

CONTRIBUTION TO THE KNOWLEDGE OF THE MESOZOIC CURCULIONOIDEA (COLEOPTERA)

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[Легалов А.А. К познанию мезозойских жуков надсемейства Curculionoidea (Coleoptera)]

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Key words: Coleoptera, Curculionoidea, Mesozoic.**Ключевые слова:** Coleoptera, Curculionoidea, Мезозой.

Summary. 111 species of the Curculionid-beetles are known from the Mesozoic (Obrieniidae – 7, Nemonychidae – 63, Ithyceridae – 24, Belidae – 4, Anthribidae – 2, Rhynchitidae – 3, Brentidae – 2, Curculionidae – 5, Scolytidae – 1). New subfamily Metrioxenoidinae Legalov, subfam.n. (type genus: *Metrioxenoides* Gratshev, Zherikhin, Jarzembowski, 1998), new tribes Kenderlykanini Legalov, trib.n. (type genus: *Kenderlyka* Zherikhin & Gratshev, 1993), Probelini Legalov, trib.n. (type genus: *Probelus* L. Arnoldi, 1977), Karataucarini Legalov, trib.n. (type genus: *Karataucar* Legalov, gen.n.), Gobicarini Legalov, trib.n. (type genus: *Gobicar* Gratshev & Zherikhin, 1999), Cretanthribini Legalov, trib.n. (type genus: *Cretanthribus* Legalov, gen.n.), Axeirodiellini Legalov, trib.n. (type genus: *Axeirodiellus* Zhericin & Gratshev, 2004), Cretuliini Legalov, trib.n. (type genus: *Cretulio* Zherikhin, 1993), new subtribe Abrocarina Legalov, subtrib.n. (type genus: *Abrocar* Liu & Ren, 2006) of tribe Baissorhynchini Zherikhin, 1993, new genera *Archaeorrhynchoides* Legalov, gen.n. (type species: *Archaeorrhynchus paradoxopus* L. Arnoldi, 1977), *Arnoldibelus* Legalov, gen.n. (type species: *Belonotaris karatavicus* L. Arnoldi, 1977), *Belonotaroides* Legalov, gen.n. (type species: *Belonotaris lineatipunctatus* L. Arnoldi, 1977), *Khetanamonyx* Legalov, gen.n. (type species: *Oxycorynoides crassirostris* Zherikhin, 1993), *Karataucar* Legalov, gen.n. (type species: *Oxycorynoides progressivus* L. Arnoldi, 1977), *Gratshevicar* Legalov, gen.n. (type species: *Scelocamptus dubius* L. Arnoldi, 1977), *Brasilnemonyx* Legalov, gen.n. (type species: *Brasilnemonyx zherichini* Legalov, sp.n.), *Chinabrenthorhinus* Legalov, gen.n. (type species: *Brenthorhinus longidigitatus* Ren, 1995), *Abrenthorhinus* Legalov, gen.n. (type species: *Brenthorhinus brevisrostris* Gratshev & Zherikhin, 1996), *Cretanthribus* Legalov, gen.n. (type species: *Anthribites cretaceus* Zherikhin, 1993), *Orapauletes* Legalov, gen.n. (type species: *Orapauletes cretaceus* Legalov, sp.n.), new subgenera *Probeloides* Legalov, subgen.n. (type species: *Probelus tibialis* L. Arnoldi, 1977) of the genus *Probelus* L. Arnoldi, 1977, *Pseudoxycorynoides* Legalov, subgen.n. (type species: *Oxycorynoides brevipes* L. Arnoldi, 1977) of the genus *Oxycorynoides* L. Arnoldi, 1977, *Hispanocarodes* Legalov, subgen.n. (type species: *Gobicar hispanicus* Gratshev & Zherikhin, 2000) and *Rugosocar* Legalov, subgen.n. (type species: *Cretonanophyes rugosithorax* Gratshev & Zherikhin, 2000) of the genus *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006 and new species *Brasilnemonyx zherichini* Legalov, sp.n. (Early Cretaceous, Brazil: Santana) and *Orapauletes cretaceus* Legalov, sp.n. (Late Cretaceous (Botswana: Orap) are described. New taxonomic name *Montsecanomalus soriano* Legalov, nom.n. for *M. zherichini* Soriano, Gratshev, Delclòs, 2006 non Liu & Ren, 2006 is proposed. New synonyms Procurelionini L. Arnoldi, 1977, syn.n. for Eccoptarthrinae L. Arnoldi, 1977, *Probelopsis* L. Arnoldi, 1977, syn.n. (type species: *Probelopsis acutiapex* L. Arnoldi, 1977) for *Probelus* L. Arnoldi, 1977 (type species: *Probelus curvispinus* L. Arnoldi, 1977), *Pseudobrenthorhinus* Gratshev & Zherikhin, 1996, syn.n. (type species: *Pseudobrenthorhinus crassicornis* Gratshev & Zherikhin, 1996) for *Eccoptarthrus* L. Arnoldi, 1977 (type species: *Eccoptarthrus crassipes* L. Arnoldi, 1977) are presented. New systematic placements are proposed: *Belonotaris* L. Arnoldi, 1977, placem.n. (type species: *Belonotaris punctatissimus* L. Arnoldi, 1977) is transferred from tribe Eobelini to tribe Oxycorynoidini; Paleocartinae Legalov, 2003, placem.n., Nebrenthorhinini Legalov, 2007, placem.n., Eccoptarthrinae L. Arnoldi, 1977, placem.n., Brenthorhinoidini Legalov, 2003, placem.n. are transferred from family Ithyceridae to family Nemonychidae; *Montsecanomalus hispanicus* (Gratshev & Zherikhin, 2000), placem.n. is transferred from Gobicar Gratshev & Zherikhin, 1999 to *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006; *Zherichiniletes* Legalov, 2007, placem.n. is transferred from Auletini subtribe incertae sedis to tribe Sanyrevilleini Legalov, 2003. Paleocartinae Legalov, 2003, stat.n. and Distenorhininae L. Arnoldi, 1977, stat.n. are upgraded from tribes to subfamilies. 15 new combinations are proposed: *Archaeorrhynchoides latitarsis* (L. Arnoldi, 1977), comb.n., *A. paradoxopus* (L. Arnoldi, 1977), comb.n., *Probelus acutiapex* (L. Arnoldi, 1977), comb.n., *Arnoldibelus karatavicus* (L. Arnoldi, 1977), comb.n., *Belonotaroides lineatipunctatus* (L. Arnoldi, 1977), comb.n., *Khetanamonyx crassirostris* (Zherikhin, 1993), comb.n., *Karataucar progressivus* (L. Arnoldi, 1977), comb.n., *Gratshevicar dubius* (L. Arnoldi, 1977), comb.n., *Eccoptarthrus crassicornis* (Gratshev & Zherikhin, 1996), comb.n., *E. magnus* (Gratshev & Zherikhin, 1996), comb.n., *E. tenuicornis* (Gratshev & Zherikhin, 1996), comb.n., *Abrenthorhinus brevisrostris* (Gratshev & Zherikhin, 1996), comb.n., *Chinabrenthorhinus longidigitatus* (Ren, 1995), comb.n., *Montsecanomalus hispanicus* (Gratshev & Zherikhin, 2000), comb.n. and *Cretanthribus cretaceus* (Zherikhin, 1993), comb.n.

Резюме. Из Мезозоя известно 111 видов долгоносикообразных жуков (Obrieniidae – 7, Nemonychidae – 63, Ithyceridae – 24, Belidae – 4, Anthribidae – 2, Rhynchitidae – 3, Brentidae – 2, Curculionidae – 5, Scolytidae – 1). В работе описаны новое подсемейство Metrioxenoidinae Legalov, subfam.n. (типовой род: *Metrioxenoides* Gratshev, Zherikhin, Jarzembowski, 1998), новые трибы Kenderlykanini Legalov, trib.n. (типовой род: *Kenderlyka* Zherikhin & Gratshev, 1993), Probelini Legalov, trib.n. (типовой род: *Probelus* L. Arnoldi, 1977), Karataucarini Legalov, trib.n. (типовой род: *Karataucar* Legalov, gen.n.), Gobicarini Legalov, trib.n. (типовой род: *Gobicar* Gratshev & Zherikhin, 1999), Cretanthribini Legalov, trib.n. (типовой род: *Cretanthribus* Legalov, gen.n.), Axeirodiellini Legalov, trib.n. (типовой род: *Axeirodiellus* Zhericin & Gratshev, 2004), Cretuliini Legalov, trib.n. (типовой род: *Cretulio* Zherikhin, 1993), новая подтриба Abrocarina Legalov, subtrib.n. (типовой род: *Abrocar* Liu & Ren, 2006) трибы Baissorhynchini Zherikhin, 1993, новые рода *Archaeorrhynchoides* Legalov, gen.n. (типовой вид: *Archaeorrhynchus paradoxopus* L. Arnoldi, 1977), *Arnoldibelus* Legalov, gen.n. (типовой вид: *Belonotaris karatavicus* L. Arnoldi, 1977), *Belonotaroides* Legalov, gen.n. (типовой вид: *Belonotaris lineatipunctatus* L. Arnoldi, 1977), *Khetanamonyx* Legalov, gen.n. (типовой вид: *Oxycorynoides crassirostris* Zherikhin, 1993), *Karataucar* Legalov, gen.n. (типовой вид: *Oxycorynoides progressivus* L. Arnoldi, 1977), *Gratshevicar* Legalov, gen.n. (типовой вид: *Scelocamptus dubius* L. Arnoldi, 1977), *Brasilnemonyx* Legalov, gen.n. (типовой вид: *Brasilnemonyx zherichini* Legalov, sp.n.), *Chinabrenthorhinus* Legalov, gen.n. (типовой вид: *Brenthorhinus longidigitatus* Ren, 1995), *Abrenthorhinus* Legalov, gen.n. (типовой вид: *Brenthorhinus brevisrostris* Gratshev & Zherikhin, 1996), *Cretanthribus* Legalov, gen.n. (типовой вид: *Anthribites cretaceus* Zherikhin, 1993), *Orapauletes* Legalov, gen.n. (типовой вид: *Orapauletes cretaceus* Legalov, sp.n.), новые подроды *Probeloides* Legalov, subgen.n. (типовой вид: *Probelus tibialis* L. Arnoldi, 1977) рода *Probelus* L. Arnoldi, 1977, *Pseudoxycorynoides* Legalov, subgen.n. (типовой вид: *Oxycorynoides brevipes* L. Arnoldi, 1977) рода *Oxycorynoides* L. Arnoldi, 1977, *Hispanocarodes* Legalov, subgen.n. (типовой вид: *Gobicar hispanicus* Gratshev & Zherikhin, 2000) и *Rugosocar* Legalov, subgen.n. (типовой вид: *Cretonanophyes rugosithorax* Gratshev & Zherikhin, 2000) рода *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006 и новые виды *Brasilnemonyx zherichini* Legalov, sp.n. (ранний Кретацес, Бразилия: Сантана) и *Orapauletes cretaceus* Legalov, sp.n. (поздний Кретацес (Ботсвана: Орап) описаны. Новое таксономическое название *Montsecanomalus soriano* Legalov, nom.n. для *M. zherichini* Soriano, Gratshev, Delclòs, 2006 не Liu & Ren, 2006 предложено. Новые синонимы Procurelionini L. Arnoldi, 1977, syn.n. для Eccoptarthrinae L. Arnoldi, 1977, *Probelopsis* L. Arnoldi, 1977, syn.n. (типовой вид: *Probelopsis acutiapex* L. Arnoldi, 1977) для *Probelus* L. Arnoldi, 1977 (типовой вид: *Probelus curvispinus* L. Arnoldi, 1977), *Pseudobrenthorhinus* Gratshev & Zherikhin, 1996, syn.n. (типовой вид: *Pseudobrenthorhinus crassicornis* Gratshev & Zherikhin, 1996) для *Eccoptarthrus* L. Arnoldi, 1977 (типовой вид: *Eccoptarthrus crassipes* L. Arnoldi, 1977) предложены. Новые систематические размещения предложены: *Belonotaris* L. Arnoldi, 1977, размещен.n. (типовой вид: *Belonotaris punctatissimus* L. Arnoldi, 1977) перенесен из трибы Eobelini в трибу Oxycorynoidini; Paleocartinae Legalov, 2003, размещен.n., Nebrenthorhinini Legalov, 2007, размещен.n., Eccoptarthrinae L. Arnoldi, 1977, размещен.n., Brenthorhinoidini Legalov, 2003, размещен.n. перенесены из семейства Ithyceridae в семейство Nemonychidae; *Montsecanomalus hispanicus* (Gratshev & Zherikhin, 2000), размещен.n. перенесен из трибы Gobicar Gratshev & Zherikhin, 1999 в *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006; *Zherichiniletes* Legalov, 2007, размещен.n. перенесен из трибы Auletini в трибу Sanyrevilleini Legalov, 2003. Paleocartinae Legalov, 2003, stat.n. и Distenorhininae L. Arnoldi, 1977, stat.n. перенесены из трибы в подсемейство. 15 новых комбинаций предложены: *Archaeorrhynchoides latitarsis* (L. Arnoldi, 1977), comb.n., *A. paradoxopus* (L. Arnoldi, 1977), comb.n., *Probelus acutiapex* (L. Arnoldi, 1977), comb.n., *Arnoldibelus karatavicus* (L. Arnoldi, 1977), comb.n., *Belonotaroides lineatipunctatus* (L. Arnoldi, 1977), comb.n., *Khetanamonyx crassirostris* (Zherikhin, 1993), comb.n., *Karataucar progressivus* (L. Arnoldi, 1977), comb.n., *Gratshevicar dubius* (L. Arnoldi, 1977), comb.n., *Eccoptarthrus crassicornis* (Gratshev & Zherikhin, 1996), comb.n., *E. magnus* (Gratshev & Zherikhin, 1996), comb.n., *E. tenuicornis* (Gratshev & Zherikhin, 1996), comb.n., *Abrenthorhinus brevisrostris* (Gratshev & Zherikhin, 1996), comb.n., *Chinabrenthorhinus longidigitatus* (Ren, 1995), comb.n., *Montsecanomalus hispanicus* (Gratshev & Zherikhin, 2000), comb.n. и *Cretanthribus cretaceus* (Zherikhin, 1993), comb.n.

