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A REVIEW OF FOSSIL AND RECENT SPECIES OF THE FAMILY ITHYCERIDAE (COLEOPTERA) FROM THE WORLD FAUNA

A.A. Legalov

[Легалов А.А. Обзор вымерших и рецентных видов семейства Ithyceridae (Coleoptera) мировой фауны]
Institute of Animal Systematics and Ecology, Siberian Zoological Museum, Frunze street, 11, 630091, Novosibirsk, Russia
Институт систематики и экологии животных СО РАН, Сибирский зоологический музей, Фрунзе, 11, 630091, Новосибирск, Россия. E-mail: legalov@ngs.ru

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Ключевые слова: *Coleoptera, Ithyceridae, мировая фауна.*

Summary. The family review is performed. Eccoptarthrinae, Ulyaninae, Slonikinae and Ithycerinae are united into one family. New tribes Chilecarini Legalov, trib.n. (type genus: *Chilecar* Kuschel, 1992), Ulyaniscini Legalov, trib.n. (type genus: *Ulyanisca* Gratshev, 1998) and subtribe Carodesina Legalov, subtrib.n. (type genus: *Carodes* Zimmermann, 1994) are described. New systematic placements are proposed: tribes Paleocartini Legalov, 2003, placem.n. and Brenthorrhinoidini Legalov, 2003, placem.n. are transfered from family Rhynchitidae to family Ithyceridae; subfamily Slonikinae Zherichin, 1977, placem.n. is transfered from family Nemonychidae to family Ithyceridae; genus *Ulyanisca* Gratshev, 1998, placem.n. is transfered from subfamily Ulyaninae to subfamily Slonikinae; genus *Gratshevibelus* Soriano, 2009, placem.n. is transfered from family Belidae to family Ithyceridae; *Montsecanomalus rugosithorax* (Gratshev & Zherikhin, 2000), placem.n., *M. zherichini* (Liu & Ren, 2006), placem.n. and *M. punctatus* (Liu & Ren, 2007), placem.n. are transfered from genus *Cretonanophyes* Zherikhin, 1977 to genus *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006. Changes of status: Ulyaninae Zherichin, 1993, stat.n. is downgraded from family to subfamily, Caritae Thompson, 1992, stat.n. and Baissorhynchitae Zherikhin, 1993, stat.n. are downgraded from subfamilies to supertribes, Mesophyletini Poinar, 2006, stat.n. is downgraded from subfamily to tribe, *Leptocar* Liu & Ren, 2007, stat.n. is downgraded from genus to subgenus, Nebrenthorrhinini Legalov, 2007, stat.n. is upgraded from subtribe to tribe. Four new combinations are proposed: *Montsecanomalus rugosithorax* (Gratshev & Zherikhin, 2000), comb.n., *M. zherichini* (Liu & Ren, 2006), comb.n., *M. punctatus* (Liu & Ren, 2007), comb.n. and *M. polychaetus* (Liu & Ren, 2007), comb.n.

Резюме. Выполнен обзор семейства. В одно семейство объединены Eccoptarthrinae, Ulyaninae, Slonikinae и Ithycerinae. В работе описаны новые трибы Chilecarini Legalov, trib.n. (типовой род: *Chilecar* Kuschel, 1992), Ulyaniscini Legalov, trib.n. (типовой род: *Ulyanisca* Gratshev, 1998) и подтриба Carodesina Legalov, subtrib.n. (типовой род: *Carodes* Zimmermann, 1994). Изменено систематическое положение триб Paleocartini Legalov, 2003, placem.n. и Brenthorrhinoidini Legalov, 2003, placem.n. (из семейства Rhynchitidae в семейство Ithyceridae), подсемейства Slonikinae Zherichin, 1977, placem.n. (из семейства Nemonychidae в семейство Ithyceridae), рода *Ulyanisca* Gratshev, 1998, placem.n. (из подсемейства Ulyaninae в подсемейство Slonikinae), рода *Gratshevibelus* Soriano, 2009, placem.n. (из семейства Belidae в семейство Ithyceridae), *Montsecanomalus rugosithorax* (Gratshev & Zherikhin, 2000), placem.n., *M. zherichini* (Liu & Ren, 2006), placem.n. и *M. punctatus* (Liu & Ren, 2007), placem.n. (из рода *Cretonanophyes* Zherikhin, 1977 в род *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006). Изменен систематический статус Ulyaninae Zherichin, 1993, stat.n. (из семейства до подсемейства), Caritae Thompson, 1992, stat.n. и Baissorhynchitae Zherikhin, 1993, stat.n. (из подсемейств до надтриб), Mesophyletini Poinar, 2006, stat.n. (из подсемейства до трибы), *Leptocar* Liu & Ren, 2007, stat.n. (из рода до подрода), Nebrenthorrhinini Legalov, 2007, stat.n. (из подтрибы до трибы). Установлены 4 новые комбинации (*Montsecanomalus rugosithorax* (Gratshev & Zherikhin, 2000), comb.n., *M. zherichini* (Liu & Ren, 2006), comb.n., *M. punctatus* (Liu & Ren, 2007), comb.n. и *M. polychaetus* (Liu & Ren, 2007), comb.n.

INTRODUCTION

Distinction between families in the superfamily Curculionoidea is a great problem. Different opinions have been published in this respect [Alonso-Zarazaga, Lyal, 1999; Arnoldi, 1977; Calder, 1989, 1990; Crowson, 1955, 1981, 1984, 1985, 1986; Kuschel, 1995; Lawrence, Newton, 1995; Legalov, 2003, 2006, 2007; Marvaldi, 1997; Marvaldi, Morrone, 2000; Marvaldi, Sequeira, O'Brien, Farrell, 2002; Marvaldi, Oberprieler, Lyal, Bradbury, Anderson, 2006; Morimoto, 1962a, 1962b, 1976; Morrone, 1997; Oberprieler, Marvaldi, Anderson, 2007; Ponomarenko, 1983; Sanborne, 1981; Thompson, 1992; Voss, 1965a; Wood, 1986; Zherichin, Egorov, 1991; Zherikhin, Gratshev, 1995; Zimmerman, 1993, 1994a, 1994b].

We can consider as generally accepted that the most primitive family is Nemonychidae which emerged in the Jurassic [Kuschel, 1983; Legalov, 2006; Zherikhin, 1993]. The family Obrieniidae from the Triassic does not belong to the superfamily Curculionoidea [Legalov, 2002, 2006; Kuschel, 2003] as was supposed first by Gratshev and Zherikhin [2003]. Obrieniidae belong to Archostemata because of the structure of the metepisternum, the elongated rostrum being a convergence. For example, species of the families Lycidae (Cantharoidea) and Salpingidae (Tenebrionoidea) from the recent fauna have an enlarged rostrum.

The majority of recent species of the family Nemonychidae develop in the sporophylls inside dehiscing male conifer strobili of coniferous [Oberprieler, Marvaldi, Anderson, 2007]. Transition of these beetles to inhabiting fruits and vegetative parts most likely was a basis for differentiation of this group in the Late Jurassic. The transition of Curculionid beetles to feeding on metasperms in the Cretaceous promoted the origin of the basic groups of the superfamily Curculionoidea. It was assumed that development in decaying gymnosperm sporophylls

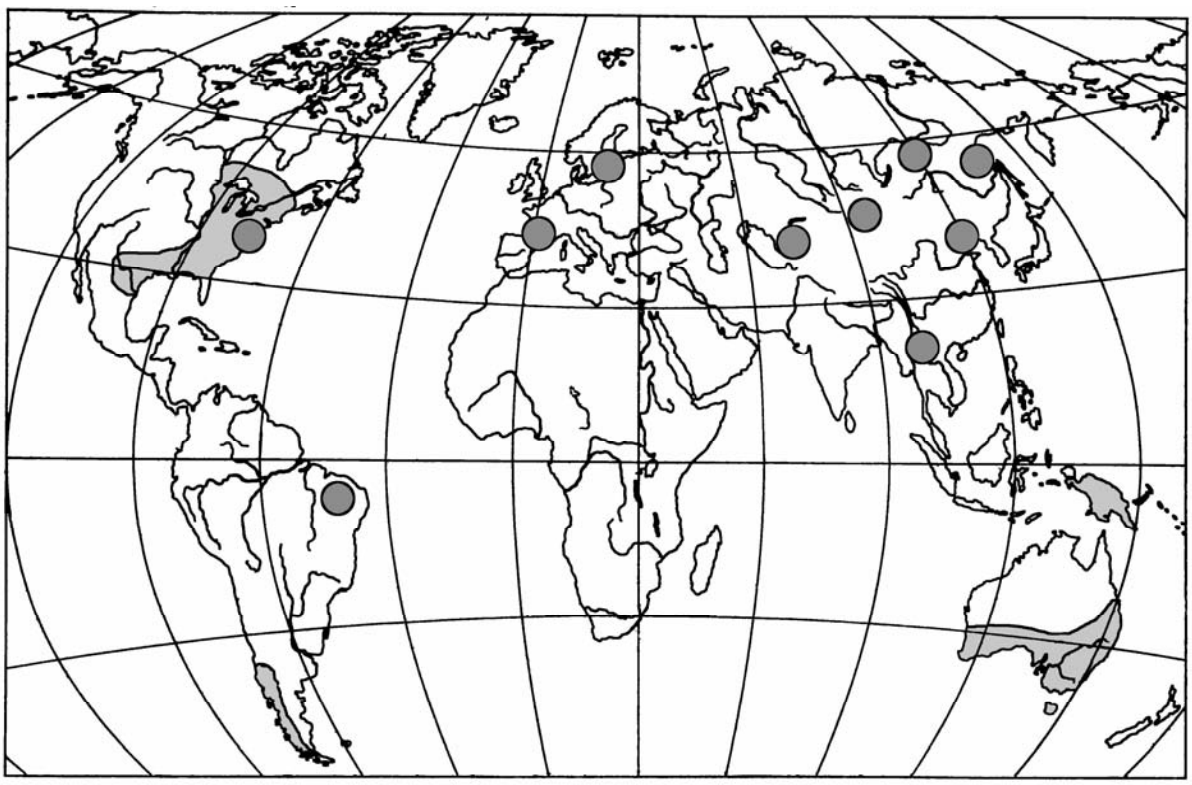

Fig. 1. Distribution of recent and fossil Ithyceridae. Remarks: Circle – places of the finds of recent taxa and continuous grey – area of recent taxa.

[Oberprieler, Marvaldi, Anderson, 2007] had resulted in the origin of the family Anthribidae known from the Cretaceous [Zherichin, 1993]. Development in fruits resulted in the origin of Ithyceridae (=Eccoptarthridae). It may be safely suggested that the families Rhynchitidae and Brentidae, and possibly Curculionidae diverged from this group. Family Belidae was formed because of transition to development in vegetative organs and Oxycorynidae diverged from this group. Probably Rhynchitidae diverged directly from Nemonychidae in the Cretaceous along with adaptation to development in the buds of angiosperm. The question about possible parallelisms arises. Probably the combination of the gular sutures and a reducted labrum with a distinct suture arose several times in different groups. Presently we may observe this in Belidae, which have 2 sutures joining apically to form a triangle. If we recognise parallelism of the first character then inclusion of the family Allocorinidae (with unpaired gular suture) into the family Oxycorynidae (with paired gular suture) is justified [Marvaldi, Oberprieler, Lyal, Bradbury, Anderson, 2006]. Family Attelabidae could be separated directly from Belidae [Legalov, 2002] or from the subfamily Rhinocartinae of the family Rhynchitidae. Divergence of Attelabidae from Ithyceridae is probable. Peculiarity of species of the family Ithyceridae (=Eccoptarthridae, = Caridae) was noted by many authors. Thompson [1992] and Kuschel [1995] have described it as subfamily Carinae of the families Belidae and Brentidae, respectively. Zimmermann [1994] has described Caridae as independent family.

Recent species of Ithyceridae are distributed in North America, southern South America, New Guinea [Oberprieler, Marvaldi, Anderson, 2007; Setliff, 2007] and Australia. The fossil forms are known from North America, South America, Europe and Asia (fig. 1).

In this article the data from the following works were used: Alonso-Zarazaga, Lyal [1999]; Arnoldi [1977]; Gratshev [1998]; Gratshev, Zherichin [1997, 1999, 2000a, 2000b, 2003]; Gratshev, Zherikhin, Jarzembowski [1997]; Kuschel [1983, 1992, 1995]; Liu, Ren [2006, 2007]; Oberprieler, Marvaldi, Anderson [2007]; Poinar [2006, 2008]; Sanborne [1981]; Soriano, Gratshev, Delclòs [2006]; Thompson [1992]; Voss [1953, 1965b]; Zherichin [1977, 1993]; Zherichin, Gratshev [2004]; Zimmerman [1994a] etc.

