

NEW DATA ON THE DISTRIBUTION OF *PSEUDAPLEMONUS ARTEMISIAE* (F. MORAWITZ, 1861) (COLEOPTERA: APIONIDAE) IN UKRAINE AND THE PALEARCTIC REGION

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[Kizub, I. V. & Slutsky, A. I. 2018. New data on the distribution of *Pseudaplemonus artemisiae* (F. Morawitz, 1861) (Coleoptera: Apionidae) in Ukraine and the Palearctic Region. *Munis Entomology & Zoology*, 13 (1): 98-105]

ABSTRACT: New record of *Pseudaplemonus artemisiae* (F. Morawitz, 1861) (Coleoptera, Apionidae) in Ukraine is represented and an updated information regarding distribution of this species in Ukraine and the Palearctic Region is given. Notes on geographical distribution and biology of the genus *Pseudaplemonus* Wagner, 1930 are represented.

KEY WORDS: Apionidae, Coleoptera, *Pseudaplemonus artemisiae*, Palearctic Region, Ukraine

The genus *Pseudaplemonus* Wagner, 1930 (= *Cypriapion* Ehret, 1997) belongs to the tribe Aplemonini Kissinger, 1968 of the subfamily Apioninae Schoenherr, 1823 and the family Apionidae Schoenherr, 1823. The genus comprises 9 species distributed in the Palearctic Region: *P. aeneicollis* (Gerstaecker, 1854); *albanicus* (Formânek, 1925); *artemisiae* (F. Morawitz, 1861); *bermani* Korotyaev, 1997; *chevrolati* (Gyllenhal, 1833); *externepunctatus* (Desbrochers des Loges, 1875); *limonii* (Kirby, 1808); *martjanovi* (Faust, 1891); *prasolovi* (Korotyaev, 1991) (Alonso-Zarazaga, 2011). Only one species of the genus, *P. artemisiae*, is presented in the territory of Ukraine. The aim of this paper is to document new data regarding distribution of *P. artemisiae* in Ukraine and the Palearctic.

MATERIALS AND METHODS

The insects were collected manually in the daytime. Photographs were taken by the Photographs were taken by Nikon D90 camera with Sigma EX 150mm 1:2.8 APO Macro DG HSM + Raynox DCR MacroScan Conversion lens. The material examined is deposited in the following collections: KIV: Kizub I. V. private collection, Kiev, Ukraine; SAI: Slutsky A. I. private collection, Kharkov, Ukraine.

RESULTS AND DISCUSSION

Pseudaplemonus artemisiae (F. Morawitz, 1861) (Fig. 1)

Material examined: 5 males and 5 females, Southern Ukraine, Kherson reg., Genichesk distr., Schaslivcevo vill. env., Azov Sea coast, 46°06'59.77"N 34°48'56.42"E, 09.08.2014, Shehovcov A.A. leg. and det. (KIV); 1 male and 1 female, Ukraine, Dnepropetrovsk reg., Pavlograd distr., near Bulakhovka vill., h =

61 m, 48°37'01"N 35°40'17.3"E, 16.07.2012, Skrylnik Yu. leg., Slutsky A. I. det. (SAI).

Geographical distribution: *P. artemisiae* has been reported from Rostov Region (Arzanov, 2015; Arzanov et al., 2016), Volgograd Region (Becker, 1869; Schilsky, 1901; Makarov et al., 2009), Stavropol Territory (Arzanov, 2001), Astrakhan Region (Arzanov, 2013), The Republic of Kalmykia (Arzanov, 2015), The Republic of Dagestan (Korotyaev et al., 1993; Efendieva, 2009; Arsanov et al., 2014; Ismailova et al., 2015), Orenburg Region (*Shapovalov*, 2012), Novosibirsk Region (Krivets & Korotyaev, 1998; Legalov & Opanassenko, 2000; Legalov, 2010); Altai Territory (Krivets & Korotyaev, 1998; Legalov, 2010); and Omsk Region (Legalov et al., 2015) of **Russia**; Northern **Kazakhstan** (Arnoldi, 1969; Baytenov, 1974; Kazenas & Bayzhanov, 2009; Arsanov et al., 2014); Northern **Turkmenistan** (Arsanov et al., 2014), South-Eastern **Romania** (Kresl, 2010), and **Ukraine** (Schilsky, 1901; Solodovnikova, 1963; 1968; Arsanov et al., 2014).

