

New Ptinidae (Coleoptera: Bostrichoidea) from Baltic amber with a list of known fossil species

Petr ZAHRADNÍK¹⁾ & Jiří HÁVA²⁾

¹⁾ Forestry and Game Management Research Institute Strnady,
CZ-156 04 Praha 5 - Zbraslav, Czech Republic
e-mail: zahradnik@vulhm.cz

²⁾ Department of Forest Protection and Entomology,
Faculty of Forestry and Wood Sciences,
Czech University of Life Sciences,
Kamýcká 1176, CZ-165 21, Prague 6 - Suchdol, Czech Republic
e-mail: jh.dermestidae@volny.cz

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Abstract. The following new species from Baltic amber are described and illustrated: *Gastrallus zjantaru* sp. nov., *Hadrobregmus ambericus* sp. nov. (both Anobiinae), *Tuberernobius ambericus* gen. nov. et sp. nov. (Ernobiinae), *Xylasia gorskii* gen. nov. et sp. nov. (Xyletininae). List of world known fossil species is provided.

INTRODUCTION

The first fossil Ptinid was described at the beginning of the second half of the 19th century from brown coal (C. Heyden & L. Heyden 1866). Other fossil Ptinids were described after fifty years (Quiel 1910; Wickham 1913 a, b; 1914 a, b; 1916, 1917, 1920). Linck (1949) described one new genus and species according to “track of living” - hole in fossilized wood; validity of this description is arguable - according to Rules of Zoological Nomenclature it is possible, but in this case, it was probably at least unhappily used. More species were described after a further period of fifty years (Abdullah & Abdullah 1967; Spilman 1971 and other). The end of the 20th century and beginning of the 21st century was characterized by an increased interest in fossil Ptinidae (Alekseev 2012, 2013; Bellés 2010; Bellés & Vitali 2007; Engel 2010; Hawkeswood et al. 2009; Kuška 1992; Mynhardt 2012; Ortuño & Aeillo 1997; Philips & Mynhardt 2011).

Still we know 6 fossil genera, each including only one or at most two species, and other 15 fossil species from 10 genera. Unidentified species are from 22 genera (identified only to genus) - see the list in the present paper.

Amber can be divided according to the place of its occurrence and according to its age - these criteria are closely interconnected. Baltic amber comes from the Eocene (partly also from the Mioocene) - 28-54 millions years old. Older amber comes from the Paleocene (from Wyoming) - 60-65 millions years old; Cretaceous amber (from Alberta, New Jersey, Burma and Lebanon) is 70-120 millions years old and the oldest is Triassic amber - 250 millions years old (from Bavaria). Younger amber is the Dominican amber (15-40 millions years old) and Mexican amber (22-28 millions years), from the Oligocene and partly also from the

Miocene. The youngest is the Miocene amber from North Carolina (15 millions years). The most frequent findings of beetles are known from the Baltic amber, Dominican amber and Cretaceous amber. Many specimens are known from tertiary red sandstones and shales, too.

MATERIAL AND METHODS

Species described here were compared with other species from the Baltic amber or with relevant descriptions. All the holotypes of the newly described species are deposited in the collection of A. Gorski in Natural Museum ISEZ PAN Kraków, Poland. All photos were made by Pentax K100 (by A. Gorski) and Olympus SZX16 (J. Háva).

The following measurements were made:

Total length (TL) - linear distance from head to apex of elytra.

Elytral width (EW) - maximum linear transverse distance.

Specimens of the presently described species are provided with red, printed labels with the text as follows: „HOLOTYPE *species name* gen. nov., sp. nov. or sp. nov. (only) P. Zahradník & J. Háva, det. 2013”.

SYSTEMATIC PALAEOENTOMOLOGY

Family Ptinidae

Subfamily Anobiinae

Tribe Gastralini White, 1982

Gastrallus zjantaru sp. nov.

(Figs 1, 9)

Type material. Holotype (unsexed): No. 7736, Baltic Amber inclusion, Gdansk, Poland.

Description of holotype. Measurements (mm): TL 1.5 EW 0.6. Body piceous, oblong oval, covered by very short setation, transversally very convex (Fig. 1). Antennae and legs brown. Head evenly convex, matt, finely punctured. Eyes large, slightly globular. Antennae with 10 antennomeres. Pronotum transverse, strongly convex, without bump. Lateral margin visible only shortly before base (dorsal view). Surface of pronotum matt, finely punctured on disc, laterally coarsely punctured. Scutellum trapezoidal, slightly wider than long. Elytra matt, with double punctuation - the first is coarse and sparse, the second is fine and dense, with fine striae, lateral striae more distinct. Epipleuron coarsely punctured. Metasternum coarsely punctured. Abdominal visible sternites: the first sternite wide, second long, third and fourth as long as first, fifth slightly wider than the third.

Differential diagnosis. The new species belongs to the genus *Gastrallus* Jacquelin du Val, 1860, the genus recently contains almost 87 species distributed worldwide (Zahradník 2009). The new species differs from all the recent species by a longitudinal ledge on each elytron and by very distinct punctured striae, which do not occur in any other *Gastrallus* species (Figs 1, 9).

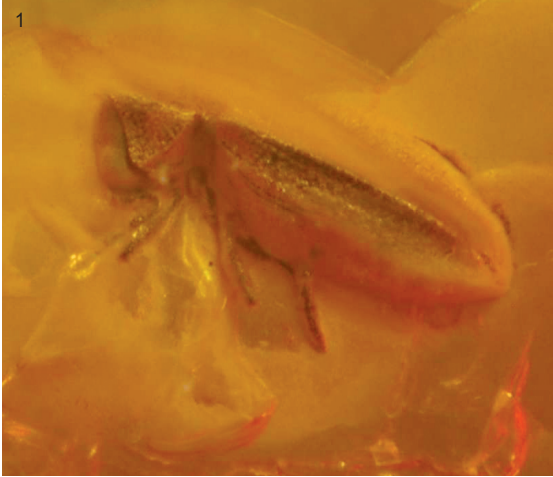


Fig. 1. Lateral view of *Gastrallus zjantaru* sp. nov. (holotype).

Etymology. Species named by using Czech words *zjantaru* - (correctly *z jantaru*) - from amber.

Tribe *Hadrobregmini* White, 1982

Hadrobregmus ambericus sp. nov.

