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**On the *Pseudobium* species of the Palaearctic region. III.
A new species from China, a new synonymy, a new combination,
and additional records
(Insecta: Coleoptera: Staphylinidae: Paederinae)**

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Abstract: *Pseudobium hunanicum* nov.sp. (China: Hunan), the first representative of the genus from China, is described and illustrated. The binomen *Pseudobium seminigrum* (KRAATZ 1859), nov.comb. (ex *Lathrobium* GRAVENHORST 1802) is established. The species is redescribed and illustrated, and a lectotype is designated. One synonymy is proposed: *P. alanyense* FAGEL 1969 = *P. yagmuri* ANLAŞ 2011, nov.syn. "*Pseudobium*" *yutakakimurai* HAYASHI 1994 was erroneously attributed to *Pseudobium* MULSANT & REY 1878; its correct generic assignment requires clarification. Additional records of twelve *Pseudobium* species from the Palaearctic region are presented, among them new country records from Iran, Oman, Yemen, Italy, and India, as well as a new record from the Palaearctic region. The distributions of three species are mapped. A checklist of the 22 species represented in the Palaearctic region is provided.

Key words: Coleoptera, Staphylinidae, Paederinae, *Pseudobium*, Palaearctic region, taxonomy, new species, new synonymy, new combination, generic assignment, lectotype designation, new records.

Introduction

According to ASSING (2007), the lathrobiine genus *Pseudobium* MULSANT & REY 1878 is represented in the Palaearctic region by 22 species and subspecies. Since then, one additional species has been described from Turkey and one subspecies has been synonymised (ANLAŞ 2011, ASSING 2012).

Since the last contribution (ASSING 2007), more *Pseudobium* material has become available from various sources. An examination of this – mostly West Palaearctic – material yielded numerous records of zoogeographic interest. Moreover, in the course of on-going revisions of the Himalayan species of *Lathrobium* GRAVENHORST 1802, as well as East Palaearctic and Oriental species of *Lobrathium* MULSANT & REY 1878, additional species and material from the East Palaearctic and Oriental regions were discovered, among them an undescribed species and one species previously assigned to *Lathrobium*.

Material and methods

The material treated in this study is deposited in the following public institutions and private collections:

BMNH The Natural History Museum, London (R.G. Booth)
 MNHUB..... Museum für Naturkunde der Humboldt-Universität Berlin (J. Frisch, J. Willers)
 NHMW Naturhistorisches Museum Wien (H. Schillhammer)
 NMNHP National Museum of Natural History, Praha (J. Hájek)
 SDEI Senckenberg Deutsches Entomologisches Institut, Müncheberg (L. Behne)
 cAss..... author's private collection
 cBoh..... private collection Jaroslav Boháč, České Budějovice
 cMah private collection Viggo Mahler, Horsens
 cPüt private collection Andreas Pütz, Eisenhüttenstadt
 cSch..... private collection Michael Schülke, Berlin

The morphological studies were conducted using a Stemi SV 11 microscope (Zeiss Germany) and a Jenalab compound microscope (Carl Zeiss Jena). A digital camera (Nikon Coolpix 995) was used for the photographs.

Head length was measured from the anterior margin of the frons to the posterior margin of the head, elytral length at the suture from the apex of the scutellum to the posterior margin of the elytra, and the length of the aedeagus from the apex of the ventral process to the base of the aedeagal capsule. The "parameral" side (i.e., the side where the sperm duct enters) is referred to as the ventral, the opposite side as the dorsal aspect.

The map was created using MapCreator 2.0 (primap) software.

New records and descriptions

Pseudobium cypriacum JARRIGE 1949

Material examined: Turkey: 1 ex., Siirt, E Sirnak, 31.V.1987, leg. Schönmann & Schillhammer (NHMW). Cyprus: 2 exs., Agios Nikolaos, 16.IV.1995, leg. Schmid (NHMW, cAss).

Comment: The distribution of *P. cypriacum* includes Turkey, Cyprus, and Iran. It is mapped by ASSING (2007).