So far, in Ukraine *P. artemisiae* is known from Odessa Region (Arsanov et al., 2014), Kherson Region (Solodovnikova, 1963; 1968), the Crimea (Schilsky, 1901; Solodovnikova, 1968), and Dnipropetrovsk Region. In the territory of Ukraine the species is distributed on the coasts of the Black (except the Southern coast of the Crimea) (Solodovnikova, 1968) and the Azov Sea (Solodovnikova, 1963; 1968; Arsanov et al., 2014), as well as on saline continental river areas. Based on our new data and published records, maps of *P. artemisiae* geographical distribution in the Palearctic Region are presented in Figs. 2 and 3.

It is important to note that until now *P. artemisiae* has not been indicated for the territory of Ukraine, Kazakhstan, Turkmenistan and Romania neither in the Catalogue of Palearctic Coleoptera (Catalogue..., Alonso-Zarazaga, 2011) nor in the Fauna Europaea database (Alonso-Zarazaga & Vit, 2017). It should also be noted that in the Southern Territories of Russia the species is more widespread than the Caucasus region only as indicated in the Catalogue... (Alonso-Zarazaga, 2011). Moreover, in the Caucasus, areal of *P. artemisiae* is limited only by the Pre-Caucasus territory of The Republic of Dagestan (Korotyaev et al., 1993; Efendieva, 2009; Ismailova et al., 2015), where southern boundary of the species passes (Korotyaev et al., 1993). The presented data allow us to suggest the following changes to the Catalogue... (Alonso-Zarazaga, 2011):

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artemisiae Moravitz, 1861: 292 (*Apion*) **E: ST "Caucasus" A: WS**

MUST BE:

artemisiae Moravitz, 1861: 292 (*Apion*) **E: RO ST UK A: KZ TM WS**

Biology: *P. artemisiae* belongs to the Mediterranean chorotype and is a stenotopic and xerophilic semi-desert species inhabiting solonetz soils and steppe (Solodovnikova, 1963; 1968; Korotyaev et al., 1993; Efendieva, 2009; Arzanov, 2013). The species is a monophagous and feeds on a matted sea-lavender (*Limonium bellidifolium* (Gouan) Dumort (= *caspium* (Willd.) Gams), Plumbaginaceae Juss., Fig. 4) (Moysiyenko, 2008; Efendieva, 2009; Arzanov, 2013; Arsanov et al., 2014).

Notes on geographical distribution and biology of the genus

Pseudaplemonus Wagner, 1930: The genus is widely distributed in the Palearctic Region. ***P. limonii*** Kirby, 1808 (= *limoniastri* (Flach, 1908); *salarius* Ehret, 1997) is an Atlantic-West-Mediterranean species (Korotyaev, 1991), distributed in Belgium (Hoffmann, 1958; Dieckmann, 1977; Haghebaert, 1989; Alonso-Zarazaga, 2011), Netherlands (Dieckmann, 1977; Köstlin, 1985; Heijerman, 1993; Alonso-Zarazaga, 2011), France (Hoffmann, 1958; Dieckmann, 1977; Ehret, 1990; Alonso-Zarazaga, 2011), Great Britain (Hoffmann, 1958; Alonso-Zarazaga, 2011; Duff, 2012; Walters, 2017), Germany (Dieckmann, 1977; Köstlin, 1985; Gürlich et al., 2011; Alonso-Zarazaga, 2011), Spain (Hoffmann, 1958; Alonso-Zarazaga, 2002; 2011; Alonso-Zarazaga et al., 2006; Winkelmann et al., 2008) Portugal (Ehret, 1990; Winkelmann et al., 2008; Alonso-Zarazaga, 2011), Algeria (Dieckmann, 1977; Alonso-Zarazaga, 2011), Morocco (Hoffmann, 1958; Dieckmann, 1977; Alonso-Zarazaga, 2011) (Fig. 3). The species is included in the Red Lists of Schleswig-Holsteins of Germany (Gürlich et al., 2011). *P. limonii* is a coastal halobionte of the western part of the Mediterranean, Atlantic and North Sea (Dieckmann, 1977). The species feeds on several species of *Limonium* (= *Statice*): *L. vulgare* Mill. (= *S. limonium* L.), *L. virgatum* (Willd) Fourr., and *L. dubyi* (G.G.) Kuntze (Plumbaginaceae Juss.) (Hoffmann, 1958; Dieckmann, 1977; Ehret, 1990; Winkelmann et al., 2008), *Limoniastrum articulatum* Mok. (Plumbaginaceae Juss.) (Hoffmann, 1958; Dieckmann, 1977), species of *Spergularia* (Caryophyllaceae) (Ehret, 1990), and *Frankenia laevis* L. (Frankeniaceae Desv.) in the Iberian Peninsula (Winkelmann et al., 2008).