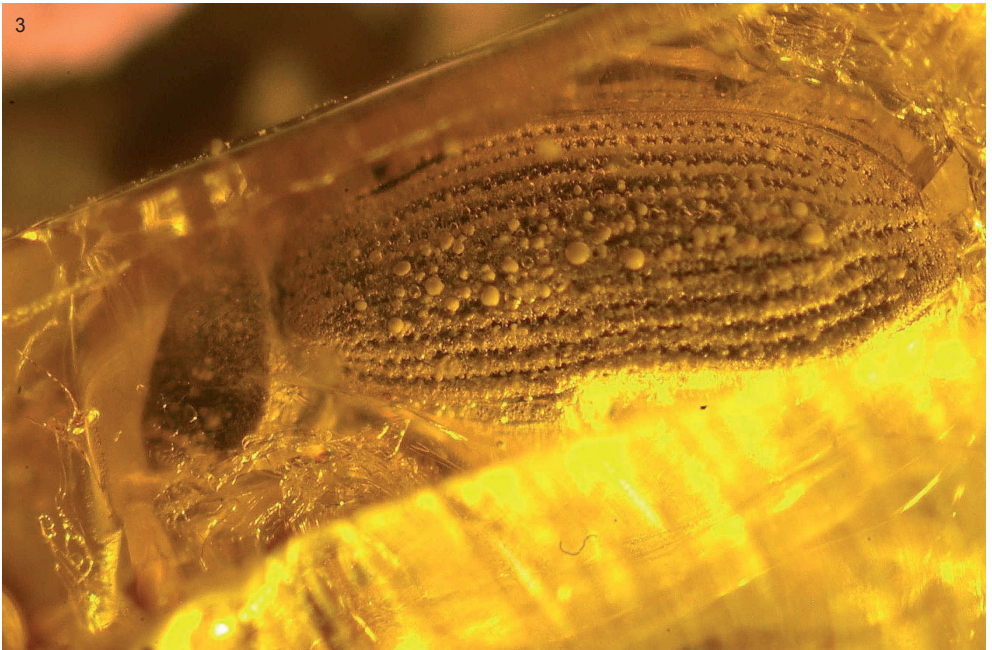
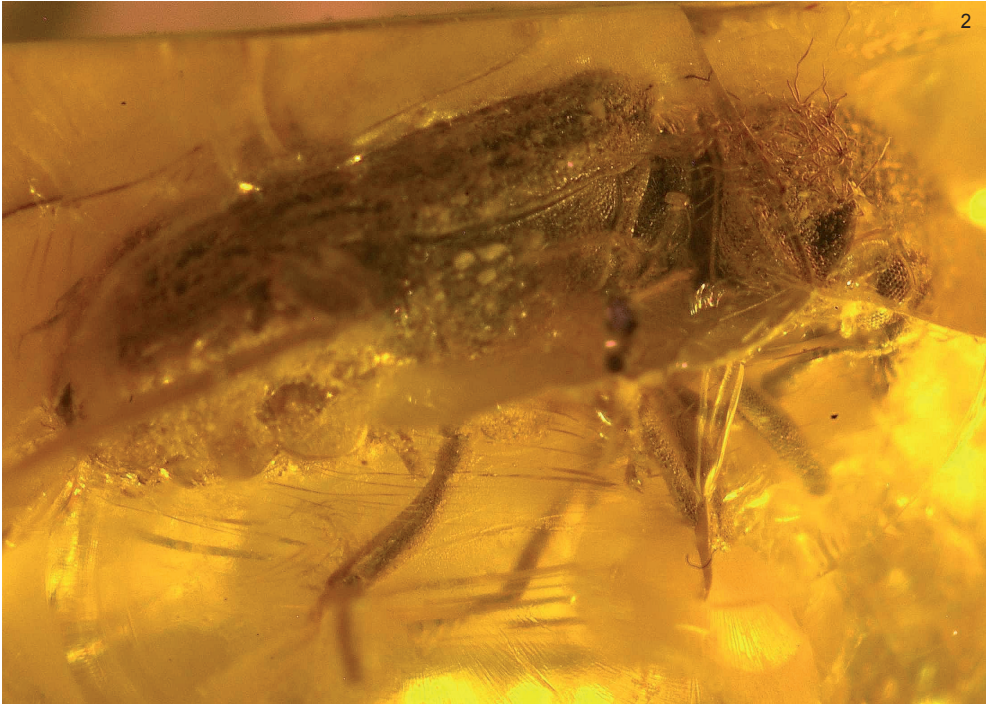
(Figs 2-4, 10)

Type material. Holotype (unsexed): No. 7785, Baltic Amber inclusion, Gdansk, Poland.

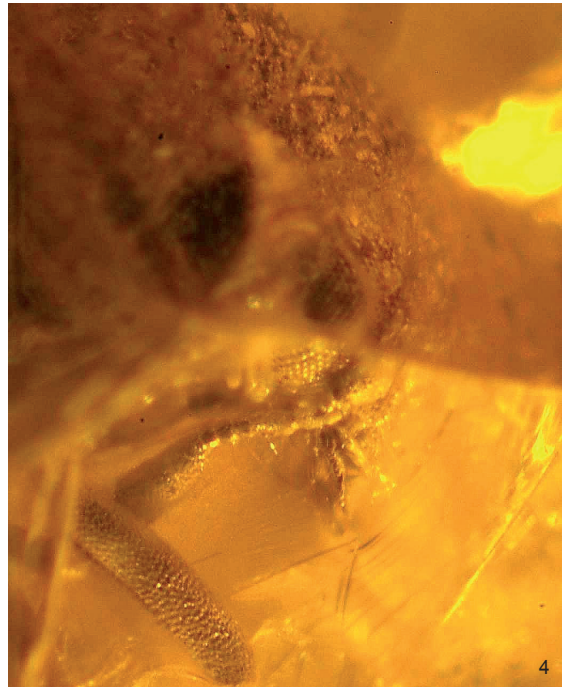
Description of holotype. Measurements (mm): TL 3.8 EW 1.8. Body grey-black, parallel, transversally slightly convex (Fig. 2). Dorsal and ventral surfaces covered by very short recumbent setation. Antennae and legs black, too. Head evenly convex, matt, finely punctured. Eyes large, distinctly globular. Antennae with 11 antennomeres. Pronotum transverse, strongly convex, with small bump in middle. Lateral margin visible only shortly before base (dorsal view), with distinct double ledge. Surface of pronotum matt, with coarse and dense punctures. Scutellum slightly wider than long. Elytra matt, with distinct punctate striae. Striae wide, punctures square-shaped. Epipleuron coarsely punctured. Metasternum coarsely punctured. All abdominal visible sternites of the same length, coarsely and densely punctuate.

Differential diagnosis. The new species belongs to the genus *Hadrobregmus* Thomson, 1859; the genus recently contains 13 species and 1 subspecies from the Holarctic Region (White 1982; Zahradník 2007). The new species differs from all the recent species by the presence of a double ledge on the basal part of the pronotum (Figs 2, 10); other species have only a fine single ledge.

Etymology. The species name was derived from the word amber.



Figs 2-4. *Hadrobregmus americus* sp. nov. (holotype): 2- lateral view; 3- detail of elytra, lateral view; 4- head and antennae.



Subfamily Ernobiinae
Tribe Ernobiini Pic, 1912

***Tuberernobius* gen. nov.**

Type species. *Tuberernobius americus* sp. nov. (by monotypy).

Differential diagnosis. The new genus *Tuberernobius* gen. nov. is very similar to other genera of the tribe Ernobiinae by the presence of two distinct pronotal bumps (Figs 5, 6, 11).

