

New sap beetles of the subfamily Epuraeinae (Coleoptera: Nitidulidae) from Indonesian New Guinea and taxonomic notes

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Abstract: In the paper West Papuan *Epuraea (Haptoncus) telnovi* sp. nov., *Amystrops (Amystrops) solitaria* sp. nov. and *Carpocryraea gratiosa* sp. nov. from Arfak Mountains (Doberai Peninsula), and also *Trimenus (Schawalleria* gen. nov.) *plicatus* sp. nov. from Jayawijaya Mountains are described. An annotated list of species of the genus *Amystrops* Grouvelle, 1906, notes on synonymy of the genera *Carpocryraea* Kirejtshuk, 1998 and *Csiromenus* Kirejtshuk et Kvamme, 2001, position of “*Amystrops bakeri* Grouvelle, 1914” [junior synonym of *Epuraea (Epuraea) latissima* Reitter, 1880)], “*Amystrops camptoides* Grouvelle, 1916” [*Epuraea (Haptoncus) camptoides* comb. nov.], “*Aphenolia bakeri* Grouvelle, 1914” [*Trimenus (Trimenus) bakeri* comb. nov.] are given. The lectotypes of *Amystrops (Amystrops) diluta* (Grouvelle, 1906a: 201) comb. nov., *A. (A.) dubia* (Grouvelle, 1903: 173) comb. nov., *A. (A.) punctata* Grouvelle, 1906 and *Epuraea (Epuraea) bakeri* Grouvelle, 1914 are designated.

Key words: New subgenus, new species, Epuraeini, Taenioncini, West Papua Province, type designation

Introduction

The nitidulid fauna of the West Papuan Province of Indonesia (formerly also known as West Irian Jaya or Irian Jaya Barat) is very rich and includes many endemic groups and species most of which still remain undescribed. The author studied many specimens from some collections where materials from this area are deposited and found much more than hundreds of new species presumably mostly endemic. Among them there are many species of the groups representing also some undescribed genera mainly from the subfamily Cillaeinae Kirejtshuk et Audisio, 1986 and many new species from the subfamilies Epuraeinae Kirejtshuk, 1986 and Cillaeinae. This paper aims to introduce four new species from different epuraeine genera important for understanding of structure and range of each genus, and also make some important taxonomic notes on epuraeines of the Indo-Malayan and Australian fauna.

Materials and methods

The specimens of three new species under description originated from Doberai (= Bird's Head) Peninsula collected by D. Telnov and deposited in the Zoological Institute of the Russian Academy of Sciences, St. Petersburg (ZIN) and one new species originated from Jayawijaya Mountains (between Theila and Habema) collected by A. Riedel and deposited in the Staatliches Museum für Naturkunde in Stuttgart (SMNS) and partly in ZIN. Besides, some type series and other materials for this paper were obtained from the collection of Natural History Museum, London (BMNH), Deutsches Entomologisches Institut (DEI), Field Museum of Natural History, Chicago (FMNH), Institut royal des Sciences naturelles in Bruxelles (IRSN), Museo Civico di Storia Naturale Giacomo Doria, Genova (MSNG), Muséum national d'Histoire naturelle in Paris (MNHN), and Zoologisches Museum der Humboldt-Universität zu Berlin (ZMB). The studies were carried out with usage of usual optical devices and the photographs were taken with a Canon EOS 11 40D digital camera with a Canon MP-E 65 mm objective and combined using Zerene Stacker 1.04 software.



Taxonomic part

Coleoptera

Nitidulidae Latreille, 1802

Epuraeinae Kirejtshuk, 1986

Epuraeini Kirejtshuk, 1986

Genus *Epuraea* Erichson, 1843

Type species: *Nitidula decemguttata* Fabricius 1792, non Olivier, 1790

Subgenus *Haptoncus* Murray, 1864

Type species: *Haptoncus tetragonus* Murray, 1864

***Epuraea (Haptoncus) telnovi* sp. nov.** (Plate 80 figs 1-6)

Holotype ♂ ZIN: INDONESIA E, W New Guinea, Doberai Peninsula, Arfak mts, Syoubri vill., 1°06'40S, 133°54'36"E, 1510 m, edge of secondary lower montane rainforest, 12-13.IX.2015, white light, leg. D.Telnov. Paratypes 2♀ ZIN: same label as in holotype.

Derivatio nominis: Patronymic. The epithet of this new species is devoted to the collector of the type specimens, Dmitry Telnov.

Description of male (holotype): Length 3.7, width 2.1, height 0.8 mm. Oval, slightly convex dorsally and ventrally; dorsum straw reddish with somewhat darker head, prosternum, meso- and metaventrites and blackish infuscations on upper surface of head, median part of pronotum and unclear paramedian stripes of small infuscations on elytra; dorsum and underside with slight shine; dorsum with moderately conspicuous, short and sparse, subrecumbent yellowish hairs, about as long as distance between their insertions; pygidium with shorter and sparser hairs; underside with somewhat finer, longer and sparser hairs. Head and pronotum with distinct punctures, about as large as eye facets, interspaces between them about as great as one puncture diameter or somewhat greater (particularly on pronotum), slightly and finely alutaceous. Elytra with punctures shallower and smaller than those on head and pronotum, interspaces between them much greater than those on head and pronotum, slightly and finely alutaceous. Pygidium with finer and denser punctures, slightly and finely alutaceous to microreticulate. Prosternum, prohypomera, meso- and metaventrites very sparsely, shallowly and finely punctured and with finely alutaceous interspaces. Other sclerites of underside with shallow and fine punctures (on abdomen becoming denser and slightly coarser distally), intervals between them alutaceous to finely and densely

microreticulated. Head markedly shorter than distance between eyes, subflattened, with temples not projecting externally behind eyes. Antennae nearly as long as head wide; scape of usual shape, somewhat longer than wide; antennomeres 2 and 3 subequal in length, following flagellomeres gradually becoming shorter; club nearly twice as long as wide, composing more than third of total antennal length. Labrum with rather short obliquely truncate lobes, nearly third as long as wide and with short median excision. Pronotum slightly and evenly convex on disc, gently and evenly sloping to extremely widely explanate sides (as widely explanate as antennal club wide), broadly arcuate at sides and widest at basal third, with broadly rounded posterior and anterior angles, anterior edge trapezium-shapedly emarginate and posterior one shallowly bi-emarginate. Scutellum strongly transverse, subtriangular, with angular apex. Elytra strongly widened, widest at midlength, somewhat shorter than combined width and leaving pygidium completely uncovered, with rather gently sloping to sides (as widely explanate as pronotal ones) and with transversely broadly rounded to subtruncate apices. Pygidium subtruncate at apex, from under it subangular apex of anal sclerite moderately exposed. Mentum twice as wide as long, subhexagonal, with rounded sides and excavate anterior edge. Ultimate labial palpomere cup-shaped, about one and third as wide as long. Ultimate maxillary palpomere almost four times as long as wide, subconical. Antennal grooves with distinct both inner and outer edges and rectilinearly convergent and transversely joined posteriorly; postocular fossae not expressed. Prosternal process strongly curved along coxae and subparallel-sided before sharply widened apex with broadly arcuate posterior edge, apex somewhat wider than antennal club. Distance between mesocoxae subequal to and that between metacoxae more than twice as wide as that between procoxae. Mesoventrite without carina. Metaventrite subflattened before emarginate posterior edge between coxae. Abdominal ventrite 1 about as long as hypopygidium, Hypopygidium with widely subtruncate to bi-emarginate apex. Epipleura about 2.5 times as wide as antennal club, subhorizontal. Tibiae subequal in width, somewhat narrower than antennal club. Femora of usual shape, about three times as wide as corresponding tibiae, metafemora with convex anterior and posterior edges. Protarsus about half as wide as antennal club and slightly wider than 2/3 of tibiae, meso- and metatarsi markedly narrower, claws rather long and simple. Tegmen and penis trunk very weakly sclerotized.



