 06.VII.1933" (FC n° 977) (BMNH); 1 female: "*Guisardinus lineatus* Carvalho Thèse Chérot n° du spécimen: 1089" / "Thailand, Bangkok, Stadtgebiet, Straβlampen, 10.V.1974, *Heiss*" (FC n° 1089) (CFC); *Guisardinus* sp. Malaya: 1 female: Selangor just W. of tunnel, ar. Genting Higlands, turnoff, 1600 ft, 11.III.1983, *Schuh & Massie*, ex: Loranthaceae sp. (FC n° 132) (AMNH).

Chrysorrhanis daphne Kirkaldy, 1902. 1 female: "*Chrysorrhanis daphne* Kirk." / "Project Wallace leg.: R. Bosmans & J. Van Stalle I. G. n° 26.977." / "Coll. R.I.Sc.N.B. Sulawesi, Utara Gunung Moat (1100m), 29.X.1985., station: 063" (FC n° 347) (ISNB); 2 males, 1 female: "R. Ent. Soc. Lond. Project Wallace. BM. 1985-10."/ "Indonesia, Sulawesi, Utara. Dumoga-Bone N.P., IV–V.1985" / "at light" (FC n°s 157–159) (BMNH).

Discussion: The genera *Chrysorrhanis* Kirkaldy, 1902 and *Guisardinus* possess many characters in common, such as the wide and deep pronotal punctation, the globose humeral angles of the pronotum, and the reduced parieto-vaginal rings, partially covered in dorsal view by a prolongation of fused dorso-medial plates. The two genera are principally distinguished by the structure of the scutellar disk, which is smooth in *Chrysorrhanis* (contra Carvalho & Gross, 1979, p. 433, but according to the same authors, p. 442) and strongly punctate in *Guisardinus*. The scutellum of "*C.*" *lineatus* is obviously punctate (Carvalho &

Gross, 1979, p. 436, Fig. 11). Accordingly, we suggest the new combination. A label affixed to the BMNH's paratype proves that Carvalho thought about this generic placement.

Remark: The species is now known from Thailand.

6. Genus *Gutrida* Kirkaldy, 1902: 284 (as n. gen.) [Type-species by monotypy: *Gutrida gabonia* Kirkaldy, 1902].

6.1. *Gutrida mocquerysi* (Poppius, 1912) comb. n.

Lygus mocquerysi Poppius, 1912a: 93 (as new species), *Lygus mocquerysi*: Schuh, 1995: 818 (catalog, as "*incertae sedis*").

Examined specimen: Holotype by monotypy (male): "Typus" / "*Lygus mocquerysi* B. Poppius" / "Afr. Occ., S. Thomé, *Mocquerys*." (FC n° 909) (HNHM).

Discussion: By its habitus, "*L*." *mocquerysi* is congeneric with the afrotropical genus *Gutrida*.

7. Genus *Hyalopeplus* Stål, 1871 [Type-species by monotypy: *Capsus vitripennis* Stål, 1855].

7.1. *Hyalopeplus cuneatus* Carvalho *in* Carvalho & Gross, 1979.

Hyalopeplus cuneatus Carvalho in Carvalho & Gross, 1979: 503 (as new species); *Hyalopeplus cuneatus*: Schuh, 1995: 678.

Examined specimens: *Hyalopeplus cuneatus* Carvalho *in* Carvalho & Gross, 1979. Paratype (male): "*Hyalopeplus cuneatus* n. sp. Det. J. C. M. Carvalho," / "S. A. Museum specimen" / "Paratipo" / "Wareo, Finsch Haven, New Guinea, *Rey L. Wagner*" (MNRJ). Paratype (male): "*Hyalopeplus cuneatus* n. sp. Det. J. C. M. Carvalho" / "Paratipo" / "*J. Seldeck*, malaise trap, Bishop" / "New Guinea: N.E., Wau 1100 m., 11.XII.1965" (MNRJ). Paratype (female): "*Hyalopeplus cuneatus* n. sp. Det. J. C. M. Carvalho," / "Paratipo" / "*J. Seldeck*, malaise trap, Bishop" / "New Guinea: N.E., Wau 1100 m., 11.XII.1965" (MNRJ). 1 female: "*Hyalopeplus cuneatus* Carvalho *in* Carvalho & Gross, 1979 FC n° 1196 Det. F. Chérot, 2000" / "C.J. Drake coll., 1956" / "New Guinea, Wau, 4000 feet, 19–22.IV.1972, *R. H. Carcasson*" (USNM).

Hyalopeplus (s. str.) *rama* (Kirby, 1891). 1 male: "*Hyalopeplus* (s. str.) *rama* (Kirby, 1894) FC n° 1197 Det. F. Chérot, 1999" / "Singapore, Stadt am Licht, 7.IV.1976, *Heiss*" (CFC).

