Zootaxa 3841 (3): 339–363
www.mapress.com/zootaxa/

Article

ISSN 1175-5326 (print edition)
ZOOTAXA
ISSN 1175-5334 (online edition)

http://dx.doi.org/10.11646/zootaxa.3841.3.2
http://zoobank.org/urn:lsid:zoobank.org:pub:FCBA5D0D-AA6B-4CB9-9104-6D682F7A9802

Nomenclatural changes, new country records and range extensions of Baridinae (Coleoptera, Curculionidae) from China

JENS PRENA[1], JIANI YANG[2], LI REN[1], ZHILIANG WANG[1], NING LIU[1] & RUNZHI ZHANG[1,3]

[1]*Key Laboratory of Zoological Systematics and Evolution, Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, P. R. China*

[2]*School of Forestry, Beijing Forestry University, Beijing 100083, P. R. China*

[3]*Corresponding author. E-mail: zhangrz@ioz.ac.cn*

Abstract

Thirteen relatively frequently collected species of baridine weevils from mainland China were mapped to improve our understanding of biogeographic patterns and distributional ranges of Baridinae in the Palaearctic and Oriental regions. This simple case study showed that taxonomists tend to underestimate the spatial scope required in regional investigations and descriptive works often resulting in widespread species being described numerous times. Several apparently uncommon species with uncertain relationships, known previously only from moderately high latitudes in the Palaearctic region, showed Oriental affinities. In each region, species may occur over many thousands of kilometers not only in East-West but also in North-South directions. New synonyms are *Mimophilus* Faust (=*Baridiomorphus* Voss), *Acythopeus inflatirostris* Voss (=*Acythopeus proximus* Voss), *Baris albisquama* Zaslavskij (=*Baris ljaodunensis* Zaslavskij), *Mimophilus tragicus* Faust (=*Baridiomorphus conicollis* Voss), *Moreobaris deplanata* (Roelofs) (=*Acythopeus patruelis* Voss), *Baris pilosa* Roelofs (=*Baris blennus* Marshall, =*Baris piliventris* Zaslavskij, =*Baris pygidialis* Voss, =*Baris suvorovi* Reitter), *Baris artemisiae* (Panzer) (=*Baris corvina* Voss), *Pellobaris melancholica* (Roelofs) (=*Paracythopeus collaris* Voss), *Pteridobaris maritima* (Roelofs) (=*Baris quinquecarinata* Zaslavskij) and *Ulobaris kuchenbeisseri* Hartmann (=*Baris pseudospitzyi* Zaslavskij, =*Baris ussuriensis ussuriensis* Zaslavskij, =*Baris ussuriensis chinganensis* Zaslavskij). New combinations are *Athesapeuta gracilis* (Voss) (from *Eumycterus* Schönherr), *Athesapeuta inornata* (Voss) (from *Baris* Germar) and *Nespilobaris inflatirostris* (Voss) (from *Acythopeus* Pascoe). *Baridius vestitus* Perris (not Boheman) and *Baris pygidialis* Hustache (not Voss) are newly recognized primary homonyms. A lectotype is designated for *Moreobaris deplanata*. Twenty-four species are recorded newly from China.

Key words: weevils, distribution, life history, Palaearctic, Oriental

Introduction

The currently available information on Chinese baridine weevils is scarce and fraught with problems. The French missionary J. P. A. David (1826–1900) apparently was the first to collect specimens in remote parts of China during the 1860s and 70s. A few others were collected somewhat later in exploritory expeditions under N. M. Prževalskij, G. N. Potanin and B. Széchenyi. This and other material from more accessible regions was described by European coleopterists but generally remained poorly known. Baridines from China did not enter the scientific literature before Deyrolle & Fairmaire (1878).

In the 20th Century, E. Voss was the most prolific student of the group in the region and described a total of 28 species (Voss 1932, 1934, 1937, 1939, 1941, 1953, 1956, 1958). Numerous of his specimens were collected in the Wuyi Mountains (Fujian Province) in 1937/38 by J. Klapperich and 1946 by Tschung Sen, while those of his early papers came from various European collections, such as Deutsches Entomologisches Institut, Senckenberg Museum Frankfurt and the G. Frey Collection. Voss rarely provided meaningful comparisons with already described species so the identities of his species often remained unknown. Moreover, the type material retained by him and Klapperich is difficult to find or has been destroyed. Voss lost his first collection by bombing in April 1945

Accepted by R. Anderson: 12 Jun. 2014; published: 28 Jul. 2014

patterns attained an unfortunate popularity with taxonomists in the early 20th Century. Researchers now have the methodology and opportunity to substantiate or rebut the formal distinction of regional taxa. However, basic knowledge of distributional ranges and occurrences are needed before such studies can be planned and conducted successfully. Our results underline that the taxonomic problems inherent to the diverse but understudied groups of organisms are transregional and cannot be solved locally. Even though significant amounts of work and funding went into taxonomic and phylogenetic research in recent time, declining and inadequately staffed museum facilities take their toll and annihilate much of the gained momentum.