Penis trunk fused with its basal apodeme.

Sexual dimorphism: Female differs from male in smaller and narrower body (with length 2.7-2.9, width 1.6 mm), more broadly arcuate and more narrowly explanate pronotal and elytral sides, narrower tarsi, widely rounded apex of pygidium and hypopygidium.

Variability: Length 2.7-3.7 mm. The paratypes are subunicolorous yellowish reddish with dark head. Some variability is observed in puncturation. Differential diagnosis: This new species is very distinct from all subcongeners in its very wide body, arcuate and very widely explanate sides of pronotum and elytra, particularly in the male, and also comparatively long legs. The body infuscations are somewhat similar to those in the Papuan-Australian *Epuraea (Haptoncus) literata* (Reitter, 1880), although it differs from the latter in its oval body with very widely explanate pronotal and elytral sides, and also in the pattern of dorsal infuscations, temples not projecting externally behind eyes. From other subcongeners with dark and blackish infuscations on dorsum (having, however, another pattern of infuscations) and almost all other members of *Haptoncus* the new species differs also in the more oval, subflattened and larger body with widely explanate pronotal and elytral sides, comparatively smaller eyes, although the ultimate labial palpomeres and structure of the main aedeagal sclerites (penis trunk and tegmen) of *Epuraea (Haptoncus) telnovi* sp. nov. are similar to those in the group of species formerly considered in the taxon *Haptoncurina* Jelínek, 1977 rather than those in the representatives of *Haptoncus* sensu Jelínek, 1977, while the body shape of the new species can be compared with some members of *Haptoncus* sensu Jelínek, 1977 (not Murray, 1864), but not *Haptoncurina*. The only species which can be compared with the new species is the Polynesian *Epuraea (Haptoncus) takhtajani* G. Medvedev et Ter-Minasyan, 1973, which is highly variable and somewhat larger its representatives looking somewhat similar to those of *Epuraea (Haptoncus) telnovi* sp. nov. Nevertheless the latter differs from the first in the more oval, subflattened and rather shining body with very widely explanate pronotal and elytral sides, smaller eyes and more transverse ultimate labial palpomere.

Genus *Amystrops* Grouvelle, 1906

Type species: *Amystrops modiglianii* Grouvelle, 1906

Subgenus *Amystrops* Grouvelle, 1906

Notes on variability of the species of genus *Amystrops*: This genus demonstrates a wide range of variability of many structures between different congeners as well as within the same species (particularly in *Amystrops (Amystrops) nigripennis* (Redtenbacher, 1867), **comb. nov.**) which was a reason for the proposal of many specific and generic synonyms, while the genital structures of both sex are much less variable. A special variability is observed in body size and outlines of body sclerites, mandibles, antennae and prosternal process (Gillogly 1962; Kirejtshuk 1997 etc.) and this circumstance was a reason for proposals of different generic and species names for the same species (Kirejtshuk 1998). At the same time these variable structural peculiarities gave the main diagnostic characters of the genus (Kirejtshuk, 1998). Somehow such a pattern of variability shows many parallelisms in other anthophagous nitidulids, namely in the Central and South American genus *Mystrops* (*Mystropini* Murray, 1864 within Nitidulinae s. str.) and Afro-Asian genera *Pria* Stephens, 1829, *Cryptartchopria* Jelínek, 1975 etc. (*Meligethinae* Thomson, 1859) (Endrödy-Younga 1978; Kirejtshuk & Couturier 2010 etc.). In all these groups these parallel structural transformations seem to be to a considerable degree an expression of allometric growth. Most members of this genus available in different collections remain undescribed and, therefore, it is rather probable that some synonyms of these subgeneric names (see also the remarks in the below taxonomic notes) will be used for further designation of its distinct groups.

Amystrops (Amystrops) solitaria sp. nov. (Plate 80 figs 7-11)

Holotype ♂ ZIN: INDONESIA E, W New Guinea, Doberai Peninsula, Arfak mts, Syoubri vill., 1°06'40S, 133°54'36"E, 1510 m, edge of secondary lower montane rainforest, 12-13.IX.2015, white light, leg. D.Telnov.

Derivatio nominis: The epithet of this new species refers to the presentation of this species available for the current study.

Description: Length 2.8, width 1.3, height 0.5 mm. Elongate oval, moderately convex dorsally and slightly ventrally; dorsum reddish with darker antennal clubs and some infuscations on dorsum (head, scutellum, three longitudinal stripes on pronotum and unclear spots on elytral distal two thirds); dorsum and underside with slight shine; dorsum with rather conspicuous, short and sparse, subrecum-



bent yellowish grey hairs, about as long as distance between their insertions; pygidium with shorter hairs; underside with hairs as long as on head, pronotum and elytra, but very fine and less conspicuous. Head and pronotum with distinct punctures, about as large as eye facets, interspaces between them about as great as one puncture diameter or somewhat greater, slightly alutaceous. Elytra with similar punctures, very narrow interspaces between them somewhat greater. Pygidium with finer punctures than those on pronotum and elytra. Prosternum, prohypomera and mesoventrite very sparsely, shallowly and finely punctured and with finely alutaceous interspaces. Other sclerites of underside with shallow and fine punctures (becoming slightly coarser distally), interspaces between them alutaceous to finely and densely microreticulated. Head markedly shorter than distance between eyes, subflattened, with raised temples somewhat angularly projecting externally behind eyes. Antennae slightly longer than head width; scape of usual shape, somewhat longer than wide; antennomeres 2 and 3 subequal in length, following flagellomeres gradually becoming shorter; club about twice as long as wide, comprising nearly third of total antennal length. Labrum nearly two thirds as long as longitudinal diameter of eye, comparatively wide lobes of labrum moderately far projecting anteriorly and with oblique apices. Mandibles moderately large with strongly elevated outer edge and bidentate apex, although inner apical tooth rather smaller than outer one. Pronotum slightly and evenly convex on disc and evenly sloping to moderately widely explanate sides (as widely explanate as antennal flagella wide), arcuate at sides, with narrowly rounded posterior and broadly rounded anterior angles, anterior edge very shallowly emarginate and posterior one almost straight and slightly sinuate at each posterior angle. Scutellum slightly transverse, subtriangular, with angular apex. Elytra slightly shorter than combined width and leaving pygidium and apex of previous segment uncovered, with moderately steeply sloping to sides (as widely explanate as pronotal ones) and with transversely broadly rounded to subtruncate apices. Pygidium subtruncate at apex, from under it apex of anal sclerite moderately exposed. Mentum about 2.5 times as wide as long, subhexagonal, with rounded sides and emarginate anterior edge. Ultimate labial palpomere slightly longer than wide and nearly cup-shaped. Ultimate maxillary palpomere almost four times as long as wide, subconical. Antennal grooves with distinct both inner and outer edges and rectilinearly convergent and with minimal dis-

tance slightly less than width of antennal club; postocular fossae unexpressed. Prosternal process strongly curved along coxae before subtransverse apex, apex about 1.5 times as wide as antennal club. Distance between mesocoxae subequal to and that between metacoxae twice as wide as that between procoxae. Mesoventrite without carina. Metaventrite subflattened before subangular posterior edge between coxae. Abdominal ventrite 1 about as long as hypopygidium, Hypopygidium with widely subtruncate apex. Epipleura about 1.5 times as wide as antennal club, weakly elevated laterally. Tibiae subequal in width, somewhat wider than antennal club. Femora of usual shape, pro- and mesofemora about 2.5 times as wide as corresponding tibiae; metafemur nearly three times as wide as corresponding tibia, with convex anterior and posterior edges. Protarsus about half as wide as antennal club and slightly wider than two thirds of tibiae, meso- and metatarsi markedly narrower, claws rather long and simple.