Hyalopeplus (*Adhyalopeplus*) *similis* Poppius, 1912a. 1 female: "*Hyalopeplus* (*Adhyalopeplus*) *similis* Poppius, 1912 Thèse Chérot N° 1240 Leg. Heiss, coll. F. Chérot" / "Seychellen, Praslin LF, XI-(19)94, *Heiss*" (CFC).

Discussion: Carvalho & Gross (1979: 478) wrote about their new subgenus *Adhyalopeplus*: "disc of pronotum and propleura distinctly punctate rugose or punctate, the rug-

osities obscured by punctures and a spiculum of vesica usually enlarged subbasally". For example, in *Hyalopeplus similis* Poppius, 1912a and *Hyalopeplus loriae* Poppius, 1912c, the pronotal disks are transversely punctate or slightly striate ("rugose" sensu Carvalho & Gross, loc. cit.) not striate. In contrast, *Hyalopeplus* s. str. has the "disc of pronotum and propleura distinctly rugose transversely" and these authors added "if punctures present obscured by rugosities; spiculum of vesica usually elongate". For example, the pronotal disk of *Hyalopeplus rama* (Kirby, 1891) is strongly striate, not punctate, and the endophallic spiculum is elongate (Carvalho & Gross' fig. 163, p. 490).

Hyalopeplus cuneatus Carvalho *in* Carvalho & Gross, 1979 was originally classified in *Adhyalopeplus*. However, according to Carvalho & Gross' fig. 213 (p. 504), the spiculum of this species is not enlarged basally. The pronotal punctures of *H. cuneatus* are superficial and wide, frequently fused posteriorly, and form local rugosities. So, in slight magnification, the pronotal disk of *H. cuneatus* is intermediate between "typical" *Hyalopeplus* s. str. and *Adhyalopeplus* dorsal surfaces. This state corresponds apparently to Carvalho & Gross' (loc. cit.) "rugosities obscured by punctures". More careful studies – including phylogenetic analysis – are needed before eventual synonymy or redefinition of the subgenera. However, for us, *H. cuneatus* challenges the traditional subdivision of *Hyalopeplus* and the original Carvalho & Gross' subgenerical diagnoses are insufficient.

8. Genus *Lampethusa* Distant, 1884 (as new genus) [Type-species by monotypy: *Lampethusa anantina* Distant, 1884].

8.1. *Lampethusa attenuata* (Distant, 1883) comb. n.

Paracalocoris attenuatus Distant, 1883: 264 (n. sp.), *Taedia attenuata*: Carvalho, 1959: 258 (catalog), *Taedia attenuata*: Carvalho, 1981: 6 (quotation, brief discussion on generic position), *Taedia attenuata*: Schuh, 1995: 952 (catalog).

Examined specimens: *Lampethusa attenuata* (Distant, 1883). "*Lampethusa attenuata* Dist., J. C. M. Carvalho det., 1991" / "Mexico: Chiapas, 3 min. S. W. Cintalpa, 19.X.1976, *Cate & Clark*" (FC n° NE 125) (MNRJ); "*Lampethusa attenuata* Dist., J. C. M. Carvalho det., 1991" / "Mexico: Chis., 35 min. W. of Tuxtla Gutierrez, 16.VIII.1972. *G. F. & S. Hevel*" (FC n° NE 126) (MNRJ).

Discussion: By the laterally flattened shape of its first antennal segment, this species obviously belongs to *Lampethusa* and not to *Taedia* Distant, 1883. Both genera possess a pair of black spots on anterior part of pronotum.

9. Genus *Lygidolon* Reuter, 1907 (as new genus) [Type-species by monotypy: *Lygidolon laevigatum* Reuter, 1907].

9.1. *Lygidolon vittatum* (Reuter, 1903). comb. n.

Lygus vittatus Reuter, 1903: 8 (n. sp.), *Lygus vittatus*: Carvalho, 1959: 132 (catalog, as *Lygus*

sensu lato), *Lygus vittatus*: Schuh, 1995: 829 (catalog, as *incertae sedis*).
Examined specimens: Lectotype and paralectotype (females) (present designation and determination): "*Lygus vittatus* typ. Reut." / "Type" / "Muséum Paris, Djibouti, *H. Coutière*, 1897" (FC n° 740–741) (MNHN).

Discussion: By its habitus, "*L.*" *vittatus* belongs to *Lygidolon*. We accordingly suggest the new combination. In order to clarify the nominal taxon (a nomenclatural concept) ostensively defined by the species-group name *vittatus* Reuter, we herein select a lectotype (The Code, Fourth Edition, Article 74.7.3.) and we put two new labels on the selected specimen ["Lectotype" and "Lectotype *Lygus vittatus* Reuter, 1903 [= *Lygidolon vittatus* (Reuter, 1903)]. Designation and new combination by Schwartz & Chérot, 1999"].