RESULTS

Family Ithyceridae Schoenherr, 1823

(Col. pl. I – a – j, II – a – j; III – a–p; IV, a – m)

Description. Body light or dark, with appressed or erect setae. Head constricted behind eyes or not constricted behind them. Rostrum short, shorter than pronotum, wide, widened to apex, flattened, with carina; or very long, or medium, longer than head, straight or slightly curved, sometimes acuminate to apex. Mandible with teeth on interior and without teeth on exterior margins or with teeth on exterior margin (rhynchitoid type). Maxillary palps sometimes long. Labial palps 2-, 3-, or 4-segmented. Antennae inserted submedially, or subapically, or inserted in the 1st third of the rostrum, or before the base of the rostrum, laterally, or ventrally, or dorsally. Eyes from medium to large, convex. Frons wide or of equal width with the rostrum at its basis, or narrow. Temples short or elongated. Antennae long. Scapus of the antennae more or less elongated. Segments of the funicle

trapezoid. Clava noncompact, or almost compact, or compact, shorter and wider than funicle, tear-shaped. Pronotum almost rectangular or almost trapezoid, sometimes transversal, sometimes with lateral carina. Sides almost direct or rounded. Disc convex or flattened, punctate. Scutellum triangular or quadrangular, wide. Elytra with irregular rows of the points, or regular rows, elongated, sometimes almost parallel, sharply narrowed in the apical third. Humeri weakly smoothed. The greatest width on the middle or behind it. Intervals wide, punctate. Scutellar striole usually absent. Striae reduced, or very weak, or distinct. 9th striae merges with 10th striae before metacoxa, or 9th striae not merges with 10th striae. Apex of the elytra rounded or separated. Prothorax short or elongated. Postorbital blades absent or weak. Procoxa located near the first margin of the prothorax, or near its base, or in the middle. Pre- and postcoxal parts of the prothorax elongated or not elongated. Mesepisternum narrow. Metepisternum very narrow. Abdomen slightly convex. All ventrites of almost equal length, or 1st and 2nd ventrites longer, or 1st ventrite short, or 1st ventrite long, 3rd and 4th ventrites shorter, 5th ventrite shorter than 4th or of equal length to it, or 2nd - 5th ventrites shorter, of approximately equal length. Pygidium in males usually large and convex. Legs long. Femora widened, sometimes with teeth. Tibiae robust or narrow, almost direct, weak or strongly curved, or slightly biconcave, sometimes with mucro and spurs. Tarsi long. 1st segment wide, trapezoid or not widened; larger in the fore legs than in the middle or hind legs. 2nd segment triangular or bilobed. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced, sometimes without teeth, usually with very weak teeth at the basis. Length of body: 1.1-18.0 mm.

Remarks. I accept a large volume of this family. I accept a point of view by Zherichin & Gratshev's [1995] that Jurassic forms together with the Eocene and recent forms are a monophyletic group. This family has emerged in the Late Jurassic and was dominating in the Cretaceous [Gratshev, Zherichin, 1999]. In the end of the Cretaceous the most part of its species became extinct. Usually we deal with badly preserved imprints of the fossil forms and some advanced recent species of this family.

I transfer the tribes Paleocartini and Brenthorrhinoidini, being intermediate from Nemonychidae to Ithyceridae and Rhynchitidae, from the family Rhynchitidae to the family Ithyceridae. These groups are characterised by the abdomen structure typical for Ithyceridae but are close to Rhynchitidae by the mandible structure.

I include into this family also the subfamilies Ulyaninae and Slonikinae described from the Cretaceous because they are characteristic with the mandible with teeth at exterior and interior margins (*Ulyaniana* Zherichin, 1993), subapically or submedially placed antennae, and free almost identical ventrites of the abdomen.

I transfer Ithycerinae from the family Brentidae into the family Ithyceridae, together with Eccoptarthrinae, Ulyaninae and Slonikinae because it is characterised by the abdomen similar to that of Eccoptarthrinae and Ulyaninae. Disposition of this group as subfamily in family Brentidae is incorrect [Marvaldi, Sequeira, O'Brien, Farrell, 2002; Oberprieler, Marvaldi, Anderson, 2007] because all Brentidae have the abdomen with longer 1st and 2nd ventrites and short 3rd and 4th ventrites.

It may be safely suggested that on early stage of development (in Jurassic) this was the same family with Nemonychidae and Belidae. Further differentiation of this group and extinction of many taxa was the basis for division of this group into separate families (Nemonychidae, Belidae, and Ithyceridae). The family Ithyceridae consists of isolated subfamilies (Eccoptarthrinae, Ulyaninae, Slonikinae, and Ithycerinae). The first develops in generative organs. The mode of life of the second and third is unknown. The larvae of Ithycerinae live in soil.

Key to subfamilies of the family Ithyceridae

1. Antennae inserted dorsally ..... **Ulyaninae**
– antennae inserted laterally or ventrally 2
2. Rostrum strongly narrowed to apex (lateral view) ..... **Slonikinae**
– rostrum not narrowed or slightly narrowed to apex (lateral view)..... 3
3. Rostrum short and wide. Large beetles (11.6.-14.5 mm) ..... **Ithycerinae**
– rostrum long and narrow. Small beetles (1.1-6.2 mm) ..... **Eccoptarthrinae**

Key to genera and subgenera of the family Ithyceridae*

*Genus *Paleocartus* Legalov, 2003 is not included into the key because the structure of its 1st segment of the tarsi is not known. This genus is characterised by subapically inserted antennae and the mandible with a tooth on the interior margin.

1. Rostrum short and wide, with carina ..... ***Ithycerus***
– rostrum long and narrow 2
2. Rostrum strongly narrowed to apex (lateral view) 3
– rostrum not narrowed or slightly narrowed to apex (lateral view) 4
3. Femora without teeth. Precoxal margin of the prothorax elongated ..... ***Slonik***
– femora with teeth. Precoxal margin of the prothorax short ..... ***Ulyanisca***
4. Antennae inserted dorsally ..... ***Ulyaniana***
– antennae inserted laterally or ventrally 5
5. 1st segment of tarsi not widened 6
– 1st segment of tarsi widened 11
6. Antennae inserted subapically ..... ***Nebrenthorrhinus***
– antennae inserted submedially or subbasally 7
7. Pronotum without carina on side 8
– pronotum with weak carina on side 9
8. Antennae inserted on the rostrum middle .... ***Abrocar***
– antennae inserted on the rostrum basis ..... ***Auletomacer***
9. 1st segment strongly elongated ..... ***Baltocar***
– 2nd segment weakly elongated 10
10. 2nd and 3rd segments of the tarsi bilobed ..... ***Baissorhynchus***
– 2nd segment triangular ..... ***Cretonanophyes***
11. Procoxa located closer to apical or basal margin of prothorax 12

– procoxa located at the middle of prothorax 18
12. Postcoxal part of prothorax widened 13
– precoxal part of prothorax widened 14
13. Tibiae wide. Femora stronger widened ..... ***Eccoptarthrus***
– tibiae narrow. Femora weaker widened ..... ***Hispanocar***
14. Pronotum without carina on side 15
– pronotum with weak carina on side 16
15. Frons strongly convex ..... ***Gratshevibelus***
– frons weakly convex 16
16. Claws with tooth. Tarsi elongated ..... ***Martinsnetoa***
– claws without tooth. Tarsi short ..... ***Cretocar***
17. Tarsi with dense setae. 1st ventrite longer than 2nd ventrite ..... ***Jarzembowskia***
– tarsi without dense setae. 1st ventrite shorter than 2nd ventrite ..... ***Gobicar***
18. Antennae inserted submedially. Mandible of a rhynchitoid type ..... ***Brenthorrhinoides***
– antennae inserted subbasally 19
19. Tibiae curved, narrower ..... ***Emanrhynchus***
– tibiae straight, wider 20
20. Rostrum longer than head and pronotum taken together (*Montsecanomalus*) 21
– rostrum of equal length, or little longer, or shorter than head and pronotum taken together 22
21. Procoxa shorter ..... ***Montsecanomalus***
– procoxa longer ..... ***Leptocar***
22. Antennae inserted ventrally ..... ***Car***
– antennae inserted laterally 23
23. Elytra almost rectangular, with heterogeneous setae ..... ***Carodes***
– elytra oval, with uniform setae 24
24. Head distinctly constricted behind eyes. Middle tibiae of males without mucro ..... ***Caenominurus***
– head not constricted behind eyes. Middle tibiae of males with mucro ..... ***Chilecar***

Subfamily Eccoptarthrinae L. Arnoldi, 1977

(Col. pl. I – a – j, II – a – j; IV, a – m)

Eccoptarthrini L. Arnoldi, 1977: 169

Type genus: *Eccoptarthrus* L. Arnoldi, 1977

Description. Body light or dark, with appressed or erect setae. Head constricted behind eyes or not constricted behind them. Rostrum very long, or long and weakly curved, or medium. Mandible with teeth on interior and without teeth on exterior margin, or with teeth on exterior margin. Maxillary palps sometimes long. Labial palps 2-, or 3-segmented. Antennae inserted submedially, or subapically, or in the 1st third of the rostrum, or before the rostrum basis, laterally or ventrally. Eyes from medium to large, convex. Frons wide or of equal length to the width of the rostrum at its basis, or narrow. Temples short or elongated. Antennae long. Scapus of the antennae more or less elongated. Segments of the funicle trapezoid. Clava noncompact or almost compact. Pronotum almost rectangular or almost trapezoid, sometimes transversal, sometimes with lateral carina. Sides almost direct or rounded. Disc convex, punctate. Scutellum triangular or quadrangular, wide. Elytra elongated, with irregular or regular rows of the points. Humeri weakly smoothed. The greatest width at the middle or behind it. Striae reduced, or very weak or distinct. 9th striae merge with 10th striae before metacoxa. Apex of elytra rounded. Prothorax short or elongated. Procoxa located near the apical margin of prothorax or near its basal margin, or at the middle. Pre- and postcoxal parts of pronotum elongated or not elongated. Mesepisternum narrow. Metepisternum very narrow. Abdomen slightly convex. Ventrites of almost equal length, or 1st and 2nd ventrites long, or 1st ventrite short, or 1st ventrite short. 3rd and 4th ventrites shorter. 5th ventrite shorter than 4th ventrite, or equal length to it, or 2nd - 5th ventrites short, of approximately equal length. Legs long. Procoxa conic. Femora widened. Tibiae robust or narrow, almost direct, weak or strongly curved, or weakly biconcave. Tarsi long. 1st segment wide, trapezoid or not widened, in fore legs larger than in middle legs. 2nd segment triangular or bilobed. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced, sometimes without teeth, usually with very weak teeth at the basis. Length of body: 1.1-6.2 mm.

Remarks. Eccoptarthrinae are divisible into 3 supertribes basing on the place of the antennal attachment and the mandible structure: supertribe Eccoptarthritae with submedially or subapically inserted antennae and mandible without teeth or as in Rhynchitidae (a rhynchytoid type); supertribe Baissorhynchitae with antennae inserted in the 1st third of the rostrum and possibly simple mandible; supertribe Carintae with antennae inserted near the rostrum basis and the mandible as in Rhynchitidae or simple.

Supertribe Eccoptarthritae L. Arnoldi, 1977

(Col. pl. I – a – j, II – a–j)

Eccoptarthrini L. Arnoldi, 1977: 169

Type genus: *Eccoptarthrus* L. Arnoldi, 1977

Description. Body brown. Head constricted behind eyes, or not constricted behind them. Rostrum long, slightly curved, or medium, little longer than head. Mandible with teeth on interior and without teeth on exterior margin, or with teeth on exterior margin. Maxillary palps sometimes long. Antennae inserted submedially, laterally or subapically. Eyes from medium to large. Frons wide, or equal in length to the width of the rostrum at its base. Temples short or elongated. Antennae long. Scapus of the antennae elongated. Segments of the funicle trapezoid. Clava noncompact, large. Pronotum almost rectangular, sometimes transversal. Sides almost direct or rounded. Disc convex, punctate. Scutellum triangular or quadrangular, wide. Elytra elongated, with striae. Humeri weakly smoothed. The greatest width in the middle or behind it. Striae reduced or probably weakly expressed. Prothorax long. Procoxa elongated, located near the apical margin of the prothorax, or near basal margin, or in the middle. Pre- and postcoxal parts of the prothorax elongated or not elongated. 1st ventrite long. 2nd - 5th ventrites short, of approximately equal length. Legs long. Procoxa conic. Femora widened. Tibiae robust or narrow. Tarsi long. 1st segment wide, trapezoid or not widened, that in protarsi larger than in mesotarsi. 2nd segment triangular. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced. Length of body: 2.5-6.0 mm.

Remarks. 4 tribes are considered within the supertribe Eccoptarthritae: Eccoptarthrini (with submedially inserted

antennae and a widened 1st segment of the tarsi), Palocartini (with a not widened 1st segment of the tarsi, simple mandible, and subapically inserted antennae), Brenthorrhinoidini (with the mandible of a rhynchytoid type, submedially inserted antennae and widened 1st segment of the tarsi), and Nebrenthorrhinini Legalov, 2007, stat.n. (with the mandible of a rhynchytoid type, subapically inserted antennae and not widened 1st segment of the tarsi).