Tegmen moderately and penis trunk well sclerotized. Penis trunk fused with its basal apodeme.

Sexual dimorphism: Female unknown.

Differential diagnosis: This new species is characterized by its widely explanate pronotal and elytral sides, comparatively long and narrow tibiae, temples somewhat angularly projecting externally behind eyes, mandibles with strongly elevated outer edge and bidentate apices. These bidentate apices of *Amystrops* (*Amystrops*) *solitaria* sp. nov. have the inner apical tooth oriented obliquely distally, while in most other cases if the inner apical tooth is raised it is oriented nearly perpendicularly to inner edge of mandibles. The inner apical tooth similar to that in the new species is also known in *A. (A.) brittoni* (Kirejtshuk, 1986) **comb. nov.** from North and East Australia, *Amystrops* (*Amystrops*) *minuta* (Gillogly, 1962) **comb. nov.** and *A. (A.) reticulata* (Gillogly, 1962) **comb. nov.** from Micronesia, *A. (A.) modiglianii* (Grouvelle, 1906) from Mentawai Islands near Sumatra and *A. (A.) novaguineensis* (Kirejtshuk, 1990) **comb. nov.** from New Guinea. *Amystrops* (*Amystrops*) *solitaria* sp. nov. differs from another Papuan species, *A. (A.) novaguineensis* **comb. nov.**, in the wider and less convex body with very short and recumbent pubescence in male, somewhat shorter antennae, temples somewhat angularly projecting externally behind eyes, indistinct top of posterior angles of pronotum, shape of mentum and widely rounded to subtruncate apex of anal sclerite. Besides, *Amystrops* (*Amystrops*) *solitaria* differs from:

A. (A.) brittoni in the oval and somewhat darker



body, gently and evenly convex dorsum, comparatively narrower head, explanate sides of pronotum and elytra, shorter pubescence, temples somewhat angularly projecting externally behind eyes, less elongate club, and another structure aedeagus;

A. (A.) minuta and *A. (A.) reticulata* (based on its original description: Gillogly, 1962: 161) in the oval and somewhat unicolorated body, gently and evenly convex dorsum, comparatively narrower head, explanate sides of pronotum and elytra, shorter pubescence, temples somewhat angularly projecting externally behind eyes, longer and narrower tibiae; and from *A. (A.) minuta* also in the not widely rounded posterior pronotal angles;

A. (A.) modiglianii in the oval and darker body, gently and evenly convex dorsum, comparatively narrower head, wider male mandibles with much shorter inner apical tooth, explanate sides of pronotum and elytra, not evenly emarginate posterior edge of pronotum, much more conspicuous pubescence, temples somewhat angularly projecting externally behind eyes, longer and narrower tibiae.

A. (A.) aquila (Kirejtshuk, 1997) **comb. nov.** from Mindanao (Philippines) in the smaller, lighter and less convex body with narrower pronotum, denser and finer dorsal puncturation, narrow and longer labral lobes, shorter male mandibles, temples somewhat angularly projecting behind eyes, much shorter male antennae with less elongate club, tergite VI not exposed from under elytra and structure of tegmen;

A. (A.) diluta (Grouvelle, 1906) **comb. nov.** from North and East Australia. *A. (A.) dubia* (Grouvelle, 1903) **comb. nov.** from New Caledonia in the oval and somewhat darker body, gently and evenly convex dorsum, explanate sides of pronotum and elytra, much shorter pubescence, temples somewhat angularly projecting behind eyes, more or less shorter male antennae with less elongate club, longer and narrower tibiae, subtransverse apex of male anal sclerite and structure aedeagus;

A. (A.) monticola Grouvelle, 1917 from Luzon (Philippines) in the oval and darker body, gently and evenly convex dorsum, comparatively narrower head, wider male mandibles, explanate sides of pronotum and elytra, only slightly projecting posterior pronotal angles, much shorter conspicuous pubescence, temples somewhat angularly projecting externally behind eyes, longer and narrower tibiae.

A. (A.) nigripennis (Redtenbacher, 1867) **comb. nov.** spread in many areas of the Indo-Malayan Region in the much shorter pubescence, temples somewhat angularly projecting externally behind eyes, clearly explanate pronotal and elytral sides,

subtransverse apex of male anal sclerite and structure of main sclerites of aedeagus;

A. (A.) nitida (Gillogly, 1962) **comb. nov.** and *A. (A.) pacifica* (Gillogly, 1962) **comb. nov.** from Micronesia, and also *A. (A.) puberula* (Kirejtshuk, 1986) **comb. nov.** from Australia in the more oval body, gently and evenly convex dorsum, finer and denser puncturation, much narrower head, temples somewhat angularly projecting externally behind eyes, more or less expressed posterior angles (not widely rounded) of pronotum and markedly thinner tibiae, and also in the much shorter male mandibles and antennae;

A. (A.) seychellensis (Kirejtshuk, 1997) **comb. nov.** from Seychelles and *A. (A.) subcalvus* (Kirejtshuk, 1986) **comb. nov.** from Australia in the oval and conspicuously pubescent body, slightly and gently convex dorsum, feebly shining integument, much narrower head and pronotum, shorter male mandibles, shorter male antennae, longer lobes of labrum, temples somewhat angularly projecting externally behind eyes, tergite VI not exposed from under elytra and another structure of aedeagus;

A. (A.) titana Poussereau, Jelinek et Audisio, 2011 from Réunion Island (known to the author only from its original description: Poussereau et al., 2011: 421) in the smaller and oval body with different coloration, much narrower head with angularly projecting temples externally behind eyes, smaller male mandibles, other proportions in most antennomeres and particularly narrower antennal club, narrower and longer labral lobes, narrower pronotum of another shape and with explanate sides, shorter elytra with explanate sides, much narrower legs and another structure of male genitalia.

Amystrops (Amystrops) solitaria differs also from *A. (A.) punctata* (known only from its original description by Grouvelle 1906: 313) at least in the somewhat larger body, shorter dorsal pubescence and longer pronotum with explanate sides.

Genus *Trimenus* Murray, 1864

Type species: *Trimenus adpressus* Murray, 1864

Subgenus *Schawalleria* subgen. nov.

Type species: *Trimenus (Schawalleria) plicatus* sp. nov.

Derivatio nominis: Patronymic. The name of this new genus is devoted to Wolfgang Schawaller (SMNS) who was friendly supporting the author's studies during many years.

Note: This monotypic subgenus can be easily distinguished after the below diagnosis which could



be used also as a comparison of it. The species description of *Trimenus (Schawalleria) plicatus* is enough detailed for characteristics of the subgenus as "descriptio generico-specifica".

Differential diagnosis: This subgenus is very distinct from the nominative subgenus in the very slightly convex (subflattened) body with extremely widely explanate pronotal and elytral sides (not narrowly explanate or only bordered sides as in the other *Trimenus* species), rather excised posterior edge of the mesoventrite between mesocoxae (not subrectilinear) and very wide epipleura. *Trimenus (Schawalleria) plicatus* differs from other congeners in the triangular labral lobes with acute apex, temples clearly angularly projecting behind eyes, truncate apex of narrow prosternal process and markedly sparser dorsal puncturation. These characters can be also treated as diagnostic for the new subgenus.