Key to genera of the tribe Ernobiini

- 1 Pronotum with two distinct bumps..... *Tuberernobius* gen. nov.
- Pronotum without distinct bumps..... 2
- 2 Antennal segments 3 through 8 serrate *Paralobium* Fall, 1905
- Antennal segments 3 through 8 filiform 3
- 3 Antennae consist of 11 antennomeres *Ernobius* C. G. Thomson, 1859
- Antennae consist of 9 or 10 antennomeres 4
- 4 Antennae consist of 10 antennomeres *Episernus* C. G. Thomson, 1863
- Antennae consist of 9 antennomeres *Episernomorphus* Roubal, 1917

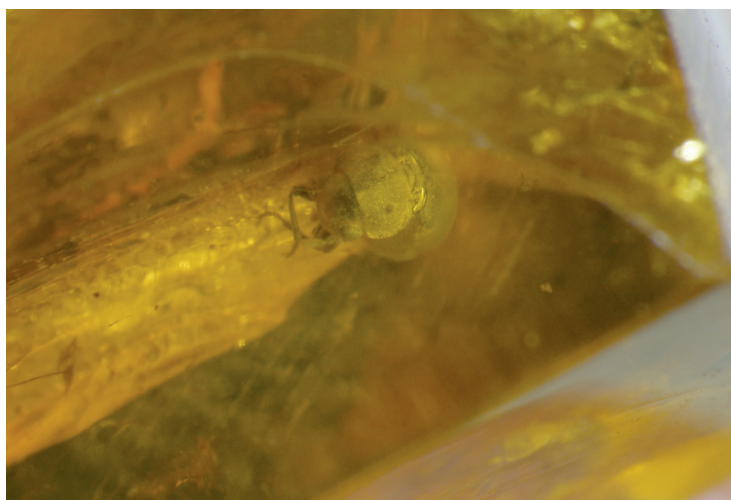
Etymology. Derived from a part of the Latin word “tuberculus”, meaning bump, and name of genus *Ernobius*.

***Tuberernobius americus* sp. nov.**

(Figs 5-6, 11)

Type material. Holotype (unsexed): No. 3572, Baltic Amber inclusion, Gdansk, Poland.

Description of holotype. Measurements (mm): TL 2.6 EW 1.1. Body grey-black, oblong, elongate oval, transversally convex (Fig. 5). Surface of body with very short and sparse setation, inclined backwards. Antennae, legs grey-black, too. Head evenly convex, matt, coarsely and densely punctured. Eyes large, strongly globular. Antennae with 11 antennomeres. Pronotum



Figs 5-6. *Tuberernobius americus* sp. nov. (holotype): 5- lateral view; 6- anterior view. (bmp - pronotal bump).

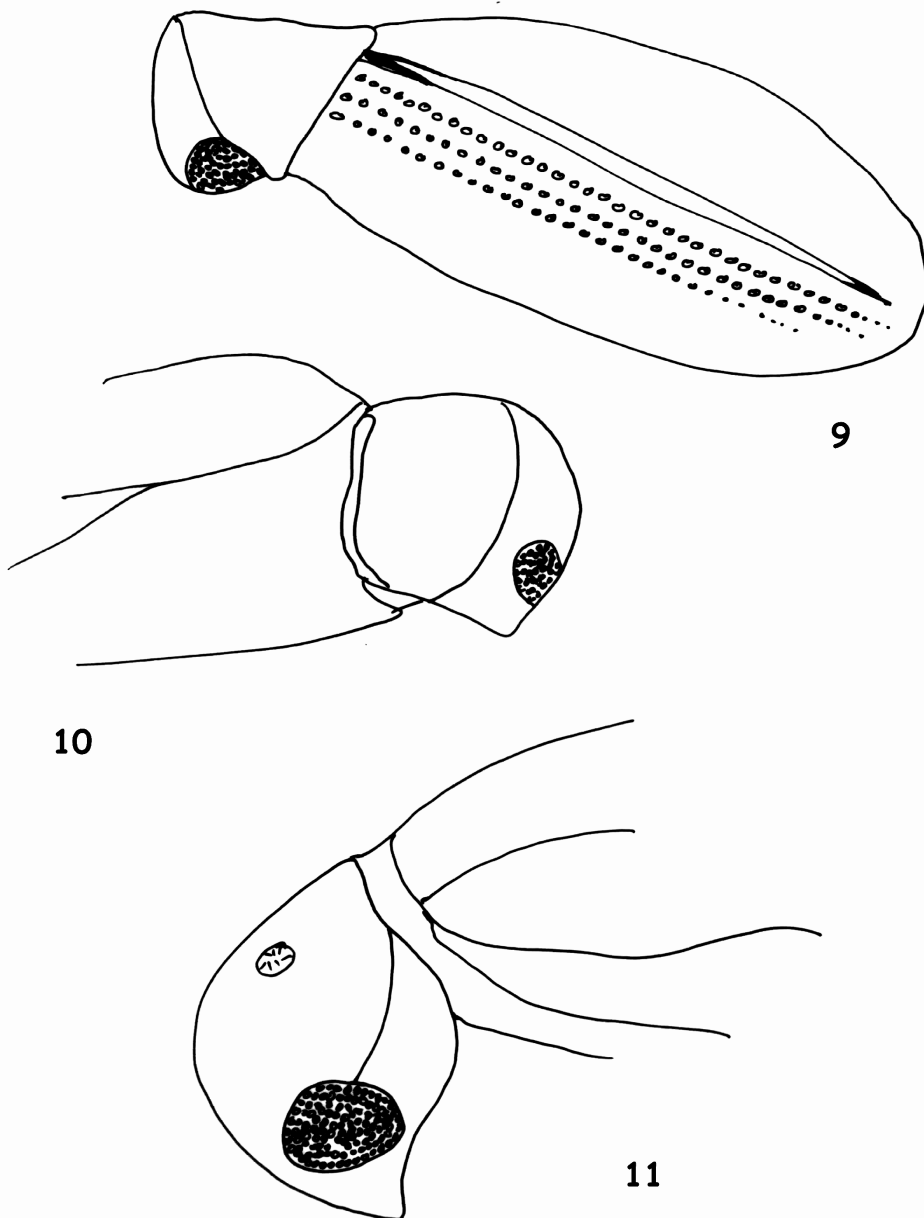


Fig. 9. Lateral view of *Gastrallus zjantaru* sp. nov. with distinct punctured striae and longitudinal ledge.
Fig. 10. Lateral view of *Hadrobergmus americus* sp. nov. with double ledge on basal part of pronotum.
Fig. 11. Lateral view of *Tuberernobius americus* sp. nov. with pronotal bump.

transverse, transversally convex, with two distinct bumps in the middle of pronotum (Fig. 2). Lateral margin with distinct ledge, anterior angles rounded, obtuse. Surface of pronotum matt, very coarsely and densely punctuate, punctures almost touching. Scutellum transverse, almost twice wider than long. Elytra matt, coarsely and densely punctuated, distance between punctures twice larger than their diameter; without striae. Metathoracic ventrite with a longitudinal furrow, from the anterior side to posterior side, with the same punctuation as elytra. The first and second visible abdominal sternites of the same length, longer than the third and the fourth ones, which are slightly shorter. Surface of all abdominal sternites densely and coarsely punctuate, with recumbent sparse setation, inclined backwards.

Differential diagnosis. As for the genus (*vide supra*).

Etymology. The name is derived from the English word amber.