10. Genus *Lygocoris* Reuter, 1875 (as n. subgen.) [Type-species by subsequent designation: *Cimex pabulinus* Linnaeus, 1761, fixed by Reuter, 1888: 242].

10.1. *Lygocoris viridiflavus* (Poppius, 1914) comb. n.

Lygus viridiflavus Poppius, 1914a: 367 (as new species), *Lygus viridiflavus*: Schuh, 1995: 829 (catalog, as "*incertae sedis*").
Examined specimen: Lectotype (female) (designation by Carvalho, 1980: 654): "Typus" / "*L. viridiflavus* n. sp." / "Darjeeling, *Fruhstorfer*" (FC n° 921) (HNHM).

Remark: According to Poppius (1914a: 368), there should be two specimens - unknown to us - one preserved in the Vienna Museum and one in the Paris Museum. They are paralectotypes [Article 74 (a) (iv) of the Third and Article 74.1.3 of the Fourth].

10.2. *Lygocoris vittulatus* (Poppius, 1914) comb. n.

Lygus vittulatus Poppius, 1914a: 361 (as new species), *Lygus vittulatus*: Schuh, 1995: 829 (catalog, as "*incertae sedis*").
Examined specimen: Holotype by monotypy (female): "Typus" / "*Lygus vittulatus* n. sp." / "S. Celebes, Bua-Kraeng, 5000', II.1896, *H. Fruhstorfer*" (FC n° 922) (HNHM).

Discussion: By their habitus, "*L.*" *viridiflavus* and "*L.*" *vittulatus* belong to *Lygocoris*. We suggest accordingly the new combinations. The genus *Lygocoris* (as *Apolygus* and *Neolygus*) should be reviewed on a world scale to clarify the relationships between the included nominal species and the validity of several taxa [particularly the validity of the many new species recently described from China by Lu & Zheng (2001)].

11. Genus *Neolygus* Knight, 1917 (as n. subgen.) [Type-species by original designation: *Lygus communis* Knight, 1917].

Neolygus: Yasunaga, Schwartz & Chérot, 2002: 3–4.

11.1. *Neolygus indicus* (Poppius, 1914) comb. n.

Lygus indicus Poppius, 1914a: 362 (as new species); *Lygus indicus*: Schuh, 1995: 815 (catalog, as "*incertae sedis*").

Examined specimens: Lectotype (male) (present designation): "Inde mérid(ionale), Pulney, Coll. Nouhalier 1898" (ZMHF). Two paralectotypes (males) (present determination): "Inde mérid(ionale), Pulney, Coll. Nouhalier 1898" (MNHN); "Brit. Ind., Trichinopoly" (ZMHF).

Discussion: The following characters substantiate the new combination *Neolygus indicus*: the general habitus, the large apophyse of the left paramere, the small apophyse of the right paramere, the simultaneous presence of a wide "spiculum" begining before the secondary gonopore and of a lobe sclerite *sensu* Kelton (1955), and the presence of a rasp and a sclerotized loop *sensu* Clayton (1982). In order to clarify the nominal taxon ostensively defined by the species-group name *indicus* Poppius, we herein select a lectotype (The Code, Fourth Edition, Article 74.7.3.) and we put two new labels on the selected specimen ["Lectotype" and "Lectotype *Lygus indicus* Poppius, 1914. Designation and new combination by Schwartz & Chérot, 2001"].

11.2. *Neolygus sondaicus* (Poppius, 1914) comb. n.

Lygus sondaicus Poppius, 1914c: 125–127 (as new species); *Lygus sondaicus*: Schuh, 1995: 826 (catalog, as "*incertae sedis*").

Examined specimen: Lectotype (female) (present designation): "Syntype. Others in Mus. Leiden" / "Mus. Zool. H:fors Spec. typ. No 10260 *Lygus sondaicus* Poppius" / "*Lygus sondaicus* n. sp. B. Poppius det." / "Tjinjiruan, W. (West) Java, Malabare, 1700 m." (MZHF).

Discussion: The dorsoventrally flattened body and long second antennal segment, strongly suggest that "*L*." *sondaicus* belongs to the *Neolygus* or *Taylorilygus* group of genera of the so-called *Lygus* complex. From *Taylorilygus* Leston, 1952, this species differs by the sclerotized rings lacking latero-outer sclerotization and a mesial sclerotized connection. "*L*." *sondaicus* is also easily separated from *Micromimetus* Eyles, 1999 by the absence of a sigmoid process ventral to the dorsal structure (which is obvious in *Micromimetus*) and by the large lateral lobes (apparently reduced in *Micromimetus*). From the others genera related to *Taylorilygus* (*Dagbertus* Distant, 1904, *Diomocoris* Eyles, 1999, and *Prolygus* Carvalho, 1987), "*L*." *sondaicus* is distinguished by tibiae with large dark spots at the base of the spines. The tibial spines of the type specimen are pale and the interramal lobes are not finger-like, preventing placement in the genus *Apolygus* China. By the absence of a medial sclerite on the lateral lobe "*L*." *sondaicus* cannot be included in the recently described genus *Yaeyamalygus* Yasunaga et al., 2002, but can be placed in *Neolygus* Knight. We consequently suggest the new combination. In order to clarify the nominal taxon ostensively defined by the species-group name *sondaicus* Poppius, we herein select

a lectotype (The Fourth , Article 74.7.3) and we put two new labels on the selected specimen ["Lectotype" and "Lectotype *Lygus sondaicus* Poppius, 1914. Designation and new combination by Schwartz & Chérot, 2001"]. The specimens from Leiden, unknown to us, are paralectotypes.