***Trimenus (Schawalleria) plicatus* sp. nov.** (Figs 1-4, plate 81 figs 1-3)

Holotype ♂ SMNS: Irian-Jaya: Jayawijaya zw. Theila u. Habbema-See, 22.10.1993, A. Riedel, 2 800-2 950 m. Paratypes 7 specimens SMNS & ZIN: same label as in holotype.

Derivatio nominis: The epithet of this new species means "plicate", "folded" referring to character of the dorsal integument of its specimens.

Description of male (holotype): Length 5.7, width 2.5, height 0.8 mm. Elongate oval, slightly convex dorsally and ventrally; blackish with lightened antennal flagella, mouthparts, protrochanters and tarsi (reddish); dorsum with faint shine; dorsum without conspicuous hairs; underside with fine, moderately long and sparse hairs. Head and most part of pronotum with distinct punctures, about as large as eye facets, interspaces between them somewhat smaller than one puncture diameter or on pronotal disc punctures shallower and interspaces between them about as great as one puncture diameter, finely alutaceous. Elytra with more or less distinct punctures about as those on head and pronotum, interspaces between them as great as one puncture diameter, finely alutaceous. Pygidium almost microtuberculate, finely alutaceous to microreticulate. Prosternum, prohypomera, mesoventrite and most part of metaventrite very sparsely, shallowly and finely punctured and with finely alutaceous interspaces. Median part of metaventrite and distal parts of abdominal ventrites with small sparse tubercles and alutaceous. Head markedly shorter than distance between eyes, subflattened,

with temples clearly angularly projecting externally behind eyes. Antennae markedly longer than head wide; scape of usual shape, somewhat longer than wide; antennomere 2 longer than antennomere 3 and subequal with each antennomeres 4 and 5, following flagellomeres gradually becoming shorter; club nearly 1.5 times as long as wide, composing two sevenths of total antennal length. Labrum moderately short and with subtriangular lobes, nearly third as long as wide and with angular median excision. Pronotum slightly and evenly convex on disc, gently and evenly sloping to extremely widely explanate sides (about 1.5 times as widely explanate as antennal club wide), broadly arcuate at sides and widest almost at basal third, with broadly rounded anterior and acute posterior angles, anterior edge shallowly and trapezium-shapedly emarginated, and posterior one shallowly bi-emarginate. Scutellum about twice as wide as long, subtriangular, with narrowly rounded apex. Elytra strongly widened, widest at midlength, almost one and seventh as long as wide combined and leaving almost entire pygidium uncovered, with rather gently sloping sides (about as widely explanate as scape width) and with transversely broadly rounded to subtruncate apices. Pygidium subtruncate at apex, from under it subangular apex of anal sclerite exposed. Mentum almost four times as wide as long, subpentagonal, with rounded sides and nearly angularly projecting anterior edge. Ultimate labial palpomere nearly cup-shaped, slightly wider than long. Ultimate maxillary palpomere almost three times as long as wide, subconical. Antennal grooves with weakly outlined both inner and outer edges and rectilinearly convergent; postocular fossae unexpressed. Prosternal process slightly curved along coxae and subparallel-sided before somewhat widened apex, with broadly emarginate posterior edge, apex about as wide as antennal club. Distance between mesocoxae subequal to and that between metacoxae more than twice as wide as that between procoxae. Mesoventrite without carina. Metaventrite subflattened before angularly excised its posterior edge between coxae. Abdominal ventrite 1 about as long as hypopygidium. Hypopygidium with widely subtruncate apex. Epipleura about 2.5 times as wide as antennal club, subhorizontal. Pro- and mesotibiae subequal in width and somewhat wider than antennal club, metatibia somewhat narrower than antennal club; protibia subtriangular and somewhat curved; mesotibia enlarged along inner side at apex. Femora of usual shape, about 1.5 times as wide as corresponding tibiae, metafemora with convex anterior and posterior edges. Protarsus about two thirds



as wide as antennal club and protibia, meso- and metatarsi markedly narrower, claws rather long and simple. Tegmen and penis trunk very moderately sclerotized. Penis trunk fused with its basal apodeme.

Sexual dimorphism: Female differs from male in somewhat narrower body, more arcuate pronotal and elytral sides, narrower tarsi, widely rounded apices of pygidium and hypopygidium.

Variability: Length 5.0-8.8 mm. The paratypes manifest some variability in coloration: from subunicolorous yellowish reddish to more contrasting one (as in the holotype). Some variability is observed in puncturation and sculpture of integument.

Differential diagnosis: See the above diagnosis of the subgenus.

Taenioncini Kirejtshuk, 1998

Genus *Carpocryaea* Kirejtshuk, 1998

Type species: *Carpophilus familiaris* Grouvelle, 1897

= *Csiromenus* Kirejtshuk et Kvamme, 2001, syn. nov. (see the below Taxonomic notes)

Type species: *Csiromenus calderi* Kirejtshuk et Kvamme, 2001

***Carpocryaea gratiosa* sp. nov.** (Figs 5-7, plate 81 figs 4-7)

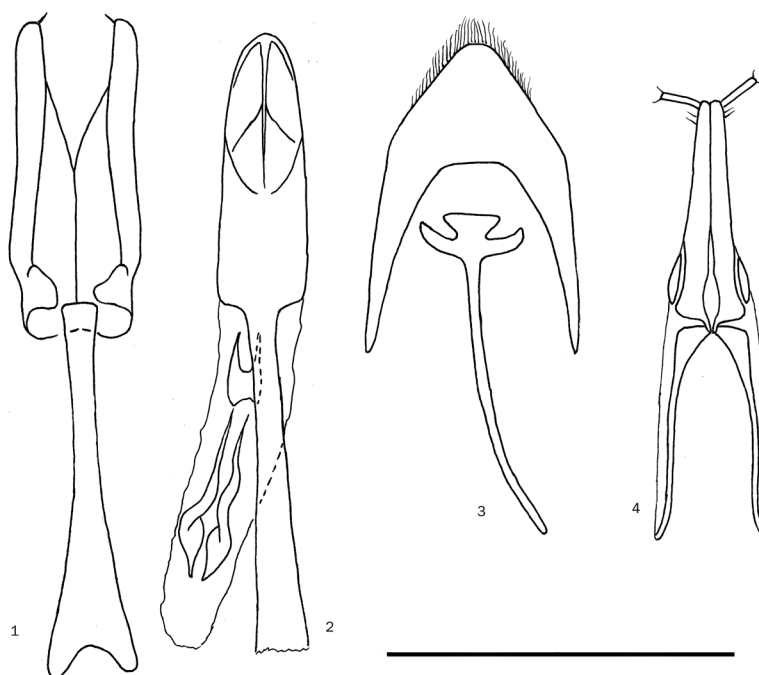
Holotype ♂ ZIN: INDONESIA E, W New Guinea, Dobe-
rai Peninsula, Arfak mts, montane ridge between lake

Gita & Gigi (Anggi Lakes), 1°23'33S, 133°55'02"E
10.IX.2015, 2200 m, primary mid montane rainforest &
subalpine vegetation, inside *Rhododendron* blooms, leg.
D.Telnov.

Paratypes 3♂ ZIN: same label as in holotype.

Derivatio nominis: The epithet of this new species is formed from the Latin "gratia" (grace or graceful) and "-osus" (having the quality of).