Subfamily Xyletininae
Tribe Lasiodermini Böving, 1927

***Xylasia* gen. nov.**

Type species. *Xylasia gorskii* sp. nov. (by monotypy).

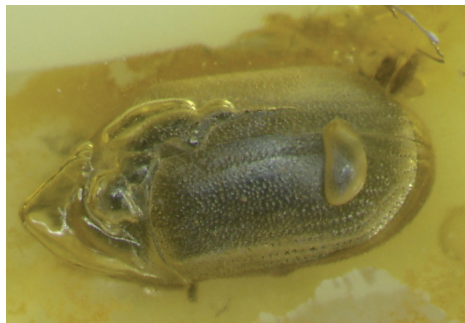
Differential diagnosis. The new genus *Xylasia* gen. nov. is visually similar to the genus *Lasioderma* Stephens, 1835 and other species from this tribe, but differs by punctures arranged in lateral rows (Figs 8,12).

Etymology. The name is derived from beginning parts of names *Xyletinus* and *Lasioderma*.

***Xylasia gorskii* sp. nov.**
(Figs 7-8, 12-13)

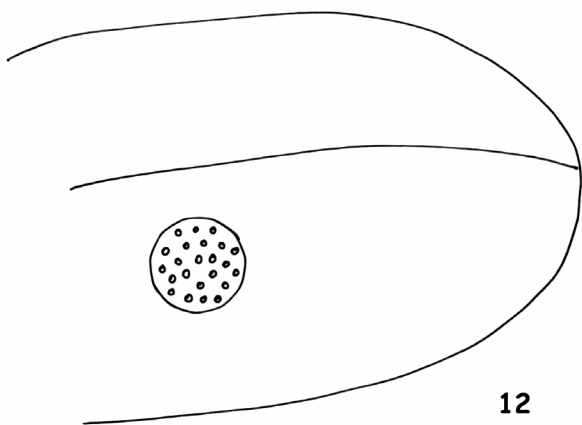
Type material. Holotype (unsexed): No. 7653, Baltic Amber inclusion, Gdansk, Poland. Paratypes (5 specimens: Nos. 9033, 7941, 9035, 7942, 8740): the same data as holotype (4 in coll. Gorski, 1 in coll. J. Háva).

Description of holotype. Measurements (mm): TL 2.8 EW 2.0. Body piceous-black, oblong oval, transversally flattened (Fig. 7), with very short setation. Antennae and legs black, too. Head evenly convex, coarsely and densely, umbilicate punctuate. Eyes large, very slightly convex. Antennae invisible. Pronotum transverse, strongly convex, without bump, posterior angles sharpened, prolonged backwards. Surface of pronotum matt, with double punctuation - the first punctures are very fine and dense, almost touching each other, and the second ones are coarse and sparse, distance between them on disc irregular, on sides punctures almost touching each other. Scutellum slightly wider than long. Elytra with double punctuation - the first is very fine and dense, almost touching each other, and the second coarse and sparse, distances between punctures irregular. Each elytron with three fine lateral rows from large umbilicate punctures, other punctures not arranged in rows or striae. Metasternum and abdominal sternites coarsely, densely, umbilicate punctuate, distance between punctures smaller than their diameter. Metasternum in middle with deep longitudinal furrow. All abdominal sternites of the same lengths, their suture in middle slightly curved.

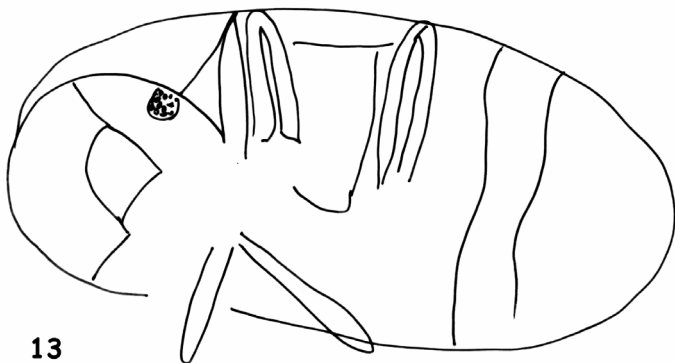


Figs 7-8. *Xylasia gorskii* sp. nov. (holotype): 7- ventral view; 8- dorsal view.

Figs 12-13. *Xylasia gorskii* sp. nov. : 12- dorsal view with detail of punctuation on elytra; 13- ventral view.



12



13

Differential diagnosis. As for the genus (*vide supra*).

Etymology. Patronymic, dedicated to our friend Andrzej Gorski (Poland).

Subfamily Ptininae

Tribe Ptinini

Ptinus incisus nom. nov.

Ptinus (Gynopterus) balticus Bellés et Vitali, 2007: 22 (syn.).

Ptinus (Gynopterus) inclusus Bellés, 2010: 85 (nom. nud.).

Ptinus (Gynopterus) inclusus Alekseev, 2012: 145 (nom. nud.).

Ptinus (Gynopterus) inclusus Alekseev, 2013: 8 (nom. nud.).

Remarks. Bellés & Vitali (2007) described a new fossil spider beetle - *Ptinus (Gynopterus) balticus*. This name was a homonym - Iablokoff-Khznorian & Karapetyan (1991) described *Ptinus* (s.str.) *balticus* from Latvia. Thereafter, Bellés (2010) used a new name *Ptinus (Gynopterus) incisus*, but with no connection to the name *P. (G.) balticus* and without new description - in this paper there is only *Ptinus (Gynopterus) incisus* Bellés et Vitali, 2007 (!) without other information or other data. However Bellés et Vitali (2007) never used *Ptinus (Gynopterus) incisus*. Later this name was used by Alekseev (2012, 2013), too. All these names are nomina nuda, because they do not meet criteria of the International Code of Zoological Nomenclature and thus, the authors are Bellés et Vitali, Bellés and Alekseev (see List of fossil Ptinidae).

LIST OF FOSSIL PTINIDAE

Ptinidae (indet.): M. Abdullah et A. 1967: 24; Ander 1942: 25, 35, 36; Andrée 1951: 32; Bachofen-Echt 1949: 104, 110; Brues 1933: 395; Conventz 1890: 129; Crowson 1975: 71; Handlirsch 1908: 758, 1925: 237; Helm 1886: 271, 1896: 227, 228; Katinas 1971: 33; Kelner-Pillault 1970: 11; Klebs 1889: 53, 1910: 237; Larsson 1965: 141, 1978: 151, 159; Laurentiaux 1953: 477; Menge 1856: 21; Miller 1963: 213; Rice 1980: 170; Spahr 1981b: 7, 85; Weidner 1952: 65; Williamson 1932: 144.

Subfamily Anobiinae

Anobiinae (indet.): Kubisz 2000: 226; Kubisz 2001: 260.

Anobichnium Linck, 1949 [185]

Anobichnium simile Linck, 1949 [185]; M. Abdullah et A. Abdullah 1967: 24.