12. Genus *Neostenotus* Reuter, 1905 (as new genus) [Type-species by monotypy: *Neostenotus bipunctatus* Reuter, 1905a].

12.1. *Neostenotus confluentus* Carvalho & Fontes, 1972 stat. n.

Alda fuscipennis confluenta Carvalho & Fontes, 1972: 88–89 (as new subspecies), *Alda fuscipennis confluenta*: Schuh, 1995: 847 (catalog).

Examined specimen: Holotype by original designation (male): "10" / "*Alda fuscipennis confluenta* n. sp. (sic) J. C. M. Carvalho Det., 1971" / "Holotipo" / "P. N. de Itatiaia, E. de Rio, VI.1960, *A. Silva* coll." (FC n° NE 128) (MNRJ).

12.2. *Neostenotus itatiaianus* Carvalho & Fontes, 1972 stat. n.

Alda fuscipennis itatiaiana Carvalho & Fontes, 1972: 90–91 (as new subspecies), *Alda fuscipennis itatiaiana*: Schuh, 1995: 847 (catalog).

Examined specimen: Holotype by original designation (male): "11" / "*Alda fuscipennis itatiaiana* n. sp. (sic) J. C. M. Carvalho Det., 1971" / "Holotipo" / "P. N. de Itatiaia, R(io) J(aneiro), 22.VII.(19)63, *Mielke* coll." (FC n° NE 129) (MNRJ).

12.3. *Neostenotus serranus* Carvalho & Fontes, 1972 stat. n.

Alda fuscipennis serrana Carvalho & Fontes, 1972: 90–91 (as new subspecies), *Alda fuscipennis serrana*: Schuh, 1995: 847 (catalog).

Examined specimen: Holotype by original designation (male): "12" / "*Alda serrana* n. sp. (sic) J. C. M. Carvalho Det., 1971" / "Holotipo" / "S(erra) Bocaina, 1650 m., S. J. Barreiros, XI.1968, *Alvarenga & Seabra*" (FC n° NE 130) (MNRJ).

12.4. *Neostenotus similimus* Carvalho & Fontes, 1972 stat. n.

Alda fuscipennis similima Carvalho & Fontes, 1972: 92–93 (as new subspecies), *Alda fuscipennis similima*: Schuh, 1995: 847 (catalog).

Examined specimen: Holotype by original designation (male): "13" / "*Alda fuscipennis similima* n. sp. (sic) J. C. M. Carvalho Det., 1971" / "Holotipo" / "E. de Rio, Brasil, Petrópolis, IX.(1)958, J. C. M. Carvalho coll." (FC n° NE 131) (MNRJ).

12.5. *Neostenotus sulinus* Carvalho & Fontes, 1972 stat. n.

Alda fuscipennis sulina Carvalho & Fontes, 1972: 93–94 (as new subspecies), *Alda fuscipennis sulina*: Schuh, 1995: 847 (catalog).

Examined specimen: Holotype by original designation (male): "14" / "*Alda fuscipennis sulina* n. sp. (sic) J. C. M. Carvalho Det., 1971" / "Holotipo" / "Brasilien, Nova Teutonia, 27° 11' B., 52° 23' L. (sic), *Fritz Plaumann*, VII.1945" (FC n° NE 132) (MNRJ).

Discussion: Carvalho & Fontes (1972: 90) justify the choice of the subspecific category for their new taxa because it was not possible to identify them only on the basis of external anatomy: "Os autores tendo encontrado sensíveis diferenças na estrutura da vésica do eadeagus en exemplares dessa espécie e não tendo caracteres externos para precisar bem a separação das memas, preferem tratá-las na categoria de subspécies, fato que (…) não impede o reconhecimento de espécies através de caracteres externos, como tem sido regra geral até o present na família Miridae".