Description of male (holotype): Length 3.2, breadth 1.1, height 0.7 mm. Elongate, rather convex dorsally and moderately ventrally; subunicolorous straw reddish with darkened discs of elytra (probably because of showthrough of folded hindwings); dorsum moderately shining and underside with slight fat lustre; dorsum with extremely short and scarcely conspicuous, rather sparse and recumbent yellowish hairs, much shorter than intervals between punctures, thorax with somewhat longer and slightly conspicuous hairs, but uncovered tergites and abdominal ventrites with moderately long and moderately conspicuous hairs nearly as long as distance between punctures. Some brushes of the hairs oriented anteriorly located between posterior angles of mentum and forming a subsemicircle. Head with distinct oval punctures, smaller or nearly as coarse as eye facets, interspaces between them about half of puncture diameter in the anterior part and in middle, but much smaller at eyes and along vertex, with almost smoothed or slightly finely microreticulate. Pronotum and elytra with rather coarse



Figures 1-4. *Trimenus* (*Schawalleria* subgen. nov.) *plicatus* sp. nov., paratypes ♂ (ZIN): 1 – Tegmen, ventral view; 2 – Penis (penis trunk with basal apodeme and armature of inner sac), dorsal view; 3 – Genital capsule (anal sclerite, ventral plate and spiculum gastrale), ventral view; ♀: 4 – Ovipositor, ventral view [scale bar 1.0 mm].



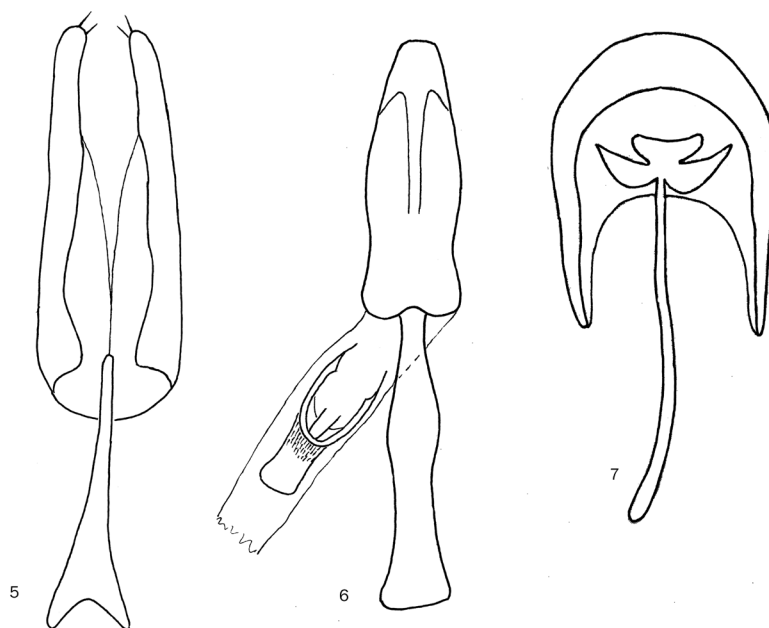
punctures much larger than eye facets, separated about by one puncture diameter or less, with rather smooth interspaces between them. Pygidium, apex of tergite VI and anal sclerite with quite distinct and dense punctures, markedly smaller than on other dorsal sclerites, extremely narrow interspaces between them finely and densely microreticulated. Underside with extremely fine and very sparse punctures becoming denser in posterior part of abdomen, interspaces between them alutaceous to finely and very densely microreticulate at abdominal apex. Head slightly depressed between antennal insertions, distance between eyes nearly 1.5 times as great as its length, without raised temples. Antennae slightly shorter than head width, scape of usual shape and twice as long as wide, antennomeres 2 and 3 subequal in length and each about half as long as scape; their club sub-void, about third of total antennal length, about 1.5 times as long as wide and with segments subequally in length and apical antennomere widest. Pronotum subtrapezoid and somewhat narrower at apex than at base, moderately steeply sloping at not explanate sides, anterior and posterior edges almost rectilinear, lateral edges broadly arcuate, anterior and posterior angles rounded. Scutellum subtriangular, about 1.5 times as wide as long and with angular apex. Elytra about 1.2 times as long as wide combined, subrectilinear at sides and widely rounded to subtruncate at apices forming very open sutural angle; leaving uncovered apex of tergite VI, pygidium and far projecting anal sclerite. Pygidium transverse, almost twice as wide as long and with truncate apex. Anal sclerite large and far projecting behind pygidial apex, subtriangular and rounded apex. Ultimate labial palpomere slightly longer than wide, widest at base. Ultimate maxillary palpomere about 3.5 times as long as wide. Mentum subhexagonal, about 2.5 times as wide as long. Antennal grooves behind mentum smoothed (without distinct edges). Prosternal process medially curved along coxae and somewhat widened before somewhat apex with widely rounded posterior edge, its apex much narrower than antennal club. Distance between coxae in each pair subequal. Metaventricle subflattened and much longer than prosternum with process, with distinct discrimen and angularly excised posterior edge. Abdominal ventrite 1 about as long as hypopygidium. Posterior edge of hypopygidium subangular and with widely rounded posterior apex. Protibia strongly curved and dilated behind the middle, with prominent and rather acuminate outer subapical process, at apex almost as wide as antennal club; mesotibia curved

and angularly dilated at apex, with rather stout spines along outer edge; metatibia simple and gently curved along inner edge, with rows of moderately stout spines along outer edge; meso- and metatibiae about half as wide as antennal club. Profemur about 1.5 times, meso- and metafemora about 2.5 times as wide corresponding tibiae; posterior edge of meso- and metafemora subrectilinear to very slightly curved at apex; mesofemur widest at distal third and metafemur widest at middle. Protarsi three fourths as wide as protibia; meso- and metatarsi somewhat narrower and about two thirds as wide as corresponding tibiae; claws slightly bulged at base. Tegmen and penis trunk weakly sclerotized. Penis trunk not fused with its basal apodeme. Sexual dimorphism: Female unknown.

Variability: Length 2.8-3.6 mm. A particular variability can be observed among four specimens of the type series available for this study in the expression of sexual dimorphism of tibiae which seem to not demonstrate any clear trace of allometric growth depending on body size and do not correlate with transformation of other structures. Some variability is expressed mostly in the sculpture of body integument of the paratypes.

Differential diagnosis: This new species is distinct among its congeners by its shape of the pronotum and body coloration. Besides, it differs from the Indo-Malayan *Carpocryaea familiaris* (Grouvelle, 1897) and *C. modiglianii* (Grouvelle, 1897) in the narrow and subunicolorous lighter body with much longer elytra, tarsal claws weakly bulged at base, peculiarities of sexual dimorphism in structure of pro- and mesotibiae, and apparently its armature of inner sac of penis; also from *C. familiaris* in the posterior angles of pronotum not projecting posteriorly. *Carpocryaea gratiosa* sp. nov. differs from the Australian *C. calderi* (Kirejtshuk et Kvamme, 2001) **comb. nov.**, *C. glabra* (Kirejtshuk et Kvamme, 2001) **comb. nov.** and *C. histeroides* (Kirejtshuk et Kvamme, 2001) **comb. nov.** in its light and subunicolorous body coloration, weakly bulged tarsal claws, peculiarities of its sexual dimorphism in tibiae and structure of the aedeagus; also from *C. calderi* in the tergite VI not completely exposed from under elytra, not clearly outlined antennal grooves; also from *C. glabra* in the less elongate antennal club and lack of fossa with long sensilla or setae behind mentum; also from *C. histeroides* in the not clearly outlined antennal grooves, and lack of fossa with long sensilla or setae behind mentum. However, the lightest representatives of *C. glabra* look somewhat like the specimens of *C. gratiosa*.





Figures 5-7. *Carpocryraea gratiosa* sp. nov., holotype ♂ (ZIN): 5 – Tegmen, ventral view; 6 – Penis (penis trunk with basal apodeme and armature of inner sac), dorsal view; 7 – Genital capsule (anal sclerite, ventral plate and spiculum gastrale), ventral view [scale bar 0.5 mm].