Anobium Fabricius, 1775

Anobium sp.: M. Abdullah et A. Abdullah 1967: 24; Anonymus 1887: 271; Bachofen-Echt 1949; Berendt 1845: 46, 49; Böttger 1867; Giebel 1852: 655, 1856a: 76, 1856b: 180; Handlirsch 1908: 758, 759; Helm 1896: 228; Hope 1836; Klebs 1910; Larsson 1978: 151; Menge 1856: 21; Rice 1980: 170; Scudder 1885: 796, 1886: 75, 1891: 464; Spahr 1981b: 7; Weidner 1952.

Anobium deceptum Scudder, 1878 [763]; Scudder 1900: 103.

Anobium durescens Scudder, 1900 [103]; Scudder 1892: pl. 1 fig. 19 (nom. nud.); Wickham 1914b: 452.

- Anobium jacquelineae* Hawkeswood, Makhan et Turner 2009 [182]; Alekseev 2013: 8.
Anobium lignitum Scudder, 1878 [763]; Scudder: 103.
Anobium ovale Scudder, 1878 [762]; Scudder 1900: 102.
Anobium punctatum (DeGeer, 1774)
Anobium domesticum (Geoffroy in Fourcroy, 1785): M. Abdullah et A. Abdullah 1967: 24; Lesne 1920a: 486; Lesne 1920b: 626.
- Cacotemnus* LeConte, 1861
Cacotemnus rufipes (Fabricius, 1792).
Anobium aff. *rufipes* Fabricius, 1792: Burmeister 1832: 635; Giebel 1856a: 76; Keferstein 1834: 328; Scudder 1891: 464; Spahr 1981b: 7.
- Gastrallanobium* Wickham, 1914 [1914a: 261]
Gastrallanobium sp.: M. Abdullah et A. Abdullah 1967: 24; Wickham 1914a: 261.
Gastrallanobium subconfusum Wickham, 1914 [1914a: 261]; M. Abdullah et A. Abdullah 1967: 24;
White 1974: 431.
- Gastrallus* Jacquelin du Val, 1860
Gastrallus sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Klebs 1910: 236; Larsson 1978: 151; Spahr 1981b: 8.
Gastrallus zjantaru sp. nov.
- Hadrobregmus* C. G. Thomson, 1859
Hadrobregmus sp.: M. Abdullah et A. Abdullah 1967: 24; Lesne 1920a: 486.
Coelostethus sp.: Spahr 1981b: 7.
Dendrobium sp.: Bachofen-Echt 1928: pl. V.
Hadrobregmus ambericus sp. nov.
Hadrobregmus pertinax (Linnaeus, 1758).
Anobium aff. *pertinax* Linnaeus, 1758: Burmeister 1832: 635; Giebel 1856a: 76; Keferstein 1834: 328; Scudder 1891: 464; Spahr 1981b: 7.
- Microbregma* Seidlitz, 1889
Microbregma emarginatum (Duftschmid, 1825)
Anobium aff. *emarginatum* Duftschmid, 1825: Handlirsch 1908: 758; Hawkeswood, Makhan et Turner 2009: 183; Helm 1886: 272, 1896: 227; Spahr 1981b: 7.
Microbregma sucineomarginatum (Kuška, 1992).
Anobium (*Microbregma*) *sucineomarginatum* Kuška, 1992 [109]; Hawkeswood, Makhan et Turner 2009: 183; Alekseev 2013: 8.
- Nicobium* LeConte, 1861
Nicobium sp.: M. Abdullah et A. Abdullah 1967: 24; Klebs 1910: 236; Larsson 1978: 151; Spahr 1981b: 9.
- Oligomerus* L. Redtenbacher, 1849
Oligomerus sp.: Larsson, 1978: 151; Spahr 1981b: 9.
Oligomerus brevisculus Wickham, 1916 [8].
Oligomerus duratus Wickham, 1914 [1914b: 451]; M. Abdullah et A. Abdullah 1967: 24.
Oligomerus florissantensis Wickham, 1914 [1914b: 451]; M. Abdullah et A. Abdullah 1967: 24.
- Stegobium* Motschulsky, 1860
Stegobium defunctus (Scudder, 1876)
Sitodrepa defuncta Scudder, 1876 [82]; Scudder 1878: 762; Scudder 1900: 102.

Subfamily Dorcatominae

Dorcatominae (indet.): Kubisz 2000: 226; Kubisz 2001: 260.

Dorcatomini (indet.): Kubisz 2000: 226; Kubisz 2001: 260.

Caenocara C. G. Thomson, 1859

Caenocara sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Klebs 1910: 236; Larsson 1978: 151; Spahr 1981b: 7.

Dorcatoma Herbst, 1792

Dorcatoma sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Berendt 1845: 56; Giebel 1852: 655, 1856a: 76, 1856b: 181; Handlirsch 1908: 760; Klebs 1910: 236; Larsson 1978: 151; Menge 1856: 21; Scudder 1885: 796, 1886: 75, 1891: 513; Spahr 1981b: 8.

Petalium LeConte, 1861

Petalium sp.: Klebs 1910: 236; Larsson 1978: 151; Spahr 1981b: 9.

Rhadine sp.: M. Abdullah et A. Abdullah 1967: 24.

Stagetus Wollaston, 1861

Theca sp.: M. Abdullah et A. Abdullah 1967: 24; Klebs 1910: 236; Larsson 1978: 151; Spahr 1981b: 9.

Stichtoptychus Fall, 1905

Stichtoptychus mexambrus Spilman, 1971 [87]: Spahr 1981b: 9.

Subfamily Dryophilinae

Dryophilus Chevrolat, 1832

Dryophilus sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Klebs 1910: 236; Larsson 1978: 151; Spahr 1981b: 8.

Subfamily Ernobiinae

Ernobius C. G. Thomson, 1859

Ernobius sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Klebs 1910: 236; Larsson 1978: 151; Ortuño et Arillo 1997: 72; Spahr, 1981: 8.

Ernobius effetus Wickham, 1914 [1914b: 450]; M. Abdullah et A. Abdullah 1967: 24.

Ernobius electrinus Quiel, 1910 [49]; M. Abdullah et A. Abdullah 1967: 24; Spahr 1981b: 8; Alekseev 2013: 8.

Ernobius alonsoi Ortuño et Arillo, 1997 [73].

Tuberernobius gen. nov.

Tuberernobius americus sp. nov.

Xestobium Motschulsky, 1845

Xestobium sp.: Larsson 1978: 151; Spahr 1981b: 9.

Xestobium alutaceum Wickham, 1913 [1913b: 363]; Wickham 1914b: 450; M. Abdullah et A. Abdullah 1967: 24.

Subfamily Eucradinae

Eucrada LeConte, 1861

Crichtonia M. Abdullah et A. Abdullah, 1967 [26]; Spahr, 1981b: 8; White 1969: 597; White 1974: 427.

Eucrada macleani (M. Abdullah et A. Abdullah, 1967).

Crichtonia macleani M. Abdullah et A. Abdullah, 1967 [27]; M. Abdullah 1975: 392; Spahr 1981b: 8; White 1969: 597; Alekseev 2013: 8.

Hedobia Dejean, 1821

Hedobia sp.: M. Abdullah et A. Abdullah 1967: 24; Klebs 1910: 236; Larsson 1978: 151; Spahr, 1981: 8.