Key to genera of the supertribe Eccoptarthritae

1. Antennae inserted submedially 2
– Antennae inserted subapically 3
2. 1st segment of the tarsi widened ..... ***Brenthorrhinoides***
– 1st segment of the tarsi not widened ..... ***Abrocar***
3. Mandible of a rhynchitoid type ..... ***Nebrenthorrhinus***
– Mandible without teeth on exterior margin..... ..... ***Paleocartus***

Tribe Eccoptarthrini L. Arnoldi, 1977
Eccoptarthrini L. Arnoldi, 1977: 169
Type genus: *Eccoptarthrus* L. Arnoldi, 1977
Description. Head constricted behind eyes, or not constricted behind them. Rostrum long, slightly curved. Antennae inserted submedially laterally. Frons wide, equal in length to the width of the rostrum at its base. Eyes large. Temples short or elongated. Antennae long. Scapus of the antennae elongated. Segments of the funicle trapezoid. Clava noncompact. Pronotum almost rectangular. Sides almost direct. Disc convex, punctate. Scutellum triangular. Elytra elongated, with striae. Humeri weakly smoothed. Prothorax long. Procoxa elongated, located near the apical margin of the prothorax, or near basal margin, or in the middle. Pre- and postcoxal parts of the prothorax elongated or not elongated. Legs long. Procoxa conic. Femora clavate. Tibiae robust or narrow. Tarsi long. 1st segment wide, trapezoid or not widened, in protarsi larger than in mesotarsi. 2nd segment triangular. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced. Length of body: 2.5-6.0 mm.

Genus *Eccoptarthrus* L. Arnoldi, 1977
Eccoptarthrus L. Arnoldi, 1977: 169
Type species: *Eccoptarthrus crassipes* L. Arnoldi, 1977

***Eccoptarthrus crassipes* L. Arnoldi, 1977**
Eccoptarthrus crassipes L. Arnoldi, 1977: 169
Distribution. Late Jurassic (Kazakhstan: Karatau).

Genus *Abrocar* Liu & Ren, 2006
Abrocar Liu & Ren, 2006: 62
Type species: *Abrocar* Liu & Ren, 2006

***Abrocar brachyorhinos* Liu & Ren, 2006**
Abrocar brachyorhinos Liu & Ren, 2006: 64
Distribution. Late Jurassic (China: Liaoning Prov.).

***Abrocar macilentus* Liu & Ren, 2007**
Abrocar macilentus Liu & Ren, 2007: 644
Distribution. Late Jurassic or Early Cretaceous (China: Liaoning Prov.).

Tribe Paleocartini Legalov, 2003, placem.n.
Paleocartini Legalov, 2003: 78
Type genus: *Paleocartus* Legalov, 2003
Description. Body dark. Rostrum medium, little longer than head. Antennae inserted subapically. Mandible with teeth on interior margin and without teeth on exterior margin. Eyes from medium to large. Frons wide. Antennae long, reaching apical margin of the pronotum. Scapus oval, thicker than funicle segments. Segments of the funicle more or less elongated. Clava noncompact, large. Pronotum transversal, with rounded sides, densely punctate. Elytra almost rectangular, sometimes elongated. The greatest width in the middle or behind it. Humeri somewhat smoothed. Striae reduced or probably weakly expressed. Legs long. Femora widened. Length of body: 2.8-3.7 mm.

Genus *Paleocartus* Legalov, 2003
Paleocartus Legalov, 2003: 78
Type species: *Brenthorrhinoides pubescens* Gratshev & Zherikhin, 1996

***Paleocartus pubescens* (Gratshev & Zherikhin, 1996)**
Brenthorrhinoides pubescens Gratshev & Zherikhin, 1996: 115
Distribution. Late Jurassic (Kazakhstan: Karatau).

***Paleocartus robustus* (Gratshev & Zherikhin, 1996)**
Brenthorrhinoides robustus Gratshev & Zherikhin, 1996: 115
Distribution. Late Jurassic (Kazakhstan: Karatau).

Tribe Brenthorrhinoidini Legalov, 2003, placem.n.
Brenthorrhinoidini Legalov, 2003f: 88
Type genus: *Brenthorrhinoides* Gratshev & Zherikhin, 1996
Description. Body brown, possibly naked. Rostrum medium, slightly widened to apex. Antennae possibly submedial. Mandible with teeth on exterior margin. Eyes large. Frons wide. Antennae long, reaching apical margin of the pronotum. Scapus distinct. Funicle segments elongated. Clava noncompact, large. Pronotum strongly transversal, with rounded sides, densely punctate. Scutellum quadrangular, wide. Elytra almost rectangular. The greatest width in the middle. Humeri smoothed. Striae distinct, points in them small and dense. Legs long. Femora widened. Tibiae long, wide, almost direct. Tarsi long with strongly elongated and widened 1st segment. Length of body: 4.0 mm.

Genus *Brenthorrhinoides* Gratshev & Zherikhin, 1996
Brenthorrhinoides Gratshev & Zherikhin, 1996: 119
Type species: *Brenthorrhinoides mandibulatus* Gratshev & Zherikhin, 1996

***Brenthorrhinoides mandibulatus* Gratshev & Zherikhin, 1996**
Brenthorrhinoides mandibulatus Gratshev & Zherikhin, 1996: 115
Distribution. Late Jurassic (Kazakhstan: Karatau).

Tribe Nebrenthorrhinini Legalov, 2007, stat.n.

Nebrenthorrhinina Legalov, 2007: 34

Type genus: *Nebrenthorrhinus* Legalov, 2003

Description. Body brown, possibly naked. Rostrum medium, more or less strongly widened to apex. Antennae inserted subapically. Mandible with teeth on exterior margin. Maxillary palps long. Eyes large. Frons wide. Antennae long. Scapus distinct. Segments of the funicle elongated. Clava noncompact, large. Pronotum strongly transversal, with rounded sides. Scutellum quadrangular, wide. Elytra almost rectangular. The greatest width in the middle. Humeri smoothed. 1st ventrite long. 2nd - 5th ventrites short, of approximately equal length. Legs long. Femora widened. Profemora very strongly widened. Tibiae long, thin, curved. Tarsi short, with short 1st segment. Length of body: 3.8 mm.

Genus *Nebrenthorrhinus* Legalov, 2003

Nebrenthorrhinus Legalov, 2003f: 89

Type species: *Nebrenthorrhinus lacasai* Gratshev & Zherikhin, 2000

***Nebrenthorrhinus lacasai* (Gratshev & Zherikhin, 2000)**

Brenthorrhinoides lacasai Gratshev & Zherikhin, 2000b: 41

Distribution. Early Cretaceous (Spain: Montsec Range).

Supertribe Baissorhynchitae Zherikhin, 1993, stat. n.

Baissorhynchini Zherikhin, 1993: 30

Type genus: *Baissorhynchus* Zherikhin, 1977

Description. Body dark, sometimes legs light. Head constricted behind eyes, or not constricted behind them. Rostrum long or very long, slightly curved, or almost straight. Mandible without teeth on exterior margin. Antennae inserted in the first third of the rostrum. Frons narrow. Eyes large, weakly or strongly convex. Temples short. Antennae long. Scapus of the antennae more or less elongated. Clava noncompact, or almost compact. Pronotum almost trapezoid, sometimes with lateral carina, sometimes elongated. Disc convex or flattened, punctate. Elytra elongated, with irregular or regular rows of the points, or without rows. Humeri weakly smoothed. Striae very weak, or distinct, or absent. 9th stria merges with 10th stria before metacoxa. Prothorax short or elongated. Procoxa located in the middle, or near basal margin. Pre- or postcoxal parts of prothorax elongated. Metepisternum very narrow. Abdomen slightly convex. Ventrites of almost equal length, or 1st and 2nd ventrites long, or 1st ventrite short or 3rd and 4th ventrites shorter, or 5th ventrite shorter than 4th ventrite, or of equal length to it, or 1st ventrite long, 2nd ventrite much shorter than 1st ventrite, 3rd ventrite hardly shorter than 2nd, 4th ventrite longer than 3rd ventrite, 5th ventrite elongated. Pygidium sometimes exposed. Legs long. Procoxa conic. Mesocoxa connected. Femora widened. Tibiae robust or narrow, almost direct, weakly or strongly curved. Tibiae and tarsi sometimes with dense setae. Tarsi long. 1st segment wide, trapezoid or not widened. 2nd segment triangular or bilobed. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced, with teeth, or without them. Length of body: 1.1-3.4 mm.

Remarks. 2 tribes (Baissorhynchini and Mesophyleti) have been assigned to this supertribe.

Key to subtribes of the supertribe Baissorhynchitae

1. Body wider. Scapus not elongated or weakly elongated. Elytra usually with rows of points..... ..... **Baissorhynchini**
– Body elongated. Scapus strongly elongated. Elytra without rows of points ..... **Mesophyletini**

Tribe Baissorhynchini Zherikhin, 1993

Baissorhynchini Zherikhin, 1993: 30

Type genus: *Baissorhynchus* Zherikhin, 1977

Description. Body dark. Head constricted behind eyes, or not constricted behind them. Rostrum long or very long, slightly curved. Mandible without teeth on exterior margin. Antennae inserted in the first third of the rostrum. Frons narrow. Eyes large, slightly convex. Temples short. Antennae long. Scapus of the antennae more or less elongated. Clava noncompact, or almost compact. Pronotum almost trapezoid, sometimes with lateral carina. Disc convex, punctate. Elytra elongated, with irregular or regular rows of points. Humeri weakly smoothed. Striae very weak or distinct. 9th stria merges with 10th stria before metacoxa. Prothorax short or elongated. Procoxa located in its middle, or near basal margin. Pre- or postcoxal parts of the prothorax elongated. Metepisternum very narrow. Abdomen slightly convex. Ventrites of almost equal length, or 1st and 2nd ventrites long, or 1st ventrite short, or 3rd and 4th ventrites shorter, or 5th ventrite shorter than 4th ventrite, or they are of equal length. Legs long. Procoxa conic. Mesocoxa connected. Femora widened. Tibiae robust or narrow, almost direct, weak or strongly curved. Tibiae and tarsi sometimes with dense setae. Tarsi long. 1st segment wide, trapezoid or not widened. 2nd segment triangular or bilobed. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced, sometimes without teeth. Length of body: 1.1-3.4 mm.

Remarks. The genera *Cretonanophyes* Zherikhin, 1977, *Cretocar* Gratshev & Zherikhin, 2000, *Emanrhynchus* Zherikhin, 1993, *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006 (including *Leptocar* Liu & Ren, 2007), *Baissorhynchus* Zherikhin, 1977, *Gratshevibelus* Soriano, 2009, *Martinsnetoa* Zherichin & Gratshev, 2004, *Jarzembowskia* Zherikhin & Gratshev, 1997, *Hispanocar* Soriano, Gratshev, Delclòs, 2006 and *Gobicar* Gratshev & Zherikhin, 1999 have been assigned to the supertribe Baissorhynchitae.

Key to genera and subgenera of the tribe Baissorhynchini

1. 1st segment of the tarsi not widened. 2
– 1st segment of the tarsi widened. 3
2. 2nd and 3rd segments of the tarsi bilobed ..... ***Baissorhynchus***
– 2nd segment triangular ..... ***Cretonanophyes***
3. Procoxa located closer to apical or basal margin of the prothorax 4
– procoxa located on the prothorax middle 8
4. Postcoxal part of the prothorax widened ..... ***Hispanocar***
– precoxal part of the prothorax widened 5

5. Pronotum without lateral carina 6
– pronotum with weak lateral carina 8
6. Frons strongly convex ..... ***Gratshevibelus***
– frons weakly convex 7
7. Claws with tooth. Tarsi elongated ..... ***Martinsnetoa***
– claws without tooth. Tarsi short ..... ***Cretocar***
8. Tarsi with dense setae. 1st ventrite longer than 2nd ventrite ..... ***Jarzembowskia***
– tarsi without dense setae. 1st ventrite shorter than 2nd ventrite ..... ***Gobicar***
9. Tibiae curved, narrower ..... ***Emanrhynchus***
– tibiae straight, wider (*Montsecanomalus*) 10
10. Procoxa shorter ..... ***Montsecanomalus***
– procoxa longer ..... ***Leptocar***

Genus *Cretonanophyes* Zherikhin, 1977
Cretonanophyes Zherikhin, 1977: 178
Type species: *Cretonanophyes longirostris* Zherikhin, 1977

***Cretonanophyes longirostris* Zherikhin, 1977**
Cretonanophyes longirostris Zherikhin, 1977: 178
Distribution. Early Cretaceous (Burjatia: Basia).

Genus *Cretocar* Gratshev & Zherikhin, 2000
Cretocar Gratshev & Zherikhin, 2000a: 246
Type species: *Cretocar luzzii* Gratshev & Zherikhin, 2000

***Cretocar luzzii* Gratshev & Zherikhin, 2000**
Cretocar luzzii Gratshev & Zherikhin, 2000a: 248
Distribution. Early Cretaceous (USA: New Jersey, Amber).

Genus *Emanrhynchus* Zherikhin, 1993
Emanrhynchus Zherikhin, 1993: 31
Type species: *Emanrhynchus lebedevi* Zherikhin, 1993

***Emanrhynchus lebedevi* Zherikhin, 1993**
Emanrhynchus lebedevi Zherikhin, 1993: 31
Distribution. Early Cretaceous (Burjatia: Basia).