Taxonomic notes

I. On synonymy of *Carpocryraea* Kirejtshuk, 1998 and *Csiromenus* Kirejtshuk et Kvamme, 2001 **syn. nov.**

Kirejtshuk and Kvamme (2001: 429) pointed out that *Csiromenus* has the “Histeroid-like habitus, not large eyes, well outlined antennal grooves and toothed tarsal claws (although tarsal claws of some *Taeniolinus* are slightly bulbous or toothed at base and antennal grooves... It is most similar to *Carpocryraea* Kirejtshuk, 1998b clearly differing from the latter in elongate body with subflattened discs of pronotum and elytra, elongate elytra (longer than their combined width) and with transversely truncate apices, toothed tarsal claws...” *Carpocryraea gratiosa* shows body and long elytra similar to *Csiromenus*, while it has the almost simple tarsal claws and smoothed antennal grooves as in *Carpocryraea*. (although the antennal grooves in *C. glabra* are not quite distinct). Besides, aedeagus of the new species is more or less similar to those in the Indo-Malayan congeners and rather different from those in the Australian ones. Taking into consideration also the characters of species of this group remaining undescribed (mostly from New Guinea) the synonymy of these taxa rises quite evident, although further studies will be able to elaborate a subgeneric division of this group with use of *Csiromenus* as a subgeneric name. Thus, three spe-

cies described in the genus *Csiromenus* should be considered as *Carpocryraea calderi* (Kirejtshuk et Kvamme, 2001) **comb. nov.**, *C. glabra* (Kirejtshuk et Kvamme, 2001) **comb. nov.** and *Carpocryraea histeroides* (Kirejtshuk et Kvamme, 2001) **comb. nov.**

II. The list of species of the genus *Amystrops*

The synonymy of this generic taxon was discussed in some papers by Kirejtshuk (1986, 1997, 1998, 2008), which include *Propetes* Reitter, 1975 non Walker, 1851 et nec Menge, 1854; *Amystrops* Grouvelle, 1906; *Platychorinus* Grouvelle, 1906; *Platychoropsis* Grouvelle, 1912; *Haptoncognathus* Gillogly, 1962. The most type series of the species were described by the authors and published in the above-mentioned papers and cited in the below list. In cases when the information on the studied type series was not published before, it is added after the mention of a certain species name in the below list. Most species included in this genus were recently treated as members of the genus *Propetes* (oldest synonym). As the latter name proposed for three different animal groups (Walker 1851: Auchenorrhyncha; Menge 1854: Aranaea and Reitter 1875: Coleoptera), the currently valid name was defined by Kirejtshuk (2005, 2008). However new combination for all species of this genus was not yet indicated in the previous papers and many species names here



are first published with the correct combination of generic and species names in accordance with the current taxonomic interpretation.

1. *Amystrops (Mandipetes) intrita* (Kirejtshuk, 1997: 123) **comb. nov.** [*Propetes, Mandipetes*]. Vietnam.
2. *Amystrops (Mandipetes) longipes* (Kirejtshuk, 1997: 125) **comb. nov.** [*Propetes, Mandipetes*]. Philippines (Mindanao).
3. *Amystrops (Amystrops) aquila* (Kirejtshuk, 1997: 118) **comb. nov.** [*Propetes, Propetes*]. Philippines (Mindanao).
4. *Amystrops (Amystrops) brittoni* (Kirejtshuk, 1986: 562) **comb. nov.** [*Platychoropsis*]. North and East Australia.
5. *Amystrops (Amystrops) diluta* (Grouvelle, 1906a: 201) **comb. nov.** [*Platychorinus*]. Barat Daya Islands (Damar Island). Type designation: lectotype (BMNH) here designated by A.G. Kirejtshuk and 3 paralectotypes (BMNH, MNHN) designated by A.G. Kirejtshuk – “Damma I. 92-20”, “*Platychorinus dilutus* ty. Grouv.” (handwritten by A. Grouvelle).
6. *Amystrops (Amystrops) dubia* (Grouvelle, 1903: 173) **comb. nov.** [*Mystrops*]. New Caledonia. Type designation: lectotype, male (IRSN) here designated by A.G. Kirejtshuk – “*Mystrops dubius* Grouv.” (handwritten by A. Grouvelle), male, designated by A.G. Kirejtshuk and 3 paralectotypes (IRSN, ZIN) – “Nouvelle Calédonie, Ile de Pins, Rec. Françoise, ex coll. Fauvel”; 1 paralectotype (IRSN) – “Nouvelle Calédonie, ex coll. Fauvel”; 7 paralectotypes (MNHN) designated by A.G. Kirejtshuk – “N-Ile Calédonia”, “*Mystrops dubius* ty. Grouv.” (handwritten by A. Grouvelle); 2 paralectotypes (ZMB) designated by A.G. Kirejtshuk – “77000”, “Ile des Tins”, “*Mystrops dubius* Grouv.” (handwritten by A. Grouvelle).
7. *Amystrops (Amystrops) minuta* (Gillogly, 1962: 161) **comb. nov.** [*Haptoncognathus*]. Mariana Island. Paratypes were seen by A.Kirejtshuk in FMNH.
8. *Amystrops (Amystrops) modiglianii* Grouvelle, 1906b: 312. Mentawai Islands near Sumatra. Type material: 2 syntypes (BMNH, MNHN (coll. A. Grouvelle)) – “Mentawai, Si Oban, IV-VIII.94, Modigliani”, “*Amystrops modiglianii* ty. Grouv.” (handwritten by A. Grouvelle). The lectotype should be designated among the syntypes of this species housed in MSNG. Syntypes with body length 3.0 and width 1.6 mm.
9. *Amystrops (Amystrops) monticola* Grouvelle, 1917: 337. Philippines (Luzon). Type material: holotype, male (MNHN) – “Mt. Makiling, Luzon, Baker”, “3673”, “Type”, “*Amystrops monticola* Grouv.” (handwritten by A. Grouvelle) with body length 2.2

and width 1.4 mm.

10. *Amystrops (Amystrops) nigripennis* (Redtenbacher, 1867: 34) **comb. nov.** [*Epuraea*]. Type designation: Kirejtshuk 1997: 117 (Sri Lanka). India (Karnataka, Kerala, Asam), Sri Lanka, Myanmar (Burma), Vietnam, China (Taiwan), Malaysia (Pahang), Japan (Ryukyu), Indonesia (Java, Lombok); = *bicolor* Grouvelle, 1910: 244. Java. Type designation: holotype, female (MNHN) – “Java, Soakabiumi”, “Type” completely corresponding to the original description including the locality label, but with missing determination label (the label “*Amystrops bicolor* Grouv.” (handwritten by A. Grouvelle) is pinned under a specimen with other labels “Java, Rounes” and “Type”, probably erroneously); = *epuraeoides* Grouvelle, 1914: 39. Taiwan. Type designation: Kirejtshuk 1998: 303; = *formosiana* Grouvelle, 1914: 39. Taiwan. Type designation: Kirejtshuk 1998: 302; = *montana* Grouvelle, 1913:102. India (Assam). Type designation: Kirejtshuk 1998: 302. Also 1 syntype (MNHN) – “Dibrugarh, Abor, Kemp”, “Type”, “*Amystrops montana* Grouv.” (handwritten by A. Grouvelle); = *remota* Reitter, 1973: 178. [*Haptoncus*]. Myanmar (Burma). Type designation: Kirejtshuk, 1998: 302.
11. *Amystrops (Amystrops) nitida* (Gillogly, 1962: 163) **comb. nov.** [*Haptoncognathus*]. Mariana Island; Federated States of Micronesia: Western Caroline Island. Paratypes were seen by A.Kirejtshuk in FMNH.
12. *Amystrops (Amystrops) novaguineensis* (Kirejtshuk, 1990: 862) **comb. nov.** [*Platychoropsis*]. Papua New Guinea (Hagen Range and Kandep).
13. *Amystrops (Amystrops) pacifica* (Gillogly, 1962: 165) **comb. nov.** [*Haptoncognathus*]. Mariana Island, Federated States of Micronesia: Western Caroline Island. Paratypes were seen by A.Kirejtshuk in FMNH and ZIN.
14. *Amystrops (Amystrops) puberula* (Kirejtshuk, 1986: 565) [*Platychoropsis*]. Australia (Queensland)
15. *Amystrops (Amystrops) punctata* Grouvelle, 1906: 313 (original misspelling: “*punctatus*”). Mentawai Islands. This species was described probably after study of one specimen, but A. Grouvelle did not mention it in his original description (Grouvelle 1906). He usually took a duplicate for his own collection when any type series was over than one specimen. However, in the collection of MNHN where the Grouvelle’s specimens are now deposited, no trace of such a duplicate of this type series was found. In the text of the original description of