P. chevrolati Gyllenhal, 1833 (= *carbonarium* (Everts, 1879)) is another Atlantic-West-Mediterranean species of the genus (Dieckmann, 1977), distributed in Switzerland (Alonso-Zarazaga, 2011), France (Hoffmann, 1958; Dieckmann, 1977; Ehret, 1990), Italy including Sicily (Dieckmann, 1977; Ehret, 1990; Alonso-Zarazaga, 2011; Diotti & Monzini, 2012; Abbazzi & Zinetti, 2013), Spain (Dieckmann, 1977; Ehret, 1990; Alonso-Zarazaga, 2002; 2011; Alonso-Zarazaga et al., 2006), Portugal (Hoffmann, 1958; Dieckmann, 1977; Ehret, 1990; Alonso-Zarazaga, 2011), and Morocco (Hoffmann, 1958; Dieckmann, 1977; Ehret, 1990; Alonso-Zarazaga, 2011) (Fig. 3). The species is a monophagous and leaves on *Tuberaria guttata* Mill. (= *Cistus guttatus* L., *Helianthemum guttatum* (L.) Mill., *Xolantha guttata* (L.) Rafin., Cistaceae Juss.) (Hoffmann, 1958; Dieckmann, 1977; Ehret, 1990).

P. albanicus Formânek, 1925 is known from Albania expecially (Fig. 3) and its biology still is poorly investigated (Formânek, 1925).

P. aeneicollis (Gerstaecker, 1854) (= *aereirostre* (Desbrochers des Loges, 1901); *laudabile* (Faust, 1891)) is a semi-desert xerophilic Turano-Arabian species inhabiting solonetz soils and steppe. The species is known from Azerbaijan (Alonso-Zarazaga, 2011), Georgia (Alonso-Zarazaga, 2011), Southern Dagestan in Russia (Solodovnikova, 1974; Korotyaev et al., 1993; Mukhtarova et al., 2009; Efendieva, 2009; Ismailova et al., 2015), Northern Iran (Legalov et al., 2010; Alonso-Zarazaga, 2011; Ghahari & Colonnelli, 2012), Saudi Arabia (Wanat, 1990; Alonso-Zarazaga, 2011), Western Tajikistan (*Baytenov*, 1974; Korotyaev, 1987; Nikulina, 1989), Iraq (Zumpt, 1938; Alonso-Zarazaga, 2011), Syria (Alonso-Zarazaga, 2011), Mongolia (Alonso-Zarazaga, 2011), Turkey (Alonso-Zarazaga, 2011), Uzbekistan (*Baytenov*, 1974; Alonso-Zarazaga, 2011), Turkmenistan (Schilsky, 1901; Wagner, 1906; *Baytenov*, 1974; Alonso-Zarazaga, 2011; Legalov, 2017), Southern Kazakhstan (*Baytenov*, 1974), Kirgizstan (*Baytenov*, 1974); Israel (Schilsky, 1901; Alonso-Zarazaga, 2011) (Fig. 3). The host plants of *P. aeneicollis* are *Psylliostachys leptostachya* (Boiss.) Roshk. and *P. suworowii* (Regel) Roshk.

of Plumbaginaceae Juss. (Korotyaev, 1987; Nikulina, 1989; Mukhtarova et al., 2009; Legalov et al., 2010). *P. aeneicollis* has not been indicated for the territory of Tajikistan, Kazakhstan, and Kirgizstan in the Catalogue... (Alonso-Zarazaga, 2011) and existing data allow us to suggest the following changes to the Catalogue... (Alonso-Zarazaga, 2011):

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aeneicollis Gerstaecker, 1854b: 277 (*Apion*) **N**: AB GG ST **A**: IN IQ IS MG SA SY TM TR UZ "Siberia"

MUST BE:

aeneicollis Gerstaecker, 1854b: 277 (*Apion*) **E**: AB GG ST **A**: IN IQ IS KG KZ MG SA SY TD TM TR UZ "Siberia"

P. externepunctatus Desbrochers des Loges, 1875 is distributed in the lower Volga basin (the Republic of Kalmykia) of Russia (Korotyaev, 1991; Arzanov, 2015), and Romania according to Alonso-Zarazaga, 2011 (Fig. 3).