Pseudobium alanyense FAGEL 1969

Pseudobium yagmuri ANLAŞ 2011: 315 ff.; **nov.syn.**

Comment: According to ANLAŞ (2011), *P. yagmuri*, whose original description is based on a single male from Tunceli province, is distinguished "by less dark coloration, and completely different morphology of the aedeagus". A comparison of a male of *P. alanyense* from the vicinity of the type locality with the illustrations provided by ANLAŞ (2011), however, revealed no such differences. The coloration and all other external characters are identical, and the same is true of the shape of the aedeagus and of the male sternite VIII. *Pseudobium* species are not known to have restricted distributions, so that the range of *P. alanyense* is most unlikely to be confined to the environs of Alanya in

Antalya province. Moreover, it can be inferred from ANLAŞ (2011) that the author has not seen any material of *P. alanyense*. The evidence, therefore, leaves little doubt that *P. yagmuri* is a junior synonym of *P. alanyense*.

***Pseudobium hellenicum* ASSING 2006**

M a t e r i a l e x a m i n e d : Greece: 1 ex., Pelopónnisos, 8 km NW Megalopoli, Alfios river, 9.IV.1993, leg. Jørum (cMah).

C o m m e n t : The known distribution is confined to Greece and western Anatolia (ASSING 2006, 2007); for a map see ASSING (2007). The above specimen represents the first record from the Pelopónnisos.

***Pseudobium anatolicum* ASSING 2006**

M a t e r i a l e x a m i n e d : Iran: 1 ex., Razavi Khorasan, 20 km NW Torbat-e Heydariyeh, Senobar, 35°26'N, 49°06'E, 1730 m, 28.V.2006, leg. Frisch & Serri (MNHUB); 1 ex., Azarbayjan-e Gharbi, Shot-Siyah Chesmeh road, pass SW Shot, 39°09'N, 44°41'E, 1420 m, 28.VIII.2008, leg. Frisch & Serri (MNHUB).

C o m m e n t : This species has been recorded only from Turkey and Iran. For a distribution map see ASSING (2007).

***Pseudobium richteri* (SCHEERPELTZ 1961)**

M a t e r i a l e x a m i n e d : Iran: 5 exs., Kerman, 100 km E Hajiabad, 4 km W Sorkhan, 28°20'N; 56°51'E, 1430 m, 20.IV.2006, leg. Frisch & Serri (MNHUB, cAss). Oman: 47 exs., Batinah province, Al-Jabal al-Ahdar mts., SE Ruataq, W Awabi, Wadi Bani Awf, 23°20'N, 57°29'E, 430 m, light-trap, 19.-20.XII.2009, leg. Lehmann et al. (cPüt, cAss); 71 exs., same data, but 29.-30.XII.2009 (cPüt, cAss); 1 ex., Al-Sharqiyah province, 12 km SE junction Road 23, Wadi b. Khalid, Wadi al-Batha, 17°11'N, 54°05'E, 250 m, light-trap, 26.XII.2009, leg. Lehmann et al. (cPüt). Yemen: 2 exs., Al Hudaydah gov., Jabal Bura valley forest NP, 14°52'N, 43°25'E, 240-350 m, light, 4.XI.2010, leg. Hlaváč (cAss).

C o m m e n t : *Pseudobium richteri* was previously known from southern Iran and Afghanistan (ASSING 2007), and was recently reported also from Israel (ASSING & FELDMANN 2012). The above specimens from Oman and Yemen represent new country records. For a map illustrating the previously known distribution see ASSING (2007). It should be noted that the illustrations of the aedeagus of *P. richteri* in BOHAČ (1988) are either misleading or refer to a species that is not conspecific with the above material. Based on the illustration of the aedeagus provided by COIFFAIT (1982), it does not seem unlikely that the type material of *P. buettikeri* (COIFFAIT 1979), which was described from Saudi Arabia, is conspecific with *P. richteri*.

***Pseudobium sinaicum* (FAUVEL 1904)**

M a t e r i a l e x a m i n e d : Yemen: 9 exs., Sokotra, Dixam plateau, Wadi Esgego, 12°28'N, 54°01'E, 300 m, 2.-3.XII.2003, leg. Kabátek & Král (NMNHP, cAss); 3 exs., Sokotra, Dixam plateau, Wadi Zeeriq, 12°31'N, 53°59'E, 750 m, 3.XII.2003, leg. Král (NMNHP, cAss).