повой вид: *Scelocamptus dubius* L. Arnoldi, 1977), *Brasilnemonyx* Legalov, gen.n. (типовой вид: *Brasilnemonyx zherichini* Legalov, sp.n.), *Chinabrenthorrhinus* Legalov, gen.n. (типовой вид: *Brenthorrhinus longidigitatus* Ren, 1995), *Abrenthorrhinus* Legalov, gen.n. (типовой вид: *Brenthorrhinus brevisrostris* Gratshev & Zherikhin, 1996), *Cretanthribus* Legalov, gen.n. (типовой вид: *Anthribites cretaceus* Zherikhin, 1993), *Orapauletes* Legalov, gen.n. (типовой вид: *Orapauletes cretaceus* Legalov, sp.n.), новые подрода *Probeloides* Legalov, subgen.n. (типовой вид: *Probelus tibialis* L. Arnoldi, 1977) рода *Probelus* L. Arnoldi, 1977, *Pseudoxycorynoides* Legalov, subgen.n. (типовой вид: *Oxycorynoides brevipes* L. Arnoldi, 1977) рода *Oxycorynoides* L. Arnoldi, 1977, *Hispanocarodes* Legalov, subgen.n. (типовой вид: *Gobicar hispanicus* Gratshev & Zherikhin, 2000) и *Rugosocar* Legalov, subgen.n. (типовой вид: *Cretonanophyes rugosithorax* Gratshev & Zherikhin, 2000) рода *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006, новые виды *Brasilnemonyx zherichini* Legalov, sp.n. (нижний мел, Бразилия: Сантана) и *Orapauletes cretaceus* Legalov, sp.n. (верхний мел, Ботсвана: Оран). Предложено новое замещающее название *Montsecanomalus sorianoi* Legalov, nom.n. для *M. zherichini* Soriano, Gratshev, Delclòs, 2006 non Liu & Ren, 2006. Procurelionini L. Arnoldi, 1977, syn.n. сведена в синонимы к Eссоptarthrinae L. Arnoldi, 1977, *Probelopsis* L. Arnoldi, 1977, syn.n. (типовой вид: *Probelopsis acutiapex* L. Arnoldi, 1977) сведен в синонимы к *Probelus* L. Arnoldi, 1977 (типовой вид: *Probelus curvispinus* L. Arnoldi, 1977), *Pseudobrenthorrhinus* Gratshev & Zherikhin, 1996, syn.n. (типовой вид: *Pseudobrenthorrhinus crassicornis* Gratshev & Zherikhin, 1996) сведен в синонимы к *Eссоptarthrus* L. Arnoldi, 1977 (типовой вид: *Eссоptarthrus crassipes* L. Arnoldi, 1977). Изменено систематическое положение *Belonotaris* L. Arnoldi, 1977, placem.n. (типовой вид: *Belonotaris punctatissimus* L. Arnoldi, 1977) (из трибы Eobelini в трибу Oxycorynoidini), Paleocartinae Legalov, 2003, placem.n., Eссоptarthrinae L. Arnoldi, 1977, placem.n., Nebrenthorrhinini Legalov, 2007, placem.n., Brenthorrhinoidini Legalov, 2003, placem.n. (из семейства Ithyceridae в семейство Nemonychidae), *Montsecanomalus hispanicus* (Gratshev & Zherikhin, 2000), placem.n. (из рода *Gobicar* Gratshev & Zherikhin, 1999 в род *Montsecanomalus* Soriano, Gratshev, Delclòs, 2006), *Zherichiniletes* Legalov, 2007, placem.n. (из Auletini subtribe incertae sedis в трибу Sanyrevilleini Legalov, 2003). Изменен статус Paleocartinae Legalov, 2003, stat.n. и Distenorrhininae L. Arnoldi, 1977, stat.n. (из триб до подсемейств). Установлено 15 новых комбинаций (*Archaeorrhynchoides latitarsis* (L. Arnoldi, 1977), comb.n., *A. paradoxopus* (L. Arnoldi, 1977), comb.n., *Probelus acutiapex* (L. Arnoldi, 1977), comb.n., *Arnoldibelus karatavicus* (L. Arnoldi, 1977), comb.n., *Belonotaroides lineatipunctatus* (L. Arnoldi, 1977), comb.n., *Khetanamonyx crassirostris* (Zherikhin, 1993), comb.n., *Karataucar progressivus* (L. Arnoldi, 1977), comb.n., *Gratshevica dubius* (L. Arnoldi, 1977), comb.n., *Eссоptarthrus crassicornis* (Gratshev & Zherikhin, 1996), comb.n., *E. magnus* (Gratshev & Zherikhin, 1996), comb.n., *E. tenuicornis* (Gratshev & Zherikhin, 1996), comb.n., *Abrenthorrhinus brevisrostris* (Gratshev & Zherikhin, 1996), comb.n., *Chinabrenthorrhinus longidigitatus* (Ren, 1995), comb.n., *Montsecanomalus hispanicus* (Gratshev & Zherikhin, 2000), comb.n. и *Cretanthribus cretaceus* (Zherikhin, 1993), comb.n.).

INTRODUCTION

Curculionid beetles play major role in ecosystems being phytophages of various plants. Transition from development on generative organs of plants to vegetative parts was a basis for differentiation of Curculionids in the Mesozoic. The basic groups of Curculionoidea were formed in Mesozoic at first on proangiosperms and then on angiosperms. Study of Mesozoic Curculionid beetles is necessary for the decision of problems of evolution and phylogeny of recent groups.

111 Curculionoidea species are hitherto known from the Mesozoic (6 species from the Triassic, 49 species from the Jurassic, 9 species from Jurassic or Cretaceous and 47 species from the Cretaceous (43 from Early and 4 from Late)) [Alonso-Zarazaga, Lyal, 1999; Arnoldi, 1977; Gratshev, 1998; Gratshev, Zherichin, 1995, 1996, 1997, 1999, 2000a, 2000b, 2003; Kirejtshuk, Azar, Beaver, Mandelshtam, Nel, 2009; Kuschel, 1959, 1983; Kuschel, Poinar, 1993; Kuschel, Oberprieler, Rayner, 1994; Legalov, 2003, 2007, 2009a, 2009b; Liu, Ren, 2006, 2007; Liu, Ren, Shih, 2006; Liu, Ren, Tan, 2006; Martynov, 1926; Poinar, 2006, 2008, 2009; Poinar, Brown, 2009; Ponomarenko, Zherikhin, Kirejtshuk, 2004; Ren, 1995; Rheinheimer, 2004; Soriano, Gratshev, Delclòs, 2006; Soriano, 2009; Whalley, Jarzembowski, 1985; Zherichin, 1977, 1986, 1993; Zherichin, Gratshev, 1993, 1997, 2003, 2004].

This work is based on the materials of Paleontological Institute of the Russian Academy of Sciences (Moscow).