P. martjanovi (Faust, 1891) inhabites in dry and desert-steppe depressions of Asian part of Russia (Alonso-Zarazaga, 2011): the Altai Republic, Krasnoyarsk Krai and the Tyva Republic (Korotyaev, 1991; Legalov, 2010), and Mongolia (Alonso-Zarazaga, 2011) (Fig. 3).

P. prasolovi (Korotyaev, 1991) is close to *P. externepunctatus* and *P. martjanovi*, and is known from the type locality only on Ili River in Almaty (formerly Taldy-Kurgan) Region in South-Eastern Kazakhstan (Korotyaev, 1991; Alonso-Zarazaga, 2011) (Fig. 3). The species feeds on *Limonium* sp. (Korotyaev, 1991).

P. bermani Korotyaev, 1997 is an East-Beringian species and is known from the type locality in Chukchi Autonomous District of Russia (Korotyaev, 1997; Berman et al., 2002; Chernyshev, 2008; Legalov, 2010; Berman et al., 2011; Alonso-Zarazaga, 2011). The species is a Pleistocene relict (Berman et al., 2011) and connected with *Armeria scabra* Pall. et Schult., the only species of Plumbaginaceae Juss. growing in the North-East of Asia (Berman et al., 2002). *P. bermani* is included in the Red data book of the Chukchi Autonomous District (Chernyshev, 2008) and is very closely related to *P. martjanovi* and *P. externepunctatus* comprising a group of related allopatric species (Berman et al., 2002).

ACKNOWLEDGEMENTS

The author thanks Marek Wanat (Museum of Natural History, Wrociaw, Poland) for kind contribution to preparing of the paper.

LITERATURE CITED

- Abbazzi, P. & Zinetti, F. 2013. Elenco sistematico-faunistico dei Curculionoidea italiani, Scolytidae e Platypodidae esclusi (Insecta, Coleoptera). 2. Addenda e corrigenda. *Memorie della Societa Entomologica Italiana*, 90 (2): 89-104.
- Alonso-Zarazaga, M. A. 2011. Apionidae. Curculionoidea I. In: Löbl, I., Smetana, A. (Eds.), Catalogue of Palaearctic Coleoptera, Volume 7. Stenstrup: Apollo Books, p. 148-176.
- Alonso-Zarazaga, M. A. 2002. Checklist of the Coleoptera Curculionoidea of the Ibero-Balearic area, with description of *Melicius* gen. nov. and new records. *Boletín de la Sociedad Entomológica Aragonesa*, 31: 9-33.