Subfamily Mesernobiinae

Mesernobius Engel, 2010

Mesernobius Engel, 2010 [32].

Mesernobius anawrahtai Engel, 2010 [32].

Subfamily Mesocoelopodinae

Cryptorama Fall, 1905

Cryptorama sp.: Spahr 1981b: 8; Spilman 1971: 89.

Mesocoelopus Jacquelin du Val, 1860

Mesocoelopus sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Klebs 1910: 236; Larsson 1978; Spahr 1981b: 8.

Mesothes Mulsant et Rey, 1864

Mesothes sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Klebs 1910: 236; Larsson 1978: 151; Spahr 1981b: 9.

Subfamily Ptilininae

Ptilinus Geoffroy, 1762

Ptilinus sp.: Anonymus 1887: 271; Berendt 1845: 46; Giebel 1852: 655, 1856a: 77, 1856b: 181; Handlirsch 1908: 759; Motschulsky 1856: 28; Scudder 1885: 796, 1886: 75, 1891: 573; Spahr 1981b: 9.

Subfamily Ptininae

Ptininae (indet.): Kubisz 2000: 226; Kubisz 2001: 260.

Electrognostus Philips et Mynhardt, 2011

Electrognostus Philips et Mynhardt, 2011 [38]; Mynhardt 2012: 154.

Electrognostus intermedius Philips et Mynhardt, 2011 [38]; Mynhardt 2012: 156.

Niptus Boieldieu, 1856

Niptus sp.: M. Abdullah et A. Abdullah 1967: 24; Bachofen-Echt 1949: 110; Klebs 1910: 236; Larsson 1978: 159; Spahr 1981b: 85; Clark & Sankey 1999: 189.

Niptus ventriculus LeConte: 1860; Clark & Sankey 1999: 189.

Okamninus Mynhardt et Philips, 2013 [25]

Okamninus Mynhardt et Philips, 2013 [26]; Mynhardt 2012: 161 (nom. nud.).

Okamninus annae Mynhardt et Philips, 2013 [26]; Mynhardt 2012: 162 (nom. nud.).

Oviedinus Bellés, 2010

Oviedinus Bellés, 2010 [78].

Oviedinus hispaniolensis Bellés, 2010 [81].

Ptinus Linnaeus, 1767

Ptinus sp.: M. Abdullah et A. Abdullah 1967: 24; Bachofen-Echt 1949: 110; Berendt 1845: 56; Giebel 1852: 655, 1856a: 77, 1856b: 181; Handlirsch 1908: 758; Klebs 1910: 236; Larsson 1978: 159; Scuder 1885: 796, 1886: 75, 1891: 574; Spahr 1981b: 86; Kubisz 2000: 226.

Ptinus (Gynopterus) inclusus nom. nov.

Ptinus (Gynopterus) balticus Bellés et Vitali, 2007 [22] (syn.).

Ptinus (Gynopterus) inclusus Bellés, 2010 [85] (nom. nud.).

Ptinus (Gynopterus) inclusus Alekseev, 2012 [145] (nom. nud.).

Ptinus (Gynopterus) inclusus Alekseev, 2013 [8] (nom. nud.).

Ptinus primidini Spilman, 1976 [240].
Ptinus primordialis C. Heyden et L. Heyden, 1866 [141].
Ptinus verticalis LeConte, 1859: Clark & Sankey 1999: 189.

Sucinoptinus Bellés et Vitali, 2007

Sucinoptinus Bellés et Vitali, 2007 [18].
Sucinoptinus sucini Bellés et Vitali, 2007 [20]; Alekseev 2013: 8.
Sucinoptinus bukejsi Alekseev, 2012 [146]; Alekseev 2013: 8.

Subfamily Xyletininae

Xyletininae (indet.): Kubisz 2000: 226.

Lasioderma Stephens, 1835

Lasioderma sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Klebs 1910: 236; Larsson 1978: 151; Spahr 1981b: 8.

Vrilletta LeConte, 1874

Vrilletta monstrosa Wickham, 1917 [468]; M. Abdullah et A. Abdullah 1967: 24.
Vrilletta tenuistriata Wickham, 1913 [1913a: 16]; M. Abdullah et A. Abdullah 1967: 24.

Xylasia gen. nov.

Xylasia gorskii sp. nov.

Xyletinites C. Heyden et L. Heyden, 1866 [142]

Xyletinites tumbicola C. Heyden et L. Heyden, 1866 [142]; White 1974: 455.

Xyletinus Latreille, 1809

Xyletinus sp.: M. Abdullah et A. Abdullah 1967: 24; Bachoten-Echt 1949: 110; Handlirsch 1908: 759; Helm 1896: 228; Klebs 1910: 236, 237; Larsson 1978: 151; Motschulsky 1856: 28; Spahr 1981b: 9.

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REFERENCES

- ABDULLAH M. 1975: The higher classification of the insect order Coleoptera including fossil records and classified directory of the coleopterists and coleopteran collections of the world. *Zoologische Beiträge*, N. F. 21: 363-461.
- ABDULLAH M. & ABDULLAH A. 1967: *Crichtonia macleani*, a new genus and species of the Hedobiini (Coleoptera: Anobiidae) from the Baltic amber. *Entomological News* 78(1): 23-27.
- ALEKSEEV V. I. 2012: *Sucinoptinus bukejsi* sp. nov. (Coleoptera: Ptinidae: Ptinini), the second species of the Tertiary genus from the Baltic amber. *Baltic Journal of Coleopterology* 12: 145-148.
- ALEKSEEV V. I. 2013: The beetles (Insecta: Coleoptera) of Baltic amber: the checklist of described species and preliminary analysis of biodeiversity. *Zoology and Ecology* 23: 5-12.
- ANDER K. 1942: *Die Insektenfauna des baltischen Bernsteins nebst damit verknüpften zoogeographischen Problemen*. Lund & Leipzig: Lunds Universitets Årsskrift, N. F. Avd. 2: 38 (4) (Kunglig fysiografiska Sällskapetets Handlingar, N. F. 53 (4)): 1-82 + 8 pl. + 10 maps.
- ANDRÉE K. 1951: *Der Bernstein. Das Bernsteinland und sein Leben*. Stuttgart: Kosmos, 96 pp.
- ANONYMUS 1887: Über Bernsteintiere. *Der Naturforscher* 20: 271-272.
- BACHOFEN-ECHT A. 1928: Leben und Sterben im Bernsteinwald. *Palaeobiologica*, 1: 39-50 + 3 pl.
- BACHOFEN-ECHT A. 1949: *Der Bernstein und seine Einschlüsse*. Wien: Springer, 204 pp.
- BELLÉS X. 2010: Systematics of the genus *Oviedinus* nov. (Coleoptera: Ptinidae), including a fossil new species from Dominican amber, biogeographical remarks and an account on fossil Ptinids. *Elytron* 24: 77-88.