C o m m e n t : *Pseudobium sinaicum* has been reported only from Egypt and Yemen (SMETANA 2004). The above material was identified based on the illustrations of the aedeagus in COIFFAIT (1982).

***Pseudobium asiaticum* GUSAROV 1994**

M a t e r i a l e x a m i n e d : Kazakhstan: 2 ♂♂, Ketmen mts., Temirlyk river, 29.VII.1988, leg. Kastcheev (cAss).

C o m m e n t : The distribution of *P. asiaticum* is confined to Middle Asia (SMETANA 2004).

***Pseudobium pakistanicum* ASSING 2007**

M a t e r i a l e x a m i n e d : Iran: 13 exs., SE-Iran, 13 km SSE Nihshar, 8.-9.IV.1973 (cBoh, cAss, cSch); 1 ex., Kerman province, 100 km E Hajiabad, 4 km W Sorkhan, 28°20'N; 56°51'E, 1430 m, 20.IV.2006, leg. Frisch & Serri (cAss); 1 ex., Hormozgan province, Tall-e Gerdu, 27°49'N, 56°25'E, 820 m, 19.IV.2006, leg. Frisch & Serri (MNHUB).

C o m m e n t : The original description of *P. pakistanicum* is based on a single male from the Northwest Frontier Province in Pakistan. The above specimens represent the first records from Iran. In addition, a female possibly belonging to this species was seen from Oman: Batinah province, Al-Jabal al-Ahdar mts., SE Ruataq, W Awabi, Wadi Bani Awf, 23°20'N, 57°29'E, 430 m, light-trap, 19.-20.XII.2009, leg. Lehmann et al. (cPüt). However, in view of the external similarity of *Pseudobium* species, the identification must be considered tentative.

***Pseudobium iranicum* BOHÁČ 1988**

T y p e m a t e r i a l e x a m i n e d : Holotype ♂: N-Iran, Garsár, 20.VII.76, Boháč lgt. / Holotypus / *Pseudobium iranicum* n. sp. J. Boháč det. 88 (cBoh). Paratypes: 4 exs.: same data as holotype (cBoh).

C o m m e n t : The known distribution of this species is confined to Iran. For a distribution map see ASSING (2007).

***Pseudobium gridellii* JARRIGE 1949**

M a t e r i a l e x a m i n e d : France: 2 exs., Pyrénées-Orientales, St. Nazaire, leg. Normand (cBoh, cAss). Italy: 5 exs., Italy, Friuli-Venezia Giulia, Cervignano del Friuli, Isonzo river, flood debris, leg. Jureček (cBoh, cAss).

C o m m e n t : This species is widespread in the West Mediterranean, West Europe, and the southwest of Central Europe (SMETANA 2004).

***Pseudobium labile* (ERICHSON 1840)**

M a t e r i a l e x a m i n e d : France: 1 ex., Corsica, Folelli, 1905, leg. Leonhard (cBoh).

C o m m e n t : Like the preceding species, *P. labile* is widespread in the West Mediterranean (SMETANA 2004).

