

CONTRIBUTION TO THE KNOWLEDGE OF THE FAMILIES NEMONYCHIDAE AND RHYNCHITIDAE (COLEOPTERA)

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[Легалов А.А. К познанию семейств Nemonychidae и Rhynchitidae (Coleoptera)]

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Key words: Coleoptera, Curculionoidea, Nemonychidae, Rhynchitidae, new taxa, new status, new placements, new synonyms, new combination**Ключевые слова:** Coleoptera, Curculionoidea, Nemonychidae, Rhynchitidae, новые таксоны, новые статусы, новые систематические положения, новые синонимы, новая комбинация**Summary.** New subfamily Idiomacerinae Legalov, **subfam.n.** (type genus: *Idiomacer* Kuschel, 2011) and new subtribe Rhynchitoplesiina Legalov, **subtrib.n.** (type genus: *Rhynchitoplesius* Voss, 1952) of the tribe Mecomacerini are described. New synonyms are established: *Eugnamptus rusticus* Legalov, 2003, **syn.n.** for *Eugnamptus lacunosus* Voss, 1948; *Scolocnemus elegantulus* Voss, 1938, **syn.n.** and *Deporaus subseriatopilosus* Voss, 1938, **syn.n.** for *Scolocnemus pilosiusculus* Voss, 1922. New systematic placement is made: *Philippinorhynchites azurescens* (Voss, 1932), **placem.n.** is transferred from the genus *Thompsonirhinus* Legalov, 2003 to the genus *Philippinorhynchites* Legalov, 2007. One new combination is established.**Резюме.** В работе описаны новое подсемейство Idiomacerinae Legalov, **subfam.n.** (типовой род: *Idiomacer* Kuschel, 2011) и новая подтриба Rhynchitoplesiina Legalov, **subtrib.n.** (типовой род: *Rhynchitoplesius* Voss, 1952) трибы Mecomacerini. Установлены новые синонимы: *Eugnamptus rusticus* Legalov, 2003, **syn.n.** к *Eugnamptus lacunosus* Voss, 1948; *Scolocnemus elegantulus* Voss, 1938, **syn.n.** и *Deporaus subseriatopilosus* Voss, 1938, **syn.n.** к *Scolocnemus pilosiusculus* Voss, 1922. *Philippinorhynchites azurescens* (Voss, 1932), **placem.n.** перемещен из рода *Thompsonirhinus* Legalov, 2003 в род *Philippinorhynchites* Legalov, 2007. Установлена 1 новая комбинация.

INTRODUCTION

The families Nemonychidae and Rhynchitidae are primitive groups within the superfamily Curculionoidea. Nemonychidae is the most primitive in the superfamily, being very important in studies of phylogeny. The main works on the recent representatives of this family were made by G. Kuschel [Kuschel, 1954, 1959, 1983, 1989, 1993, 1994, 1995, 2003; Kuschel, May, 1997; Kuschel, Leschen, 2011] and A. Legalov [2009a, 2009c, 2010d] and for the fossil forms mostly by Gratshev, Zherikhin and Legalov [Gratshev, Legalov, 2009; Gratshev, Zherichin, 1995, 1996, 2000, 2003; Gratshev, Zherikhin, Jarzembowski, 1997; Kuschel, Poinar, 1993; Legalov, 2009d, 2010a, 2010b, 2010c, 2010d, 2011; Zherikhin, 1986, 1993; Zherichin, Gratshev, 2003, 2004]. The author thinks it is necessary to make some additions to the system of this group. Rhynchitidae is more advanced group deriving from Ithyceridae [Legalov, 2009b]. The further results of the study of this family are given in this paper as well.

MATERIAL AND METHODS

Types and other specimens are kept in the following collections and museums: ISNB – Institut Royal des Sciences Naturelles de Belgique (Belgium: Brussels); MRAC – Musee Royal de l’Afrique Centrale (Belgium: Tervuren); MZLU – Lund University (Sweden: Lund); USNM – National Museum of Natural History, [formerly, United States National Museum] (USA: Washington); ZFMK – Zoologische Forschungsinstitut und Museum “Alexander Koenig” (Germany: Bonn); ZMHB – Museum fur Naturkunde der Humboldt-Universitat (Germany: Berlin).