We think that the definition of the subspecies, as applied in the Code, is biological, or eventually ecological. According to Mayr & Ashlock (1991: 43), the biological: "subspecies may be defined as follows: A subspecies is an aggregate of phenotypically similar populations of a species inhabiting a geographic subdivision of the range of that species and differing taxonomically from other populations of that species". Carvalho & Fontes' taxa are not congruent with this approach and cannot be included in this logical class (nor in the so-called "ecological subspecies" category). Given that the type locality of *Alda fuscipennis itatiaiana* (original combination) is the same as this of *Alda fuscipennis confluenta* and as the collection locality of some paratypes of *Alda fuscipennis similima*, these taxa are at least sympatric, if not (micro)syntopic. Their biology is also largely unknown. At best, they are sibling (biological or typological) species. We therefore suggest recognizing these taxa as species and consequently raise their subspecific nomen.

Remark: Carvalho (1985b: 494) corrected a *lapsus* found in Carvalho & Fontes (1972: 85). These latter authors synonymised the genus *Neostenotus* Reuter, 1905a with *Alda* Reuter, 1909, and kept the second name, in despite of the priority rule (the Code, Article 23). Consequently, Carvalho (loc. cit.) suggested some new combinations (under the term "designação") and put all the author names within parentheses. It was clearly not necessary for *Neostenotus bipunctatus* Reuter, 1905, type-species by monotypy of the genus *Neostenotus*.

Article 51 (c) of the Third and Article 51.3 of the Fourth allow the use of parentheses "if a species-group name is combined with a generic name other the original one" (the Code, loc. cit., p. 51 of the Third). In the present case, the valid genus name is obviously *Neostenotus* Reuter, 1905. Carvalho & Fontes' *lapsus* is not a valid nomenclatorial act (act available and correct – so-called "accepted" – under the provision of the Code, cf. the Glossary of the Third, p. 270 or of the Fourth, p. 99) and consequently the changes are nomenclatorialy not existent for this epithet of Reuter[1]. We think that it is also the case for Carvalho & Fontes' new species, because for these authors there was only one generic (nomenclatorial) taxon. For us, only authorships of the *Alda*'s type-species should be written within parentheses.

1. The Code is not very clear about the following problem: does a non valid but available nomenclatorial act remain in Zoological Nomenclature after correction by the first reviser? For us, at least in the present case, the answer is negative.

13. Genus *Phytocoris* Fallén, 1814: 10 (as n. gen.) [Type-species by subsequent designation: *Cimex populi* Linnaeus, 1758, fixed by Westwood, 1840a: 12].

13.1. *Phytocoris garyi nomen novum*.

Phytocoris falcatus Stonedahl, 1995b: 9, 11–12 (as new species) not *Phytocoris* (*Ktenocoris*) *falcatus* Linnavuori, 1984: 20–21 (as new species).

Discussion: The name *Phytocoris falcatus* Stonedahl, 1995b is a junior primary homonym of *Phytocoris* (*Ktenocoris*) *falcatus* Linnavuori, 1984. Lacking a junior synonym for *Phytocoris falcatus* Stonedahl, 1995b not *Phytocoris* (*Ktenocoris*) *falcatus* Linnavuori, 1984, we suggest the following replacement name: *Phytocoris garyi* new replacement name (*nomen novum*).

14. Genus *Pleurochilophorus* Reuter, 1905b: 3 (as n. gen.) [Type-species by original designation: *Pleurochilophorus quadripunctatus* Reuter, 1905b].

14.1. *Pleurochilophorus sexlineatus* (Delattre, 1949) n. comb.

Corizidolon sexlineatum Delattre, 1949: 20 (as new species), *Corizidolon dexlineatum*: Schuh, 1995: 675 (catalog).

Examined specimens: *Pleurochilophorus sexlineatus* (Delattre, 1949). Lectotype (male) (present designation): "G. Schmitz det. 1960. g. n. ou *Pleurochilophorus*?" / "*Corizidolon sexlineatum* n. sp. R. Delattre, 1947" / "male Holotype" / "Type" / "Cotonnier, 27.XI.1947" / "Bouaké, Côte d'Ivoire" (FC n° 959). Paralectotype (male) (present determination): "G. Schmitz det. 1960. g. n. ou *Pleurochilophorus?*" / "*Corizidolon sexlineatum* male R. Delattre, 1947" / "paratype male" / "Cotype" / "Cotonnier, 27.XI.1947" / "Bouaké, Côte d'Ivoire" (FC n° 958) (MNHN).

Discussion: The practically vertical tylus, obviously separated of the frons, the deep sulcus on the vertex, the wide third antennal segment relative to the second, the translucent to opaque hemelytra, the complete hemelytral venation, the absence of a line of wide and deep punctures on the clavus and exocorium, and the gonoporal process of "*C.*" *sexlineatus* are all very similar those of several *Pleurochilophorus* species, including *P. quadripunctatus* the type-species of the genus. Accordingly, we suggest the new combination.
In order to clarify the nominal taxon ostensively defined by the species-group name sexlineatum Delattre, we herein select a lectotype and put two new labels on the selected specimen ["Lectotype" and "Lectotype *Corizidolon sexlineatum* Delattre, 1949. Designation and new combination by Schwartz & Chérot, 2003"].