- Alonso-Zarazaga, M. A. & Lyal, C. H. C.** 1999. A world catalogue of families and genera of Curculionoidea (Insecta: Coleoptera) (Excepting Scolytidae and Platypodidae). Entomopraxis, S. C. P. Barcelona, 315 pp.
- Alonso-Zarazaga, M. A., Sánchez-Ruiz M. & Domingo-Quero T.** Preliminary checklist of the Curculionoidea (Coleoptera) of Comunidad de Madrid (Spain). Graellsia, 62 (número extraordinario): 43-52.
- Alonso-Zarazaga, M. A. & Vit, S.** 2017. Fauna Europaea: Coleoptera, Curculionoidea. Museum für Naturkunde Leibniz-Institut für Evolutions- und Biodiversitätsforschung Invalidenstr. Berlin. Available from: <http://www.fauna-eu.org> (Date of access 25.09.2017).
- Arnoldi, L. V.** 1969. Zoogeograficheskoe raionirovanie, osnonannoe na entomologicheskikh dannykh. Zhuzhelitsy (Coleoptera, Carabidae). Dolgonosiki (Curculionidae). In: Yunatov, A. A. & Lavrenko, E. M. (Eds.), Biokompleksnyye issledovaniya v Kazakhstane. Part 1. Nauka, Leningrad, 417-423.
- Arsanov, Y. G., Mukhtarova, G. M. & Ismailova, M. W.** 2014. Ecological-faunistic and zoogeographical characteristic of beetle-weevils of island Chechen of the Caspian Sea. The South of Russia: Ecology, Development, 3: 82-92.
- Arzanov, Yu. G.** 2001. The collection of weevils (Coleoptera: Curculinoidea: Apionidae, Dryophoridae, Curculionidae) of Stavropol Local History Museum named in honour of G.N. Prozritelev and G.K. Prave. The Kharkov Entomological Society Gazette, 9 (1-2): 45-53.
- Arzanov, Yu. G.** 2013. Zhuki-dolgonosiki okrestnostey ozera Baskunchak. In: Glagolev, S.B., Grebennikov, K. A. & Scherbakova, O. N. (Eds.), Issledovaniya prirodnogo kompleksa okrestnostey ozera Baskunchak: sbornik nauchnykh statey. Volgogradskoe Nauchnoe Izdatelstvo, Volgograd, 8-21.
- Arzanov, Yu. G.** 2015. A revised checklist species of the Curculionoidea (Coleoptera, excluding Scolytinae) of Rostov Oblast and Kalmykia, the southern part of European Russia. Journal of Insect Biodiversity, 3 (12): 1-32.
- Arzanov, Yu. G., Prishutova, Z. G., Poltavskiy, A. N., Nabozhenko, M. V., Shokhin, I. V., Khachikov, E. A., Kasatkin, D. G., Terskov, E. N., Reshetov, A. A., Rudaykov, A. E. & Popov, I. B.** 2016. Vidovoy sostav nasekomykh zapovednika "Rostovskiy". In: Lipkovich, A. D. (Ed.) Ekologicheskii monitoring doliny Zapadnogo Manycha: itogi i perspektivy. K 20-lituyu Gosudarstvennogo prirodnogo biosfernogo zapovednika "Rostovskiy". Trudy Gosudarstvennogo prirodnogo biosfernogo zapovednika "Rostovskiy". Vyp. 6. Fond nauki i obrazovaniya, Rostov na Donu, 100-181.
- Baytenov, M. S.** 1974. Zhuki-dolgonosiki (Attelabidae, Curculionidae) Sredney Azii i Kazakhstana. Nauka Kazakhskoy SSR, Alma-Ata, 288 pp.
- Becker Von, A.** 1869. Ueber *Apion artemisiae*, *Cossyphus tauricus* und *Bryaxis furcata*. Horae Societatis Entomologicae Rossicae, 6: 108.
- Berman, D., Alfimov, A. & Kuzmina, S.** 2011. Invertebrates of the relict steppe ecosystems of Beringia, and the reconstruction of Pleistocene landscapes. Quaternary Science Reviews, 30: 2200-2219.
- Berman, D. I., Alfimov, A. V. & Korotyaev, B. A.** 2002. Xerophilous arthropods in tundra-steppe of the Utyosiki locality (Chukotka). Entomological Review, 82: 94-100.
- Chernyshev, I. A.** 2008. Red data book of the Chukchi Autonomous District. Vol. 1. Animals. Dikiy Sever, Magadan, 235 pp.
- Desbrochers des Loges, J.** 1875. Diagnoses de curculionides inédits. Opuscules Entomologiques (Coleopteres), I [1874-1875]: 1-36.