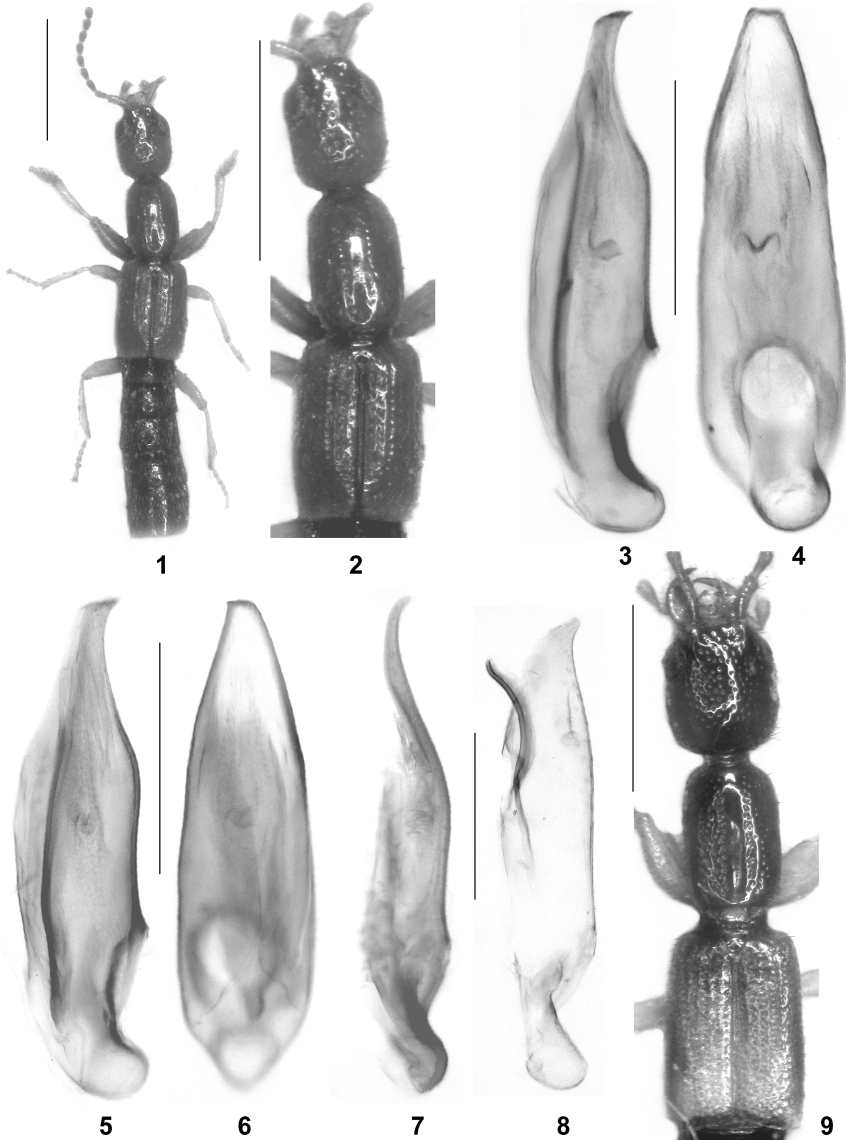
***Pseudobium peyerimhoffi* JARRIGE 1949**

M a t e r i a l e x a m i n e d : Italy: 2 exs., "Sicilia" (cBoh, cAss).

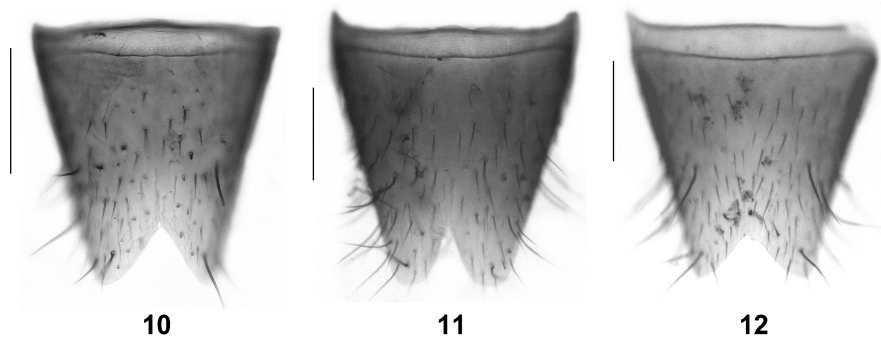
C o m m e n t : *Pseudobium peyerimhoffi* was previously known only from North Africa and the Canary Islands (SMETANA 2004). The above specimens represent the first record from Italy.

***Pseudobium seminigrum* (KRAATZ 1859), nov.comb.** (Figs 1-6, 10, Map 1)

Type material examined: Lectotype ♂, present designation: "Ceylon / Coll. Kraatz / Syntypus / DEI Müncheberg, Col - 02768 / Lectotypus ♂ *Lathrobium seminigrum* Kraatz, desig. V. Assing 2011 / *Pseudobium seminigrum* (Kraatz), det. V. Assing 2011" (SDEI). Paralec-
totypes: 1♂, 1 ex. without abdomen: same data as lectotype, but "Col - 02769" and "Col - 02770",
respectively (SDEI).



Figs 1-9: *Pseudobium seminigrum* (KRAATZ) (1-6; 1-4: lectotype; 5-6: male from Uttaranchal), *P. laeviventre* CHAMPION (7), and *P. hunanicum* nov.sp. (8-9): (1) habitus; (2, 9) forebody; (3, 5, 7, 8) aedeagus in lateral view; (4, 6) aedeagus in lateral view. Scale bars: 1-2, 9: 1.0 mm; 3-8: 0.2 mm.