RESULTS

Key to Mesozoic weevil families (Curculionoidea)

1. Middle coxa impinging on mesepimerum and metepisternum. Body narrow, elongated, with distinct

- striae **Obrienidae**
 – middle coxa not impinging on mesepimerum and metepisternum. Body wider, with weak striae or without striae 2
 2. 1st and 2nd ventrites elongated, much longer than 3rd and 4th ventrites 3
 – ventrites homonomic, sometimes 1st ventrite a little elongated 5
 3. Antennae not geniculate. Rostrum without antennal stria **Brentidae**
 – antennae geniculate. Rostrum with antennal stria 4
 4. Rostrum very short **Scolytidae**
 – rostrum elongated **Curculionidae**
 5. Antennae inserted dorsally **Ithyceridae (Ulyaninae)**
 – antennae inserted laterally or ventrally 6
 6. Rostrum sharply narrowed to apex **Ithyceridae (Slonikinae)**
 – rostrum not or slightly narrowed to apex 7
 7. Rostrum widened and flattened, short. Pronotum usually with basal carina **Anthribidae**
 – rostrum more or less elongated, narrow. Pronotum without basal carina 8
 8. Antennae inserted near basis or in first third of rostrum 9
 – antennae inserted submedially or subapically 11
 9. Body flattened. Elytra with carina along the margins ... **Belidae (Oxycorininae)**
 – body convex. Elytra without carina along the margins ... 10
 10. Body granulated, larger (5.2 mm) **Belidae (Belinae, in part)**
 – body not granulated, smaller (1.1-3.4 mm) **Ithyceridae (Carinae, in part)**
 11. Segments of tarsi widened 12
 – segments of tarsi not widened, if widened then body

- large, elytra and pronotum not granulated 13
12. Body granulated, larger (6.7 mm)
 **Belidae (Belinae, in part)**
 – body not granulated, smaller (2.5-6.0 mm)
 **Nemonychidae (in part)**
13. Antennae located subapically
 **Nemonychidae (in part)**
 – antennae located submedially 14
14. Procoxa occupy almost all prothorax
 **Ithyceridae (Carinae, in part)**
 – precoxal part of prothorax elongated 15
15. Gular suture double **Nemonychidae (in part)**
 – gular suture single **Ithyceridae (Carinae, in part)**

LIST OF THE FAMILY OBRIENIIDAE

Family **Obrieniidae** Zherikhin & Gratshev, 1993

Obrieniidae Zherikhin & Gratshev, 1993: 51

Type genus: *Obrienia* Zherikhin & Gratshev, 1993

Remarks. 6 species are described from the Triassic and 1 species from the Jurassic.

Subfamily **Obrieniinae** Zherikhin & Gratshev, 1993

Obrieniinae Zherikhin & Gratshev, 1993: 51

Type genus: *Obrienia* Zherikhin & Gratshev, 1993

Genus **Obrienia** Zherikhin & Gratshev, 1993

(Col. pl. II: a, b)

Obrienia Zherikhin & Gratshev, 1993: 51

Type species: *Obrienia kuscheli* Zherikhin & Gratshev, 1993

Obrienia illaetabilis Zherikhin & Gratshev, 1993

Obrienia illaetabilis Zherikhin & Gratshev, 1993: 56

Distribution. Late Triassic (Kirghizia: Madygen).

Obrienia ingurgata Zherikhin & Gratshev, 1993

Obrienia ingurgata Zherikhin & Gratshev, 1993: 55

Distribution. Late Triassic (Kirghizia: Madygen).

Obrienia kuscheli Zherikhin & Gratshev, 1993

Obrienia kuscheli Zherikhin & Gratshev, 1993: 53

Distribution. Late Triassic (Kirghizia: Madygen).

Genus **Guillermia** Zherikhin & Gratshev, 1993

Guillermia Zherikhin & Gratshev, 1993: 52

Type species: *Guillermia lecticula* Zherikhin & Gratshev, 1993

Guillermia lecticula Zherikhin & Gratshev, 1993

Guillermia lecticula Zherikhin & Gratshev, 1993: 57

Distribution. Late Triassic (Kirghizia: Madygen).

Subfamily **Kararhynchinae** Zherikhin & Gratshev, 1993

Kararhynchinae Zherikhin & Gratshev, 1993: 52

Type genus: *Kararhynchus* Zherikhin & Gratshev, 1993

Tribe **Kenderlykanini** Legalov, trib.n.

Type genus: *Kenderlyka* Zherikhin & Gratshev, 1993

Remarks. For the description, see that of *Kenderlyka* and *Madygenorhynchus* [Zherikhin & Gratshev, 1993: 58-60].

Diagnosis. The new tribe differs from tribe *Kararhynchini* by the subcontiguous metacoxa and 1st ventrite shorter than

2nd ventrite.

Genus **Kenderlyka** Zherikhin & Gratshev, 1993

Kenderlyka Zherikhin & Gratshev, 1993: 52

Type species: *Kenderlyka consobrina* Zherikhin & Gratshev, 1993

Kenderlyka consobrina Zherikhin & Gratshev, 1993

Kenderlyka consobrina Zherikhin & Gratshev, 1993: 60

Distribution. Late Triassic (East Kazakhstan: Kenderlyk).

Genus **Madygenorhynchus** Zherikhin & Gratshev, 1993

Madygenorhynchus Zherikhin & Gratshev, 1993: 52

Type species: *Madygenorhynchus multifidus* Zherikhin & Gratshev, 1993

Madygenorhynchus multifidus Zherikhin & Gratshev, 1993

Madygenorhynchus multifidus Zherikhin & Gratshev, 1993: 59

Distribution. Late Triassic (Kirghizia: Madygen).

Tribe **Kararhynchini** Zherikhin & Gratshev, 1993

Kararhynchinae Zherikhin & Gratshev, 1993: 52

Type genus: *Kararhynchus* Zherikhin & Gratshev, 1993

Genus **Kararhynchus** Zherikhin & Gratshev, 1993

Genus *Kararhynchus* Zherikhin & Gratshev, 1993: 52

Type species: *Kararhynchus occiduus* Zherikhin & Gratshev, 1993

Kararhynchus occiduus Zherikhin & Gratshev, 1993

Kararhynchus occiduus Zherikhin & Gratshev, 1993: 62

Distribution. Late Jurassic (Kazakhstan: Karatau).

FAMILY NEMONYCHIDAE

Remarks. 49 species are described from the Jurassic, 11 species from the Cretaceous and 3 species from Jurassic or Cretaceous.

Key to Mesozoic supraspecific taxa of family
 Nemonychidae

1. Procoxa located in the middle or closer to apical margin of prothorax 2
 – procoxa located closer to basal margin of prothorax 12
2. Procoxa located closer to apical margin of prothorax. Mandibles narrow. (*Eccoptarthrinae* L. Arnoldi, 1977) ... 3
 – procoxa located in the middle of prothorax. Mandibles wide 4
3. 1st-2nd segments of funicle widened. Femora narrow ...
 *Eccoptarthrus* L. Arnoldi, 1977
 – 1st-2nd segments of funicle not widened. Femora widened *Procurculio* L. Arnoldi, 1977
4. Antennae inserted subapically. Rostrum slightly elongated. (*Brenthorrhiniinae* L. Arnoldi, 1977) 5
 – Antennae inserted in the middle or beyond the middle of rostrum. Rostrum long. (*Distenorrhiniinae* L. Arnoldi, 1977) 8
5. Mandibles with teeth at exterior margin.

(Brenthorrhinoidini Legalov, 2003)	widened in the basis (lateral view). Elytra behind almost rectangular (lateral view)	22
..... Brenthorrhinoides Gratshev & Zherikhin, 1996	– frons strongly convex. Rostrum almost cylindrical in the basis (lateral view). Elytra behind smoothed (lateral view)	24
– mandible without teeth at exterior margin. (Brenthorrhinini L. Arnoldi, 1977)	22. Rostrum thick and short. Body short	
6. Rostrum short. Antennae long, reaching humeri. The greatest width of pronotum is in the basis .....	..... Khetanamonyx Legalov, gen.n.	
..... Abrenthorrhinus Legalov, gen.n.	– rostrum longer and thin. Body elongated. (<i>Oxycorynoides</i> L. Arnoldi, 1977)	23
– rostrum longer. Antennae shorter, not reaching elytra. The greatest width of pronotum is in the middle	23. Frons flat. Rostrum strongly triangular widened in the basis (lateral view)	
7. Tarsi narrow. Femora slightly widened .....	..... Pseudoxycorynoides Legalov, subgen.n.	
..... Chinabrenthorrhinus Legalov, gen.n.	– frons slightly convex. Rostrum slightly triangular, widened in the basis (lateral view)	
– tarsi wide. Femora distinctly widened .....	..... Oxycorynoides s. str.	
..... Brenthorrhinus L. Arnoldi, 1977	24. Profemora slightly widened	25
8. Body narrower. Pronotum with weak lateral carina. (<i>Distenorrhinus</i> L. Arnoldi, 1977)	– Profemora strongly widened	28
– body wider. Pronotum with strong lateral carina	25. Tarsi not elongated. Intervals of elytra narrow	
9. Protibiae widened, biconcave. Profemora strongly widened .....	..... Belonotaroides Legalov, gen.n.	
..... Parabrenthorrhinus Gratshev & Zherikhin, 1996	– Tarsi elongated. Intervals of elytra wide	26
– tibiae narrow, straight. Profemora slightly widened or not widened	27. Body short. Elytra with distinct rows of points	
10. Larger (greater than 5 mm in length). Rostrum shorter .....	..... Cratomacer Zherichin & Gratshev, 2004	
..... Asternorrhinus Gratshev & Zherikhin, 1996	– body elongated. Elytra without distinct rows of points. Elytra flattened	
– smaller (less than 5 mm). Rostrum longer .....	..... Microprobelus Liu, Ren, Shih, 2006	
..... Distenorrhinus s. str.	28. Forehead very strongly convex. Rostrum separated from frons	
11. Apical margin of prothorax strongly curved. Labrum elongated .....	..... Ampliceps L. Arnoldi, 1977	
..... Microbrenthorrhinus Gratshev & Zherikhin, 2000	– frons strongly convex. Rostrum not separated from frons	29
– apical margin of prothorax straight. Labrum not elongated	29. Rostrum long. Body larger (6.2 mm). Protibiae straight	
..... Megabrenthorrhinus Gratshev & Zherikhin, 1996	..... Belonotaris L. Arnoldi, 1977	
12. Eyes not convex or slightly convex	– rostrum shorter. Body smaller (3.6-4.0 mm). Protibiae slightly curved	
– eyes strongly convex .....	..... Scelocamptus L. Arnoldi, 1977	
13. Antennae inserted submedially. (Eobelinae L. Arnoldi, 1977)	30. 1st segment of tarsi widened	
..... Nanophydes L. Arnoldi, 1977	..... Karataucar Legalov, gen.n.	
– antennae inserted subapically	– 1st-3rd segments of tarsi widened	
14. Metathorax short. (Nanophydini L. Arnoldi, 1977) .....	..... Gratshevicar Legalov, gen.n.	
..... Nanophydes L. Arnoldi, 1977	31. Elytra gently punctate, with weak striae or without them. (Paleocartinae Legalov, 2003)	32
– metathorax long	– elytra roughly punctate, with distinct striae. (Metrioxenoidinae Legalov, subfam.n.)	33
15. Rostrum thin and long. Pronotum with weak lateral carinae. Larger (7.0-10.2 mm)	32. Mandible with tooth at exterior margin. Pronotum sharply transversal. Profemora strongly widened. (Nebrenthorrhinini Legalov, 2007)	
– rostrum thicker and short. Pronotum with sharper lateral carinae. Smaller (2.1-6.2 mm) .....	..... Nebrenthorrhinus Legalov, 2003	
20. Tarsi strongly widened. (Eobelini L. Arnoldi, 1977)	– mandible without tooth at exterior margin. Pronotum slightly transversal. Profemora slightly widened. (Paleocartini Legalov, 2003)	
..... Archaeorrhynchoides Legalov, gen.n.	..... Paleocartus Legalov, 2003	
– protarsi widened, but not large	33. Sizes of body larger and metathorax convex	
18. Profemora narrow .....	..... Brasilnemonyx Legalov, gen.n.	
..... Eobelus L. Arnoldi, 1977	– sizes of body smaller and metathorax flat	34
– Profemora widened	34. Rostrum long. Eyes smaller. Head and pronotum small punctate	
..... Archaeorrhynchus Martynov, 1926	..... Libanorhinus Kuschel & Poinar, 1993	
19. Tibiae with mucro and sizes of the body smaller (7.0-8.2 mm)	– rostrum short. Eyes larger. Head and pronotum largely punctate	
..... Probelus L. Arnoldi, 1977	..... Metrioxenoides Gratshev, Zherikhin, Jarzembowski, 1997	
– tibiae without mucro and sizes of the body larger (7.5-8.5 mm) .....	..... Renicimberis Legalov, 2009	
..... Arnoldibelus Legalov, gen.n.	– elytra without striae. (Cimberindinae des Gozis, 1882)	
20. Segments of tarsi not widened, narrower than tibiae. (<i>Oxycorynoidini</i> L. Arnoldi, 1977) .....	..... Chinocimberis Legalov, 2009	
– segments of tarsi widened, wider than tibiae. (Karataucarini Legalov, trib.n.)		
21. Frons flat or slightly convex. Rostrum triangular		

Subfamily **Eobelinae** L. Arnoldi, 1977

Tribe Eobelini L. Arnoldi, 1977

Genus **Archaeorrhynchoides** Legalov, gen.n. (col. pl. II, e)

Type species: *Archaeorrhynchus paradoxopus* L. Arnoldi, 1977

Remarks. For the description, see that of *Archaeorrhynchus paradoxopus* [Arnoldi, 1977: 149-150].