RESULTS

Family **Nemonychidae** Bedel, 1882Subfamily **Idiomacerinae** Legalov, **subfam.n.**Type genus: *Idiomacer* Kuschel, 2011**Diagnosis.** The new subfamily differs from other subfamilies by the antennae inserted subbasally and by the reduction of clypeolabral suture.**Remarks.** The uniqueness of the genus *Idiomacer* was noted in its description; however Kuschel and Leschen [2011] did not isolate it to an independent supraspecific taxa but placed it in the tribe Rhynorhynchini. On my opinion, this genus deserved to be placed in a subfamily of its own. The systematic position of this subfamily remains indistinct. Basal location of antennae and reduction of clypeolabral suture can be regarded as secondary characters. If these characters are plesiomorphic for this group, it should be placed in the family Ithyceridae despite the double gular suture.For the description, see that of *Idiomacer* [Kuschel, Leschen, 2011: 592, figs. 41-43, 136, 137].Subfamily **Rhinorhynchinae** Voss, 1922Tribe **Mecomacerini** Kuschel, 1994Subtribe **Rhynchitoplesiina** Legalov, **subtrib.n.**Type genus: *Rhynchitoplesius* Voss, 1952**Description.** Body black or yellow-brown, with appressed light setae. Antennae, pronotum, prothorax, legs red; labrum, mandibles and mouthparts red or reddish-brown. Rostrum straight or weakly curved, flattened or not, sometimes near the base compressed, densely and finely punctate; dorsally bright and quite densely punctate. Labrum large. Mandibles large, without teeth on exterior margin. Maxillae long, longer than mandibles. Antennae located on the middle or near the apex of the rostrum.

Frons wide, densely punctate, weakly flattened or convex. Eyes large, strongly convex. Head behind eyes weakly narrowed. Temples very short. Antennae rather long, reaching or almost reaching the middle of pronotum. Club 3-segmented, non-compact, more or less elongated. Pronotum longer than its width or very weakly transverse, with more or less rounded sides. Disc flattened, densely punctate. Scutellum small, rectangular. Elytra elongate-oval. Humeri weakly flattened. Elytral striae distinct. Scutellar striole rather long. Intervals wider than striae, more or less convex. Greatest width of elytra at middle. Elytral apices rounded together. Epipleura distinct. Precoxal part of prothorax elongated. Procoxal cavities located on the base of prothorax, connected. Mesocoxal cavities separated. Mesepisternum narrow. Metathorax weakly convex and rarely punctate. Abdomen weakly convex, finely punctate. Ventrites almost gomonomic. 5th ventrite weakly longer than 4th ventrite. Legs rather long. Procoxae oval, convex. Femora clavate. Tibiae almost straight, weakly widened at the apex, with apical setose fringe. Tarsi long. 1st segment triangular. 2nd segment widely triangular. 3rd segment bilobed. Clausal segment elongated. Claws narrow, with teeth. Length of body (without rostrum): 3.3-4.8 mm.

Diagnosis. The new subtribe differs from nominative subtribe by the punctate mesonotum without stridulatory files.

Remarks. May [1993] was the first who offered to give the tribe status to this group. Genera *Rhynchitoplesius* Voss, 1952 and *Rhynchitomacerinus* Kuschel, 1954 are quite well isolated from other genera of the tribe Mecomacerini and should be placed in the independent category of supraspecific rank as a subtribe or possibly tribe.

For the description also, see that of *Rhynchitoplesius* and *Rhynchitomacerinus* [Kuschel, 1954, p. 105-106, 113 and Kuschel, Leschen, 2011, figs. 15-16, 62, 65, 78-84, 85-91].

System of recent Nemonychidae as follows:

Family **Nemonychidae** Bedel, 1882

Subfamily **Nemonychinae** Bedel, 1820

Genus *Nemonyx* Redtenbacher, 1845.