Figs 10-12: *Pseudobium seminigrum* (KRAATZ), lectotype (10), *P. laeiventre* CHAMPION (11), and *P. hunanicum* nov.sp. (12): male sternite VIII. Scale bars: 0.2 mm.

Comment: The original description is based on an unspecified number of syntypes, among them at least one male, from "Ceylan" (KRAATZ 1859). Two male syntypes and one syntype without abdomen were located in the collections of the SDEI. The male in better condition is designated as the lectotype. An examination of the type material revealed that the species undoubtedly belongs to *Pseudobium*.

Additional material examined: India: 1♂m, Uttaranchal, Kumaon, "R. [=River] Sarda Gorge", XII.1918, leg. Champion (BMNH).

Redescription: Body length 4.0-4.3 mm; length of forebody 2.2-2.3 mm. Habitus as in Fig. 1. Coloration: forebody reddish, elytra with yellowish posterior margin; abdomen blackish, with somewhat paler apex; legs yellowish, except for the reddish profemora; antennae reddish, or brown with reddish antennomeres I and II.

Head (Fig. 2) strongly oblong, 1.3 times as long as broad; posterior angles not marked, broadly convex; punctation coarse and moderately dense, middle of frons and of vertex impunctate; interstices without microsculpture. Eyes large, approximately 0.7 times as long as distance from posterior margin of eye to neck in dorsal view. Antenna moderately slender, approximately 1.2 mm long; antennomeres V-XI less than twice as long as broad.

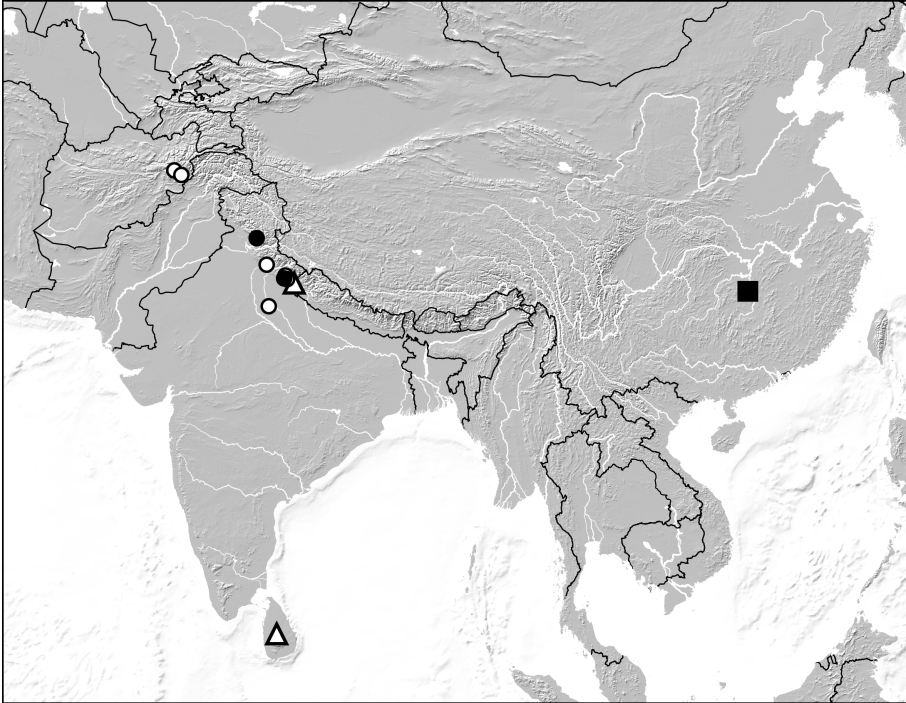
Pronotum (Fig. 2) 1.58 times as long as broad and 0.90-0.95 times as wide as head, strongly convex in cross-section; lateral margins weakly convex in dorsal view; on either side of the broadly impunctate midline with a dorsal series each composed of at least approximately 20 punctures; punctures relatively fine.