- Desbrochers des Loges, J.** 1901. Deuxieme supplement a la monographie des apionides. Le Frelon, 9: 77-80.
- Dieckmann, L.** 1977. Beiträge zur Insektenfauna der DDR: Coleoptera — Curculionidae (Apioninae). Beiträge zur Entomologie, 27 (1): 7-143.
- Diotti, L. & Monzini, S.** 2012. Ricerche coleotterologiche nella Tenuta di San Rossore (Pisa): Curculionoidea (Insecta, Coleoptera). Giornale italiano di entomologia, 13: 155-174.
- Duff, A. G.** 2012. Checklist of Beetles of the British Isles. Pemberley Books, Iver, 171 pp.
- Efendieva, S. S.** 2009. Apionidae Dagestana (vidovoy sostav, ekologo-biologicheskoe osobennosti, zoogeografiya). Monografiya. Alef, Makhachkala, 108 pp.
- Ehret, J.-M.** 1997. Essai de classification des apions palaearctiques (Coleoptera Curculionidae: Apioninae) en fonction des familles vegetales d'angiospermes dicotyledones parasiteses. Nouvelle Revue d'Entomologie, 13 [1996]: 191-221.
- Ehret, J.-M.** 1990. Les Apions de France: clés d'identification commentées (Coleoptera Curculionidae Apioninae). Bulletin Mensuel de la Société Linnéenne de Lyon, 59 (7): 209-292.
- Everts, E.** 1879. Description de cinq especes nouvelles du genre Apion. Tijdschrift voor Entomologie, 22: 58-60, pl. 5.
- Faust, J.** 1891. Beitrage zur Kenntniss der Kafer des europaischen und asiatischen Russlands mit Einschluss der Kusten des Kaspischen Meeres. (Fortsetzung). Horae Societatis Entomologicae Rossicae, 25: 386-416.
- Flach, K.** 1908. Bionomische Notizen. Wiener Entomologische Zeitung, 27: 130-132.
- Formanek, R.** 1925. Neue Curculioniden des palaarktischen Gebietes. Wiener Entomologische Zeitung, 42: 18-28.
- Gerstaecker, C. E. A.** 1854. Beschreibung neuer arten der gattung *Apion* Herbst (Schluss). Entomologische Zeitung (Stettin), 15: 267-280.
- Ghahari, H. & Colonnelli, E.** 2012. Curculionoidea from Golestan Province, Northern Iran (Coleoptera). Fragmenta entomologica, 44 (1): 101-161.
- Gürlich, S., Suikat, R. & Ziegler, W.** 2011. Die Käfer Schleswig-Holsteins Rote Liste Band 1. Kronshagen, 126 p.
- Gyllenhal, L.** 1833. Species novae aut hactenus minus cognitae, descriptionibus a Dom. Leonardo Gyllenhal, C. H. Boheman, et entomologis aliis illustratae. In: Schoenherr, C. J. (Ed.). Genera et species curculionidum, cum synonymia hujus familia, Tomus primus, pars prima. Roret, Parisiis, pp. i-xv + 1-381.
- Haghebaert, G.** 1989. Coleoptera from marine habitats. Verhandelingen van het symposium "Invertebraten van België": 301-307.
- Heijerman, T.** 1993. Naamlijst van de snuitkevers van Nederland en het omliggende gebied (Curculionoidea: Curculionidae, Apionidae, Attelabidae, Urodontidae, Anthribidae en Nemonychidae). Nederlandse Faunistische Mededelingen, 5: 19-46.
- Hoffmann, A.** 1958. Coléoptères Curculionides (Troisième Partie). Faune de France, 62: 1209-1839.
- Ismailova, M. Sh., Mukhtarova, G. M. & Abdurakhmanov, G. M.** 2015. Composition and ecological review of the weevils (Curculionidae) coastal and island ecosystems in the Middle and North-Western of the Caspian Sea. The South of Russia: Ecology, Development, 10 (1): 42-58.
- Kazenas, V. L. & Bayzhanov, M. Ch.** 2009. Nasekomye Korgalzhynskogo zapovednika I prilegayushikh territoriy. Almaty, 270 pp.
- Kirby, W.** 1808. The genus *Apion* of Herbst's Natursystem considered, its characters laid down, and many of species described. Transactions of the Linnean Society of London, 9: 1-80.