Acknowledgments

This study was conducted within the framework of a professorship for senior international scientists awarded by the Chinese Academy of Sciences to the first author (2012T1S0025), with the overall objective to develop a taxonomic infrastructure for research on economically important weevils. Funds by NSFC programs 31210103909, 31172130 and J1210002 allowed obtaining ecological and molecular data of target species from different regions of China. We thank Dirk Ahrens (Bonn), Max Barclay (London), Lutz Behne (Müncheberg), Marie-Claude Bon (Montferrier le Lez), Olaf Jäger (Dresden), Martin Fikáček (Prague), Andrea Hastenpflug-Vesmanis (Frankfurt a. M.), Peter Hlaváč (Prague), Huang Junhao (Zhejiang), Boris Korotyaev (St. Petersburg), Pol Limbourg (Brussels), Youssef Omar (Assiut), Eva Sprecher-Uebersax (Basel), Győző Szél (Budapest), Joachim Willers (Berlin), Bert Viklund (Stockholm) and Hiraku Yoshitake (Tsukuba), who all helped with specimens, literature or otherwise. Ding Liang, Li You, Jiang Chunyan, Zhang Menglei (all Beijing), Pan Bo (Menglun), Charles O'Brien (Green Valley), Muhammad Haseeb (Tallahassee), Miguel Alonso-Zarazaga (Madrid) and Han Kyunduk (Seoul) were able companions in the field and contributed biological observations, plant identifications and/or specimens. An Yuan, Wang Jie, Jiang Chunyan and He Xu databased label data. Charles O'Brien and Robert Anderson commented on earlier versions of the manuscript. All contributions were much appreciated.

References cited

Aleeva, M.N. (1953) Materialy k biologii dol'gonosikov (Coleoptera, Curculionidae), vredjasshikh sakharnoj svekle v Kazakhstane [Material and biology of weevils injurious to sugar beet in Kazakhstan]. *Entomologicheskoe obozrenje*, 33, 103–108.

Brisout de Barneville, H. (1870) Monographie des espèces européennes et algériennes du genre *Baridius*, 1re partie. *Annales de la Société Entomologique de France*, 10, 31–66.

Brunner, Y.N. (1957) Ob otlichitel'nykh priznakakh lichinok nekotorykh vidov dolgonosikov, povrezhdajushchikh sakharnuju sveklu v Srednei Azii i Kazakhstane [On distinguishing larval characters of certain weevil species damaging sugar beet in Central Asia and Kazakhstan]. *Zoologicheskij Zhurnal*, 36, 1031–1038.

Casey, T.L. (1892) Coleopterological Notices, IV. *Annals of the New York Academy of Sciences*, 6 (9–12), 359–712. http://dx.doi.org/10.1111/j.1749-6632.1892.tb55408.x

Casey, T.L. (1920) Some descriptive studies among the American Barinae. *Memoirs on the Coleoptera*, 9, 300–529.

Chen, L., Song, Y. & Xu, S. (2008) The boundary of palaearctic and oriental realms in western China. *Progress in Natural Science*, 18, 833–841. http://dx.doi.org/10.1016/j.pnsc.2008.02.004

Chu, J.-T. & Sung, T.-L. (1935) Notes on the Mulberry Curculionid, *Baris deplanata* Roelofs. *Entomology and Phytopathology* (Hangchow, Chekiang), 3 (25), 500–508.

Cristofaro, M., Lecce, F., Paolini, F., Di Cristina, F., Bon, M.-C., Colonnelli, E. & Smith, L. (2013) Host specificity of an Italian population of *Cosmobaris scolopacea* (Coleoptera: Curculionidae), candidate for the biological control of *Salsola tragus* (Chenopodiaceae). *In*: Wu, Y., Johnson, T., Sing, S., Raghu, S., Wheeler, G., Pratt, P., Warner, K., Center, T., Goolsby, J. & Reardon, R. (Eds.), *XIII International Symposium on Biological Control of Weeds, 2011*. Hawaii, pp. 20–25.