this species is written: "Pygidium subtriangulaire, environs aussi long que large, tronqué au sommet chez le mâle et laissant voir le segment supplémentaire..." (Grouvelle 1906: 214-215). It means that the specimen described was a male. Roberto Poggi found one specimen in MSNG with the labels: "Mentawai, Si-Oban, IV-VIII.[18]94, [E.] Modigliani", "*Amystrops punctatus* Grouv. ty." (handwritten by A. Grouvelle) and this specimen should be designated as a lectotype.

16. *Amystrops* (*Amystrops*) *reticulata* (Gillogly, 1962: 165), **comb. nov.** [*Haptoncognathus*]. Mariana Island; Federated States of Micronesia: Western Caroline Island. Paratypes were seen by A.G. Kirejtshuk in FMNH.

17. *Amystrops* (*Amystrops*) *seychellensis* (Kirejtshuk, 1997: 121) **comb. nov.** [*Propetes*]. Seychelles (Mahé).

18. *Amystrops* (*Amystrops*) *subcalva* (Kirejtshuk, 1986: 564) [*Platychoropsis*]. Australia (Queensland).

19. *Amystrops* (*Amystrops*) *titana* Poussereau, Jelinek et Audisio, 2011: 421 (original misspelling: "*titanus*"). Réunion Island.

III. Position of "*Amystrops bakeri*" Grouvelle, 1914: 536

The type series of this species includes two males (MNHN; lectotype here designated with body length 3.2 and width 2.3 mm) - "Los Banos, P.I.Baker", "1637", "Type", "*Amystrops Bakeri* Grouv." (handwritten), "coll. A. Grouvelle" which correspond completely with the specimens of *Epuraea* (*Epuraea*) *latissima* Reitter, 1880 defined in the monograph by Kirejtshuk (1998: 158) and thereafter "*Amystrops bakeri*" should be regarded as a junior synonym: ***Epuraea* (*Epuraea*) *latissima* Reitter, 1880 (= *bakeri* Grouvelle, 1914 **comb. nov.**, **syn. nov.**)**

Thus, the range of this species after the publication by Kirejtshuk (1988) and new data on the synonymy of it includes India (Uttaranchal Pradesh), Sri Lanka, Laos, Thailand, Malaysia (Malakka), Indonesia (Sumatra, Java, Kalimantan), Taiwan and Philippines (Luzon).

IV. Position of "*Amystrops camptoides*" Grouvelle, 1916: 314

The type series of this species includes only the holotype, male (MNHN) with body length 2.4 and width 1.6 mm - "Mt. Makling, Luzon, Baker", "367", "Type", "*Amystrops camptoides* Grouv." (handwritten by A. Grouvelle), "coll. A. Grouvelle" (MNHN). This specimen has no diagnostic charac-

ter making it possible to consider it among members of *Amystrops*, because its head appendages (labrum, mandibles and antennae) as those in species of *Epuraea* sensu lato but not those in species of *Amystrops*, and its elytra with transversely truncate apices leaving uncovered only apex of the pygidium (rather as in representatives of the subgenus *Epuraea* sensu str.). At the same time, the ultimate labial palpomere of "*Amystrops camptoides*" is transverse and has almost cup-like shape as that in the wide and comparatively convex representatives of *Epuraea* (*Haptoncus*) and the appearance of it looks like some wide *Haptoncus* species (*E. (H.) fanuli* Gillogly, 1982, *E. (H.) ovalis* Murray, 1864 and unicoloured *E. (H.) takhtajani*), although the pygidium of all these *Haptoncus* species, in contrast to "*Amystrops camptoides*", completely or mostly remains uncovered by elytra. Besides, the holotype of "*Amystrops camptoides*" has the male metatibiae similar to those in *E. (H.) luteola* Erichson, 1843. Thus, the species under consideration should be assigned to the subgenus *Haptoncus* and its taxonomic interpretation should be *Epuraea* (*Haptoncus*) *camptoides* (Grouvelle, 1916) **comb. nov.**

V. Position of "*Aphenolia bakeri*" Grouvelle, 1914: 539

The type series of this species includes only the holotype, female (MNHN) with body length 3.1 and width 1.5 mm - "Los Banoa, P.L. Baker", "*Aphenolia Bakeri* Grouv." (handwritten by A. Grouvelle). The specimen examined demonstrates the structure of head (labrum, palpi, mentum and eyes), shape of pronotum and elytra of this specimen are similar those in most species of *Trimenus* rather than other epuraeine genera. Besides, its meso- and metatarsi are with simple tarsomeres 1-3. Thus, this species should be considered in composition of the subgenus *Trimenus* sensu str. and its taxonomic interpretation should be *Trimenus* (*Trimenus*) *bakeri* (Grouvelle, 1914) **comb. nov.**