Subfamily **Rhinorhynchinae** Voss, 1922

Tribe **Mecomacerini** Kuschel, 1994

Subtribe **Mecomacerina** Kuschel, 1994

Genus *Aragomacer* Kuschel, 1994.

Genus *Araucomacer* Kuschel, 2011.

Genus *Bunyaesus* Kuschel, 1994.

Genus *Eutactobius* Kuschel, 1994.

Genus *Mecomacer* Kuschel, 1954

Genus *Notomacer* Kuschel, 1994.

Subtribe **Rhynchitoplesiina** Legalov, **subtrib.n.**

Genus *Rhynchitomacerinus* Kuschel, 1954.

Genus *Rhynchitoplesius* Voss, 1952.

Subtribe **Brarina** Legalov,

Genus *Brarus* Kuschel, 1997.

Tribe **Rhinorhynchini** Voss, 1922

Genus *Atopomacer* Kuschel, 1989.

Genus *Basiliorhinus* Kuschel, 1994.

Genus *Basilogeus* Kuschel, 1994.

Genus *Nannomacer* Kuschel, 1954.

Genus *Pagomacer* Kuschel, 1994.

Genus *Rhinorhynchus* Sharp, 1882.

Genus *Zimmiellus* Kuschel, 2011.

Tribe **Rhynchitomacerini** May, 1993

Genus *Rhynchitomacer* Voss, 1937.

Genus *Stenomacer* Kuschel, 1954.

Subfamily **Cimberindinae** des Gozis, 1882

Tribe **Cimberindini** des Gozis, 1882

Genus *Acromacer* Kuschel, 1989.

Genus *Cimberis* des Gozis, 1881

Subgenus *Cimberis* s. str.

Subgenus *Amerocimberis* Legalov, 2009.

Genus *Pityomacer* Kuschel, 1989.

Subfamily **Doydirhynchinae** Pierce, 1916

Genus *Doydirhynchus* Dejean, 1821.

Genus *Lecontellus* Kuschel, 1989.

Subfamily **Idiomacerinae** Legalov, **subfam.n.**

Genus *Idiomacer* Kuschel, 2011.

Family **Rhynchitidae** Gistel, 1848

Tribe **Eugnamptini** Voss, 1930

Subtribe **Eugnamptina** Voss, 1930

Genus *Eugnamptus* Schoenherr, 1839

Eugnamptus lacunosus Voss, 1948 (col. pl. I: 1, 8)

Eugnamptus lacunosus Voss, 1948: 157

Eugnamptus rusticus Legalov, 2003: 160, **syn.n.**

Remarks. The lectotype is designated by the author – a male from the collection ZFMK with labels “Kuatun (2300 m), 27,40n, Br. 117, 40ö, L. J. Klapperich, 31.5. 1938 (Fukien)”, “Type”, “*Eugnamptus lacunosus* n. sp.”, “Lectotype *Eugnamptus lacunosus* Voss, 1948, A. Legalov design. 2010”. Paralectotype: a male (ZFMK) with labels “Kuatun (2300 m), 27,40n, Br. 117, 40ö, L. J. Klapperich, 31.5. 1938 (Fukien)”, “Type”, “Paralectotype *Eugnamptus lacunosus* Voss, 1948, A. Legalov design. 2010”; 2 male (ZFMK) with labels “Kuatun (2300 m), 27,40n, Br. 117, 40ö, L. J. Klapperich, 31.5. 1938 (Fukien)”, “Paratypoid *Eugnamptus lacunosus* Voss”, “Paralectotype *Eugnamptus lacunosus* Voss, 1948, A. Legalov design. 2010”; 2 male (ZFMK) with labels “Kuatun (2300 m), 27,40n, Br. 117, 40ö, L. J. Klapperich, 1.6. 1938 (Fukien)”, “Paratypoid *Eugnamptus lacunosus* Voss” “Paralectotype *Eugnamptus lacunosus* Voss, 1948, A. Legalov design. 2010”; 6 male (ZFMK) with labels “Kuatun (2300 m), 27,40n, Br. 117, 40ö, L. J. Klapperich, 4.6. 1938 (Fukien)”, “Paratypoid *Eugnamptus lacunosus* Voss”, “Paralectotype *Eugnamptus lacunosus* Voss, 1948, A. Legalov design. 2010”; 4 male (ZFMK) with labels “Kuatun (2300 m), 27,40n, Br. 117, 40ö, L. J. Klapperich, 5.6. 1938 (Fukien)”, “Paratypoid *Eugnamptus lacunosus* Voss” “Paralectotype *Eugnamptus lacunosus* Voss, 1948, A. Legalov design. 2010”.