Elytra (Fig. 2) 0.94-1.0 times as long as, and distinctly broader than pronotum, humeral angles marked; macropunctuation arranged in distinct series; microsculpture absent. Hind wings fully developed.

Abdomen slightly narrower than elytra, widest at segment VII; punctation moderately fine and not very dense; interstices without distinct microsculpture; posterior margin of tergite VII with palisade fringe.

♂: sternite VII unmodified; sternite VIII with broadly V-shaped posterior excision of moderate depth, otherwise unmodified (Fig. 10); aedeagus 0.45 mm long, shaped as in Figs 3-6.

Distribution: *Pseudobium seminigrum* was previously reported only from Sri Lanka. The record from Uttaranchal considerably extends the known distribution to the north and represents the first record from the Palearctic region (Map 1).



Map 1: Distributions of *Pseudobium seminigrum* (KRAATZ) (open triangles), *P. laeviventre* CHAMPION (filled circles: revised records; open circles: literature records), and *P. hunanicum* nov.sp. (filled square).

***Pseudobium laeviventre* CHAMPION 1922** (Figs 7, 11, Map 1)

Material examined: India: 1 ex., Uttaranchal, West Almora Division, Kumaon, X.1918, leg. Champion (BMNH); 1 ex., Himachal Pradesh, Kulu, Naggur, 5000', leg. Champion (cAss).

Comment: The above specimens were found among unidentified material of *Lobrathium* and *Pseudolathra* CASEY 1905. *Pseudobium laeviventre* was previously recorded from Uttaranchal, Uttar Pradesh, and Afghanistan (CAMERON 1931, COIFFAIT 1979, SMETANA 2004). The currently known distribution is illustrated in Map 1.

***Pseudobium assimile* CAMERON 1924**

Material examined: India: 2 ♀♀, Assam, Bhalukpong, 27°02'N, 92°35'E, 150 m, 26.V.-3.VI.2006, leg. Dembický & Pacholátko (BMNH, cAss).

Comment: *Pseudobium assimile* was previously recorded only from Uttaranchal

(CAMERON 1931, SMETANA 2004). In view of the fact that both examined specimens are females, the identification should be regarded as tentative.

***Pseudobium hunanicum* nov.sp.** (Figs 8-9, 12)

Type material: Holotype ♂: "China: P. M. Hammond. B.M. 1967-215. / Hunan, Shaoshan, 18-10-66 / Holotypus ♂ *Pseudobium hunanicum* sp.n. det. V. Assing 2012" (BMNH).

Etymology: The specific epithet is an adjective derived from the name of the province where the type locality is situated.

Description: Body length 4.7 mm; length of forebody 2.9 mm. Coloration (note that the holotype is slightly teneral): head and pronotum reddish; elytra yellowish; abdomen blackish with yellowish apex (posterior margin of segment VII; segments VIII-X); legs yellowish; antennae reddish.

Head (Fig. 9) relatively weakly oblong, 1.15 times as long as broad; lateral margins subparallel; posterior angles not marked, broadly convex in dorsal view; punctation coarse and rather dense; interstices without microsculpture, narrower than diameter of punctures, except for median dorsal portion. Eyes large and convex, slightly less than half as long as distance from posterior margin of eye to neck in dorsal view. Antenna slender, approximately 1.8 mm long; antennomeres V-X twice as long as broad, or nearly so.

Pronotum (Fig. 9) 1.5 times as long as broad and 0.85 times as wide as head, relatively weakly convex in cross-section, in median portion almost flattened; lateral margins almost straight and indistinctly converging posteriad in dorsal view; on either side of the broadly impunctate midline densely punctate, without defined dorsal series.

Elytra (Fig. 9) 1.1 times as long as, and distinctly broader than pronotum, humeral angles marked; macropunctuation arranged in somewhat irregular series only in anterior two thirds; microsculpture absent. Hind wings fully developed.

Abdomen distinctly narrower than elytra, widest at segment VII; punctation moderately fine and moderately dense; interstices without distinct microsculpture, glossy; posterior margin of tergite VII with palisade fringe.

♂: sternite VII unmodified; sternite VIII with broadly V-shaped posterior excision of moderate depth, otherwise unmodified (Fig. 12); aedeagus 0.55 mm long, laterally somewhat compressed, and with strongly curved dorsal plate (Fig. 8).