Genus *Gobicar* Gratshev & Zherikhin, 1999
Gobicar Gratshev & Zherikhin, 1999: 40
Type species: *Gobicar ponomarenkoi* Gratshev & Zherikhin, 1999

***Gobicar ponomarenkoi* Gratshev & Zherikhin, 1999**
Gobicar ponomarenkoi Gratshev & Zherikhin, 1999: 41
Distribution. Late Jurassic (Mongolia: Gobi-Altai aimak).

***Gobicar hispanicus* Gratshev & Zherikhin, 2000**
Gobicar hispanicus Gratshev & Zherikhin, 2000b: 42
Distribution. Early Cretaceous (Spain: Montsec Range).

Genus *Gratshevibelus* Soriano, 2009, placem. n.
Gratshevibelus Soriano, 2009: 100
Type species: *Gratshevibelus erici* Soriano, 2009
Remark. This genus is close to genus *Cretocar* and I transfer it from family Belidae to family Ithyceridae.

Gratshevibelus erici Soriano, 2009
Gratshevibelus erici Soriano, 2009: 101
Distribution. Early Cretaceous (France, amber).

Genus *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006
Montsecanomalus Soriano, Gratshev, Delclòs, 2006: 558
Type species: *Montsecanomalus zherichini* Soriano, Gratshev, Delclòs, 2006
Remarks. Species *Cretonanophyes rugosithorax*, *C. zherichini*, and *C. punctatus* have been described in the genus *Cretonanophyes*. The type species of this genus is characterised by the narrow 1st segment of the tarsi. Therefore named three species (*Cretonanophyes rugosithorax*, *C. zherichini*, and *C. punctatus*) are unrelated to the genus *Cretonanophyes*. These species are transferred to the genus *Montsecanomalus* because they are close to *Montsecanomalus zherichini*. Species of genera *Montsecanomalus* and *Leptocar* have only small differences in the form of coxae, so they are combined in one genus. However I give the status of subgenus to *Leptocar*.

Subgenus *Montsecanomalus* s. str.

***Montsecanomalus* (s. str.) *rugosithorax* (Gratshev & Zherikhin, 2000), comb.n., placem.n.**
Cretonanophyes rugosithorax Gratshev & Zherikhin, 2000b: 43
Distribution. Early Cretaceous (Spain: Montsec Range).

***Montsecanomalus* (s. str.) *zherichini* (Liu & Ren, 2006), comb.n., placem.n.**
Cretonanophyes zherichini Liu & Ren, 2006: 61
Distribution. Late Jurassic (China: Liaoning Prov.).

***Montsecanomalus* (s. str.) *punctatus* (Liu & Ren, 2007), comb.n., placem.n.**
Cretonanophyes punctatus Liu & Ren, 2007: 645
Distribution. Late Jurassic or Early Cretaceous (China: Liaoning Prov.).

***Montsecanomalus* (s. str.) *zherichini* Soriano, Gratshev, Delclòs, 2006**
Montsecanomalus zherichini Soriano, Gratshev, Delclòs, 2006: 559
Distribution. Early Cretaceous (Spain: Montsec Range).

Subgenus *Leptocar* Liu & Ren, 2007, stat.n.
Leptocar Liu & Ren, 2007: 642
Type species: *Leptocar polychaetus* Liu & Ren, 2007

***Montsecanomalus* (*Leptocar*) *polychaetus* (Liu & Ren, 2007), comb.n.**
Leptocar polychaetus Liu & Ren, 2007: 642
Distribution. Late Jurassic or Early Cretaceous (China: Liaoning Prov.).

Genus *Baissorhynchus* Zherikhin, 1977
Baissorhynchus Zherikhin, 1977: 176
Type species: *Baissorhynchus tarsalis* Zherikhin, 1977

***Baissorhynchus tarsalis* Zherikhin, 1977**
Baissorhynchus tarsalis Zherikhin, 1977: 177
Distribution. Early Cretaceous (Burjatia: Basia).

Genus *Martinsnetoa* Zherichin & Gratshev, 2004
Martinsnetoa Zherichin & Gratshev, 2004: 65
Type species: *Martinsnetoa dubia* Zherichin & Gratshev, 2004

***Martinsnetoa dubia* Zherichin & Gratshev, 2004**
Martinsnetoa dubia Zherichin & Gratshev, 2004: 66
Distribution. Early Cretaceous (Brazil: Santana).

Genus *Jarzembowskia* Zherikhin & Gratshev, 1997
Jarzembowskia Zherikhin & Gratshev, 1997: 628
Type species: *Jarzembowskia edmundi* Zherikhin & Gratshev, 1997

***Jarzembowskia edmundi* Zherikhin & Gratshev, 1997**
Jarzembowskia edmundi Zherikhin & Gratshev, 1997: 629
Distribution. Early Cretaceous (Spain: Montsec Range).

Genus *Hispanocar* Soriano, Gratshev, Delclòs, 2006
Hispanocar Soriano, Gratshev, Delclòs, 2006: 561
Type species: *Hispanocar kseniae* Soriano, Gratshev, Delclòs, 2006

***Hispanocar kseniae* Soriano, Gratshev, Delclòs, 2006**
Hispanocar kseniae Soriano, Gratshev, Delclòs, 2006: 561
Distribution. Early Cretaceous (Spain: Montsec Range).

Tribe Mesophyletini Poinar, 2006, stat.n.
Mesophyletinae Poinar, 2006: 879
Type genus: *Mesophyletis* Poinar, 2006
Description. Body dark. Legs and antennae red-brown. Rostrum long, longer than pronotum, almost direct. Antennae inserted in the first third of the rostrum. Eyes large, strongly convex. Temples short. Antennae long, reaching humeri. Scapus of the antennae elongated, little shorter than funicle. Funicle segments long trapezoid. Clava noncompact. Pronotum elongated, without lateral carina. Disc flattened. Elytra elongated, without rows of points. Humeri weakly smoothed. Prothorax elongated, procoxa located near basal margin. Precoxal parts of the prothorax elongated. Abdomen slightly convex. 1st ventrite long. 2nd ventrite much shorter than 1st ventrite. 3rd ventrite hardly shorter than 2nd. 4th ventrite longer than 3rd ventrite. 5th ventrite elongated. Pygidium exposed. Legs long. Procoxa spherical. Femora widened. Tibiae robust, weakly curved. Tarsi long. 1st segment not widened. 2nd segment triangular. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced, with teeth. Length of body: 2.8 mm.

Genus *Mesophyletis* Poinar, 2006
Mesophyletis Poinar, 2006: 879
Type species: *Mesophyletis calhouni* Poinar, 2006

***Mesophyletis calhouni* Poinar, 2006**
Mesophyletis calhouni Poinar, 2006: 880
Distribution. Early Cretaceous (Myanmar, Amber).

Supertribe Caritae Thompson, 1992, stat. n.
(Col. pl. I – a – j, II – a – j; IV, a – m)
Carinae Thompson, 1992: 882
Type genus: *Car* Blackburn, 1897
Carinae Zimmermann, 1994a: 449 [non Thompson, 1992]
Type genus: *Car* Blackburn, 1897
Carinae Kuschel, 1995: 18 [non Thompson, 1992, nec Zimmermann, 1994]
Type genus: *Car* Blackburn, 1897
Description. Body light or dark, with appressed or erect setae. Head constricted behind eyes or not constricted. Rostrum long. Mandible without teeth on exterior margin or of rhynchitoid type. Labial palps 2-, or 3-segmented. Antennae inserted before the rostrum basis laterally or ventrally. Frons narrow. Eyes large, weakly convex. Temples weakly elongated. Antennae long, reaching humeri. Scapus of the antennae elongated. Clava noncompact. Pronotum almost rectangular, sometimes with weak lateral carina. Sides almost direct. Disc convex, punctate. Scutellum rectangular, punctate. Elytra elongated. Humeri weakly smoothed. Scutellar striole absent. Intervals flat, punctate, wide. Striae very weak or distinct. Apex of the elytra rounded. 9th stria merges with 10th stria before metacoxa. Prothorax short. Procoxa located in the middle of prothorax. Pre- and postcoxal parts of prothorax not elongated. Mesepisternum narrow. Metepisternum very narrow. Abdomen slightly convex. 1st ventrite long, little wider than 2nd ventrite. 2nd - 4th ventrites of equal length. 5th ventrite long, equal in length to 1st ventrite. Legs long. Procoxa conic. Femora clavate. Tibiae robust or narrow, weakly biconcave. Mesotibiae in males with mucro or without it. Tarsi long. 1st segment wide, trapezoid or not widened. 2nd segment triangular. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced with very weak teeth at the basis. Basal sclerite of the endophallus flagelliform. Length of body: 1.8-6.2 mm.
Remarks. 2 tribes (Carini and Chilecarini) have been assigned to the supertribe Caritae.

Key to tribes of the supertribe Caritae

1. Mandible with 2 teeth on exterior margin. Antennae inserted ventrally ..... **Carini**
– Mandible without teeth on exterior margin. Antennae inserted laterally ..... **Chilecarini**

Tribe Carini Thompson, 1992
(Col. pl. I – a – j, II – a, d)
Carinae Thompson, 1992: 882
Type genus: *Car* Blackburn, 1897
Carinae Zimmermann, 1994a: 449 [non Thompson, 1992]
Type genus: *Car* Blackburn, 1897
Carinae Kuschel, 1995: 18 [non Thompson, 1992, nec Zimmermann, 1994]

Type genus: *Car* Blackburn, 1897

Description. Body red-brown or yellowish brown, with appressed and erect light setae. Rostrum long, hardly longer than head and pronotum taken together, very weakly or weakly curved, slightly widened at the apex and near the antennal insertions, finely punctate or smooth, with weak carina from antennal insertions to the midfrontal dimple or without carina. Mandible with 2 teeth on exterior and 2 teeth on interior margins. Labial palps 3-segmented. Frons narrow, narrower than rostrum basis, flat. Eyes large, slightly convex. Vertex convex, finely punctate. Temples weakly elongated, finely transversely wrinkled. Gular suture single, rough. Antennae inserted ventrally near the base of rostrum. Antennae long, reaching humeri. Scapus of the antennae elongated, equal in length to the 1st and 2nd segments of the funicle taken together. Segments of the funicle trapezoid. 1st segment elongated. 2nd segment narrower, longer than 1st. 3rd segment equal to 2nd segment. 4th segment thicker and hardly longer than 3rd segment. 5th segment shorter than 4th segment. 6th segment shorter than 6th segment. 7th segment shorter and thicker than 6th segment. Clava noncompact, hardly wider than 7th segment. 1st and 2nd segments wide, trapezoid. 3rd segment tear-shaped, pointed, longer than 2nd segment. Pronotum almost rectangular, without grooves, with the greatest width in the first third. Sides almost direct. Disc convex, densely or sparsely punctate. Scutellum rectangular, finely and densely punctate, sometimes with dense light setae. Elytra almost rectangular. Humeri weakly smoothed. Scutellar striole absent. Intervals almost flat, densely punctate or nearly smooth, wide. Striae deep. Points in them large. Apex of the elytra rounded. 9th stria merges with 10th stria before metacoxa. Bottom finely punctate. Postorbital blades absent. Prothorax with forward erecting setae on the edge. Prothorax short. Procoxa located in its middle. Pre- and postcoxal parts of the prothorax not elongated. Mesepisternum narrow, finely and densely punctate. Metepisternum very narrow. Metathorax coarsely punctate. Meso- and metacoxal cavities separated. Abdomen slightly convex. 1st ventrite long, 1.5 times longer than 2nd ventrite. 2nd - 5th ventrites short. 5th ventrite hardly longer than 4th ventrite. Legs long. Procoxa conic. Femora clavate, without teeth. Tibiae wide, weakly biconcave. Meso- and metatibiae with dense long semierect setae in the apical third. Tarsi long. 1st segment wide, trapezoid. 2nd segment widely triangular. 3rd segment wide, bilobed. Clausal segment elongated. Claws widely spaced with very weak teeth at the basis. 7th tergite in males pruinose on sides. Length of body: 2.1-6.2 mm.

Remarks. The genus *Car* Blackburn, 1897 from Australia has been assigned to this tribe.

Genus *Car* Blackburn, 1897

(Col. pl. I – a – j, II – a, d)

Car Blackburn, 1897: 35

Type species: *Car condensatus* Blackburn, 1897

***Car condensatus* Blackburn, 1897**

(Col. pl. I – a – j)

Car condensatus Blackburn, 1897: 36

Distribution. Australia.

Host plants. *Callitris preissii*, *C. rhomboidea*, *C. glaucophylla* (Zimmermann, 1994a).

***Car intermedius* Lea, 1926**

Car intermedius Lea, 1926: 361

Distribution. Australia.

Host plants. Unknown.

***Car pini* Lea, 1911**

(Col. pl. II – a, d)

Car pini Lea, 1911: 103

Distribution. Australia.

Host plants. *Callitris endlicheri*, *C. preissii* (Zimmermann, 1994a).

Tribe Chilecarini Legalov, trib. n.