Study of the type specimens has shown that *Eugnamptus rusticus* Legalov, 2003, **syn.n.** is a synonym to *Eugnamptus lacunosus* Voss, 1948.

Distribution. China.

Eugnamptus pedestris Voss, 1948 (col. pl. I: 2, 9)

Eugnamptus pedestris Voss, 1948: 155

Remarks. The lectotype is designated by the author – a male from the collection ZFMK with labels “Kuatun

(2300 m), 27,40 n, Br. 117, 40 ö, L.J. Klapperich, 25.5. 1938 (Fukien)", "Type", "*Eugnamptus pedestris* n. sp.", "Lectotype *Eugnamptus pedestris* Voss, 1948, A. Legalov design. 2010".

This species is very close to *Eugnamptus kazantsevi* Legalov, 2003 but differs with the darker rostrum, head and femora and smaller lobes on the apex of aedeagus.

Distribution. China (Fujian).

Tribe **Isotheini** Scudder, 1893

Subtribe **Deboraina** Voss, 1929

Genus **Chinadeporaus** Legalov, 2007

Chinadeporaus bicolor (Voss, 1938)

Deporaus bicolor Voss, 1938: 106

Remarks. The lectotype is designated by the author – a female from the collection ZMHB with labels "female", "42", "Pr. Chekiang, Hangchou", "P.L. Fong leg.", "*Deporaus bicolor* n. sp., Det. E. Voss", "SYNTYPUS *Deporaus bicolor* Voss, 1938 labelled by MNHUB 2010", "Lectotype *Deporaus bicolor* Voss, 1938, A. Legalov design. 2010".

Distribution. China.

Genus **Scolocnemus** Kirsch, 1875

Scolocnemus pilosiusculus Voss, 1922, **stat.res.** (col. pl. I: 3-4)

Scolocnemus pilosiusculus Voss, 1922: 386

Scolocnemus elegantulus Voss, 1938: 83, **syn.n.**

Deporaus subseriatopilosus Voss, 1938: 99, **syn.n.**

Scolocnemus pulchellus f. decolor Voss, 1938: 85

Distribution. Indonesia (Kalimantan), Malaysia (Sabah).

Remarks. The holotype of *Scolocnemus elegantulus* Voss, 1938 was studied by the author – a male from the collection ZMHB with labels "S.O. Borneo, Grabowsky.", "*Scolocnemus elegantulus* n.sp.", "HOLOTYPUS *Scolocnemus elegantulus* Voss, 1938 labelled by MNHUB 2010", "Holotype *Scolocnemus elegantulus* Voss, 1938, A. Legalov det. 2010".

The holotype of *Deporaus subseriatopilosus* Voss, 1938 was studied by the author – a female from the collection ZMHB with labels "S.O. Borneo, Grabowsky.", "*Deporaus (Arodepus) subseriatopilosus* n. sp.", "HOLOTYPUS *Deporaus subseriatopilosus* Voss, 1938 labelled by MNHUB 2010", "Holotype *Deporaus subseriatopilosus* Voss, 1938, A. Legalov det. 2010".

The study of type specimens has shown that *Scolocnemus elegantulus* Voss, 1938, **syn.n.** and *Deporaus subseriatopilosus* Voss, 1938, **syn.n.** are synonyms to *Scolocnemus pilosiusculus* Voss, 1922.