Comparative notes: *Pseudobium hunanicum* is distinguished from the similarly coloured *P. assimile* by somewhat larger size, darker abdomen, longer and more slender antennae, less pronounced posterior angles of the head, and by the much denser punctation of the pronotum. It is separated from all its congeners by the shape of the aedeagus.

Distribution: The type locality is situated in Hunan province (Map 1). *Pseudobium hunanicum* is the first representative of the genus to become known from China.

Species excluded from *Pseudobium*

"Pseudobium" yutakakimurai HAYASHI 1994

C o m m e n t : The original description of *P. yutakakimurai* is based on a single male from "Mt. Ohdai, Nara", Japan (HAYASHI 1994). As can be inferred from the photo of the habitus and on the drawings provided in the original description, this species clearly does not belong to *Pseudobium*. The description is very detailed, but unfortunately, important characters facilitating a correct generic placement (e.g., presence or absence of a submarginal line on the elytra; shape and chaetotaxy of the male sternites VII-IX and tergites VIII-X) are neither described nor illustrated. Therefore, this species should be considered as *Lathrobiina incertae sedis* until the holotype has been re-examined.

Checklist of the *Pseudobium* species recorded from the Palaearctic region

species	distribution
<i>alanyaense</i> FAGEL 1969 = <i>yagmuri</i> ANLAŞ 2011, nov.syn.	Turkey
<i>anatolicum</i> ASSING 2006	Turkey, Iran
<i>angusticolle</i> (HOCHHUTH 1851)	Armenia, Azerbaijan
<i>arabicum</i> COIFFAIT 1982	Saudi Arabia
<i>asiaticum</i> GUSAROV 1994	Middle Asia
<i>assimile</i> CAMERON 1924	N-India
<i>benicki</i> BORDONI 1985	Spain
<i>buettikeri</i> (COIFFAIT 1979)	Saudi Arabia
<i>cypriacum</i> JARRIGE 1949	Cyprus, Iran, Turkey
<i>dissimile</i> COIFFAIT 1978	Bhutan
<i>gridellii</i> JARRIGE = <i>ibericum</i> COIFFAIT 1982	West Mediterranean, West Europe, south-western Central Europe
<i>hellenicum</i> ASSING 2006	Greece, W-Turkey
<i>humanicum</i> nov.sp.	China: Hunan
<i>iranicum</i> BOHÁČ 1988	Iran
<i>labile</i> (ERICHSON 1840)	West Mediterranean
<i>laeviventre</i> CHAMPION 1922	Afghanistan, N-India
<i>pakistanicum</i> ASSING 2007	Pakistan, Iran
<i>peyerimhoffi</i> JARRIGE 1949	North Africa, Canary Islands, S-Italy: Sicily
<i>richteri</i> (SCHEERPELTZ 1961)	Iran, Afghanistan, Oman, Israel
<i>semiflavum</i> CAMERON 1924	N-India
<i>seminigrum</i> (KRAATZ 1859), nov.comb.	N-India, Sri Lanka
<i>sinaicum</i> (FAUVEL 1904)	Egypt, Yemen

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Zusammenfassung

Pseudobium hunanicum nov.sp. (China: Hunan) wird beschrieben und abgebildet. Für *Pseudobium seminigrum* (KRAATZ 1859), nov.comb. (ex *Lathrobium* GRAVENHORST 1802) wird ein Lectotypus designiert. Die Art wird redeskribiert und abgebildet. *Pseudobium yagmuri* ANLAŞ 2011, nov.syn. wird mit *P. alanyense* FAGEL 1969 synonymisiert. "*Pseudobium*" *yutakakimurai* HAYASHI 1994 gehört nicht zu *Pseudobium* MULSANT & REY 1878; die korrekte Gattungszugehörigkeit bedarf der Klärung. Weitere Nachweise von zwölf *Pseudobium*-Arten werden aus der Paläarktis gemeldet, darunter Erstnachweise für den Iran, Oman, Jemen, Italien und Indien sowie ein Erstnachweis für die Paläarktis. Die derzeit bekannte Verbreitung von drei Arten wird anhand einer Karte illustriert. Eine Checkliste der derzeit 22 aus der Paläarktis bekannten Arten wird erstellt.

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