Diagnosis. The new genus is close to genus *Archaeorrhynchus* but differs by the strongly widened and larger protarsi.

Etymology. The name is formed by addition of the ending “-ides” to “Archaeorrhynchus”.

Archaeorrhynchoides latitarsis (L. Arnoldi, 1977), comb.n.

Archaeorrhynchus latitarsis L. Arnoldi, 1977: 150

Distribution. Late Jurassic (Kazakhstan: Karatau).

Archaeorrhynchoides paradoxopus (L. Arnoldi, 1977), comb.n.

Archaeorrhynchus paradoxopus L. Arnoldi, 1977: 149

Distribution. Late Jurassic (Kazakhstan: Karatau).

Tribe **Probelini** Legalov, trib.n.

Type genus: *Probelus* L. Arnoldi, 1977

Description. Body brown. Rostrum long, straight or curved. Antennae inserted submedially. Frons convex. Eyes large. Temples short. Antennae long, reaching the middle of pronotum. Pronotum not elongated, punctate, with lateral carina. Elytra elongated, probable with weak rows of points. Procoxa located near basal margin of prothorax. Precoxal part of prothorax elongated. Metathorax elongated. Abdomen convex. 1st ventrite of almost equal length. 5th ventrite sometimes elongated. Legs long. Procoxa large. Femora slightly widened. Tibiae slightly curved. Metatibiae with mucro. Tarsi more or less long, not widened. Clausal segment elongated with 2 claws. Claws with teeth. Length of body: 7.0-8.5 mm.

Diagnosis. The new tribe differs from tribe Eobelini by not widened segments of tarsi.

Genus **Probelus** L. Arnoldi, 1977 (Col. pl. I, b, c)

Probelus L. Arnoldi, 1977: 151

Type species: *Probelus curvispinus* L. Arnoldi, 1977

Probelopsis L. Arnoldi, 1977: 153, syn.n.; type species:

Probelopsis acutiapex L. Arnoldi, 1977

Remarks. A study of type species of this genera has shown that *Probelopsis* L. Arnoldi, 1977, syn.n. is synonym to *Probelus* L. Arnoldi, 1977.

Subgenus **Probelus** s. str.

Probelus (Probelus) acutiapex (L. Arnoldi, 1977), comb.n. (Col. pl. I, c)

Probelopsis acutiapex L. Arnoldi, 1977: 154

Distribution. Late Jurassic (Kazakhstan: Karatau).

Probelus (Probelus) curvispinus L. Arnoldi, 1977

Probelus curvispinus L. Arnoldi, 1977: 151

Distribution. Late Jurassic (Kazakhstan: Karatau).

Probelus (Probelus) longitarsus L. Arnoldi, 1977

Probelus longitarsus L. Arnoldi, 1977: 152

Distribution. Late Jurassic (Kazakhstan: Karatau).

Subgenus **Probeloides** Legalov, subgen.n.

Type species: *Probelus tibialis* L. Arnoldi, 1977

Remarks. For the description, see that of *Probelus tibialis* [Arnoldi, 1977: 152-153].

Diagnosis. This new subgenus differs from nominative subgenus by the antennae located behind the middle of rostrum and not widened 5th ventrite.

Etymology. The name is formed by addition of the ending “-ides” to “Probelus”.

Probelus (Probeloides) tibialis L. Arnoldi, 1977

Probelus tibialis L. Arnoldi, 1977: 152

Distribution. Late Jurassic (Kazakhstan: Karatau).

Genus **Arnoldibelus** Legalov, gen.n. (Col. pl. I, a)

Type species: *Belonotaris karatavicus* L. Arnoldi, 1977

Remarks. For the description, see that of *Belonotaris karatavicus* [Arnoldi, 1977: 156].

Diagnosis. This new genus resembles the genus *Probelus* but differs by the apex of tibiae without mucro and larger sizes of the body.

Etymology. The new genus is named in honour of L. Arnoldi.

Arnoldibelus karatavicus (L. Arnoldi, 1977), comb.n. (Col. pl. I, a)

Belonotaris karatavicus L. Arnoldi, 1977: 156

Distribution. Late Jurassic (Kazakhstan: Karatau).

Tribe **Oxycorynoidini** L. Arnoldi, 1977

Genus **Belonotaris** L. Arnoldi, 1977, placem.n.

Type species: *Belonotaris punctatissimus* L. Arnoldi, 1977

Belonotaris punctatissimus L. Arnoldi, 1977

Belonotaris punctatissimus L. Arnoldi, 1977: 155

Distribution. Late Jurassic (Kazakhstan: Karatau).

Genus **Belonotaroides** Legalov, gen.n.

Type species: *Belonotaris lineatipunctatus* L. Arnoldi, 1977

Remarks. For the description, see that of *Belonotaris lineatipunctatus* [Arnoldi, 1977: 160-161].

Diagnosis. This new genus resembles the genera *Cratomacer* and *Microprobelus* but differs by not elongated tarsi and narrow intervals of elytra.

Etymology. The name is formed by addition of the ending “-ides” to “Belonotaris”.

Belonotaroides lineatipunctatus (L. Arnoldi, 1977), comb.n.

Belonotaris lineatipunctatus L. Arnoldi, 1977: 155

Distribution. Late Jurassic (Kazakhstan: Karatau).

Genus **Oxycorynoides** L. Arnoldi, 1977

Subgenus **Pseudoxycorynoides** Legalov, subgen.n.

Type species: *Oxycorynoides brevipes* L. Arnoldi, 1977

Remarks. For the description, see that of *Oxycorynoides brevipes* [Arnoldi, 1977: 160-161].

Diagnosis. This new subgenus differs from nominative subgenus by flat forehead and rostrum strongly triangular and widened in the basis (lateral view).

Etymology. The name is formed by addition of the prefix

“pseudo-” to “oxycorynoides”.

Oxycorynoides (Pseudoxycorynoides) brevipes L. Arnoldi, 1977

Oxycorynoides brevipes L. Arnoldi, 1977: 160

Distribution. Late Jurassic (Kazakhstan: Karatau).

Genus *Khetanamonyx* Legalov, gen.n.

Type species: *Oxycorynoides crassirostris* Zherikhin, 1993

Remarks. For the description, see that of *Oxycorynoides crassirostris* [Zherikhin, 1993: 21, 23].

Diagnosis. This new genus differs from genus *Belonotaroides* by small points in rows on elytra, longer rostrum and larger sizes of body.

Etymology. The name is formed from the words “Khetana” (toponym) and “monyx”.

Khetanamonyx crassirostris (Zherikhin, 1993), comb.n.

Oxycorynoides crassirostris Zherikhin, 1993: 21

Distribution. Early Cretaceous (Khabarovskii krai: Khetana).

Tribe *Karataucarini* Legalov, trib.n.

Type genus: *Karataucar* Legalov, gen.n.

Description. Body brown. Head not constricted behind eyes. Rostrum long, slightly curved. Antennae inserted submedially. Frons more or less wide, convex. Eyes large. Temples short. Antennae long, reaching the middle of pronotum. Funicle segments almost trapezoid. Clava wide. Pronotum wide. Sides almost direct. Elytra slightly elongated, with weak striae. Humeri slightly smoothed. Prothorax long. Procoxa located near basal margin of prothorax. Precoxal part of prothorax elongated. Metathorax elongated. Legs long. Femora slightly widened. Tibiae almost straight. Protarsi long, of equal length to tibiae. 1st segment wide. 2nd segment narrow- or wide-triangular. 3rd segment bilobed. Clausal segment elongated. Length of body: 3.4-4.6 mm.

Diagnosis. The new subtribe differs from tribe Oxycorynoidini by widened segments of tarsi which are wider than tibiae.

Genus *Karataucar* Legalov, gen.n.

Type species: *Oxycorynoides progressivus* L. Arnoldi, 1977

Remarks. For the description, see that of *Oxycorynoides progressivus* [Arnoldi, 1977: 163].

Diagnosis. The new genus is very close to genus *Gratshevica* but differs by only 1st segment of tarsi being widened.

Etymology. The name is formed from the words “Karatau” (toponym) and “car”.

Karataucar progressivus (L. Arnoldi, 1977), comb.n. (Col. pl. II, g)

Oxycorynoides progressivus L. Arnoldi, 1977: 163

Distribution. Late Jurassic (Kazakhstan: Karatau).

Genus *Gratshevica* Legalov, gen.n.

Type species: *Scelocamptus dubius* L. Arnoldi, 1977

Remarks. For the description, see that of *Scelocamptus*

dubius [Arnoldi, 1977: 165-166].

Diagnosis. The new genus is close to genus *Karataucar* but differs by widened 1st-3rd segments of tarsi.

Etymology. The new genus is named in honour of V.G. Gratshev.

Gratshevica dubius (L. Arnoldi, 1977), comb.n. (Col. pl. II, f)

Scelocamptus dubius L. Arnoldi, 1977: 165

Distribution. Late Jurassic (Kazakhstan: Karatau).

Subfamily *Paleocartinae* Legalov, 2003, stat.n., placem.n.

Paleocartini Legalov, 2003: 78

Type genus: *Paleocartus* Legalov, 2003

Tribe *Paleocartini* Legalov, 2003

Paleocartini Legalov, 2003: 78

Type genus: *Paleocartus* Legalov, 2003

Genus *Paleocartus* Legalov, 2003

Paleocartus Legalov, 2003: 78

Type species: *Brenthorhinoidea pubescens* Gratshev & Zherikhin, 1996

Paleocartus pubescens (Gratshev & Zherikhin, 1996) (Col. pl. III, a)

Brenthorhinoidea pubescens Gratshev & Zherikhin, 1996: 115

Distribution. Late Jurassic (Kazakhstan: Karatau).

Tribe *Nebrenthorhinini* Legalov, 2007, placem.n.