Subtribe **Anisomerinina** Legalov, 2003

Genus **Anisomerinus** Voss, 1933

Anisomerinus proteae Voss, 1933 (col. pl. I: 5-6, 10)

Anisomerinus proteae Voss, 1933: 53

Remarks. The lectotype is designated by the author – a male from the collection ZMHB with labels "Hist.-Coll. (Coleoptera), Nr. 3453, Rhynchites Proteae Lichtenst., Promont. B. Sp., Lichtenst., Zool. Mus. Berlin", "SYNTYPUS *Anisomerinus proteae* Voss, 1933 labelled by MNHUB 2010", "Lectotype *Anisomerinus proteae* Voss, 1933, A. Legalov design. 2010". The paralectotypes are designated by the author – a female from the collection ZMHB with labels "Hist.-Coll. (Coleoptera), Nr. 3453,

Rhynchites Proteae Lichtenst., Promont. B. Sp., Lichtenst., Zool. Mus. Berlin", "SYNTYPUS *Anisomerinus proteae* Voss, 1933 labelled by MNHUB 2010", "Paralectotype *Anisomerinus proteae* Voss, 1933, A. Legalov design. 2010" and a female from the collection ZMHB with labels "3453", "Pr. B. Sp., Lichtenst.", "Proteae Lichtenst.", "*Anisomerinus proteae* n. sp., Det. E. Voss", "SYNTYPUS *Anisomerinus proteae* Voss, 1933 labelled by MNHUB 2010", "Paralectotype *Anisomerinus proteae* Voss, 1933, A. Legalov design. 2010".

Distribution. S-Africa.

Tribe **Rhynchitini** Gistel, 1848

Subtribe Rhynchitina Gistel, 1848

Genus **Caporhynchites** Legalov, 2003

Caporhynchites longicollis (Gyllenhal, 1839)

Rhynchites longicollis Gyllenhal, 1839: 332

Remarks. The specimens were studied by the author – a male from the collection MRAC with labels "Musée du Congo, S Afr., Ebitenhaege (don Marschall)", "R. Dét, J 3912", "S. Africa, Nitenhage, 9.XII.1900, J.A. Neil", "*Rhynchites longicollis* Gyll., Det. G.A.K. Marshall", and the second specimen – a female from the collection MRAC with labels "Natal Estcourt", "30.I.1899, Dimock Brown", "Coll. Mus. Congo (leg. E. Voss)", "*Involvulus longicollis* Gyll., E. Voss det., 1954".

Distribution. S-Africa.

Genus **Philippinorhynchites** Legalov, 2007

Philippinorhynchites azurescens (Voss, 1932), **comb.n., placem.n.** (col. pl. I: 7)

Rhynchites azurescens Voss, 1932: 563

Remarks. The lectotype is designated by the author – a female from the collection USNM with labels "Surigao, Mindanao, Baker", "17108", "Recd ex. Voss Mch 1932", "*Rhynchites azurescens* n. sp., Det. E. Voss", "Lectotype *Rhynchites azurescens* Voss, 1932, A. Legalov design. 2010".

Distribution. Philippines.