Remark: Carvalho (1959), Carvalho & Gross (1979: 439) and, later, Schuh (1995: 675) erroneously spelled Delattre's species name as "*dexlineatum*". The correct original spelling was "*sexlineatum*" (Steyskal, 1973).

15. Genus *Poeas* Distant, 1893: 428 (as n. gen.) [Type-species by monotypy: *Poeas reuteri* Distant, 1893].

15.1. *Poeas alvarengai* Carvalho, 1975 stat. n.

Poeas reuteri alvarengai Carvalho, 1975: 173–174 (n. ssp.), *Poeas reuteri alvarengai*: Schuh, 1995: 923 (catalog).

Examined specimens: Holotype by original designation (male) and allotype (female): "272" / "*Poeas reuteri alvarengai* n. ssp., Det. 1971, J. C. M. Carvalho" / "Alotipo" / "Holotipo" / "Alvarenga + Roppa" / "Sinop., R(io) Teles Pires, M(ato Grosso), Brasil, (I)X.(1)974" (FC n° NE 133) (MNRJ).

Remark: The two specimens are glued on the same cardboard mount.

15.2. *Poeas atlantica* Carvalho, 1975 stat. n.

Poeas reuteri atlantica Carvalho, 1975: 174 (n. ssp.), *Poeas reuteri atlantica*: Schuh, 1995: 923 (catalog).

Examined specimen: Holotype by original designation (male): "273" / "*Poeas reuteri atlantica* n. ssp., det. 1974 J. C. M. Carvalho" / "Holotipo" / "Brasil: Nova Teutonia, Santa Catarina, 27° 11' N. (sic), 52°, 23' W., XI.1970, *Fritz Plaumann*" (FC n° NE 134) (MNRJ).

15.3. *Poeas caatinga* Carvalho, 1975 stat. n.

Poeas reuteri caatinga Carvalho, 1975: 175–176 (n. ssp.), *Poeas reuteri caatinga*: Schuh, 1995: 923 (catalog).

Examined specimen: Holotype by original designation (male): "274" / "*Poeas reuteri caatinga* n. ssp., det. J. C. M. Carvalho" / "Holotipo" / "J. C. M. Carvalho, V.1974" / "Caatinga" / "Casa Nova, Pernam-Buco, Brasil" (FC n° NE 135) (MNRJ).

15.4. *Poeas chapada* Carvalho, 1975 stat. n.

Poeas reuteri chapada Carvalho, 1975: 176–177 (n. ssp.), *Poeas reuteri chapada*: Schuh, 1995: 923 (catalog).

Examined specimen: Holotype by original designation (?female): "275" / "*Poeas reuteri chapada* n. subsp., det. 195. J. C. M. Carvalho" / "Holotypus" / "Chapada dos Guimarães, M(ato Grosso), XI.1967, *M. Alvarenga* coll." (FC n° NE 136) (MNRJ).

15.5. *Poeas cipoa* Carvalho, 1975 stat. n.

Poeas reuteri cipoa Carvalho, 1975: 177–178 (n. ssp.), *Taedia cipoa* Carvalho, 1975: 177 (*lapsus*), *Poeas reuteri cipoa*: Schuh, 1995: 923 (catalog).

Examined specimens: Holotype by original designation (male): "268" / "*Poeas reuteri cipoa* n. ssp., det." / "Holotipo" / "Estrada Rio-Bahia, Km. 965, Motel da Divisa, 900m., Encruzilhada, Bahia, Brasil, XI.1972, *Seabra & Roppa* Coll." (FC n° NE 137) (MNRJ).

Discussion: We can find no basis for the attribution of Carvalho's taxa to the (biological or ecological) subspecific category. We therefore suggest recognizing these taxa as species and, consequently, to apply specific names to them. The nomenclatorial case of *Poeas reuteri cipoa* Carvalho, 1975 is peculiar because Carvalho (*loc. cit.*) published this taxon as "*Taedia cipoa*" new species. We think that it is a *lapsus calami* because, in the same paper, this taxon is quoted as "*Poeas reuteri cipoa* n. subsp." in the key to *Poeas reuteri* subspecies (p. 173) and also in some captions of the drawings of head and male genitalic structures (p. 178).

16. Genus *Sabactiopus* Zheng & Lin, 2002 (as new genus) [type-species by original designation: *Lygus sauteri* Poppius, 1915].

16.1. *Sabactiopus laevipennis* (Poppius, 1914) comb. n.

Lygus laevipennis Poppius, 1914a: 348–349 (as new species); *Lygus leavipennis*: Schuh, 1995: 816 (as *incertae sedis*).