Nebrenthorhinina Legalov, 2007: 34

Type genus: *Nebrenthorhinus* Legalov, 2003

Genus *Nebrenthorhinus* Legalov, 2003

Nebrenthorhinus Legalov, 2003f: 89

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

Nebrenthorhinus lacasai (Gratshev & Zherikhin, 2000)

Brenthorhinoidea lacasai Gratshev & Zherikhin, 2000b: 41

Distribution. Early Cretaceous (Spain: Montsec Range).

Subfamily *Metrioxenoidinae* Legalov, subfam.n.

Type genus: *Metrioxenoides* Gratshev, Zherikhin, Jarzembowski, 1998

Description. Body brown, with rare semierect setae. Rostrum short or long, slightly curved. Antennae inserted subapically. Frons convex or flattened. Eyes large, oval. Temples short. Antennae long, reaching the middle of pronotum. Pronotum not elongated, largely or small punctate, with lateral carina. Elytra elongated, with rows of large points. Procoxa located near basal margin of prothorax. Metathorax elongated, sometimes convex. Abdomen more or less largely punctate. 1st ventrite little longer than 2nd ventrite. 3rd-5th ventrites of almost equal length. Legs long. Procoxa large. Femora slightly widened. Tibiae almost direct. Protarsi long, little longer than tibiae. Clausal segment elongated with 2 claws. Length of body: 2.0-4.5 mm.

Diagnosis. The new subfamily differs from subfamily

Rhinorhynchinae by the rough and large punctuate elytra, distinct lateral carina on pronotum and not convex eyes.

Genus *Metrioxenoides* Gratshev, Zherikhin, Jarzembowski, 1998

Metrioxenoides Gratshev, Zherikhin, Jarzembowski, 1998: 323

Type species: *Metrioxenoides pusillus* Gratshev, Zherikhin, Jarzembowski, 1998

Metrioxenoides pusillus Gratshev, Zherikhin, Jarzembowski, 1998

Metrioxenoides pusillus Gratshev, Zherikhin, Jarzembowski, 1998: 324

Distribution. Early Cretaceous (England).

Genus *Libanorhinus* Kuschel & Poinar, 1993

Libanorhinus Kuschel & Poinar, 1993: 144

Type species: *Libanorhinus succinus* Kuschel & Poinar, 1993

Libanorhinus succinus Kuschel & Poinar, 1993

Libanorhinus succinus Kuschel & Poinar, 1993: 144

Distribution. Early Cretaceous (Lebanon, Amber).

Genus *Brasilnemonyx* Legalov, gen.n.

Type species: *Brasilnemonyx zherichini* Legalov, sp.n.

Description. Rostrum short. Frons flattened. Eyes large. Pronotum with lateral carina. Elytra elongated, with rows of large points. Metathorax elongated and convex. Abdomen slightly convex. 1st ventrite little longer than 2nd ventrite. 3rd-5th ventrites of almost equal length. Legs long. Length of body: 4.5 mm.

Diagnosis. The new genus differs from other genera of the subfamily Metrioxenoidinae by the larger sizes of body and convex metathorax.

Etymology. The name is formed from the words “Brazil” and “nemonyx”.

Brasilnemonyx zherichini Legalov, sp.n.

Material. Holotype – 1 ex. (American Museum of Natural History) № 43316.

Description. Rostrum short, little longer than pronotum, slightly curved. Frons flattened. Eyes large, oval. Temples short. Pronotum not elongated, with lateral carina. Elytra elongated, with rows of large points. Metathorax elongated and convex. Abdomen slightly convex. 1st ventrite little longer than 2nd ventrite. 3rd-5th ventrites of almost equal length. Legs long. Femora slightly widened. Tibiae almost direct. Length of body: 4.5 mm.

Distribution. Early Cretaceous (Brazil: Santana).

Etymology. The new species is named in honour of V.V. Zherichin.

Remarks. See figure 4 in Zherichin & Gratshev [2004: 65].

Subfamily **Eccoarthrinae** L. Arnoldi, 1977, placem.n.

Eccoarthrini L. Arnoldi, 1977: 169

Type genus: *Eccoarthrus* L. Arnoldi, 1977

Procurculionini L. Arnoldi, 1977: 157, syn.n.

Eccoarthracini L. Arnoldi, 1977: 158

Genus *Eccoarthrus* L. Arnoldi, 1977

Eccoarthrus L. Arnoldi, 1977: 169

Type species: *Eccoarthrus crassipes* L. Arnoldi, 1977

Pseudobrenthorhinus Gratshev & Zherikhin, 1996: 114, syn.n.

Type species: *Pseudobrenthorhinus crassicornis* Gratshev & Zherikhin, 1996

Remarks. A study of type species of this genera has shown that *Pseudobrenthorhinus* Gratshev & Zherikhin, 1996, syn.n. is synonym to *Eccoarthrus* L. Arnoldi, 1977.

Eccoarthrus crassicornis (Gratshev & Zherikhin, 1996), comb.n.

Pseudobrenthorhinus crassicornis Gratshev & Zherikhin, 1996: 114

Distribution. Late Jurassic (Kazakhstan: Karatau).

Eccoarthrus crassipes L. Arnoldi, 1977 (Col. pl. II, d)

Eccoarthrus crassipes L. Arnoldi, 1977: 169

Distribution. Late Jurassic (Kazakhstan: Karatau).

Eccoarthrus magnus (Gratshev & Zherikhin, 1996), comb.n.

Pseudobrenthorhinus magnus Gratshev & Zherikhin, 1996: 114

Distribution. Late Jurassic (Kazakhstan: Karatau).

Eccoarthrus tenuicornis (Gratshev & Zherikhin, 1996), comb.n.

Pseudobrenthorhinus tenuicornis Gratshev & Zherikhin, 1996: 114

Distribution. Late Jurassic (Kazakhstan: Karatau).

Subfamily **Brenthorhininae** L. Arnoldi, 1977

Brenthorhininae L. Arnoldi, 1977: 171

Type genus: *Brenthorhinus* L. Arnoldi, 1977

Tribe **Brenthorhinoidini** Legalov, 2003, placem.n.

Brenthorhinoidini Legalov, 2003f: 88

Type genus: *Brenthorhinoides* Gratshev & Zherikhin, 1996

Genus *Brenthorhinoides* Gratshev & Zherikhin, 1996

Brenthorhinoides Gratshev & Zherikhin, 1996: 119

Type species: *Brenthorhinoides mandibulatus* Gratshev & Zherikhin, 1996

Brenthorhinoides mandibulatus Gratshev & Zherikhin, 1996 (Col. pl. III, b)

Brenthorhinoides mandibulatus Gratshev & Zherikhin, 1996: 115

Distribution. Late Jurassic (Kazakhstan: Karatau).

Brenthorhinoides robustus Gratshev & Zherikhin, 1996 (Col. pl. III, c)

Brenthorhinoides robustus Gratshev & Zherikhin, 1996: 115

Distribution. Late Jurassic (Kazakhstan: Karatau).

Remarks. A study of holotype has shown that antennae located submedially, mandible possibly rhynchitoid type: so this beetle belongs to genus *Brenthorhinoides*.

Tribe **Brenthorhinini** L. Arnoldi, 1977

Brenthorhininae L. Arnoldi, 1977: 171

Type genus: *Brenthorhinus* L. Arnoldi, 1977

Genus *Abrenthorrhinus* Legalov, gen.n.

Type species: *Brenthorrhinus brevirostris* Gratshev & Zherikhin, 1996

Remarks. For the description, see that of *Brenthorrhinus brevirostris* [Gratshev & Zherikhin, 1996: 126].

Diagnosis. The new genus differs from other genera of this tribe by the short rostrum, long antennae reaching humeri and the greatest width of the pronotum being on the basis.

Etymology. The name is formed by addition of the prefix “a-” to “brenthorrhinus”.

Abrenthorrhinus brevirostris (Gratshev & Zherikhin, 1996), comb.n.

Brenthorrhinus brevirostris Gratshev & Zherikhin, 1996: 115

Distribution. Late Jurassic (Kazakhstan: Karatau).

Genus *Brenthorrhinus* L. Arnoldi, 1977

Brenthorrhinus L. Arnoldi, 1977: 172

Type species: *Brenthorrhinus mirabilis* L. Arnoldi, 1977

Brenthorrhinus mirabilis L. Arnoldi, 1977

Brenthorrhinus mirabilis L. Arnoldi, 1977: 172

Distribution. Late Jurassic (Kazakhstan: Karatau).

Genus *Chinabrenthorrhinus* Legalov, gen.n.

Type species: *Brenthorrhinus longidigitatus* Ren, 1995

Remarks. For the description, see that of *Brenthorrhinus longidigitatus* [Ren, 1995: 90].

Diagnosis. This new genus resembles genus *Brenthorrhinus* but differs by the narrow tarsi and slightly widened femora.

Etymology. The name is formed from the words “Chinese” and “brenthorrhinus”.

Chinabrenthorrhinus longidigitatus (Ren, 1995), comb.n.

Brenthorrhinus longidigitatus Ren, 1995: 90.

Distribution. Early Cretaceous (China: Xishan).

Subfamily **Distenorrhinae** L. Arnoldi, 1977, stat.n.

Distenorrhini L. Arnoldi, 1977: 170

Genus *Distenorrhinus* L. Arnoldi, 1977

Subgenus *Distenorrhinus* s. str.

Subgenus *Parabrenthorrhinus* Gratshev & Zherikhin, 1996

Distenorrhinus (Parabrenthorrhinus) xavieri (Zherichin & Gratshev, 2003)

Distenorrhinus xavieri Zherichin & Gratshev, 2003: 70

Distribution. Early Cretaceous (Spain: Las Hoyas).

Subfamily **Cimberindinae** des Gozis, 1882

Remarks. The genus *Chinocimberis* Legalov, 2009 with 2 species (*Ch. angustipeeteris* (Liu, Ren, Tan, 2006) and *Ch. magnoculi* (Liu, Ren, Tan, 2006)) from Late Jurassic or Early Cretaceous of China has been assigned to this subfamily.

Subfamily **Rhinorhynchinae** Voss, 1922

Remarks. The genus *Renicimberis* Legalov, 2009 with species *R. latipeeteris* (Liu, Ren, Tan, 2006) from Late Jurassic or Early Cretaceous of China has been assigned to the tribe Mecomacerini Kuschel, 1994 of this subfamily.

FAMILY ITHYCERIDAE

Remarks. 1 species are described from the Jurassic, 13 species from the Cretaceous (Col. pl. IV., b-d) and 5 species from Jurassic or Cretaceous.