Deyrolle, H. & Fairmaire, L. (1878) Descriptions de Coléoptères recueillis par M. l'abbé David dans la Chine centrale (1. partie). *Annales de la Société Entomologique de France*, Series 5, 8, 87–140.

Dzhanokmen, K.A. & Ertevtsyan, Y.K. (1990) New species of the genus *Stenoselma* and *Pseudocatolaccus* (Hymenoptera, Chalcidoidea, Pteromalidae) in the USSR fauna. *Zoologicheskij Zhurnal*, 69 (10), 145–150.

Egorov, A.B. (1978) Novyj vid dolgonosika roda *Baris* Germ. (Coleoptera, Curculionidae) s Dal'nego Vostoka [A new species of the weevil genus *Baris* from the Far East]. *Trudy Zoologicheskogo Instituta*, 61, 158–160.

Egorov, A.B., Zherichin, V.V. & Korotyaev, B.A. (1996) Sem. Curculionidae – dolgonosiki, ili sloniki. *In*: Ler, P.A. (Ed.),

Opredelitel' nasekomykh dal'nego vostoka Rossii [A key to insects of the Russian Far East]. Vol. 3-3. Dal'nauka, Vladivostok, pp. 249–311, 431–516.
Faust, J. (1881) Beiträge zur Kenntniss der Käfer des Europäischen und Asiatischen Russlands mit Einschluss der Küsten des Kaspischen Meeres (3. Fortsetzung). *Horae Societatis Entomologicae Rossicae*, 16 (3/4), 285–333.
Faust, J. (1894) Viaggio di Leonardo Fea in Birmania e regioni vicine. LX. Curculionidae. *Annali del Museo Civico di Storia Naturale di Genova*, 34, 153–370.
http://dx.doi.org/10.5962/bhl.title.48832
Germar, E.F. (1819) Versuch einer Eintheilung der Horde der Rüsselkäfer in mehrere Gattungen. *Neue Annalen der Wetterauischen Gesellschaft für die gesammte Naturkunde*, 1 (1) [1818], 116–139.
Germar, E.F. (1824) *Insectorum species novae aut minus cognitae, descriptionibus illustratae. Vol. 1. Coleoptera*. Hendel & Söhne, Halle, xxiv + 624 pp.
Germar, E.F. (1842) Einige Bermerkungen über Curculioniden. *Entomologische Zeitung*, 3, 98–110. [Stettin]
Gilbert, E.E. (1964) The genus *Baris* Germar in California (Coleoptera: Curculionidae). *Publications in Entomology* (University of California), 34, 1–153.
Hartmann, F. (1899) Neue Rüsselkäfer von Tientsin. *Wiener Entomologische Zeitung*, 18 (2–3), 49–52.
Hayes, W.P. (1936) Two new species of *Cosmobaris* (Curculionidae, Coleop.). *Journal of the Kansas Entomological Society*, 9 (1), 26–29.
Heller, K.M. (1940) Indomalayische Rüsselkäfer II. (Coleoptera, Curculionidae). *Arbeiten über morphologische und taxonomische Entomologie aus Berlin-Dahlem*, 7 (2), 92–113.
Herbst, J.F.W. (1795) *Natursystem aller bekannten in- und ausländischen Insekten. Der Käfer sechster Theil*. Pauli, Berlin, xxiv + 520 pp., 38 pl.
Heyden, L. von, Reitter, E. & Weise, J. (1883) *Catalogus Coleopterorum Europae et Caucasi. 3rd Edition*. Berlin, London & Paris, 228 pp.
Heyden, L. von, Reitter, E. & Weise, J. (1906) *Catalogus Coleopterorum Europae, Caucasi et Armeniae Rossicae. 2nd Edition*. Friedländer & Sohn, Berlin, 774 pp.
Hill, D.S. (1987) *Agricultural insect pests of temperate regions and their control*. Cambridge University Press, 569 pp.