- BELLÉS X. & VITALI F. 2007: New fossil spider beetles from Baltic amber (Coleoptera: Ptinidae). *Entomapeiron* (P. S.) 2: 7-28.
- BERENDT G. C. 1845: *Die organischen Bernstein-Einschlüsse im Allgemeinen*. Pp. 41-60. In: GOEPPERT H. R. & BERENDT G. C.: *Der Bernstein und die in ihm befindlichen Pflanzenreste der Vorwelt*. In: BERENDT G. C. (ed.): *Die im Bernstein befindlichen organischen Reste der Vorwelt* 1, 1. Abth. Berlin: Nicolai.
- BÖTTGER O. 1867: Über die nachweisbaren Spuren des Lebends der Their- und Pflanzenwelt in der Vorzeit. *Bericht des Offenbacher Vereins für Naturkunde über seine Thätigkeit* 8: 40-68.
- BRUES C. T. 1933: Progressive change in the insect population of forests since the Early tertiary. *The American Naturalist* 67: 385-406.
- BURMEISTER H. 1832: *Handbuch der Entomologie I*. Berlin: Reimer, xvi + 696 pp. + 22 pp.
- CLARK W. H. & SANKEY J. T. 1999: Late Holocene Sonoran Desert Arthropod Remains from a Packrat Midden, Cataviña, Baja Kalifornia Norté, México. *The Pan-Pacific Entomologist* 75: 183-199.
- CONWENTZ H. 1890: *Monographie der baltischen Bernsteinbäume*. Danzingg und Lepzig: Engelmann, 151 pp. + 18 pl.
- CROWSON R. A. 1975: The evolutionary history of Coleoptera, as documented by fossil and comparative evidence. *Atti della Accademia Nazionale Italiana di Entomologia* 1975: 47-90.
- ENGEL M. S. 2010 : A primitive anobiid beetle in mid-Cretaceous amber from Myanmar (Coleoptera: Anobiidae). *Alavesia* 3: 31-34.
- GIEBEL C. G. 1852: *Deutschlands Petrefacten. Ein systematisches Verzeichnis aller in der Synonymen und Fundorte*. Leipzig: Abel, xiii + 706 pp.
- GIEBEL C. G. 1856a: *Die Insecten und Spinnen der Vorwelt mit steter Berücksichtigung der lebenden Insecten und Spinnen*. In: *Fauna der Vorwelt mit steter Berücksichtigung der lebende Thiere*, 2 (Gliederthiere), 1 Abth. Leipzig: Brockhaus, xviii + 511 pp.
- GIEBEL C. G. 1856b: Geologische Übersicht der vorweltlichen Insecten. *Zeitschrift für die Gesammten Naturwissenschaften* 8: 174-188.
- HANDLIRSCH A. 1908: *Die fossilen Insecten und die Phylogenie der rezenten Formen*. Leipzig: Engelmann (1906-1908), ix + vi + 1430 pp.
- HANDLIRSCH A. 1925: Paleontologie. Pp. 117-306. In: SCHRÖDER C. (ed.): *Handbuch der Entomologie* 3. Jena: Fischer.
- HAWKESWOOD T. J., MAKHAN D. & TURNER J. R. 2009: *Anobium jacquelineae* sp. nov. a new woodboring beetle (Coleoptera: Anobiidae) from Baltic Amber. *Giornale Italiano di Entomologia* 12: 181-187.
- HELM O. 1886: Mittheilungen über Bernstein. XIII. Über die Insecten der Bernsteins. *Schriften der Naturforschenden Gesellschaft in Danzig, N. F.* 6 (3): 267-277.
- HELM O. 1896: Beiträge zur Kenntnis der Insecten des Bernsteins. *Schriften der Naturforschenden Gesellschaft in Danzig, N. F.* 9 (1): 220-231.
- HEYDEN C.H. G. VON & HEYDEN L. F. J. D. VON 1866: Käfer und Polyphen aus der Braunkohle des Siebengebirges. *Paleontographica* (Stuttgart) 15: 131-156 + 3 pl.
- HIECKE F. & PIETRZENIUK E. 1984 : Die Bernstein-Käfer des Museums zur Naturkunde, Berlin (Insecta, Coleoptera). *Mitteilungen aus dem Museum für Naturkunde in Berlin*, 60: 297-326.
- KATINAS V. 1971: Amber and amber-bearing deposits of the southern Baltic area. *Transaction of Lithuanian Scientific Research Geological Survey Institute* 20: 1-151.
- KEFERSTEIN C. 1834: *Die Naturgeschichte des Erdkörpers in ihren ersten Grundzügen dargestellt. 2 Teil*. Leipzig: Fleischer, 4 + 896 pp.
- KELNER-PILLAULT S. 1970: L'ambre balte et sa faune entomologique avec description de deux Apoides nouveaux. *Annales de la Société Entomologique de France, N. S.* 6: 3-24 + 2 pl.
- KLEBS R. 1889: *Aufstellung und Katalog des Bernstein-Museums von Stantien & Becker, Königsberg i. Pr. Nebst einer kurzen Geschichte des Bernstein*. Königsberg: Hartung, 103 pp.
- KLEBS R. 1910: Über Bernsteineinschlüsse im allgemeinen und die Coleopteren meiner Bernsteinsammlung. *Schriften der physikalisch-ökonomischen Gesellschaft zu Königsberg i. Pr.* 51: 217-242.
- KUBISZ D. 2000: Fossil beetles (Coleoptera) from Baltic amber in the collection of the Museum of Natural History of ISEA in Kraków. *Polskie Pismo Entomologiczne* 69: 225-230.
- KUBISZ D. 2001: Beetles in the collection of the Amber Inclusions, University of Gdańsk, with description of *Colotes sambicus* sp. n. (Coleoptera: Melyridae). *Polskie Pismo Entomologiczne* 70: 259-265.