Key to supraspecific taxa of the supertribe Baissorhynchitae

1. Procoxa occupy almost all prothorax. (Baissorhynchini Zherikhin, 1993) 3
– precoxal part of prothorax the elongated 2
2. Body wider. Precoxal part of prothorax weaker elongated, 1.3 times longer than diameter of procoxa. Elytra with rows of points. (Gobicarini Legalov, trib.n.) *Gobicar* Gratshev & Zherikhin, 1999
– body elongated. Precoxal part of prothorax stronger elongated, 1.5 times longer than diameter of procoxa . Elytra without rows of points. (Mesophyletini Poinar, 2006) *Mesophyletis* Poinar, 2006
3. Antennae inserted submedially. 1st segment of tarsi not widened. Body elongated. (Abrocarina Legalov, subtrib.n.) *Abrocar*
– antennae inserted in first third of rostrum. 1st segment of tarsi usually widened. Body short or elongated. (Baissorhynchina Zherikhin, 1993) 4
4. 2nd and 3rd segments of the tarsi bilobed
..... *Baissorhynchus* Zherikhin, 1977 (Col. pl. IV, a)
– 2nd segment triangular 5
5. Frons strongly convex *Gratshevibelus* Soriano, 2009
– frons slightly convex 6
6. Tibiae curved *Emanrhynchus* Zherikhin, 1993
– tibiae straight 7
7. Clausal segment short
..... *Hispanocar* Soriano, Gratshev, Delclòs, 2006
– clausal segment long 8
8. Protibiae granulated
..... *Martinsnetoa* Zherichin & Gratshev, 2004
– protibiae not granulated 9
9. Tibiae wider 10
– tibiae narrower 11
10. Pronotum without lateral carina. Rostrum curved, shorter *Cretocar* Gratshev & Zherikhin, 2000
– pronotum with weak lateral carina. Rostrum almost direct, longer
..... *Jarzembowskia* Zherikhin & Gratshev, 1997
11. Body shorter (Col. pl. III, d). Rostrum longer
..... *Cretonanophyes* Zherikhin, 1977
– body more elongated. Rostrum less long. (Montsecanomalus Soriano, Gratshev, Delclòs, 2006) ..
..... 12
12. Pronotum rugosely punctate. Elytra forming single arc (lateral view) *Rugosocar* Legalov, subgen.n.
– pronotum weak punctate or nearly smooth. Elytra not forming single arc (lateral view) 13
13. 1st ventrite much longer than 2nd ventrite
..... *Hispanocarodes* Legalov, subgen.n.
– 1st and 2nd ventrites of almost equal length 14
14. Rostrum longer. Apex of elytra almost rectangular (lateral view) *Leptocar* Liu & Ren, 2007
– rostrum less long. Apex of elytra smoothed (lateral view)
..... *Montsecanomalus* s. str.

Tribe **Gobicarini** Legalov, trib.n. (Col. pl. III, e)

Type genus: *Gobicar* Gratshev & Zherikhin, 1999

Remarks. For the description, see that of *Gobicar* [Gratshev & Zherikhin, 1999: 40-41].

Diagnosis. The new tribe differs from tribe Mesophyletini by the wider body, weaker elongated precoxal part of prothorax that is 1.3 times longer than diameter of procoxa, and elytra with rows of points. From Baissorhynchini, it differs by elongated precoxal part of prothorax.

Genus **Gobicar** Gratshev & Zherikhin, 1999 (Col. pl. III, e)

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).

Tribe **Baissorhynchini** Zherikhin, 1993

Baissorhynchini Zherikhin, 1993: 30

Type genus: *Baissorhynchus* Zherikhin, 1977

Subtribe **Abrocarina** Legalov, subtrib.n.

Type genus: *Abrocar* Liu & Ren, 2006

Remarks. For the description, see that of Abrocar [Liu & Ren, 2006: 62-64, 66; 2007: 644-645].

Diagnosis. The new subtribe differs from nominative subtribe by the antennae inserted submedially, not widened 1st segment of tarsi and elongated body.

Genus **Abrocar** Liu & Ren, 2006

Abrocar Liu & Ren, 2006: 62

Type species: *Abrocar brachyorhinos* Liu & Ren, 2006

Abrocar brachyorhinos Liu & Ren, 2006

Abrocar brachyorhinos Liu & Ren, 2006: 64

Distribution. Late Jurassic or Early Cretaceous (China: Liaoning Prov.).

Abrocar macilentus Liu & Ren, 2007

Abrocar macilentus Liu & Ren, 2007: 644

Distribution. Late Jurassic or Early Cretaceous (China: Liaoning Prov.).

Subtribe **Baissorhynchina** Zherikhin, 1993

Baissorhynchini Zherikhin, 1993: 30

Type genus: *Baissorhynchus* Zherikhin, 1977

Genus **Montsecanomalus** Soriano, Gratshev, Delclòs, 2006

Montsecanomalus Soriano, Gratshev, Delclòs, 2006: 558

Type species: *Montsecanomalus zherichini* Soriano, Gratshev, Delclòs, 2006

Subgenus **Montsecanomalus** s. str.

Montsecanomalus (Montsecanomalus) soriano Legalov, nom.n.

Montsecanomalus zherichini Soriano, Gratshev, Delclòs, 2006: 559 non Liu & Ren, 2006

Distribution. Early Cretaceous (Spain: Montsec Range).

Montsecanomalus (Montsecanomalus) zherichini (Liu &

Ren, 2006)

Cretonanophyes zherichini Liu & Ren, 2006: 61

Distribution. Late Jurassic or Early Cretaceous (China: Liaoning Prov.).

Montsecanomalus (Montsecanomalus) punctatus (Liu & Ren, 2007)

Cretonanophyes punctatus Liu & Ren, 2007: 645

Distribution. Late Jurassic or Early Cretaceous (China: Liaoning Prov.).

Subgenus **Leptocar** Liu & Ren, 2007

Leptocar Liu & Ren, 2007: 642

Type species: *Leptocar polychaetus* Liu & Ren, 2007

Montsecanomalus (Leptocar) polychaetus (Liu & Ren, 2007)

Leptocar polychaetus Liu & Ren, 2007: 642

Distribution. Late Jurassic or Early Cretaceous (China: Liaoning Prov.).

Subgenus **Hispanocarodes** Legalov, subgen.n.

Type species: *Gobicar hispanicus* Gratshev & Zherikhin, 2000

Remarks. For the description, see that of *Gobicar hispanicus* [Gratshev & Zherikhin, 2000b: 42-43].

Diagnosis. The new subgenus differs from subgenera *Leptocar* and *Montsecanomalus* s. str. by the 1st ventrite much longer than 2nd ventrite.

Etymology. The name is formed from the words "Spanish" and "carodes".

Montsecanomalus (Hispanocarodes) hispanicus

(Gratshev & Zherikhin, 2000), comb.n., placem.n.

Gobicar hispanicus Gratshev & Zherikhin, 2000b: 42

Distribution. Early Cretaceous (Spain: Montsec Range).

Subgenus **Rugosocar** Legalov, subgen.n.

Type species: *Cretonanophyes rugosithorax* Gratshev & Zherikhin, 2000

Remarks. For the description, see that of *Cretonanophyes rugosithorax* [Gratshev & Zherikhin, 2000b: 43].

Diagnosis. The new subtribe differs from other subgenera of this genus by the rugosely punctate pronotum and elytra forming single arc (lateral view).

Montsecanomalus (Rugosocar) rugosithorax (Gratshev & Zherikhin, 2000)

Cretonanophyes rugosithorax Gratshev & Zherikhin, 2000b: 43

Distribution. Early Cretaceous (Spain: Montsec Range).

FAMILY BELIDAE

Remarks. 4 species are described from Early Cretaceous.

LIST OF THE FAMILY ANTHRIBIDAE

Family **Anthribidae** Billberg, 1820 (Col. pl. II, c)

Subfamily **Anthribinae** Billberg, 1820

Tribe **Cretanthribini** Legalov, trib.n. (Col. pl. II, c)

Type genus: *Cretanthribus* Legalov, gen.n.

Remarks. For the description, see that of *Anthribites cretaceus* [Zherikhin, 1993: 29-30].

Diagnosis. The new tribe differs from other tribes of the Anthribinae by the pronotum without basal carina and sagittate rostrum at apex.

Genus *Cretanthribus* Legalov, gen.n. (Col. pl. II, c)

Type species: *Anthribites cretaceus* Zherikhin, 1993

Remarks. For the description, see that of *Anthribites cretaceus* [Zherikhin, 1993: 29-30]. Diagnosis as for Cretanthribini.

Etymology. The name is formed from the words “Cretaceous” and “anthribus”.

Cretanthribus cretaceus (Zherikhin, 1993), comb.n. (Col. pl. II, c)

Anthribites cretaceus Zherikhin, 1993: 29

Distribution. Early Cretaceous (Khabarovskii krai: Khetana).

Subfamily **Choraginae** Kirby, 1819

Genus *Cretochoragus* Soriano, Gratshev, Delclòs, 2006

Cretochoragus Soriano, Gratshev, Delclòs, 2006: 557

Type species: *Cretochoragus pygmaeus* Soriano, Gratshev, Delclòs, 2006

Cretochoragus pygmaeus Soriano, Gratshev, Delclòs, 2006
Cretochoragus pygmaeus Soriano, Gratshev, Delclòs, 2006: 557

Distribution. Early Cretaceous (Spain: Montsec Range).

LIST OF THE FAMILY RHYNCHITIDAE

Family **Rhynchitidae** Gistel, 1848

Tribe **Sanyrevilleini** Legalov, 2003

Subtribe **Sanyrevilleina** Legalov, 2003

Key to Mesozoic genera of the subtribe Sanyrevilleina

1. Rostrum longer, curved. Body larger (5.0-6.0 mm)
..... *Zherichiniletes*
– rostrum shorter, almost direct. Body smaller (2.2-4.2 mm) 2
2. Rostrum longer than pronotum. Body smaller (2.2 mm)
..... *Sanyrevilleus*
– rostrum shorter than pronotum. Body larger (4.2 mm) ..
..... *Orapauletes*

Genus *Orapauletes* Legalov, gen.n.

Type species: *Orapauletes cretaceus* Legalov, sp.n.

Description. Rostrum short, shorter than head, with mandibles at apex. Antennae inserted near the rostrum basis. Eyes large, slightly convex. Forehead narrower than eye. Antennae thin. Pronotum slightly transversal. Elytra almost rectangular, elongated. Elytra, possibly, without striae. Pygidium exposed. Femora widened. Length of body: 4.2 mm.

Diagnosis. The new genus resembles the genus *Sanyrevilleus* but differs by the rostrum shorter than pronotum and larger body (4.2 mm).

Etymology. The name is formed from the words “Orapa” and “auletes”.

Orapauletes cretaceus Legalov, sp.n.

Material. Holotype – 1 ex. (Bernard Price Institute, University of the Witwatersrand, Johannesburg) № BP/2/26974.

Description. Rostrum short, 0.8 times shorter than head, not widened to apex, with mandibles at apex. Antennae located near the rostrum basis. Eyes large, slightly convex. Frons narrower than eye. Temples short. Antennae thin, reaching the middle of pronotum. Pronotum slightly transversal, 1.3 times wider than length, 1.25 times longer than rostrum. Sides very slightly rounded. Elytra almost rectangular, 1.79 times longer than wide. Humeri slightly smoothed. Elytra, possibly, without striae. Pygidium exposed. Femora widened. Length of body: 4.2 mm.

Distribution. Late Cretaceous (Botswana: Orap).

Remarks. See figure 12 in Kuschel, Oberprieler & Rayner [1994: 143].