Hoffmann, A. (1955) *Faune de France, 59, Coléoptères Curculionides (Deuxième Partie)*. Librairie de la Faculté des Sciences, Paris, [1954], pp. 487–1208.
Hoffmann, R.S. (2001) The southern boundary of the Palaearctic Realm in China and adjacent countries. *Acta Zoologica Sinica*, 47 (2), 121–131.
Hong, K.-J., Egorov, A.B. & Korotyaev, B.A. (2000) Illustrated Catalogue of Curculionidae in Korea. *In*: Park, K.-T. (Ed.), *Insects of Korea*. Chunchon, 337 pp.
Hong, K.-J., Park, S. & Han, K. (2011) *Insect Fauna of Korea. Vol. 12-2. Weevils 1*. National Institute of Biological Resources, Korea, 301 pp.
Hustache, A. (1928) Insectes Coléoptères, Curculionidae. *In*: *Mission dans les provinces centrales de l'Inde et dans la région occidentale de l'Himalaya 1914 par Guy Babault*. Paris, pp. 1–23.
Hustache, A. (1932) Curculionidae Gallo-Rhénans (8e partie). *Annales de la Société Entomologique de France*, [1931], 153–470.
Hustache, A. (1951) Nouveaux Barinae Sud Américains. Deuxième partie – Barina. *Boletím do Museu Nacional*, 96, 1–78.
Kabakhchi, B.P. (1938) Novyj vreditel' sakharnoj svekly *Ulobaris loricata* Boh. [A new pest of sugar beet, *Ulobaris loricata* Boh.]. *Zashchita rastenii*, 16, 107–108.
Kôno, H. (1937) Eine neue *Baris*-Art als Schädling an *Mentha arvensis*. *Kontyû*, 11 (4), 316.
Korotyaev, B.A., Konstantinov, S.A. & Lingafelter, S.W. (2005) Gall-inducing Coleoptera. *In*: Raman A., Schaefer, C.W. & Withers, T.M. (Eds.), *Biology, Ecology, and Evolution of Gall-Inducing Arthropods*. Science Publishing, pp. 239–271.
Legalov, A.A. (2010) Annotated checklist of species of superfamily Curculionoidea (Coleoptera) from Asian part of the Russia. *Amurian Zoological Journal*, 2 (3), 93–132.
Legalov, A.A., Gharhari, H. & Arzanov, Y.G. (2010) Annotated catalogue of curculionid-beetles (Coleoptera: Anthribidae, Rhynchitidae, Attelabidae, Brentidae, Brachyceridae, Dryophthoridae and Curculionidae) of Iran. *Amurian Zoological Journal*, 2 (3), 191–244.
Lepeletier, A.L.M. & Serville, J.G.A. (1925) *In*: Latreille, P.A. (Ed.), *Encyclopédie méthodique*. *Entomologie, ou histoire naturelle des crustacés, des arachnids et des insectes. Vol. 10*. Paris, 833 pp.
Lucht, W. (1988) Johann Friedrich Klapperich (1913–1987). *Entomologische Blätter*, 84, 129–131.
Marshall, G.A.K. (1916) Some injurious Indian weevils (Curculionidae) - II. *Bulletin of Entomological Research*, 6 (4), 365–373.
Marshall, G.A.K. (1928) New injurious Curculionidae (Col.). *Bulletin of Entomological Research*, 18 (3), 257–266.
McNamara, J. (1991) Family Curculionidae, snout beetles or weevils. *In*: Bousquet, Y. (Ed.), *Checklist of beetles of Canada and Alaska*. Agriculture Canada Publication 1861/E, Ottawa, pp. 329–355.
Morimoto, K. (1962) Provisional check list of the family Curculionidae of Japan. I. *Science bulletin of the Faculty of Agriculture, Kyushu University*, 19 (2), 183–217.
Morimoto, K. (1984) Curculionidae. *In*: Hayashi, M., Morimoto, K. & Kimoto, S. (Eds.), *The Coleoptera of Japan in Color, IV*. Hoikusha, Osaka, pp. 269–345, pl. 53–68.