(Col. pl. II – b, c, e – j; IV, a – m)

Type genus: *Chilecar* Kuschel, 1992

Description. Body yellowish brown or with dark spots, with uniformly spaced appressed light setae, or setae forming spots on the elytra. Head constricted behind eyes or not constricted behind them. Rostrum long, shorter than head and pronotum taken together, weakly curved, slightly widened at the apex and near the antennal insertions, almost smooth. Mandible without teeth exterior margin. Labial palps 2-, or 3-segmented. Antennae inserted laterally before the base of rostrum. Frons narrow, considerably narrower than rostrum at its basis, flat, densely punctate. Eyes large, almost protruding from the contour of the head, or weakly convex. Vertex convex, finely punctate. Temples weakly elongated, finely transversely wrinkled. Antennae long, reaching humeri. Scapus and 1st segment elongated, tear-shaped. Scapus longer than 1st segment. 2nd - 7th segments of the funicle elongated, trapezoid, narrow. 2nd segment narrower and shorter than 1st segment. 2nd - 4th segments approximately equal in length. 5th segment shorter than 4th segment. 6th segment shorter and wider than 5th segment. 7th segment hardly shorter than 6th segment. Clava noncompact, hardly wider than 7th segment. 1st and 2nd segments wide, trapezoid. 3rd segment tear-shaped, pointed, longer than 2nd segment. Pronotum almost rectangular or trapezoid, without grooves, narrowed to apex, sometimes with weak lateral carina, little longer than wide. The greatest width in the middle or near the basis. Sides almost direct. Disc convex, finely punctate. Scutellum rectangular, punctate. Elytra elongated, 1.42-1.67 times longer than wide. Humeri weakly smoothed. Scutellar striole absent. Intervals flat, punctate, wide. Striae very weak or distinct. Points in them large. Apex of the elytra rounded. 9th stria merges with 10th stria before metacoxa. Bottom finely punctate. Postorbital blades absent. Prothorax without forward erected setae on the margin. Prothorax short. Procoxa located at its middle. Pre- and postcoxal parts of the prothorax not elongated. Mesepisternum narrow, finely punctate. Metepisternum very narrow. Metathorax coarsely punctate. Meso- and metacavities separated. Abdomen slightly convex. 1st ventrite long, little longer than 2nd ventrite. 2nd - 4th ventrites of the equal length.

5th ventrite long, equal in length to 1st ventrite. Legs long. Procoxa conic. Femora clavate, without teeth. Tibiae robust or slender, weakly biconcave. Meso- and metatibiae hardly shorter than protibiae. Mesotibiae in male with mucro or without it. Tarsi long. 1st segment wide, trapezoid or not widened. 2nd segment triangular. 3rd segment bilobed. Clausal segment elongated. Claws widely spaced with very weak teeth on the basis. 7th tergite in male sclerotised. 8th sternite in female medially membranous or sclerotised on apex. Stylus in female short or elongated, hardly any longer than wide. Basal sclerite of the endophallus flagelliform. Length of body: 1.8-5.2 mm.

Remarks. 5 genera: *Baltocar* Kuschel, 1992, *Chilecar* Kuschel, 1992, *Caenominurus* Voss, 1965, *Carodes* Zimmermann, 1994 and *Auletomacer* Zherichin, 1993 from Cretaceous and Eocene, and from recent fauna of the South America and Australia have been assigned to this tribe.

Key to genera of the tribe Chilecarini

1. Pronotum without lateral carina 2
– pronotum with weak lateral carina ..... ***Auletomacer***
2. 1st segment of the tarsi not widened ..... ***Baltocar***
– 1st segment of the tarsi widened 3
3. Elytra almost rectangular, with irregular setae. Labial palps 3-segmented ..... ***Carodes***
– elytra oval, with uniform setae. Labial palps 2-segmented 4
4. Head distinctly constricted behind eyes. Middle tibiae of males without mucro ..... ***Caenominurus***
– Head not constricted behind eyes. Middle tibiae of males with mucro ..... ***Chilecar***

Key to subtribes of the tribe Chilecarini

1. Labial palps 3-segmented. Elytra almost rectangular, wider, with irregular setae ..... **Carodesina**
– labial palps 2-segmented. Elytra oval, narrower, with uniform setae ..... **Chilecarina**

Subtribe Chilecarina Legalov, subtrib. n.
(Col. pl. II – b, c, e – j; IV, a – m)
Type genus: *Chilecar* Kuschel, 1992

Description. Body brown with uniformly spaced appressed light setae. Head constricted or not constricted behind eyes. Rostrum long, shorter than head and pronotum taken together, slightly curved. Mandible without teeth on exterior margin. Labial palps 2-segmented. Frons narrow, punctate. Eyes large, almost not protruding from the contour of the head, or slightly convex. Vertex convex, punctate. Temples weakly elongated. Antennae long, reaching humeri. Clava noncompact, hardly wider than 7th segment. Pronotum almost rectangular, without grooves, longer than wide. Sides almost direct. Disc convex, punctate. Scutellum rectangular, punctate. Elytra elongated, 1.42-1.67 times longer than wide. Humeri weakly smoothed. Scutellar striole absent. Intervals flat, punctate, wide. Striae weak. Apex of the elytra rounded. 9th stria merges with 10th stria before metacoxa. Bottom finely punctate. Prothorax short. Procoxa located in its middle. Mesepisternum narrow, finely punctate. Metepisternum very narrow. Metathorax coarsely punctate. Meso- and metacavities separated. Abdomen slightly convex. 1st ventrite long, little longer than 2nd ventrite. 2nd - 4th ventrites of equal length. 5th ventrite long, equal in length to 1st ventrite. Legs long. Procoxa conic. Femora clavate, without teeth. Tibiae robust or narrow, weakly biconcave. Meso- and metatibiae hardly shorter than protibiae. Tarsi long. 1st segment wide, trapezoid or not widened. 2nd segment triangular. 3rd segment bilobed. Clausal segment elongated. Length of body: 1.8-3.3 mm.

Genus *Baltocar* Kuschel, 1992
Baltocar Kuschel, 1992: 197
Type species: *Car succinicus* Voss, 1953

Remarks. The labial palps of this genus are not known. This genus is close to the genera of this subtribe by the shape of body.

***Baltocar succinicus* (Voss, 1953)**
Car succinicus Voss, 1953: 125
Distribution. Late Eocene (Baltic Amber).

Genus *Chilecar* Kuschel, 1992
(Col. pl. II – b, c, e – j)
Chilecar Kuschel, 1992: 203
Type species: *Chilecar pilgerodendri* Kuschel, 1992

***Chilecar pilgerodendri* Kuschel, 1992**
Chilecar pilgerodendri Kuschel, 1992: 206
Distribution. Chile.
Host plants. *Fitzroya cupressoides*, *Pilgerodendron uniferun* [Kuschel, 1992].

Genus *Caenominurus* Voss, 1965 (Col. pl. IV, a – m)
Caenominurus Voss, 1965b: 330
Type species: *Caenominurus topali* Voss, 1965

***Caenominurus topali* Voss, 1965**
Caenominurus topali Voss, 1965b: 331
Distribution. Argentina, Chile.
Host plants. *Austrocedrus chilensis* [Kuschel, 1992].

Remarks. I studied the holotype, allotype and paratype from the collection of the Hungarian Natural History Museum (Budapest): a male with labels «S. Arg. Rio Negro, El Bolson, Topál», «Nr. 4», «Holotypus 1964, *Caenominurus topali* male Voss», «Holotypus *Caenominurus topali* n. sp., male, E. Voss det. 1964», «Holotype *Caenominurus topali* Voss, 1965, A. Legalov det. 2009», a female with labels «S. Arg. Rio Negro, El Bolson, Topál», «Nr. 4», «Allotypus 1964, *Caenominurus topali* Voss», «Allotypus *Caenominurus topali* n. sp., female, E. Voss det. 1964», «Paratype *Caenominurus topali* Voss, 1965, A. Legalov det. 2009», a female with labels «S. Arg. Rio Negro, El Bolson, Topál», «Nr. 4», «female», «Paratypus 1964, *Caenominurus topali* Voss», «Paratype *Caenominurus topali* Voss, 1965, A. Legalov det. 2009».

Subtribe Carodesina Legalov, subtrib. n.
Type genus: *Carodes* Zimmermann, 1994

Description. Body black-brown. Antennae, legs and elytra partially yellowish brown, or elytra with spots formed by setation. Head constricted behind eyes.

Rostrum long, much shorter than head and pronotum taken together, slightly curved. Mandible without teeth on exterior margin. Labial palps 3-segmented. Antennae inserted laterally before the base of rostrum. Frons narrow. Eyes large, slightly convex. Temples weakly elongated. Antennae long, reaching humeri. Scapus and 1st segment elongated, tear-shaped. 2nd - 7th segments of the funicle elongated trapezoid. Clava noncompact, hardly wider than funicle. 3rd segment tear-shaped, pointed, little shorter than 1st and 2nd segments taken together. Pronotum trapezoid, without grooves, narrowed to apex, little longer than wide. The greatest width near the basis. Sides almost direct. Disc convex, punctate. Scutellum rectangular, punctate. Elytra elongated. Humeri weakly smoothed. Scutellar striole absent. Intervals flat, punctate, wide. Striae distinct, points on them large. Apex of the elytra rounded. 9th stria merges with 10th stria near the middle of elytra. Bottom punctate. Postorbital blades absent. Prothorax short. Procoxa located in its middle. Pre- and postcoxal parts of prothorax not elongated. Metepisternum very narrow. Abdomen slightly convex. 1st ventrite long, little longer than 2nd ventrite. 2nd - 4th ventrites of equal length. Legs long. Procoxa conic. Femora clavate. Tibiae robust, weakly biconcave. Meta- and mesotibiae of male with mucro. Tarsi long. 1st segment wide, trapezoid. Basal sclerite of the endophallus flagelliform. Length of body: 4.1-4.5 mm.

Genus *Carodes* Zimmermann, 1994
Carodes Zimmermann, 1994a: 511
Type species: *Carodes revelatus* Zimmermann, 1994

***Carodes revelatus* Zimmermann, 1994**
Carodes revelatus Zimmermann, 1994a: 513
Distribution. Australia.
Host plants. *Callitris preissii*, *C. rhomboidea*, *C. glaucophylla* [Zimmermann, 1994a].

Subtribe incertae sedis

Genus *Auletomacer* Zherichin, 1993
Auletomacer Zherichin, 1993: 24
Type species: *Auletomacer disruptus* Zherichin, 1993
Remarks. The number of the segments of the labial palps is not known. Therefore the author cannot place this genus in one of subtribes.

***Auletomacer disruptus* Zherichin, 1993**
Auletomacer disruptus Zherichin, 1993: 25
Distribution. Early Cretaceous (Khabarovskii krai: Khetana).

Subfamily Ulyaninae Zherichin, 1993, stat. n.
Ulyanidae Zherichin, 1993: 26
Type genus: *Ulyaniana* Zherichin, 1993
Description. Body dark. Head not constricted behind eyes. Rostrum long, shorter than head and pronotum taken together, almost direct. Mandible with tooth on exterior margin. Labial palps 4-segmented. Antennae inserted subapically, dorsally. Frons wide, narrower than rostrum at its basis. Eyes large. Temples weakly elongated. Antennae long. Scapus elongated. Funicle segments elongated trapezoid. Pronotum trapezoid, wide, narrowed to apex, punctate, with lateral carina. The greatest width near the basis. Sides weakly rounded. Disc slightly convex, punctate. Scutellum triangular, punctate. Elytra elongated. Humeri weakly smoothed. Bottom punctate. Postorbital blades absent. Prothorax short. Procoxa located in its middle. Pre- and postcoxal parts of prothorax not elongated. Metepisternum narrow. 1st - 4th ventrites long, approximately equal in length. 5th ventrite longer than 4th ventrite. Legs long. Femora clavate. Tibiae robust, curved, with mucro and spurs. Tarsi long, weakly widened. Claws with teeth. Length of body: 7.1-18.0 mm.

Genus *Ulyaniana* Zherichin, 1993
Ulyaniana Zherichin, 1993: 27
Type species: *Ulyaniana nobilis* Zherichin, 1993

***Ulyaniana nobilis* Zherichin, 1993**
Ulyaniana nobilis Zherichin, 1993: 27
Distribution. Early Cretaceous (Khabarovskii krai: Khetana).

***Ulyaniana excellens* Gratshev, 1998**
Ulyaniana excellens Gratshev, 1998: 44
Distribution. Early Cretaceous (Mongolia: Bayan-Hongor aimak).