Genus *Sanyrevilleus* Gratshev & Zherikhin, 2000

Sanyrevilleus Gratshev & Zherikhin, 2000a: 244

Type species: *Sanyrevilleus grimaldii* Gratshev & Zherikhin, 2000

Sanyrevilleus grimaldii Gratshev & Zherikhin, 2000

Sanyrevilleus grimaldii Gratshev & Zherikhin, 2000a: 245

Distribution. Late Cretaceous (USA: New Jersey, Amber).

Genus *Zherichiniletes* Legalov, 2007, placem.n.

Zherichiniletes Legalov, 2007: 69

Type species: *Zherichiniletes khetanus* Legalov, 2007

Zherichiniletes khetanus Legalov, 2007 (Col. pl. IV, e)

Zherichiniletes khetanus Legalov, 2007: 69

Distribution. Early Cretaceous (Khabarovskii krai: Khetana).

LIST OF THE FAMILY BRENTIDAE

Family **Brentidae** Billberg, 1820

Subfamily **Eurhynchinae** Lacordaire, 1863

Tribe **Axeirodiellini** Legalov, trib.n.

Type genus: *Axeirodiellus* Zhericin & Gratshev, 2004

Remarks. For the description, see that of *Axeirodiellus* [Zhericin & Gratshev, 2004: 66-67].

Diagnosis. The new tribe differs from the nominative tribe by the separated procoxal cavities, postmedial position of the procoxa and smaller and elongate 1st and 2nd segment of antennal club.

Genus *Axeirodiellus* Zhericin & Gratshev, 2004

Axeirodiellus Zhericin & Gratshev, 2004: 66

Type species: *Axeirodiellus ruptus* Zhericin & Gratshev, 2004

Axeirodiellus ruptus Zhericin & Gratshev, 2004

Axeirodiellus ruptus Zhericin & Gratshev, 2004: 67

Distribution. Early Cretaceous (Brazil: Santana).

Tribe **Eurhynchini** Lacordaire, 1863

Genus *Orapaueus* Kuschel & Oberprieler, 1994

Orapaueus Kuschel & Oberprieler, 1994: 139

Type species: *Orapaueus cretaceus* Kuschel & Oberprieler, 1994

Orapaeus cretaceus Kuschel & Oberprieler, 1994
Orapaeus cretaceus Kuschel & Oberprieler, 1994: 140
Distribution. Late Cretaceous (Botswana: Orap).

LIST OF THE FAMILY CURCULIONIDAE

Family **Curculionidae** Latreille, 1802 (Col. pl. IV, f, g)
Subfamily **Erirehininae** Schoenherr, 1825
Tribe **Cretuliini** Legalov, trib.n. (Col. pl. IV, f)
Type genus: *Cretulio* Zherikhin, 1993

Remarks. For the description, see that of *Cretulio* [Zherikhin, 1993: 33, 35].

Diagnosis. The new tribe differs from other tribes of the subfamily Erirehininae by the almost roundish body, V-shaped groove on first line of prothorax and truncated last stria of elytra.

Genus **Cretulio** Zherikhin, 1993

Cretulio Zherikhin, 1993: 33

Type species: *Cretulio nucula* Zherikhin, 1993

Cretulio nucula Zherikhin, 1993 (Col. pl. IV, f)

Cretulio nucula Zherikhin, 1993: 35

Distribution. Early Cretaceous (Khabarovskii krai: Khetana).

Subfamily **Molytinae** Schoenherr, 1823

Genus **Gyrbykana** Zherikhin, 1993

Gyrbykana Zherikhin, 1993: 36

Type species: *Gyrbykana curvipes* Zherikhin, 1993

Gyrbykana curvipes Zherikhin, 1993 (Col. pl. IV, g)

Gyrbykana curvipes Zherikhin, 1993: 36

Distribution. Early Cretaceous (Khabarovskii krai: Khetana).

Subfamily **Cryptorhynchinae** Schoenherr, 1825

Genus **Paleocryptorhynchus** Poinar, 2009

Type species: *Paleocryptorhynchus burmanus* Poinar, 2009

Paleocryptorhynchus burmanus Poinar, 2009

Paleocryptorhynchus burmanus Poinar, 2009: 587

Distribution. Early Cretaceous (Myanmar, Amber).

Subfamily **Curculioninae** Latreille, 1802

Genus **Anchineus** Poinar & Brown, 2009

Anchineus Poinar & Brown, 2009: 264

Type species: *Anchineus dolichobothris* Poinar & Brown, 2009

Anchineus dolichobothris Poinar & Brown, 2009

Anchineus dolichobothris Poinar & Brown, 2009: 266

Distribution. Early Cretaceous (Myanmar, Amber).

Subfamily **Entiminae** Schoenherr, 1823

Tribe **Cyldrorhinini** Lacordaire, 1863

Genus **Dorotheus** Kuschel, 1959

Dorotheus Kuschel, 1959: 50

Type species: *Dorotheus guidensis* Kuschel, 1959

Dorotheus guidensis Kuschel, 1959

Dorotheus guidensis Kuschel, 1959: 50

Distribution. Late Cretaceous (Chile: Magallanes).

LIST OF THE FAMILY SCOLYTIDAE

Family **Scolytidae** Latreille, 1807

Subfamily **Scolytinae** Latreille, 1807

Tribe **Cylindrobrotini** Kirejtshuk, Azar, Beaver, Mandelshtam & Nel, 2009

Cylindrobrotini Kirejtshuk, Azar, Beaver, Mandelshtam & Nel, 2009: 102

Genus **Cylindrobrotus** Kirejtshuk, Azar, Beaver, Mandelshtam & Nel, 2009

Cylindrobrotus Kirejtshuk, Azar, Beaver, Mandelshtam & Nel, 2009: 105

Type species: *Cylindrobrotus pectinatus* Kirejtshuk, Azar, Beaver, Mandelshtam & Nel, 2009

Cylindrobrotus pectinatus Kirejtshuk, Azar, Beaver, Mandelshtam & Nel, 2009

Cylindrobrotus pectinatus Kirejtshuk, Azar, Beaver, Mandelshtam & Nel, 2009: 105

Distribution. Early Cretaceous (Lebanon, Amber).

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a



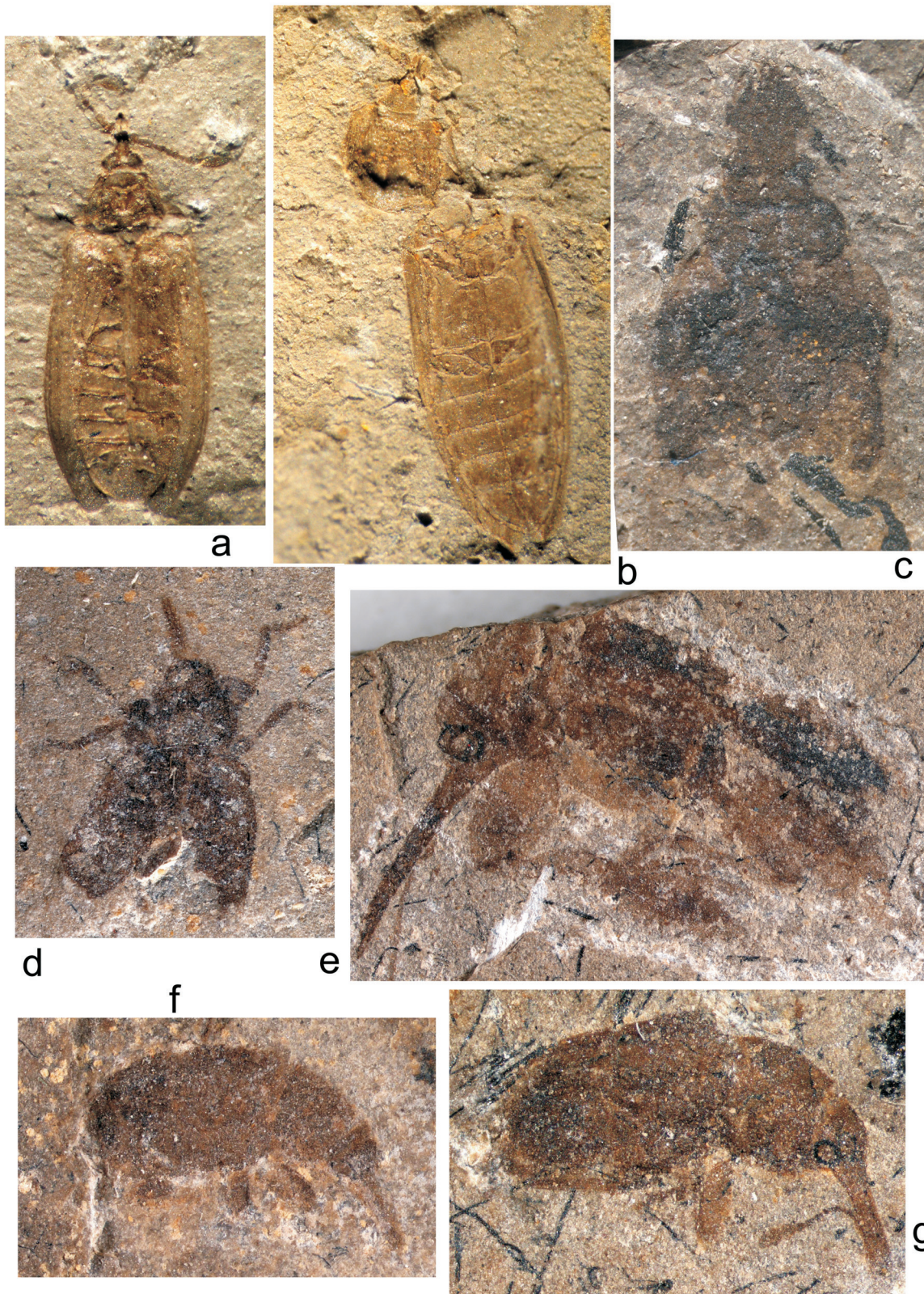
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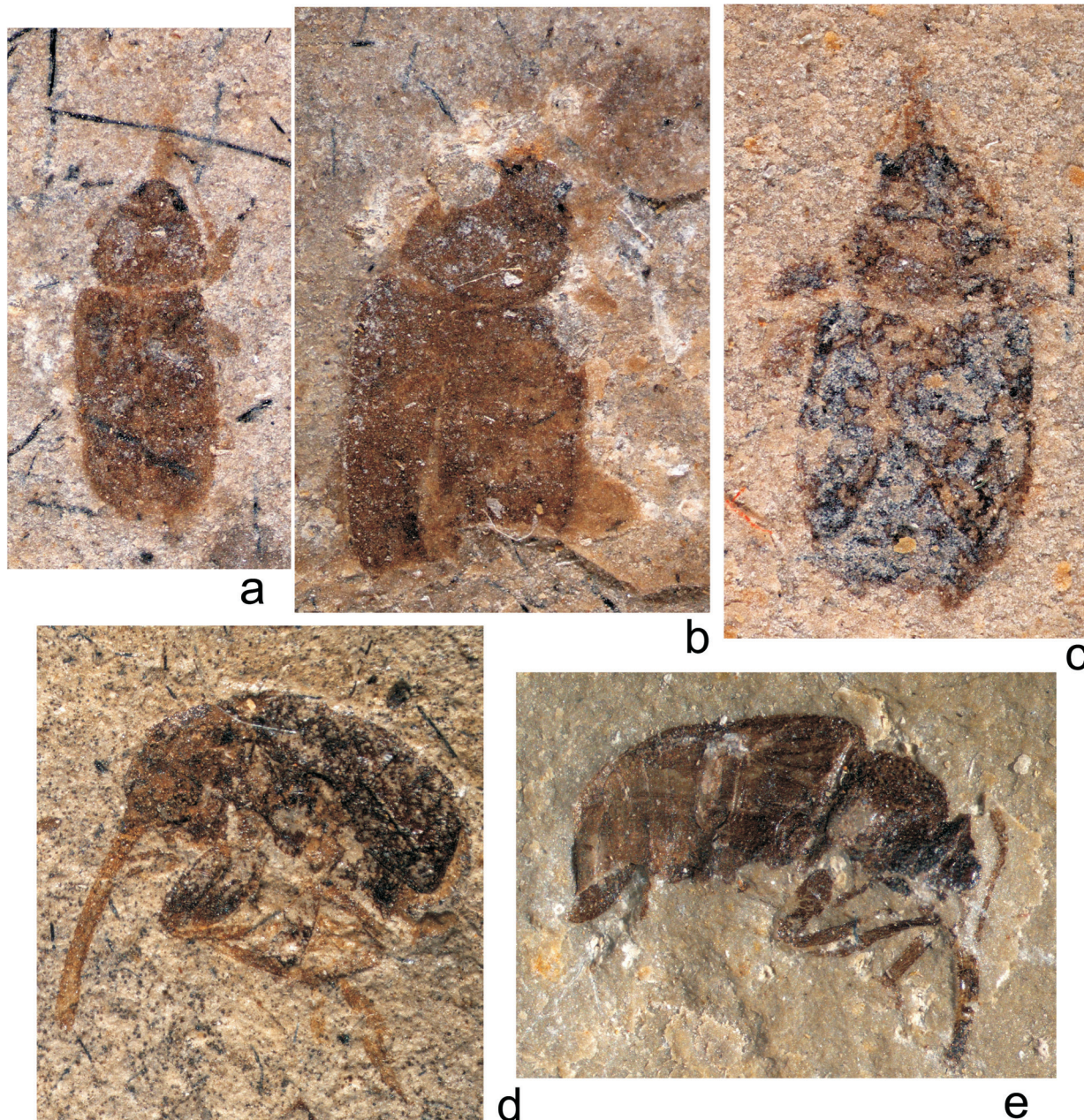
c