- Kissinger, D. G.** 1989. Synonymy for *Apion daimio* Sharp, a Brazilian species erroneously attributed to Japan (Coleoptera: Apionidae). The Coleopterists Bulletin, 43: 24.
- Korotyayev, B. A.** 1987. Materialy k poznaniyu zhukov nadsemeystva (Coleoptera, Apionidae, Curculionioidea) fauny SSSR. Trudy ZIN AN SSSR, 164: 142-148.
- Korotyayev, B. A.** 1991. Novye i maloizvestnye palearkticheskie dolgonosiki (Coleoptera: Apionidae, Curculionidae). Entomologicheskoe Obozrenie, 70 (4): 875-903.
- Korotyayev, B. A.** 1997. New and little known species of weevils from East Asia (Coleoptera: Apionidae, Curculionidae). Zoosystematica Rossica, 5: 285-288.
- Korotyayev, B. A., Ismailova, M. Sh., Arzanov, Yu. G., Davidyan, G. E. & Prasolov, V. N.** 1993. Spring fauna of weevils (Apionidae, Rhynchophoridae, Curculionidae) of the Lowland and Foothills Dagestan. Entomological Review, 72 (4): 836-865.
- Köstlin, R.** 1985. Beiträge zur Insektenfaunistik Südwestdeutschlands. Die Gattung Apion (Coleoptera). Teil II. Mit einem Anhang über Apionfunde ausserhalb des eigentlichen Beobachtungsgebietes. Mitteilungen des Entomologischen Vereins Stuttgart, 20: 25-140.
- Kresl, P.** 2010. Forum Entomologi Italiani. Pseudaplemonus artemisiae (F.Morawitz, 1861) – Apionidae Apioninae – Romania. Available from: <http://www.entomologiitaliani.net/forum> (Date of access 25.05.2017).
- Krivets, S. A. & Korotyayev, B. A.** 1998. New and little known species of weevils (Coleoptera: Apionidae, Curculionidae) from Southern Siberia. Entomological Review, 77 (4): 836-859.
- Legalov, A. A.** 2010. Annotated checklist of species of superfamily Curculionioidea (Coleoptera) from Asian part of Russia. Amurian Zoological Journal, 2 (2): 93-132.
- Legalov, A. A.** 2017. Collection of Siberian Zoological Museum, Coleoptera, Brentidae, Siberian Zoological Museum of the Institute of Animal Systematics and Ecology, Siberian Branch of the Russian Academy of Sciences, Novosibirsk. Available from: <http://szmn.sbras.ru/Coleop/Brentid.htm>.
- Legalov, A. A., Dudko, R. Yu., Gurina, A. A., Tshernyshev, S. E., Zinoviyev, A. V., Kireev, I. S. & Nikitsky, N. B.** 2015. Biodiversity of beetles of Western Siberia: new records of weevils (Coleoptera, Curculionioidea: Rhynchitidae, Brentidae, Curculionidae). Euroasian Entomological Journal, 14 (5): 401-408.
- Legalov, A. A., Ghahari, H. & Arzanov, Yu. 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.
- Legalov, A. A. & Opanassenko, F. I.** 2000. A review of the superfamily Cucculionioidea (Coleoptera) of Novosibirsk province. Entomological Review, 80 (3): 283-303.
- Makarov, K.V., Matalin A.V. & Komarov E.V.** 2009. Fauna of beetles of the environs of Lake Elton. In: Tishkov, A.A. (Ed.) Animals of clayey semidesert in Transvolga region (fauna conspecta and ecological characteristics). KMK Scientific Press, Moscow, 95-135.
- Moravitz, F.** 1861. Einige für die Russisch-Europäische Fauna neue Käfer. Bulletin de la Societe Imperiale des Naturalistes de Moscou, 34 (1): 284-294.
- Moysiyenko, I. I.** 2008. A review of the family Limoniaceae Lincz. in Ukraine. Chornomorski Botanical Journal, 4 (2): 161-174.
- Mukhtarova, G. M., Efendieva, S. S. & Talibova, S. E.** 2009. Materialy k poznaniyu fauny zhukov-dolgonosikov semeystva Apionidae (Coleoptera) Yuzhnogo Dagestana. Ecology of animals. The South of Russia: Ecology, Development, 2: 105-111.
- Nikulina, O. N.** 1989. Biologiya massovykh vidov nasekomykh-obitateley travianistoi rastitelnosti Tadzhikistana. Dissertatsiya. AN SSSR. Institut evolutsii, morfologii i ekologii zhivotnykh im. A. N. Severtsova, Moskva, 177 pp.
- Schilsky, J.** 1901. Die Käfer Europas. Nach der Natur beschrieben. Heft 38. Bauer und Raspe, Nurnberg, VI + A-K pp. + 100 pp.
- Schoenherr, C. J.** 1823. Curculionides (Tabula synoptica familiae curculionidum). Isis von Oken 10: 1132-1146.
- Shapovalov, A. M.** 2012. Botany-geographical zones as the frontiers of the distribution of beetles (Coleoptera, Cerambycidae) in the Orenburg region. In: Stepi Severnoy Evrazii. Materialy VI mezhdunarodnogo simpoziuma i VIII mezhdunarodnoy shkoly-seminara "Geoekologicheskieskie problem stepnykh regionov". Orenburg, Gazprompechat, 940 pp.
- Solodovnikova, V. S.** 1963. O raspredelenii dolgonosikov roda *Apion* Hrbst. v ctepiakh Vostochnoy Ukrainy. Zoologicheskij Zhurnal, 42 (2): 222-232.
- Solodovnikova, V. S.** 1968. Curculionidae of the genus *Apion* Herbst (Coleoptera) of the Crimea. Vestnik Zoologii, 4: 27-33.
- Solodovnikova, V. S.** 1974. On Distribution of most harmful species from the genus *Apion* Hrbst. (Circulationidae) in Daghestan. Vestnik Zoologii, 3: 73-76.
- Wagner, H.** 1906. Beiträge zur Kenntnis der Gattung Apion Herbst. III. Münchener Koleopterologische Zeitschrift, 3: 187-208.
- Wagner, H.** 1930. [New taxa]. In: Winkler, A. (Ed.) Catalogus coleopterorum regionis Palaearcticae. Pars 11. Wien, 1385-1392.
- Walters, J.** 2017. UK Beetle Recording, Taxonomy: Polyphaga, Curculionioidea, Apionidae. NERC – Centre for Ecology & Hydrology, Nottingham, <http://www.coleoptera.org.uk/species/pseudaplemonus-limonii> (Date of access 25.05.2017).
- Wanat, M.** 1990. Apionidae (Coleoptera, Curculionioidea) of the Arabian Peninsula. Fauna of Saudi Arabia, 11: 55-81.
- Winkelmann, H., Bayer, Ch. & Bahr, F.** 2008. Beitrag zur Biologie von *Pseudaplemonus limonii* (Kirby, 1808) im südlichen Portugal und Spanien (Coleoptera: Curculionioidea: Apionidae). Weevil News, 42: 1-4.
- Zumpt, F.** 1938. Eine Curculioniden – Ausbeute von Mesopotamien, Palästina, Syrien und Aegypten. (Coleopt.) (Curculioniden – Studien XXIX). Mitteilungen der Münchener Entomologischen Gesellschaft, 28 (1): 7-16.