Subfamily Slonikinae Zherichin, 1977, placem. n.
Slonikinae Zherichin, 1977: 179
Type genus: *Slonik* Zherichin, 1977
Description. Body dark. Rostrum long or slightly elongated, shorter than head and pronotum taken together, straight, slightly curved or almost pointed to apex. Antennae inserted laterally behind the middle of the rostrum or subapically. Frons wide, convex. Eyes large. Temples short or weakly elongated. Antennae long. Scapus and funicle segments elongated. Clava noncompact, wide. Pronotum disc flattened or slightly convex, punctate, usually with lateral carina. Scutellum triangular. Elytra elongated. Humeri weakly smoothed. Intervals wide, punctate. Postorbital blades absent or weak. Prothorax elongated or short. Procoxa located near the basis of pronotum, or in its middle. Precoxal part of the prothorax elongated or not elongated. Abdomen slightly convex. 1st ventrite long, little longer than 2nd ventrite, 2nd - 4th ventrites of equal length, 5th ventrite longer than 1st ventrite, or 1st - 4th ventrites long, approximately equal in length, 5th ventrite little shorter than 4th ventrite. Legs long. Femora clavate, without teeth or with tooth. Tibiae robust, curved, widened to apex. Tarsi long, weakly widened. Length of body: 3.1-5.6 mm.
Remarks. 2 tribes have been assigned to the subfamily.

Key to tribes of the subfamily Slonikinae

1. Femora without tooth. Precoxal part of prothorax elongated ..... **Slonikini**
– Femora with tooth. Precoxal part of prothorax short ..... **Ulyaniscini**

Tribe Slonikini Zherichin, 1977
Slonikinae Zherichin, 1977: 179
Type genus: *Slonik* Zherichin, 1977
Description. Body dark. Rostrum long, shorter than head and pronotum taken together, weakly curved, pointed to apex. Antennae inserted laterally behind the middle of the rostrum. Frons wide. Eyes large. Temples short. Antennae long. Clava noncompact. Pronotum disc flattened, punctate. Scutellum triangular. Elytra elongated. Humeri weakly smoothed. Intervals wide, punctate. Postorbital blades absent. Prothorax elongated. Procoxa located near the base of prothorax. Precoxal part of the prothorax elongated. Abdomen slightly convex. 1st ventrite long, little longer than 2nd ventrite. 2nd - 4th ventrites of equal length. 5th ventrite longer than 1st ventrite. Legs long. Procoxa spherical. Femora clavate without teeth. Length of body: 3.1 mm.

Genus *Slonik* Zherichin, 1977
Slonik Zherichin, 1977: 180
Type species: *Slonik sibiricus* Zherichin, 1977

***Slonik sibiricus* Zherichin, 1977**
Slonik sibiricus Zherichin, 1977: 180
Distribution. Early Cretaceous (Burjatia: Basia).

Tribe Ulyaniscini Legalov, trib.n.
Type genus: *Ulyanisca* Gratshev, 1998
Description. Body dark. Rostrum slightly elongated, shorter than pronotum, almost direct, narrowed to apex. Antennae inserted subapically, laterally. Frons wide, convex. Eyes large. Temples weakly elongated. Antennae long. Scapus and funicle segments elongated. Clava noncompact, wide. Pronotum punctate, with lateral carina. Disc slightly convex. Elytra elongated. Humeri weakly smoothed. Postorbital blades weak. Prothorax short. Procoxa located in its middle. Pre- and postcoxal parts of the prothorax not elongated. 1st - 4th ventrites long, approximately equal in length. 5th ventrite little longer than 4th ventrite. Legs long. Femora clavate, with tooth. Tibiae robust, curved, widened to apex. Tarsi long, weakly widened. Length of body: 5.2-5.6 mm.

Genus *Ulyanisca* Gratshev, 1998, placem. n.
Ulyanisca Gratshev, 1998: 45
Type species: *Ulyanisca dentipes* Gratshev, 1998
Remarks. This genus is close to the genus *Slonik* with the form of rostrum and the location of antennae.

***Ulyanisca dentipes* Gratshev, 1998**
Ulyanisca dentipes Gratshev, 1998: 45
Distribution. Early Cretaceous (Mongolia: Bayan-Hongor aimak).

Subfamily Ithycerinae Schoenherr, 1823
(Col. pl. III – a–p)
Ithycerides Schoenherr, 1823: 1136
Type genus: *Ithycerus* Schoenherr, 1823
Pachyrhinchidae Kirby, 1837: 203
Type genus: *Pachyrhynchus* Kirby, 1837
Description. Body black, with dense light, brownish and dark setae. Setae condensed on the scutellum. Odd intervals with spots formed by dark setae. Head not constricted behind eyes. Rostrum short, shorter than pronotum, wide, and widened to apex, flattened, with carina. Mandible without teeth on exterior margin and with 2 teeth on interior margin. Labial palps 3-segmented. Antennae inserted laterally in the middle of rostrum. Frons wide, narrower than rostrum at its base, flat. Eyes large, weakly convex. Temples weakly elongated. Antennae long, reaching the middle of pronotum. Scapus oval. 1st segment trapezoid, shorter and narrower than scapus. 2nd and 3rd segments elongated trapezoid. 2nd segment longer than 1st segment. 3rd segment shorter than 2nd segment. 4th and 5th segment short trapezoid. 6th and 7th segment tear-shaped. Clava compact, shorter and wider than funicle, pointed, tear-shaped. Segments connected. Pronotum almost square, slightly narrowed to the basis and to the apex. The greatest width before the middle. Sides almost direct. Disc convex, roughly punctate, with middle carina. Scutellum triangular. Elytra elongated, almost parallel, sharply narrowed in the apical third. Humeri weakly smoothed. Scutellar striole absent. Intervals convex, wide, punctate. Striae distinct. Points on them deep. Apex of the elytra separated. 9th stria not merges with 10th stria. Bottom punctate. Postorbital blades absent. Prothorax short. Procoxa located in its middle. Pre- and postcoxal parts of prothorax not elongated. Metepisternum very narrow. Abdomen slightly convex, densely punctate. Ventrites long. 1st ventrite shorter than 2nd ventrite. 3rd ventrite shorter than 2nd ventrite. 4th ventrite hardly shorter than 3rd ventrite. 5th ventrite in males short, shorter than 2nd ventrite and longer than 4th ventrite. In females 5th ventrite longer than 2 ventrite. Pygidium in males large, convex. Legs long. Procoxa conic. Femora clavate. Tibiae robust, widened to apex, with mucro. Meta- and mesotibiae of male with mucro. Tarsi long, wide. 1st segment trapezoid. 2nd segment triangular. 3rd segment bilobed. Clausal segment elongated. Claws long, with teeth. Basal sclerite of the endophallus flagelliform. Length of body: 11.6-14.5 mm.

Genus *Ithycerus* Schoenherr, 1823
(Col. pl. III – a–p)
Ithycerus Schoenherr, 1823: 1136
Type species: *Rhynchites curculionoides* Herbst, 1797 = *Curculio noveoboracensis* Foerster, 1771
Pachyrhynchus Kirby, 1837: 203
Type species: *Pachyrhynchus schoenherri* Kirby, 1837 = *Curculio noveoboracensis* Foerster, 1771

***Ithycerus noveoboracensis* (Foerster, 1771)**
(Col. pl. III – a–p)
Curculio noveoboracensis Foerster, 1771: 35
Curculio punctatus Fabricius, 1781: 187
Rhynchites curculionoides Herbst, 1797: 136
Pachyrhynchus schoenherri Kirby, 1837: 203
Distribution. Canada, USA.

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REFERENCES

Alonso-Zarazaga M.A., Lyal C.H.C. A world catalogue of families and genera Curculionoidea (Insecta: Coleoptera) (excepting Scolytidae and Platypodidae). Barcelona. Entomopraxis. 1999. 315 pp.

Arnoldi L.V. Rhynchophora. In: Arnoldi L.V., Zherichin V.V., Nikritin L.M., Ponomarenko A.G. Mesozoic Coleoptera // Proceeding of Paleontological institute. 1977. Vol. 161. P. 142-176. [in Russian]

Blackburn T. Further notes on Australian Coleoptera, with descriptions of new genera and species // Transactions and proceedings and report of the Royal Society of South Australia. 1897. Vol. 21. P. 28-39.

Calder A.A. The alimentary canal and nervous system of Curculionoidea (Coleoptera): Gross morphology and systematic significance // Journal of Natural History. 1989. Vol. 23. P. 1205-1265.

Calder A.A. Gross morphology of the soft parts of the male and female reproductive systems of Curculionoidea (Coleoptera) // Journal of Natural History. 1990. Vol. 24. P. 453-505.

Crowson R.A. The natural classification of Coleoptera. Nathaniel Lloyd & Co. London. 1955. 187 pp.

Crowson R.A. The biology of Coleoptera. Academic Press. New York. 1981. XII + 802 pp.

Crowson R.A. On the systematic position of *Bruchela* Dejean (*Urodon* auctt.) (Coleoptera) // The Coleopterists Bulletin. 1984. Vol. 38. P. 91-93.

Crowson R.A. The systematic position of *Nemonyx* Redtenbacher (Coleoptera: Curculionoidea: Nemonychidae) // Entomol. Gen. 1985. Vol. 11. No. 1-2. P. 57-58.

Crowson R.A. On the systematic position of Allocoryninae (Coleoptera: Allocorynidae) // The Coleopterists Bulletin. 1986. Vol. 40. No. 3. P. 243-244.

Fabricius I.C. Species insectorum exhibentes eorum differentias specifica, synonyma auctorum, loca natalia, metamorphosis, adjectis observationibus, descriptionibus 1. Hamburgii: Kilonii. 1781. VIII + 552 pp.

Foerster J.R. Novae species insectorum. Centuria 1. Davies and White. London. 1871. VII + 100 pp.

Gratshev V.G. Ulyanidae, an extinct family of weevils (Coleoptera, Curculionoidea) // Proceedings of the First International Paleontological Conference. Moscow. 1998. P. 41-47.

Gratshev V.G., Zherikhin V.V., Jarzembowski E.A. A new genus and species of weevil from the Lower Cretaceous of southern England (Insecta: Coleoptera: Curculionoidea) // Cretaceous Research. 1997. Vol. 19. P. 323-327.

Gratshev V.G., Zherichin V.V. *Gobicar*, a new Late Jurassic genus of Eccoptarthrid weevils from Mongolia (Insecta, Coleoptera: Eccoptarthridae) // Paleontological journal. 1999. No. 2. P. 40-42. [in Russian]

Gratshev V.G., Zherikhin V.V. The weevils from the Late Cretaceous New Jersey Amber (Coleoptera, Curculionoidea) // Studies on fossils in amber, with particular reference to the Cretaceous of New Jersey. Leiden. 2000a. P. 241-254.

Gratshev V.G., Zherichin V.V. New Early Cretaceous weevil taxa from Spain (Coleoptera, Curculionoidea) // Acta geologica Hispanica. 2000b. Vol. 35. P. 37-46.

Gratshev V.G., Zherikhin V.V. The fossil record of weevils and related beetle families (Coleoptera, Curculionoidea) // Acta Zoologica Cracoviensia. 2003. Vol. 46. supplement. P. 129-138

Herbst J.F.W. Natursystem aller bekannten in- und auslandischen Insekten, I als eine Forsetzung der von Buffonschen Naturgeschichte. Der Käfer. 7. Berlin: Pauli. 1797. IX +346 pp.

Kirby W. Part the fourth and last. The Insects. In: Richardson J. Fauna Boreali-Americana; or the zoology of the northern parts of British America: containing descriptions of the objects of natural history collected on the late Nortern Land Expeditions, under command of Capitain Sir John Franklin, R. N. 1837. XXXIX + 325 pp.

Kuschel G. Past and present of the relict family Nemonychidae (Coleoptera, Curculionoidea) // GeoJournal. 1983. Vol. 7. No. 6. P. 499-504.

Kuschel G. Reappraisal o the Baltic Amber Curculionoidea described by E. Voss // Mitteilungen aus dem Geologisch-Paläontologischen Institut der Universitat Hamburg. 1992. Heft 73. S. 191-215.

Kuschel G. A phylogenetic classification of Curculionoidea to families an subfamilies // Memoirs of the Entomological Society of Washington. 1995. No. 14. P. 5-33.

Kuschel G. Nemonychidae, Belidae, Brentidae (Insecta: Coleoptera: Curculionoidea) // Fauna of New Zealand. 2003. No. 45. 100 pp.

Lawrence J.F., Newton A.F. Families and subfamilies of Coleoptera (with selected genera, notes, references and data on family-group names) // Biology, phylogeny, and classification of Coleoptera. Papers celebrating the 80th birthday of Roy A. Crowson. Warszawa. 1995. P. 778-1006.

Lea A.M. Notes on Australian Curculionidae in the Belgian Museum, with descriptions of new species. Part. 2. // Mémoires de la Société Entomologique de Belgique. 1911. Vol. 18. P. 61-128.

Lea A.M. On some Australian Curculionidae // Proceedings of the Linnean Society of New South-Wales. 1926. Vol. 51. P. 327-362.

Legalov A. Obituary Vladimir Vasilievich Zherichin // Curculio. 2002a. Vol. 44. P. 14-16.

Legalov A.A. The genesis and phylogenetic relationships of the leaf-rolling weevils (Coleoptera: Rhynchitidae, Attelabidae) // Biological science and formation in pedagogical high schools. Novosibirsk. 2002b. Vol. 2. P. 104-111 [in Russian].