Family Nemonychidae gen. spp.: a – *Arnoldibelus karatavicus* (L. Arnoldi, 1977) (holotype, № 2066/2552), b – *Probelus curvispinus* L. Arnoldi, 1977 (holotype, № 2554/709), c – *Probelus acutiapex* (L. Arnoldi, 1977) (holotype, № 2239/1554).

Представители Nemonychidae gen. spp.: a – *Arnoldibelus karatavicus* (L. Arnoldi, 1977) (голотип, № 2066/2552), b – *Probelus curvispinus* L. Arnoldi, 1977 (голотип, № 2554/709), c – *Probelus acutiapex* (L. Arnoldi, 1977) (голотип, № 2239/1554).

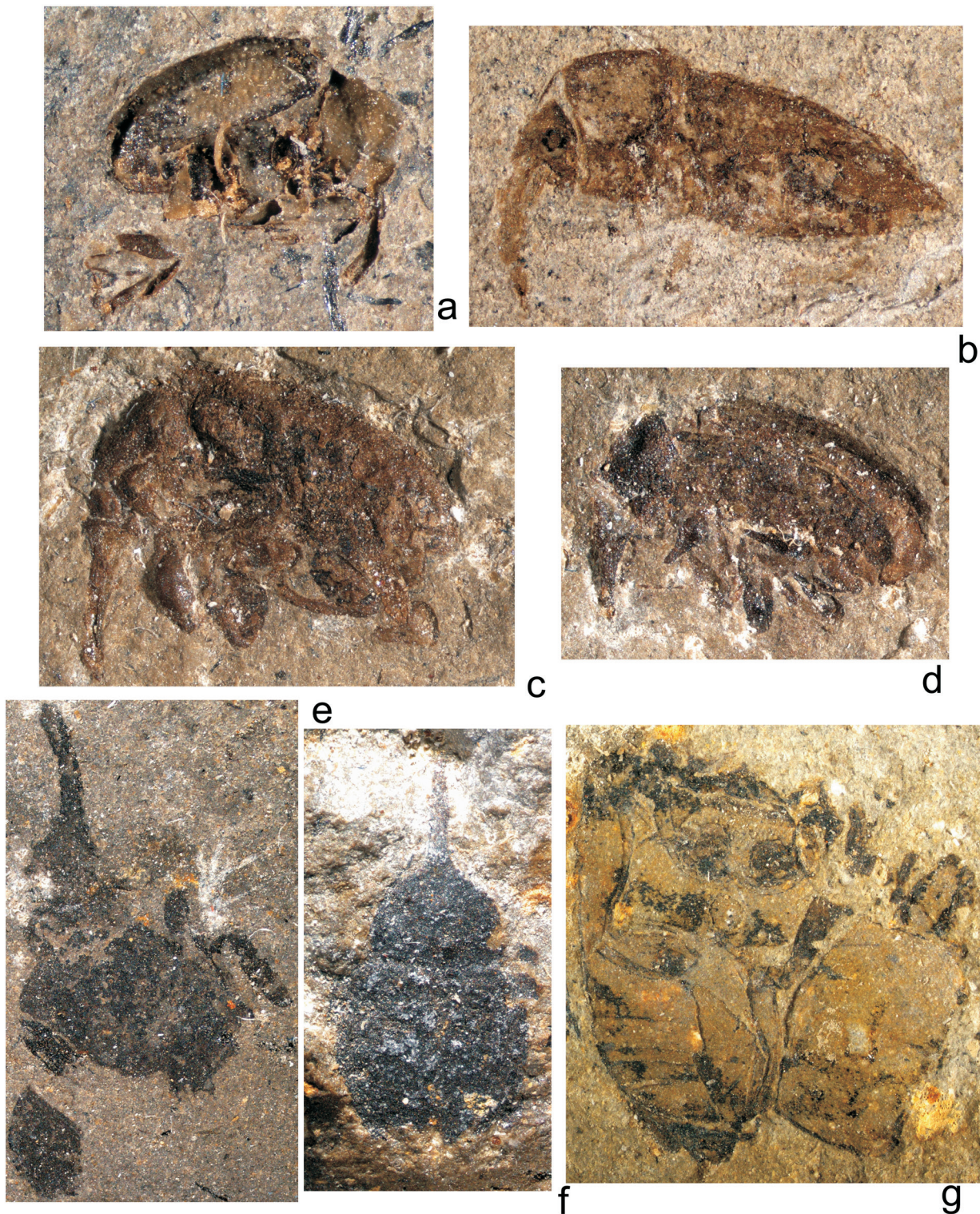


Families Obrieniidae, Nemonychidae and Anthribidae gen. spp.: a – *Obrienia kuscheli* Zherikhin & Gratshev, 1993 (holotype, № 2971/435), b – *Obrienia ingurgata* Zherikhin & Gratshev, 1993 (holotype, № 2971/612), c – *Cretanthribus cretaceus* (Zherikhin, 1993) (holotype, № 3800/1209), d – *Eccoptarthrus crassipes* L. Arnoldi, 1977 (holotype, № 2239/1507), e – *Archaeorrhynchoides latitarsis* (L. Arnoldi, 1977) (holotype, № 2239/1531), f – *Gratshevica dubius* (L. Arnoldi, 1977) (holotype, № 2066/3037), g – *Karataucar progressivus* (L. Arnoldi, 1977) (holotype, № 2066/2317).
 Представители Obrieniidae, Nemonychidae и Anthribidae gen. spp.: a – *Obrienia kuscheli* Zherikhin & Gratshev, 1993 (голотип, № 2971/435), b – *Obrienia ingurgata* Zherikhin & Gratshev, 1993 (голотип, № 2971/612), c – *Cretanthribus cretaceus* (Zherikhin, 1993) (голотип, № 3800/1209), d – *Eccoptarthrus crassipes* L. Arnoldi, 1977 (голотип, № 2239/1507), e – *Archaeorrhynchoides latitarsis* (L. Arnoldi, 1977) (голотип, № 2239/1531), f – *Gratshevica dubius* (L. Arnoldi, 1977) (голотип, № 2066/3037), g – *Karataucar progressivus* (L. Arnoldi, 1977) (голотип, № 2066/2317).



Nemonychidae and Ithyceridae gen. spp.: a – *Paleocartus pubescens* (Gratshev & Zherikhin, 1996) (holotype, № 2784/1464), b – *Brenthorrhinoides mandibulatus* Gratshev & Zherikhin, 1996 (holotype, № 2239/1508), c – *Brenthorrhinoides robustus* Gratshev & Zherikhin, 1996 (holotype, № 2066/2861), d – *Cretonanophyes longirostris* Zherikhin, 1977 (holotype, № 1668/1772), e – *Gobicar ponomarenkoi* Gratshev & Zherikhin, 1999 (holotype, № 4270/1125).

Представители Nemonychidae and Ithyceridae gen. spp.: a – *Paleocartus pubescens* (Gratshev & Zherikhin, 1996) (голотип, № 2784/1464), b – *Brenthorrhinoides mandibulatus* Gratshev & Zherikhin, 1996 (голотип, № 2239/1508), c – *Brenthorrhinoides robustus* Gratshev & Zherikhin, 1996 (голотип, № 2066/2861), d – *Cretonanophyes longirostris* Zherikhin, 1977 (голотип, № 1668/1772), e – *Gobicar ponomarenkoi* Gratshev & Zherikhin, 1999 (голотип, № 4270/1125).



Ithyceridae, Rhynchitidae, Curculionidae gen. spp.: a – *Baissorhynchus tarsalis* Zherikhin, 1977 (holotype, № 1989/3010), b – *Slonik sibiricus* Zherichin, 1977 (holotype, № 1989/2938), c – *Ulyaniana excellens* Gratshev, 1998 (holotype, № 3559/6465), d – *Ulyanisca dentipes* Gratshev, 1998 (holotype, № 3559/6466), e – *Zherichiniletes khetanus* Legalov, 2007 (holotype, № 3800/1208), f – *Cretulio nucula* Zherikhin, 1993 (holotype, № 3800/1200), g – *Gyrbykana curvipes* Zherikhin, 1993 (holotype, № 4009/1).

Представители Ithyceridae, Rhynchitidae, Curculionidae gen. spp.: a – *Baissorhynchus tarsalis* Zherikhin, 1977 (голотип, № 1989/3010), b – *Slonik sibiricus* Zherichin, 1977 (голотип, № 1989/2938), c – *Ulyaniana excellens* Gratshev, 1998 (голотип, № 3559/6465), d – *Ulyanisca dentipes* Gratshev, 1998 (голотип, № 3559/6466), e – *Zherichiniletes khetanus* Legalov, 2007 (голотип, № 3800/1208), f – *Cretulio nucula* Zherikhin, 1993 (голотип, № 3800/1200), g – *Gyrbykana curvipes* Zherikhin, 1993 (голотип, № 4009/1).