Examined material: Lectotype (female) (present designation): "Mus. Zool. H:fors, Spec. typ. 10287, *Lygus laevipennis* Popp." / "1277" / "Los Banos, *P. I. Baker*" (ZMHF). Paralectotype (female) (present determination): "Mus. Zool. H:fors, Spec. typ. 10286, *Lygus laevipennis* Popp." / "Los Banos, *P. I. Baker* " (ZMHF).

Discussion: "*L.*" *laevipennis* is obviously related to *S. sauteri* (Poppius, 1912) by its habitus and genitalic structure. We consequently suggest the new combination. In order to clarify the nominal taxon ostensively defined by the species-group name *laevipennis* Poppius, we herein select a lectotype and we put two new labels on the selected specimen ["Lectotype" and "Lectotype *Lygus laevipennis* Poppius, 1914. Designation and new combination by Schwartz & Chérot, 2001"].

Remark: In their recent paper, Lu & Zheng (1998: 188) mentioned two "misidentified paralectotypes" of *L. sauteri*, which were not conspecific with the lectotype. According to Articles 72.1.3 and 73.2.2 of the Fourth, these specimens, as all paralectotypes, are not type-bearing names (which are, according to Glossary of the Fourth, "the objective standards of reference whereby the application of the name of a nominal taxon can be determined").

By their designation of lectotype, Lu & Zheng (loc. cit.) obviously bind the species-group name *sauteri* Poppius to the present corresponding taxonomic concept, which is their nominal taxon and not Poppius' one.

Unfortunately the Code (the Third and Fourth) is neither very explicit as to the composite type-series nor as to the exact function of type specimens "without name-bearing function " (Article 72.1.3).

For us, a restriction of type-series is necessary in the present case and practically automatic, following directly from the designation. This interpretation seems in accord with the spirit of the Article 74.1.2 (and also with the Article 73.3 concerning hapanotype,

which explicitly mentions the restriction as being the normal result of a lectotype designation, to prevent it in this peculiar case). But, then, after designation, what exactly is the nomenclatorial status of the remaining specimens ("misidentified paralectotypes" in accordance with Article 74.1.3?)? And what is their function (only historical? They cannot serve an informal standard of reference, as classical paratype or paralectotype)? This problem could be submitted to the International Commission on Zoological Nomemclature.

16.2. *Sabactiopus sublaevis* (Poppius, 1914) comb. n.

Lygus sublaevis Poppius, 1914a: 384–385 (as new species), *Lygus sublaevis*: Schuh, 1995: 826 (as "*incertae sedis*").

Examined material: Holotype by monotypy (female): "*Sabactus sublaevis* Det. M. D. Schwartz, 1997" / "Typus" / "*Sabactus sublaevis* n. sp."/ "S(outh) Celebes, Bua Kraeng, 5000`, II.1896, *H. Fruhstorfer*" (HNHM).

Discussion: Like "*L.*" *laevipennis*, "*L.*"*sublaevis* is closely related to *S. sauteri* (Poppius, 1912) by its habitus and genitalic structure. We consequently suggest the new combination.

Remark: The holotype specimen is a female and not a male, as incorrectly asserted by Poppius (1914a: 385).

17. Genus *Sabactus* Distant, 1910a: 21 (as n. gen.) [Type-species by original designation: *Sabactus institutus* Distant, 1910].

17.1. *Sabactus exiguus* (Poppius, 1914) comb. n.

Lygus exiguus Poppius, 1914a: 385 (as new species), *Lygus exiguus*: Schuh, 1995: 812 (catalog).

Examined specimens: *Sabactus exiguus* (Poppius, 1914). Lectotype (male) (present designation): "Typus" / "*Lygus exiguus* n. sp." (m) / "Bombay, *Biró* (18.VIII.)1902" (FC n° 911) (HNHM). Paralectotype (male) (present determination): "Typus" / "*Lygus exiguus* n. sp." (m) / "Bombay, *Biró* 1902" (ZMHF).

Sabactus institutus Distant, 1910. Lectotype (male) (designation by Zheng & Lin, 2002: 78): "Distant coll. 1911-383" / "*Sabactus institutus* Typ. Distant" / "Peradeniya, Ceylon 4-05" / "Type Ht." (FC n° NE 5) (BMNH).

Discussion: This taxon is very close, if not identical, to *Sabactus institutus* Distant, 1910, the type-species of the genus. The quotation by Carvalho (1980: 653) cannot be admitted as a lectotype designation, because he did not select one particular syntype (The Code, Fourth Edition, Article 74.5). In order to clarify the nominal taxon ostensively defined by the species-group name *exiguus* Poppius, we herein select a lectotype (The Code, Fourth Edition, Article 74.7.3) and we put two new labels on the specimen selected ["Lectotype" and "Lectotype *Lygus exiguus* Poppius, 1914 [= *Sabactus exiguus* (Poppius,

1914)]. Designation and new combination by Schwartz & Chérot, 1999"]. A paralectotype is also housed in HNHM (Carvalho, loc. cit.).