Legalov A.A. Taxonomy, classification and phylogeny of the leaf-rolling weevils (Coleoptera: Rhynchitidae, Attelabidae) of the world fauna. Novosibirsk. CD-R. № 0320301200. 2003. 733+350 p. (641 Mb.) [in Russian].

Legalov A.A. Phylogenetic reconstruction of weevils superfamily Curculionoidea (Coleoptera) using the SYNAP method // Biology Bulletin. 2006. Vol. 33. No. 2. P. 127-134.

Legalov A.A. Leaf-rolling weevils (Coleoptera:

Rhynchitidae, Attelabidae) of the world fauna. Novosibirsk: Agro-Siberia. 2007. 523 pp.

Liu M., Ren D. First fossil Eccoptarthridae (Coleoptera: Curculionoidea) from the Mesozoic of China // Zootaxa. 2006. No. 1176. P. 59-68.

Liu M., Ren D. New fossil eccoptarthrids (Coleoptera: Curculionoidea) from the Yixian Formation of western Liaoning, China // Science in China Series D: Earth Sciences. 2007. Vol. 50. No. 5. P. 641-648.

Marvaldi A.E. Higher level phylogeny of Curculionidae (Coleoptera: Curculionoidea) based mainly on larval characters, with special reference to droad-nosed weevils // Cladistics. 1997. Vol. 13. P. 285-312.

Marvaldi A.E., Morrone J.J. Phylogenetic systematics of weevils (Coleoptera: Curculionoidea): a reappraisal based on larval and adult morphology // Insect Systematics and Evolution. 2000. Vol. 31. P. 43-58.

Marvaldi A.E., Sequeira A.S., O'Brien Ch.W., Farrell B.D. Molecular and morphological phylogenetics of weevils (Coleoptera: Curculionoidea): do niche shifts accompany diversification? // Systematic biology. 2002. Vol. 51. No. 5. P. 761-785.

Marvaldi A.E., Oberprieler R.G., Lyal C.H.C., Bradbury T., Anderson R.S. Phylogeny of the Oxycoryninae s. l. (Coleoptera Phytophaga) and evolution of plant-weevil interactions // Invertebrate Systematics. 2006. Vol. 20. No. 4. P. 447-476.

Morimoto K. Comparative morphology, phylogeny and systematics of the superfamily Curculionoidea of Japan // Journal of the Faculty of Agriculture, Kyushu University. 1962a. Vol. 11. P. 331-373.

Morimoto K. Key to families, subfamilies, tribes and genera of the superfamily Curculionoidea of Japan excluding Scolytidae, Platypodidae and Cossoninae, (Comparative morphology, phylogeny and systematics of the superfamily Curculionoidea of Japan. III) // Journal of the Faculty of Agriculture, Kyushu University. 1962b. Vol. 12. P. 21-66.

Morimoto K. Notes on the family characters of Apionidae and Brentidae (Coleoptera), with key to the related families // Kontyu. 1976. No. 44. P. 469–476.

Morrone J.J. The impact of cladistics on weevil classification, with a new scheme of families and subfamilies (Coleoptera: Curculionoidea) // Trends in Entomology. 1997. Vol. 1. P. 129-136.

Oberprieler R.G., Marvaldi A.E., Anderson R.S. Weevils, weevils, weevils everywhere // Zootaxa. 2007. No. 1668. P. 491-520.

Poinar G. *Mesophyletis calhouni* (Mesophyletinae), a new genus, species, and subfamily of Early Cretaceous weevils (Coleoptera: Curculionoidea: Eccoptarthridae) in Burmese amber // Proceedings of the Entomological Society of Washington. 2006. Vol. 108. Issue 4. P. 878-884.

Poinar G. Type genus for Mesophyletinae, a subfamily of Early Cretaceous weevils (Coleoptera: Curculionoidea: Eccoptarthridae) in Burmese Amber // Proceedings of the Entomological Society of Washington. 2008. Vol. 110. Issue 1. P. 262.

Ponomarenko A.G. 1983. Historical development of Coleoptera. The author's abstract of the dissertation of Dr.Sci.Biol. Moscow. 1983. 47 pp. [in Russian]

Sanborne M. Biology of *Ithycerus noveboracensis* (Forster) (Coleoptera) and weevil phylogeny // Evol. Monogr. 1981. Vol. 4. P. 1-80.

Schoenherr C.J. Curculionidea [Tabula synoptica familiae Curculionidum] // Isis von Oken. 1823. 1823(10). P. 1132-1146.

Setliff G.P. Annotated checklist of weevils from the Papuan region (Coleoptera, Curculionoidea) // Zootaxa. 2007. Vol. 1536. 296 pp.

Soriano C., Gratshev V.G., Delclòs X. 2006. New Early Cretaceous weevils (Insecta, Coleoptera, Curculionoidea) from El Montsec, Spain // Cretaceous Research. Vol. 27. P. 555-564.

Soriano C. 2009. First record of the family Belidae (Insecta, Coleoptera) in amber. New genus and species from the uppermost Albian amber of France // Geodiversitas. Vol. 31. No. 1. P. 99-104.

Thompson R.T. Observations on the morphology and classification of weevils (Coleoptera, Curculionoidea) with a key to major groups // Journal of Natural History. 1992. Vol. 26. P. 835-891.

Voss E. Einige Rhynchophoren der Bernsteinfauna (Col.) // Mitteilungen des geologischen Staatsinstitutes von Hamburg. 1953. Bd. 22. S. 119-140.

Voss E. Die Unterfamilie Camarotinae, ihre Beziehungen zur Familie Attelabidae sowie ein Versuch, die phylogenetischen Zusammenhänge innerhalb der letzteren zur Darstellung zu bringen (Coleopteram Curculionidae) // Entomologische Abhandlungen. 1965a. Bd. 32. No. 11. S. 222-244.

Voss E. The zoological Results of Gy. Topal's collectiongs in South Argentina. 17. Attelabidae (Coleoptera) (188. Beitrag zur Kenntnis der Curculioniden) // Annales Historico-Naturales Musei National Hungarici. 1965b. Vol. 57. P. 329-332.

Wood S.L. A reclassification of the genera of Scolytidae (Coleoptera) // Great Basin Naturalist Memoirs. 1986. No. 10. P. 1-126.

Zherichin V.V. Family Attelabidae Billberg, 1820. In: Arnoldi L.V., Zherichin V.V., Nikritin L.M., Ponomarenko A.G. Mesozoic Coleoptera // Proceeding of Paleontological Institute. 1977. Vol. 161. P. 176-180. [in Russian]

Zherichin V.V., Egorov A.B. Weevils (Coleoptera, Curculionidae) from Russian Far East (review of subfamilies with description new taxa). Vladivostok. 1990(1991). 164 pp. [in Russian]

Zherikhin V.V. Family Nemonychidae Bedel, 1882, Family Ulyanidae Zherichin, fam. nov., Family Anthribidae Billberg, 1829, Family Attelabidae Billberg, 1820. In: Gromov V.V., Dmitriev V.Yu., Zherikhin V.V., Lebedev E.L., Ponomarenko A.G., Rasnitsyn A.P., Sukatsheva I. D. 1993. Cretaceous insect faunas of the Ulya River basin, West Okhotsk Region // Mesozoic insects and ostracods from Asia. Nauka Press, Moscow. 1993. P. 20-33. [in Russian].

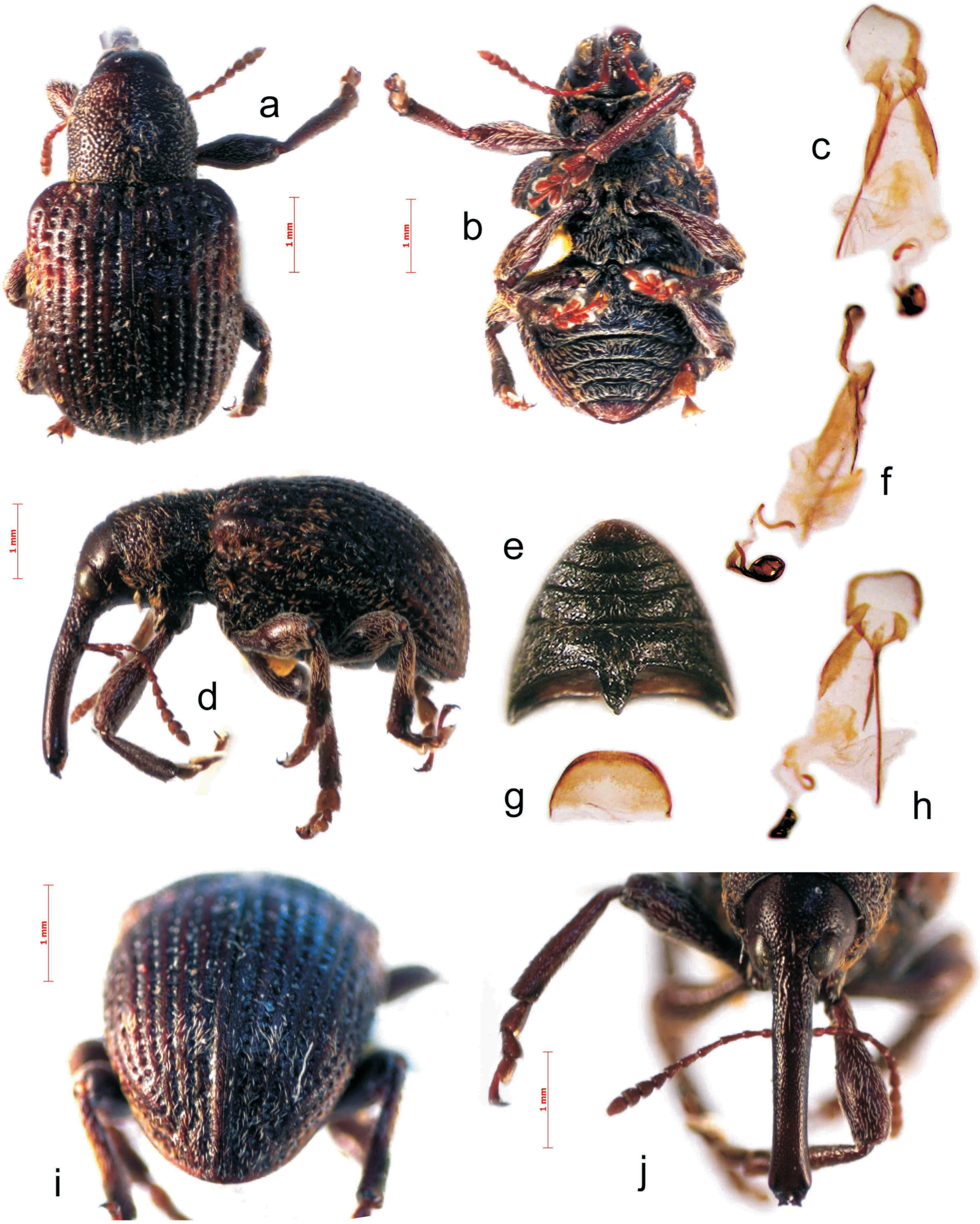
Zherikhin V.V., Gratshev V.G. A comparative study of the hind wing venation of the superfamily Curculionoidea, with phylogenetic implications // Biology, phylogeny, and classification of Coleoptera. Papers celebrating the 80th birthday of Roy A. Crowson. Warszawa. 1995. P. 633-777.