Figure 1. The habitus of *Pseudaplemonus artemisiae* (F. Morawitz, 1861): female (left) and male (right). Scale bar = 1 mm.

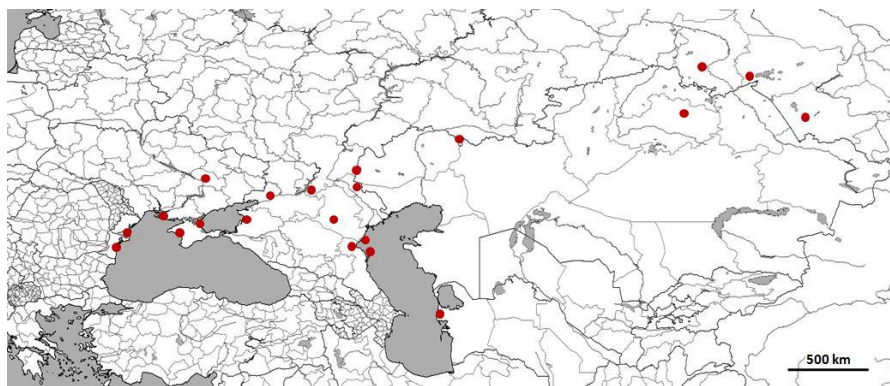


Figure 2. A map of *Pseudaplemonus artemisiae* (F. Morawitz, 1861) geographical distribution.

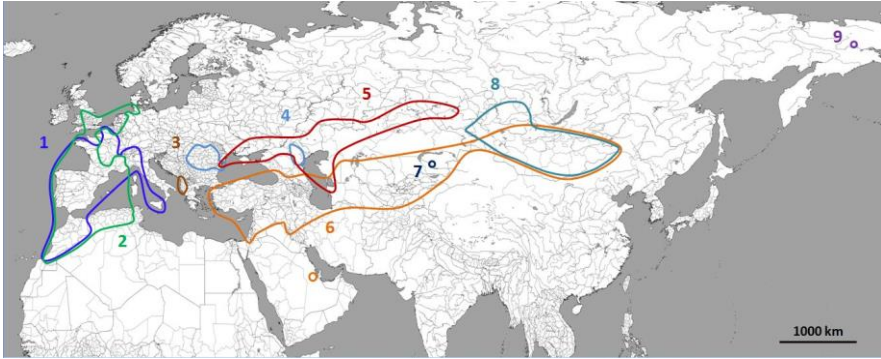


Figure 3. A map of the genus *Pseudaplemonus* Wagner, 1930 geographical distribution. 1 - *P. chevrolati* Gyllenhal, 1833; 2 - *P. limonii* Kirby, 1808; 3 - *P. albanicus* Formânek, 1925; 4 - *P. externepunctatus* Desbrochers des Loges, 1875; 5 - *P. artemisiae* (F. Morawitz, 1861); 6 - *P. aeneicollis* (Gerstaecker, 1854); 7 - *P. prasolovi* (Korotyaev, 1991); 8 - *P. martjanovi* (Faust, 1891); 9 - *P. bermani* Korotyaev, 1997.



Figure 4. *Limonium bellidifolium* (Gouan) Dumort, the only known host plant of *Pseudaplemonus artemisiae* (F. Morawitz, 1861).