Евразиатский энтомол. журнал 16(4): 304–305

The first record of the locust digitate leafminer *Parectopa robiniella* (Clemens, 1863) (Lepidoptera: Gracillariidae) from Georgia

Первое указание белоакациевой моли-пестрянки *Parectopa robiniella* (Clemens, 1863) (Lepidoptera: Gracillariidae) из Грузии

A.I. Gubin, V.V. Martynov
А.И. Губин, В.В. Мартынов

Public Institution «Donetsk Botanical Garden», Illicha Ave. 110, Donetsk 83059 Ukraine. E-mail: helmintolog@mail.ru, martynov.scarab@yandex.ua.
Государственное учреждение «Донецкий ботанический сад», просп. Ильича 110, Донецк 83059 Украина.

Key words: *Parectopa robiniella*, *Robinia pseudoacacia*, invasive species, first record, Georgia.
Ключевые слова: *Parectopa robiniella*, *Robinia pseudoacacia*, инвазивный вид, первое указание, Грузия.

Abstract. The locust digitate leafminer *Parectopa robiniella* (Clemens, 1863), recorded in the vicinity of Kutaisi in June, 2017, is newly recorded from Georgia as an invasive species and pest of the black locust *Robinia pseudoacacia* L.

Резюме. Впервые для Грузии приводится белоакациевая моль-пестрянка *Parectopa robiniella* (Clemens, 1863), инвазивный вид — вредитель робинии псевдоакации *Robinia pseudoacacia* L. Вид выявлен в июне 2017 г. в окрестностях г. Кутаиси.

Black locust *Robinia pseudoacacia* L. (Fabaceae) is a woody plant of North American origin that has been cultivated in Europe since the beginning of the 17th century. For 400 years in the Old World this species has showed itself as weakly susceptible to local pests and diseases. However, since the end of the 20th century, several specialized phytophagous species capable of acting as dangerous pests of black locust, has penetrated into Western Europe. One such species is the locust digitate leafminer *Parectopa robiniella* (Clemens, 1863) (Lepidoptera: Gracillariidae) — monophagous of black locust.

P. robiniella larvae develop in chambers inside the leaves, causing the appearance of star-shaped white-gray mines on the upper side of the leaves. The young trees in monoculture under 10 years of age, as well as shoots are damaged the most. The leaves with mines soon turn yellow and prematurely fall, which cause to a weakening of the trees. Furthermore, strong damage to the leaves leads to reduction of black locust flowering period and a decrease in nectar production, which adversely affects the honey harvest.

In Europe, *P. robiniella* was firstly record in 1970 in the vicinity of Milan (Italy) [Vidano, 1970] whither it was probably imported accidentally by air transport [Gninenko, Rakov, 2011]. Since then, the rapid spread of leafminer across Europe has begun. In 1983, the species was found in the southwest of Hungary [Seprös, 1988] and in the territory of the former Yugoslavia (Croatia) [Maceljski, Igrc, 1983], in 1986 — in France [Martinez, Chambon, 1987], in 1989 — in Slovakia [Kulfan, 1989]. In 2002 leafminer was firstly registered in Ukraine [Bidzilya, Budashkin, 2004], and in 2009 has reached it eastern regions (Donetskaya Oblast') [Martynov, Nikulina, 2016]; in 2006 it was also registered in Transnistria [Antyukhova, 2010], in 2014 — in the Crimea (personal observations). By 2010 *P. robiniella* was found in many countries of Europe: Slovenia, Austria, Poland, Lithuania [Ivinskis, Rimšaitë, 2008; Gninenko, Rakov, 2011; Seljak, 2013], in 2011 — in Belarus [Sautkin, Evdoshenko, 2012].

In 2010 was noted the appearance of leafminer in the Krasnodarskii Krai and the Kaliningradskaya oblast' of Russia [Gninenko et al., 2011]. Although according to some authors the penetration of the pest into the Krasnodarskii Krai occurred earlier in 2008–2009 [Gninenko et al., 2011] or even in 2003–2004 [Shchurov et al., 2015]. In the urban plantations of the Sochi District, the species was found in autumn 2013 [Karpun et al., 2013], and in September 2015 it was found in Abkhazia (Sukhumi city) [Karpun et al., 2015]. On average, the spread of the pest occurs at a speed of about 100 km per year [Neşoiu, Tomescu, 2006]. It is quite natural further penetration of *P. robiniella* into the territory of Transcaucasia.

In 2017, *P. robiniella* was found on the territory of Western Georgia, in the vicinity of Kutaisi for the first time.

Parectopa robiniella (Clemens, 1863)

Fig. 1.

Material. **Georgia:** Imereti, Samtredia Municipality, Dapnari Vill. env., right bank of Rioni riv., N 42°06'57", E 42°19'47", 29.06.2017 — mines on *Robinia pseudoacacia* leaves (Fig. 1), A.I. Gubin.