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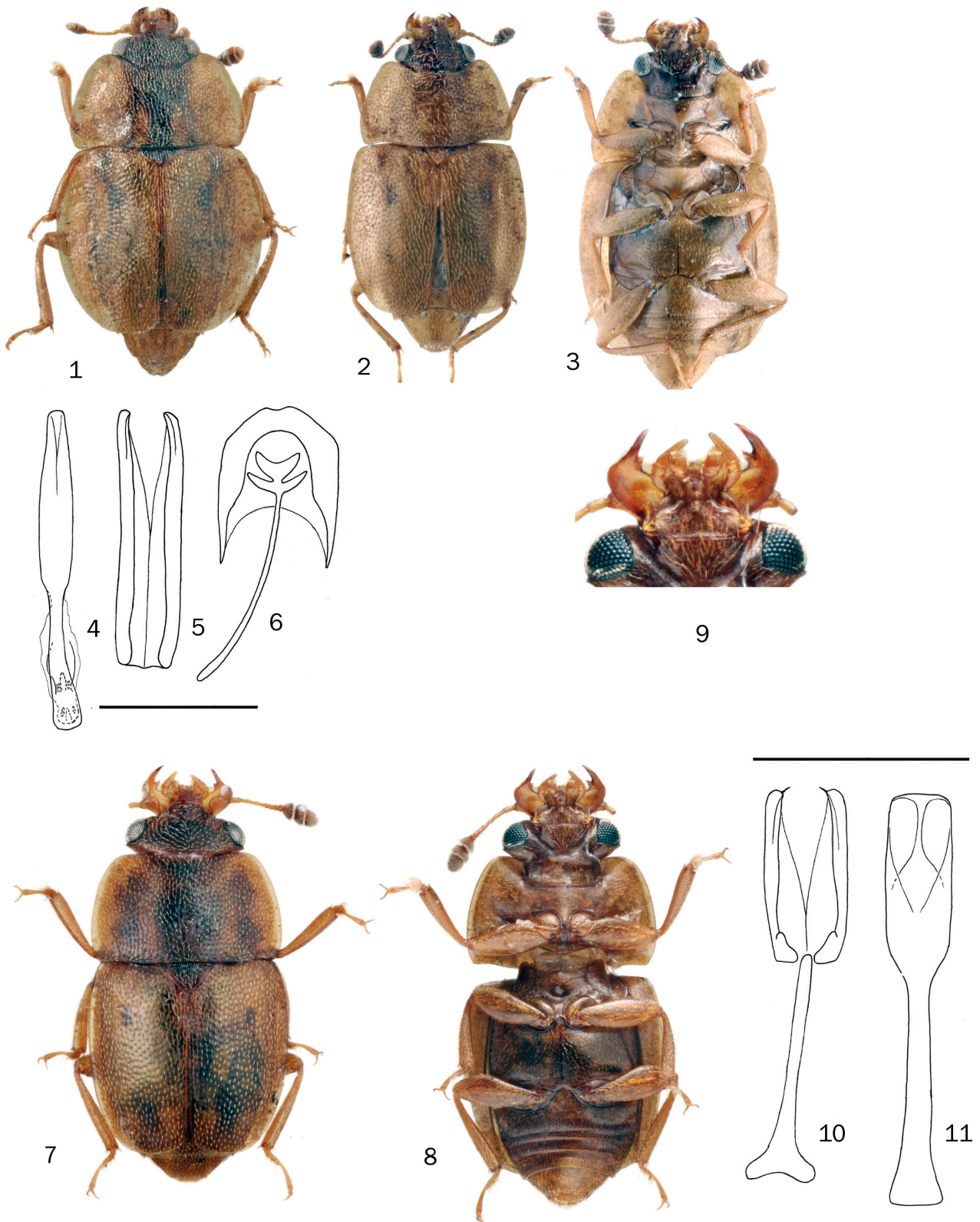
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Plate 80

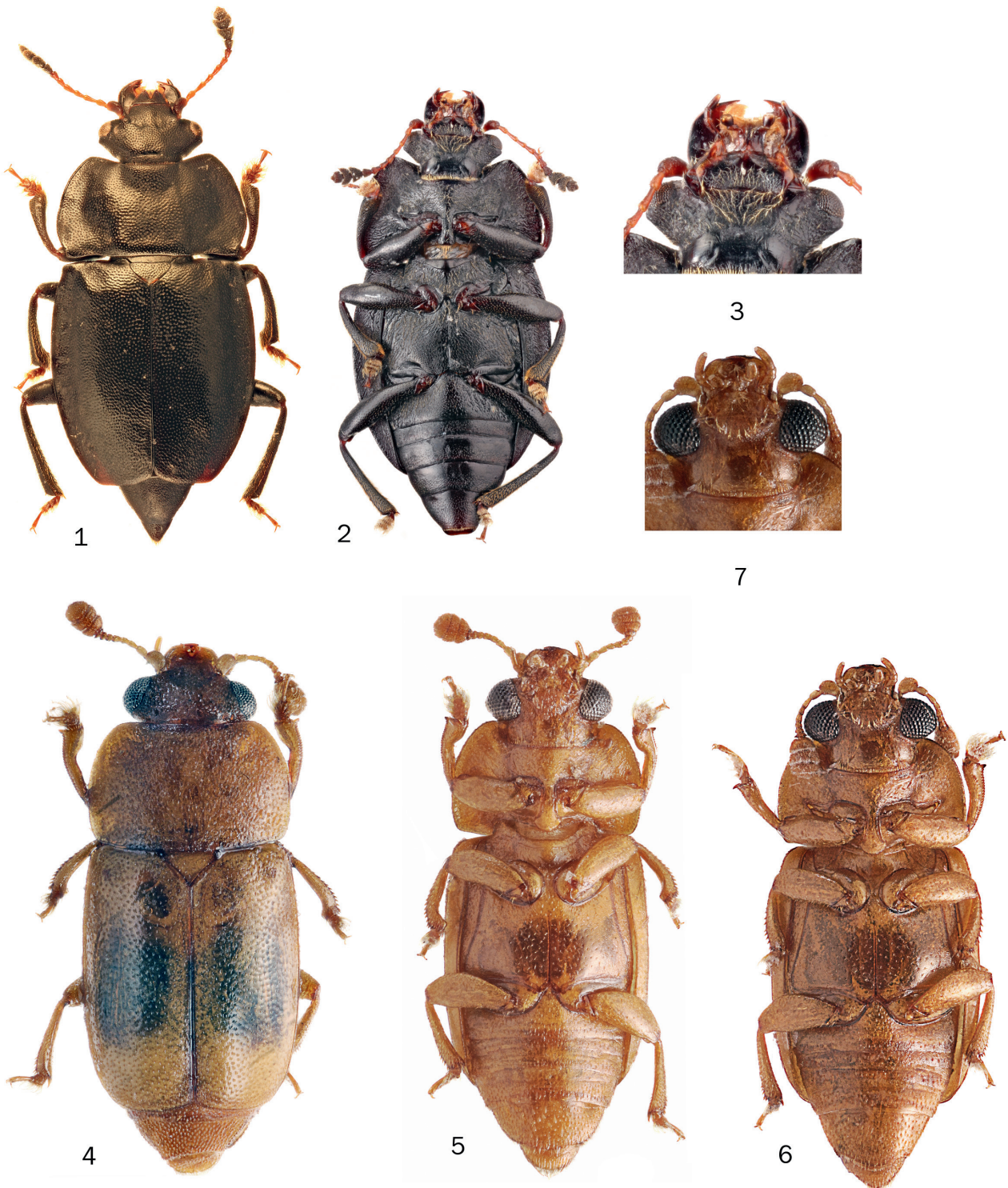
KIREJTSHUK, A.G.: New sap beetles of the subfamily Epuraeinae (Coleoptera: Nitidulidae) from Indonesian ...



Figures 1-11. Papuan Epuraeinae. 1-6 - *Epuraea (Haptoncus) telnovi* sp. nov.: 1 - Holotype ♂, habitus, dorsal view [body length 3.7 mm]; 2-3 - Paratype ♀ [body length 2.9 mm]: 2 - Dorsal view; 3 - Ventral view; 4 - Penis (penis trunk with basal apodeme and armature of inner sac), dorsal view; 5 - Tegmen, ventral view; 6 - Genital capsule (anal sclerite, ventral plate and spiculum gastrale), ventral view; 7-11 - *Amystrops (Amystrops) solitaria* sp. nov., holotype ♂: 7 - Habitus, dorsal view [body length 2.8 mm]; 8 - ditto, ventral view; 9 - Head, ventral view; 10 - Tegmen, ventral view; 11 - Penis, dorsal view [scale bars to figs 4-6 & 10-11 0.5 mm].

Plate 81

KIREJTSHUK, A.G.: New sap beetles of the subfamily Epuraeinae (Coleoptera: Nitidulidae) from Indonesian ...



Figures 1-7. Papuan Epuraeinae. 1-3 - *Trimenus (Schawalleria) subgen. nov.) plicatus* sp. nov., paratypes, ♂♂: 1 - Habitus, dorsal view; 2 - ditto, ventral view; 3 - Head, ventral view [body length 6 mm]; 4-7 - *Carpocryaea gratiosa* sp. nov.: 4 - Holotype ♂, habitus, dorsal view [body length 3.7 mm]; 5 - ditto, ventral view; 6 - Paratype ♂, habitus, ventral view [body length 2.9 mm]; 7 - Head, ventral view.