Morimoto, K. & Lee, C.E. (1992) Curculionidae from Cheju Island, Korea, with descriptions of three new species (Insecta, Coleoptera). *Esakia*, 32, 1–18.
Morimoto, K. & Miyakawa, S. (1985) Weevil fauna of the Izu Islands, Japan (Coleoptera). *Mushi*, 50 (3), 19–85.
Morimoto, K. & Yoshihara, K. (1996) On the genera of the Oriental Baridinae (Coleoptera, Curculionidae). *Esakia*, 36, 1–59.
Motschulsky, V. (1860) Coléoptères de la Sibérie orientale et en particulier des rives de l'Amour. *In*: *Dr. L. v. Schrenck's Reisen und Forschungen im Amur-Lande. Band II*. St. Petersburg, Riga, Leipzig, pp. 77–257.
Nakayama, S. (1929) A list of the more important injurious insects in Chosen. *Annals of the Agricultural Experiment Station* (Chosen Sotokufu), 4 (5), 261–300. [in Japanese]
Nikulina, N. (2000) Morphology of larvae in weevil of the genus *Baris* (Coleoptera, Curculiondae) from Central Asia. *Zoologicheskij Zhurnal*, 79 (2), 180–185.
Paik, H.J. & Paik, W.H. (1976) Studies on biology and control of the Mulberry Small Weevil, *Baris deplanata* Roelofs (Coleoptera: Curculionidae). *Korean Journal of Sericultural Science*, 18 (2), 65–78.
Pajni, H.R. (1989) Studies on morphotaxonomy and cytotaxonomy of the Indian Curculionidae along with the ecology of the pest species. Final Technical Report (1984–89) to USDA-ARS, 80 pp.
Panzer, G.W.F. (1794) *Faunae Insectorum Germanicae initia oder Deutschlands Insecten, Heft 18*. Felssecker, Nürnberg, 24 pp., 24 pls.
Perris, E. (1858) Nouvelles excursions dans les Grandes Landes. *Annales de la Société Linnéenne de Lyon*, 4, 83–180.
Perris, E. (1877) Larves de Coléoptères (suite). *Annales de la Société Linnéenne de Lyon*, 23, 1–430 + [13] + 14 pl.
Pic, M. (1922) Notes diverses, descriptions et diagnoses (Suite). *L'Échange*, 38 (410), 29–30.
Prena, J. (2008) On the identities of European Baridini (Coleoptera, Curculionoidea) named before 1832. *Deutsche Entomologische Zeitschrift*, 55 (2), 263–275.
http://dx.doi.org/10.1002/mmnd.200800027
Prena, J. (2011) Baridinae. *In*: Löbl, I. & Smetana, A. (Eds.), *Catalogue of Palaearctic Coleoptera. Vol. 7. Curculionoidea I*. Apollo Books, pp. 88–89, 251–261.
Prena, J., Korotyaev, B., Wang, Z., Ren, L., Liu, N. & Zhang, R. (2014) A taxonomic revision of *Limnobaris* Bedel in the strict sense (Coleoptera, Curculionidae, Baridinae), with particular emphasis on the species found in China. *ZooKeys*, 416, 41–66.
http://dx.doi.org/10.3897/zookeys.416.7164
Ramesha, B. & Ramamurthy, V.V. (2012) A study on the *Baris* from India (Coleoptera: Curculionidae). *Oriental Insects*, 45 (4), 304–392.
http://dx.doi.org/10.1080/00305316.2011.648904
Reitter, E. (1895) *Bestimmungs-Tabellen der europäischen Coleopteren*. *Curculionidae, 3. Theil, 33. Heft*. Paskau, 31 pp.
Reitter, E. (1910) Vier neue *Baris*-Arten aus der palaearktischen Fauna (Col., Curcul.). *Wiener Entomologische Zeitung*, 29 (5/6), 201–203.
Roelofs, W. (1875) Curculinides recueillis au Japon par M. G. Lewis. Troisième et dernière partie. *Annales de la Société Entomologique de Belgique*, 18 (2), 149–194.
Roubal, J. (1929) Popis šesti nových coleopter.—Beschreibung von sechs neuen Coleopteren. *Acta Societatis Entomologicae Bohemiae*, 26, 56–57.
Scherf, H. (1964) Die Entwicklungsstadien der mitteleuropäischen Curculioniden (Morphologie, Bionomie, Ökologie). *Abhandlungen der Senckenbergischen Naturforschenden Gesellschaft*, 506, 1–335.
Schönherr, C.J. (1836) *Genera et species curculionidum, cum synonymia hujus familiae, Vol. 3 (2)*. Roret, Paris; Fleischer, Lipsiae, pp. 506–858.
Stein, J.P.E.F. (1868) *Catalogus Coleopterorum Europae*. Nicolai, Berlin, 149 pp.
Takahashi, S. (1930) *Kaju gaichū kakuron. Vol. 2*. [Japan], pp. [2] + 1–42 + 581–1225 + 1–11 + 1 pl. + [1].
Udvardy, M.D.F. (1975) A classification of the biogeographical provinces of the world. *IUCN Occasional Paper* (Switzerland), 18, 1–48.
Ulmen, K., Newzella, R., Hubweber, L., Schmitt, M., Klug, T. & Ahrens, D. (2010) Contribution to a catalogue of types preserved in the collection of Zoologisches Forschungsmuseum Alexander Koenig (ZFMK): Coleoptera: 1. Checklist of taxa. *Bonn zoological Bulletin*, 58, 5–48.
Van Dyke, E.C. (1950) Another European weevil established in California. *Pan-Pacific Entomologist*, 26, 35.
Voss, E. (1932) Weitere Curculioniden aus Yunnan und Szetschwan der Sammlung Hauser, (Col. Curc.) (38. Beitrag zur Kenntnis der Curculioniden). *Wiener Entomologische Zeitung*, 49 (2), 57–76.
Voss, E. (1934) Über neue und bekannte Rüßler aus Szetschwan und der Mandschurei (Col. Curc.). (47. Beitrag zur Kenntnis der Curculioniden). *Entomologisches Nachrichtenblatt*, 8 (2), 71–83.
Voss, E. (1937) Über ostasiatische Curculioniden (Col., Curc.) (70. Beitrag zur Kenntnis der Curculioniden). *Senckenbergiana*, 19, 226–282.
Voss, E. (1939) Beschreibung einiger chinesischer Curculioniden nebst Bemerkungen zu anderen (Col., Curc.). (80. Beitrag zur Kenntnis der Curculioniden.). *Entomologische Blätter*, 35 (5), 262–265.
Voss, E. (1941) Bemerkenswerte und unbeschriebene Rüsselkäfer aus China und Japan (Col., Curc.). (92. Beitrag zur Kenntnis der Curculioniden). *Mitteilungen der Münchener entomologischen Gesellschaft*, 31 (3), 887–902.
Voss, E. (1953) Über einige in Fukien (China) gesammelte Rüßler. IV. (Col., Curc.) (114. Beitrag zur Kenntnis der