Zherichin V.V., Gratshev V.G. Fossil Curculionid beetles (Coleoptera, Curculionoidea) from the Lower Cretaceous of Northeastern Brazil // Paleontological journal. 2004. No. 5. P. 58-68. [in Russian]

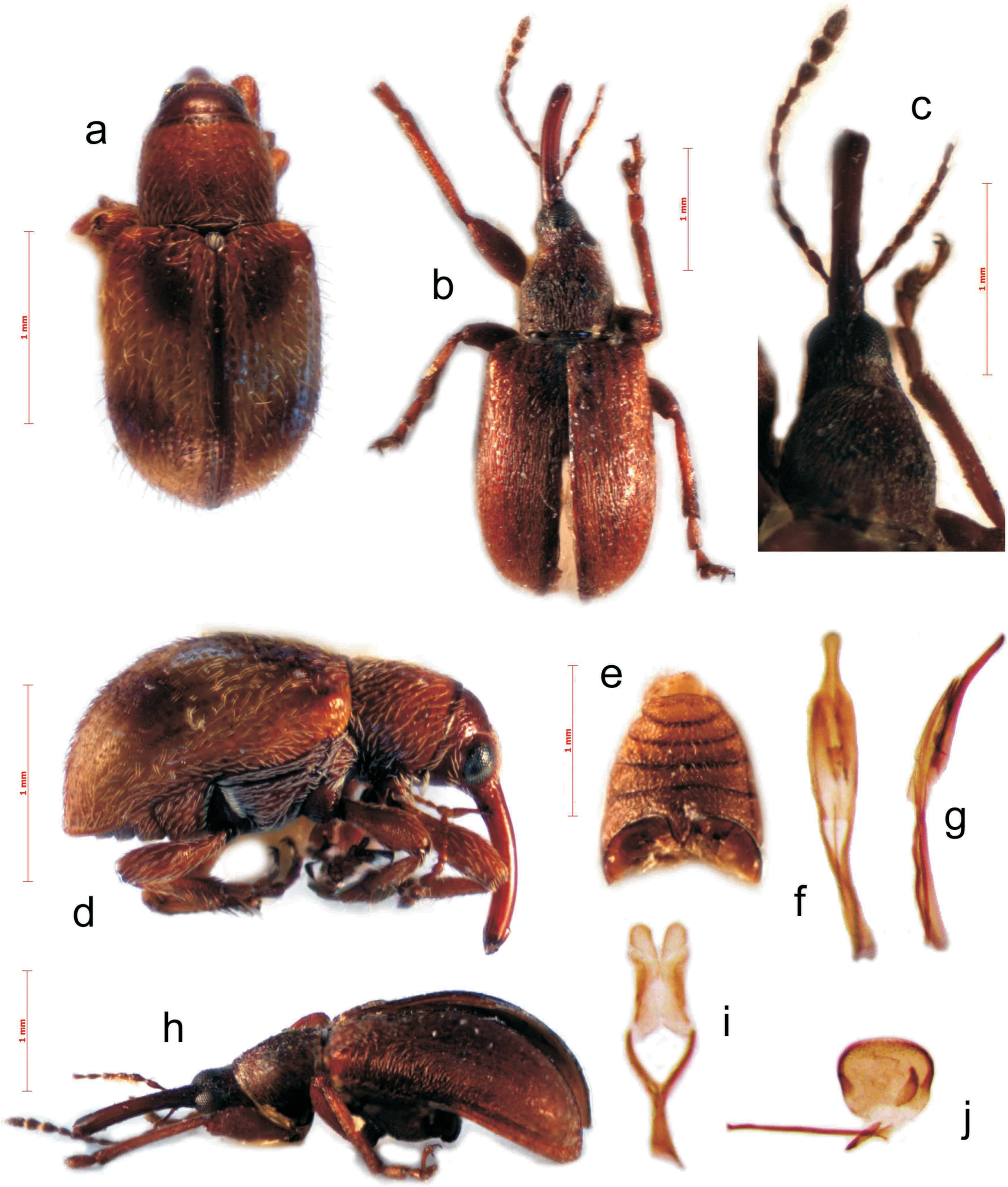
Zimmerman E.C. 1993. Australian Weevils (Coleoptera. Curculionoidea). Vol. 3. Nanophyidae, Rhynchophoridae, Erirhinidae, Curculionidae: Amycterinae, literature consulted. CSIRO Publications. X + 854 pp.

Zimmerman E.C. Australian Weevils (Coleoptera. Curculionoidea). Vol. 1. Anthribidae to Attelabidae. CSIRO Publications. 1994a. XXXII + 741 pp.

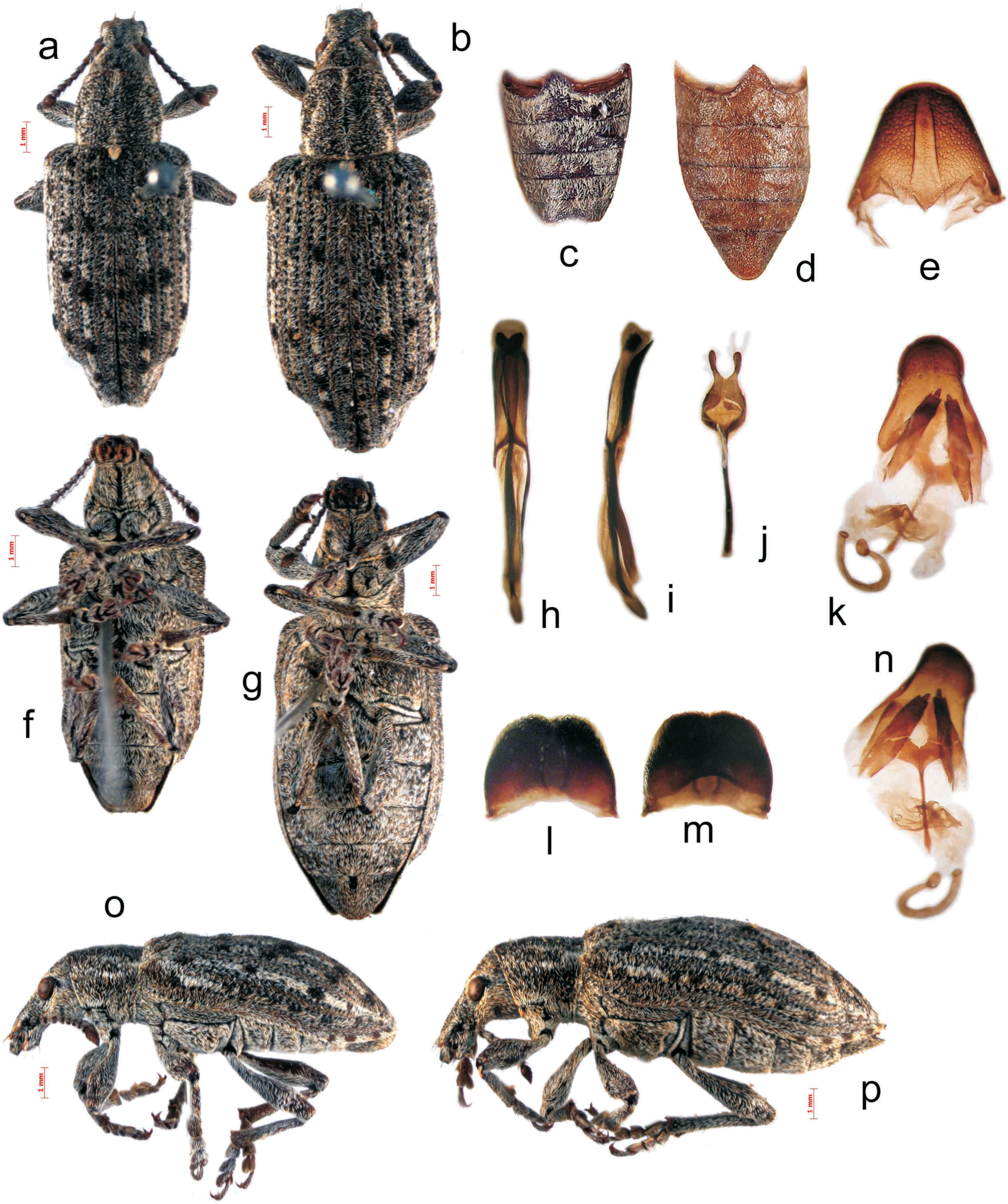
Zimmerman E.C. Australian Weevils (Coleoptera. Curculionoidea). Vol. 2. Brentidae, Eurhynchidae, Apionidae and a chapter on immature stages by Brenda May. CSIRO Publications. 1994b. X + 755 pp.



Car condensatus (female): ***a*** - habitus (dorsal view), ***b*** - habitus (ventral view), ***c*** - genitalia (ventral view), ***d*** - habitus (lateral view), ***e*** - abdomen (dorsal view), ***f*** - genitalia (lateral view), ***g*** - 7th tergite (dorsal view), ***h*** - genitalia (dorsal view), ***i*** - apex of the elytra (dorsal view), ***j*** - head and rostrum (dorsal view).



Caritae gen. spp.: ***a*** - habitus of *Car pini*, female (dorsal view), ***b*** - habitus of *Chilecar pilgerodendri*, male (dorsal view), ***c*** - rostum and head of *Ch. pilgerodendri*, male (dorsal view), ***d*** - habitus of *Car pini*, female (lateral view), ***e*** - abdomen of *Chilecar pilgerodendri*, male (dorsal view), ***f*** - aedeagus of *Ch. pilgerodendri* (dorsal view), ***g*** - aedeagus of *Ch. pilgerodendri* (lateral view), ***h*** - habitus of *Ch. pilgerodendri*, male (lateral view), ***i*** - tegmen of *Ch. pilgerodendri* (dorsal view), ***j*** - 8th sternite of *Ch. pilgerodendri*, male (dorsal view).



Ithycerus noveoboracensis: ***a*** - habitus, male (dorsal view), ***b*** - habitus, female (dorsal view), ***c*** - abdomen, male (dorsal view), ***d*** - abdomen, female (dorsal view), ***e*** - 7th tergite of female (dorsal view), ***f*** - habitus, male (ventral view), ***g*** - habitus, female (ventral view), ***h*** - aedeagus (dorsal view), ***i*** - aedeagus (lateral view), ***j*** - tegmen (dorsal view), ***k*** - female genitalia (dorsal view), ***i*** - 7th tergite of male (dorsal view), ***m*** - 7th tergite of male (ventral view), ***n*** - female genitalia (ventral view), ***o*** - habitus, male (lateral view), ***p*** - habitus, female (lateral view).

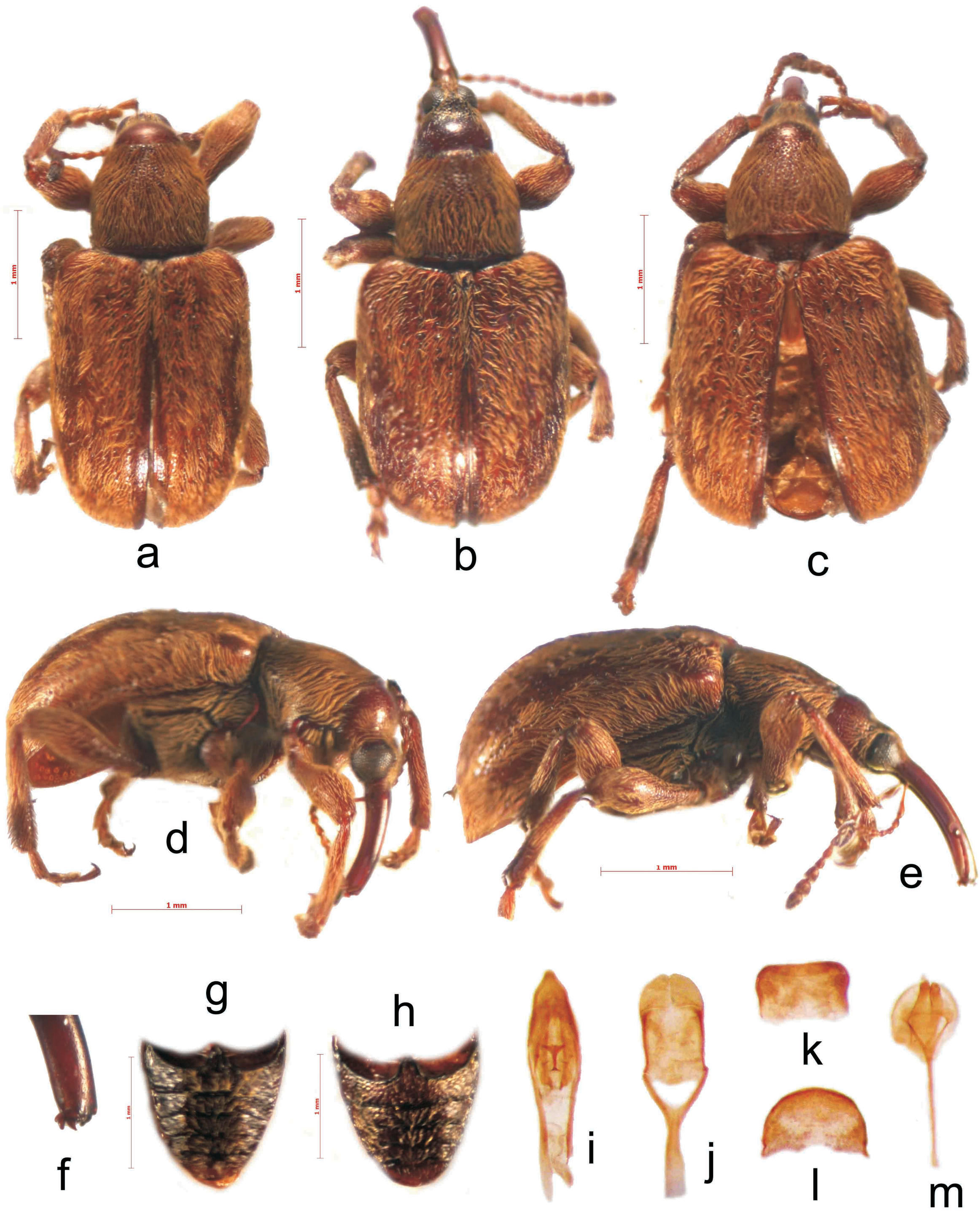


Fig. 4. *Caenominurus topali*: ***a*** - habitus, holotype, male (dorsal view), ***b*** - habitus, allotype, female (dorsal view), ***c*** - habitus, paratype, female (dorsal view), ***d*** - habitus, male (lateral view), ***e*** - habitus, female (lateral view), ***f*** - apex of rostrum and mandilbe, female (lateral view), ***g*** - abdomen, male (dorsal view), ***h*** - abdomen, female (dorsal view), ***i*** - aedeagus (dorsal view), ***j*** - tegmen (dorsal view), ***k*** - 8th sternite, male (dorsal view), ***l*** - 7th tergite, female (dorsal view), ***m*** - female genitalia (ventral view).