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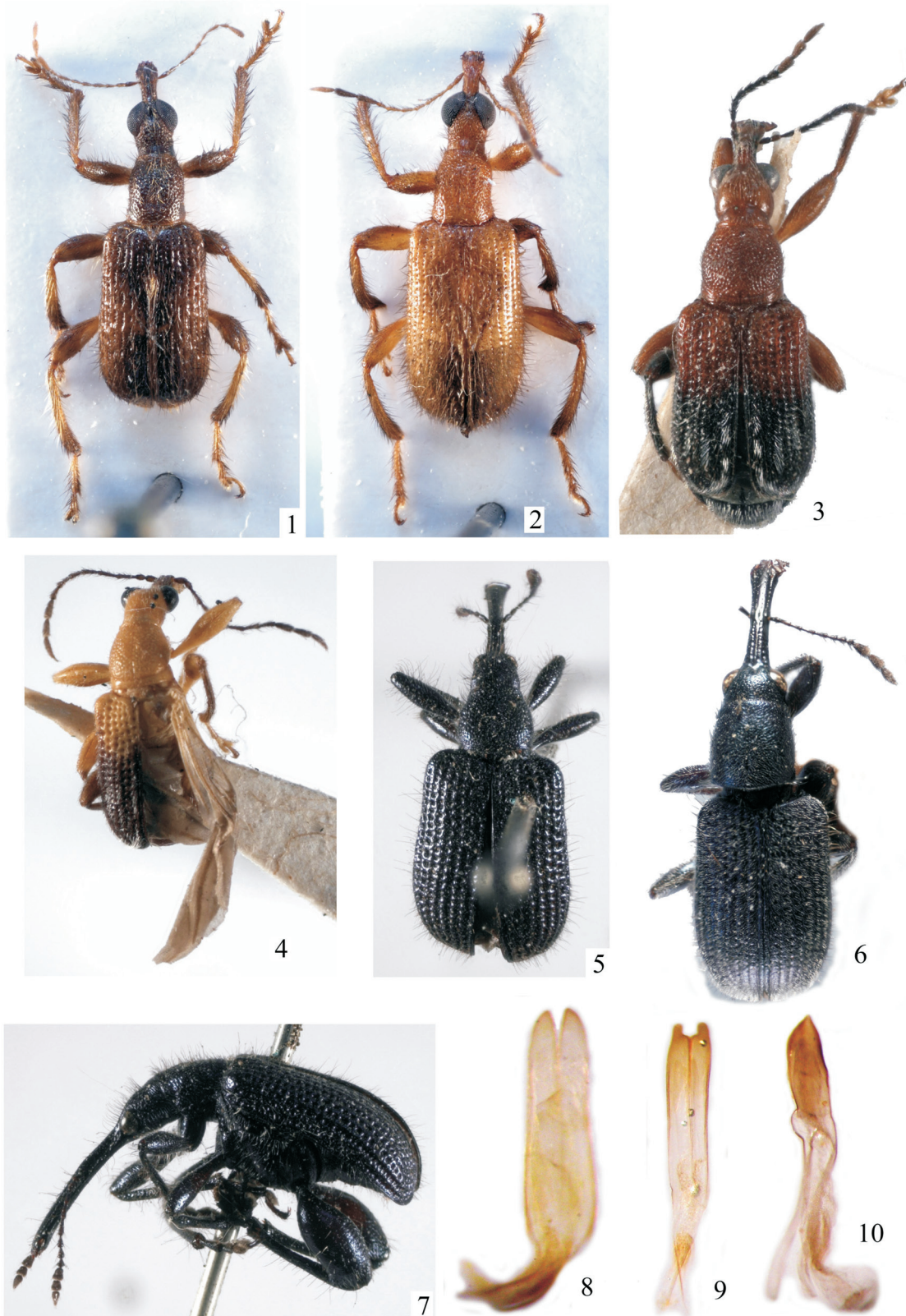
The author is thankful to his colleagues for the help with the work.

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Figs. 1-10. Rhynchitidae gen. sp.: habitus: 1 – *Eugnamptus lacunosus* (lectotype), 2 – *E. pedestris* (lectotype), 3 – *Deporaus subseriatopilosus* (holotype), 4 – *Scolocnemus elegantulus* (holotype), 5-6 – *Anisomerinus proteae* (lectotype), 7 – *Philippinorhynchites azurescens* (lectotype); aedeagus: 8 – *Eugnamptus lacunosus* (lectotype), 9 – *E. pedestris* (lectotype), 10 – *Anisomerinus proteae* (lectotype).

Рис. 1-10. Rhynchitidae gen. sp.: внешний вид: 1 – *Eugnamptus lacunosus* (лектотип), 2 – *E. pedestris* (лектотип), 3 – *Deporaus subseriatopilosus* (голотип), 4 – *Scolocnemus elegantulus* (голотип), 5-6 – *Anisomerinus proteae* (лектотип), 7 – *Philippinorhynchites azurescens* (лектотип); эдеагус: 8 – *Eugnamptus lacunosus* (лектотип), 9 – *E. pedestris* (лектотип), 10 – *Anisomerinus proteae* (лектотип).