- KULICKA R. & SLIPINSKI S. 1996: A review of the Coleoptera inclusions in the Baltic amber. *Prace Muzeum Ziemi PAN* 44: 5-12.
- KUSKA A. 1992: Three new species of beetles (Coleoptera: Cantharidae, Anobiidae, Curculionidae) from the Baltic amber. *Annals of the Upper Silesian Museum - Entomology* 3: 107-113.
- LARSSON S. G. 1965: Reflections on the Baltic amber inclusions. *Entomologische Meddelelser* 34: 135-142.
- LARSSON S. G. 1978: Baltic amber - a palaeobiological study. *Entomonograph*, 1: 1-192.
- LAURENTIAUX D. 1953 : *Classe des Insectes (Insecta Linné, 1958)*. Pp. 397-527 + 1 pl. In: PIVETEAU J. (ed.): *Traité de Paléontologie* 3. Paris: Masson.
- LECONTE J. L. 1859: Catalogue of the Coleoptera of Fort Tejon, California. *Proceedings of the Academy of Natural Sciences of Philadelphia* 11: 69-90.
- LECONTE J. L. 1860: The Coleoptera of Kansas and eastern New Mexico. *Smithsonian Contribution to Knowledge* 2, Art 6 (11): vi + 58 pp. + 2 pl. + 1 map.
- LESNE P. 1920a: Quelques insectes du pliocène supérieurs du comte de Durham. *Bulletin de Muséum National de Histoire Naturelle de Paris* 1920: 484-488.
- LESNE P. 1920b : A propos des Insectes du gisement pliocène de Castle Eden (Comté de Durham). *Bulletin de Muséum National de Histoire Naturelle de Paris* 1920: 626.
- LINCK O. 1949: Fossile Bohrgänge (Anobichnium simile n.g. n. sp.) an einen Keuperholz. *Neus Jahrbuch für Mineralogie und Palaontologie Monatshefte* 4-6: 180-185.
- MENGE A. 1856: Lebenszeichen vorweltlicher, im Bernstein eingeschlossener Thiere. *Program der Petrischule Danzig* 1856: 1-32.
- MOTSCHULSKY V. VON 1856 : Lettre à Ménétré. Nr. 4. *Etudes Entomologiques*, 5: 21-28 + 1 pl.
- MÜLLER A. H. 1963 : *Lehrbuch der Paläozoologie, 2 (Invertebraten, Teil 3 : Arthropoda 2 - Stomochorda)*. Jena: Fischer, xvii + 698 pp.
- MYNHARDT G. 2012: Phylogeny and Evolution of Myrmecophily In Beetles, Based On Morphological Evidence (Coleoptera: Ptinidae, Scarabaeidae). Dissertation. Ohio State University, 217 pp. http://etd.ohiolink.edu/view.cgi?acc_num=osu1338335162.
- MYNHARDT G. & PHILIPS T. K. 2013: A third new genus and species of spider beetle, *Okamninus annae* n. gen., n. sp. (Coleoptera: Ptinidae) from Dominican amber. *Paleodiversity* 6: 23-28.
- QUIEL G. 1910: Zwei neue Coleopteren aus dem baltischen Bernstein (Eocän bzw. unteres Oligocän). *Berliner Entomologische Zeitschrift* 54: 49-52.
- ORTUÑO V. M. & ARILLO A. 1997: Discovery of the genus *Ernobius* Thomson (Coleoptera: Anobiidae) from the Oligocene of Izarra, Álava, Spain. *The Coleopterists Bulletin* 51(1): 71-73.
- PHILIPS T. K. & MYNHARDT G. 2011: Description of *Electrognostus intermedius*, the first spider beetle from Dominican amber with implications on spider beetle phylogeny (Coleoptera, Ptinidae). *Entomapeiron* (P. S.) 4: 37-51.
- RICE P. C. 1980: *Amber. The golden gem of the ages*. New York & London: Van Nostrand Reinhold comp., x + 289 pp.
- SCUDDER S. H. 1876: Fossil Coleoptera from the Rocky Mountain Tertiaries. *Bulletin of the Geological and Geographical Survey of the Territories* 2: 77-87.
- SCUDDER S. H. 1878: The fossil insects of the Green River Shales. *Bulletin of the Geological and Geographical Survey of the Territories* 4: 747-776.
- SCUDDER S. H. 1885: *Insecta. Insekten*. Pp. 747-831 + 2 pl. In: ZITTEL K.A. (ed.): *Handbuch der Paleontologie*, I, Abt. 2. München und Leipzig: Oldenbourg.
- SCUDDER S. H. 1886: Systematic review of our present knowledge of fossil insects, including Myriapods and Arachnids. *Bulletin of the United States Geological Survey* 31: 1-128.
- SCUDDER S. H. 1891: Index to the known fossil insects of the world including Myriapods and Arachnids. *Bulletin of the United States Geological Survey* 71: 1-744.
- SCUDDER S. H. 1892: The tertiary Rhynchophora of North America. *Proceedings of the Boston Society of Natural History* 25: 370-386.
- SCUDDER S. H. 1900: Adepagous and clavicorn Coleoptera from the Tertiary deposits at Florissant, Colorado. with descriptions of a few other forms and a systematic list of the non-Rhynchophorus Tertiary Coleoptera of North America. *Monographs of the United States Geological Survey* 40: 1-147 + i-xi.
- SPAHR U. 1981a: Bibliographie der Bernstein- und Kopal-Käfer (Coleoptera). *Stuttgarter Beiträge zur Naturkunde Serie B (Geologie und Paläontologie)* 72: 1-21.

- SPAHR U. 1981b: Systematischer Katalog der Bernstein- und Kopal-Käfer (Coleoptera). *Stuttgarter Beiträge zur Naturkunde Serie B (Geologie und Paläontologie)* 80: 1-107.
- SPILMAN T. J. 1971: Fossil *Stichtoptychus* and *Cryptorama* in Mexican amber (Coleoptera: Anobiidae). *University of California Publications in Entomology* 63: 87-89.
- WEIDNER H. 1952: Insektenleben in Bernsteinwald. *Entomologische Zeitschrift* 62: 8-9, 62-72, 88.
- WHITE R. E. 1969: On *Crichtonia*, described an a new fossil genus of Anobiidae (Coleoptera). *Proceedings of the Entomological Society of Washington* 71: 597.
- WHITE R. E. 1974: Type species for world genera of Anobiidae (Coleoptera). *Transaction of the American Entomological Society* 99: 415-475.
- WHITE R. E. 1982: A catalog of the Coleoptera of America north of Mexico: Family Anobiidae. *United States Department of Agriculture, Agriculture Handbook*, Number 529-70: i-xi + 1-58.
- WICKHAM H. F. 1913a: Fossil Coleoptera from the Wilson ranch near Florissant Colorado. *Bulletin from the Laboratories of Natural History of the State University of Iowa* 6(4): 3-29.
- WICKHAM H. F. 1913b: The Princetown collection of fossil beetles from Florissant. *Annals of the Entomological Society of America* 6: 359-366.
- WICKHAM H. F. 1914a: Twenty new Coleoptera from the Florissant shales. *Transaction of the American Entomological Society* 40: 257-269 + 4 pl.
- WICKHAM H. F. 1914b: New miocene Coleoptera from Florissant. *Bulletin of the Museum of Comparative Zoology* 58: 423-494.
- WICKHAM H. F. 1916: New fossil Coleoptera from the Florissant beds. *Bulletins from the Laboratory of Natural History of the State University of Iowa* 7 (3): 3-20.
- WICKHAM H. F. 1917: New species of fossil beetles from Florissant, Colorado. *Proceedings of the United States National Museum Washington* 52: 463-472.
- WICKHAM H. F. 1920: Catalogue of the North American Coleoptera described as fossils. Pp. 343-365. In: LENG C. W.: *Catalogue of North America Coleoptera*. New York: J.D. Sherman, x+470 pp.
- WILLIAMSON G. C. 1932: *The book of amber*: London: Ernest Benn, 268 pp. + 6 pl.
- ZAHRADNÍK P. 2007: Ptinidae (without Gibbiinae and Ptininae). Pp. 339-362. In: LÖBL I. & SMETANA A. (eds.): *Catalogue of Palaearctic Coleoptera. Elateroidea - Derodontoidea - Bostrichoidea - Lymexyloidea - Cleroidea - Cucujoidea*. Volume 4. Stenstrup: Apollo Books, 935 pp.
- ZAHRADNÍK P. 2009: Contribution to knowledge of the tribe Gastrallini (Coleoptera: Bostrichoidea: Ptinidae) - III. New Species of the genus *Gastrallus*, with review of Oriental species. *Studies and Reports of District Museum Prague-East, Taxonomical Series* 5: 329-365.

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