Curculioniden). *Entomologische Blätter*, 49 (1–2), 42–82.
Voss, E. (1956) Über einige in Fukien (China) gesammelte Rüßler, V, nebst einer neuen Gattung und Art aus Yunnan. (Col., Curc.) 115. Beitrag zur Kenntnis der Curculioniden. *Entomologische Blätter*, 51 (1–2), 21–45. [1955]
Voss, E. (1958) Ein Beitrag zur Kenntnis der Curculioniden im Grenzgebiet der Orientalischen zur Paläarktischen Region (Col., Curc.). Die von J. Klapperich und Tschung Sen in der Provinz Fukien gesammelten Rüsselkäfer. 132. Beitrag zur Kenntnis der Curculioniden. *Decheniana Beihefte*, 5, 1–139.
Voss, E. (1965) Bemerkenswerte Curculioniden aus der orientalischen Region (Col. Curc.). *Entomologische Mitteilungen aus dem Zoologischen Staatsinstitut und Zoologischen Museum* (Hamburg), 3 (54), 105–111.
Webster, R., Anderson, R.S., Sweeney, J.D. & DeMerchant, I. (2012) New Coleoptera records from New Brunswick, Canada: Anthribidae, Brentidae, Dryphthoridae, Brachyceridae, and Curculionidae, with additions to the fauna of Quebec, Nova Scotia and Prince Edward Island. *ZooKeys*, 179, 349–406.
http://dx.doi.org/10.3897/zookeys.179.2626
Weidner, H. (1976) Die Entomologischen Sammlungen des Zoologischen Instituts und des Zoologischen Museums der Universität Hamburg. IX. Teil. Insecta VI. *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, 73, 87–264.
Weidner, H. (1979) Die Entomologischen Sammlungen des Zoologischen Instituts und Zoologischen Museums der Universität Hamburg. Nachtrag zum IX. Teil Insecta VI. *Mitteilungen aus dem Hamburgischen Zoologischen Museum und Institut*, 76, 395–468.
Zaslavskij, V.A. (1956) Revizija dolgonosikov roda *Baris* Germ. fauny Sovetskogo Sojuza i sopredelnykh stran [Revision of weevils of the genus *Baris* of the Soviet Union and adjacent countries]. *Trudy Vsesojuznogo Entomologicheskogo Obshchestva*, 45, 343–377.
Zhen, M.E., Wu, H.P., Xu, J.S., Fang, L.D., Li, M. & Yao, Y.G. (1990) Study on the life history and control of *Baris deplanata* Roelofs. *Zhejiang Nongye Kexue*, 4, 187–190.
Zherikhin, V.V. (1997) A revised key to the genera of weevils of the subfamily Baridinae (Coleoptera: Baridiidae) of Russian Far East. *Far Eastern Entomologist*, 38, 1–6.
Zimmerman, E.C. (1942) Curculionidae of Guam. *Bulletin of the Bernice P. Bishop Museum*, 172, 73–146.