18. *Schoutedenomiris* Carvalho, 1951 [Type-species by monotypy: *Schoutedenomiris acutotylus* Carvalho, 1951].

18.1. *Schoutedenomiris schmitzi* (Chérot, 1996).

Trigonotylus schmitzi Chérot, 1996b: 115–118 (as new species).

Examined specimens: Holotype and 4 paratypes (males): "Burundi, Plaine Imbo, Kitango Mubone, IV–V.1976." (MRAC).

Discussion: By the shape of the head and typical endophallus, including an apical process, "*T.*" *schmitzi* undoubtedly belongs to *Schoutedenomiris* – a genus in great need to review – and not to *Trigonotylus*, in which it was tentatively placed by Chérot (*loc. cit.*).

19. Genus *Taylorilygus* Leston, 1952: 219 (as n. subgen.) [Type-species by original designation: *Lygus simonyi* Reuter, 1903].

19.1. *Taylorilygus nebulosus* (Poppius, 1914).

Lygus nebulosus Poppius, 1914a: 378 (as new species), *Lygus nebulosus*: Schuh, 1995: 818 (catalog, as "*incertae sedis*"), *Taylorilygus nebulosus*: Cassis & Gross, 1995: 178 (n. comb.).

Examined specimen: Lectotype (female) (present designation): "Coll. Mus. Nat. Hung." / "*Lygus* Typus *nebulosus* Poppius" / "*Lygus nebulosus* n. sp." / "Tweed. R. N.S.W. (Lea)" / "Australia, N. S. Wales" (FC n° 914) (HNHM).

Discussion: We confirm Cassis & Gross' new combination (1995: 178). In order to clarify the nominal taxon ostensively defined by the species-group name *nebulosus* Poppius, we herein select a lectotype (The Code, Fourth Edition, Article 74.7.3.) and we put two new labels on the selected specimen ["Lectotype" and "Lectotype *Lygus nebulosus* Poppius, 1914. Designation and new combination by Schwartz & Chérot, 1999"]. A female specimen in Helsinki is a paralectotype [Article 74.1.3 of the Fourth]. The specimen from Budapest is a female and not a male, as written by Poppius (1914a: 179) and Cassis & Gross (1995: 178).

19.2. *Taylorilygus oceanicus* (Poppius, 1914) comb. n.

Lygus oceanicus Poppius, 1914a: 392 (as new species), *Lygus oceanicus*: Schuh, 1995: 820 (catalog, as "*incertae sedis*").

Examined specimen: Lectotype (female) (present designation): New Hebrides, Ile Vaté (Island Vaté), Port Vila, Dr Joly, 1903 (ZMHF). Paralectotype (female) (present determination): New Hebrides, Ile Vaté (Island Vaté), Port Vila, Dr Joly, 1903 (MNHN).

Discussion: By the sclerotized rings, including a pair of latero-outer finger-like sclerotizations and a mesal sclerotized connection, the wide dorsal structure covering partially in dorsal view the interramal lobes, and the absence of lateral lobe, "*L.*" *oceanicus* is similar to the species classified in the genus *Taylorilygus* Leston, particularly to the type-species and related Afrotropical taxa (Kelton, 1955: 294, 297). We accordingly suggest the new combination.

In order to clarify the nominal taxon ostensively defined by the species-group name *oceanicus* Poppius, we herein select a lectotype and put two new labels on the selected specimen ["Lectotype" and "Lectotype *Lygus oceanicus* Poppius, 1914. Designation and new combination by Schwartz & Chérot, 1999"].

20) Genus *Tropidosteptes* Uhler, 1878: 404 (as n. gen.) [Type-species by monotypy: *Tropidosteptes cardinalis* Uhler, 1878].

20.1. *Tropidosteptes costai* nomen novum.

Tropidosteptes scutellatus Carvalho & Costa, 1993: 716–719 (as new species) not *Tropidosteptes scutellatus* Distant, 1893: 444 (as new species).

Examined specimens: Paratype (male): "*Tropidosteptes scutellatus* sp. n. Carvalho & Costa, 1993" / "paratypus" / "Venezuela: Aragua, 12 km N. Tiara, 10.VIII.1985, *W. E. Clark*" (FC n° NE 126) (MNRJ).

Discussion: The name *Tropidosteptes scutellatus* Carvalho & Costa, 1993 is a junior secondary homonym of *Monalocorisca scutellata* Distant, 1893: 444, since the transfer of this latter taxon in the genus *Tropidosteptes* by Carvalho, 1986: 411. Lacking a junior synonym for *Tropidosteptes scutellatus* Carvalho & Costa, 1993 *not* Distant, 1893, we suggest the following replacement name: *Tropidosteptes costai* new replacement name (*nomen novum*).

Remark: The only paratype housed in MNRJ bears a label different than that of the holotype, contrary to the affirmation of Carvalho & Costa (1993: 716).

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