Remarks. During the survey of *R. pseudoacacia* trees in the territory of Batumi Botanical Garden (Adzharia), spe-

cialized phytophagous-invaders were not registered.

On the territory of Georgia *R. pseudoacacia* grows mainly on the territory of settlements and along roads as part of protective forest plantations, which greatly accelerates the distribution of phytophagous of black locust by means of transport and will promote the further expansion of *P. robiniella* in the territory of Transcaucasia.

References

Antyukhova O.V. 2010. [*Parectopa robiniella* Clemens — dangerous pest of *Robinia pseudoacacia* L. in Pridnestrovie region] // Izvestia Sankt-Peterburgskoi lesotehniceskoi akademii. Vol.192. P.4–11. [In Russian].

Bidzilya O.V., Budashkin Yu.I. 2004. [New records of Lepidoptera from Ukraine] // Proceedings of zoological museum Kiev Taras Shevchenko National University. Vol.2. P.59–68. [In Ukranian].

Gninenko Yu.I., Rakov A.G. 2011. [*Parectopa robiniella* Cl. — a new invasive phytophage]. Pushkino: VNIILM, EPRS IOBC. 14 p. [In Russian].

Gninenko Yu.I., Kostyukov V.V., Kosheleva O.V. 2011. [New invasive insects in the forests and greenery of the Krasnodar krai] // Zashita i Karantin Rastenii. No.4. P.49–51. [In Russian].

Ivinskis P., Rimšaitë J. 2008. Recorda of *Phyllonorycter robiniella* (Clemens, 1859) and *Parectopa robiniella* Clemens, 1863 (Lepidoptera, Gracillariidae) in Lithuania // Acta Zoologica Lituanica. Vol.18. No.2. P.130–133.

Karpun N.N., Ignatova E.A., Mikhailova E.V. 2013. [New pest of black locust in the subtropics of the Russian Federation] // Nauchnye issledovaniia v subtropikakh Rossiiskoi Federatsii: sbornik trudov molodykh uchenykh, aspirantov i soiskatelei. Sochi: GNU VNIITsiSK. P.43–53. [In Russian].

Karpun N.N., Aiba L.Ya., Zhuravleva Ye.N., Ignatova Ye.A., Shinkuba M.Sh. 2015. [Guidance on determining the new pests in ornamental woody plants on the Black sea coast of the Caucasus]. Borisov B.A. (Ed.). Sochi. 78 p. [In Russian].

Kulfan M. 1989. Occurrence of the American species *Parectopa robiniella* in south Slovakia // Biologia (Bratislava). Vol.44. No.2. P.185–188.

Maceljski M., Igrc J. 1983. *Parectopa robiniella* Clemens — Novi stetni insekt nearktikog pori jekla u Jugoslaviji // Zaštita Bilja. Vol.165. P.427–430.

Martinez M., Chambon J.P. 1987. Note sur la presence en France de *Parectopa robiniella*, la mineuse americaine des feuilles de Robinier (Lep. Gracillariidae) // La Nouvelle Revue. Vol.4. No.3. P.323–328.

Martynov V.V., Nikulina T.V. 2016. [New invasive phytophagous insects in woods and forest plantings of Donbass] // Caucasian Entomological Bulletin. Vol.12. No.1. P.41–51. [In Russian].

Neţoiu C., Tomescu R. 2006. Moliile miniere ale salcâmului (*Parectopa robiniella* Clemens, 1863 şi *Phyllonorycter robiniella* Clemens, 1859, Lepidoptera, Gracillariidae) // Analele ICAS. Vol.49. P.119–131.

Sautkin F.V., Evdoshenko S.I. 2012. [The current distribution of invasive species of miner moths (Lepidoptera: Gracillariidae) — phyllophagous of black locust (*Robinia pseudoacacia*) in Belarus] // Vestnik BSU. Bd.2. No.1. P.103–104. [In Russian].

Seljak G. 2013. The dynamics of introduction of alien phytophagous insects and mites into Slovenia // Acta Entomologica Slovenica Vol.21. No.2. P.85–122.

Seprös I. 1988. Újabb adatok az akáclevél-hólyagosmoly *Parectopa robiniella* Clemens (Lepidoptera, Gracillariidae) magyarországi elterjedéséhez // Növényvédelem. Vol.24. No.5. P.218.

Shchurov V.I., Bondarenko A.S., Vibe E.N. 2013. [Modern distribution of new invasive species (Insecta: Homoptera, Heteroptera, Hymenoptera, Diptera, Lepidoptera) in tree-shrub ecosystems of the North-Western Caucasus] // The Kataev Memorial Readings — VII. Pests and Diseases of Woody Plants in Russia / Proceedings of the International Conference. Saint Petersburg (Russia), November, 25–27, 2013. SPb.: SPbSFTU, 2013. P.105–106. [In Russian].

Vidano C. 1970. Foglioline di *Robinia pseudoacacia* con mine di un microlepidopttero nuotore per l'Italia // L'Apicoltore Moderno. Vol.61. No.10. P.1–11.

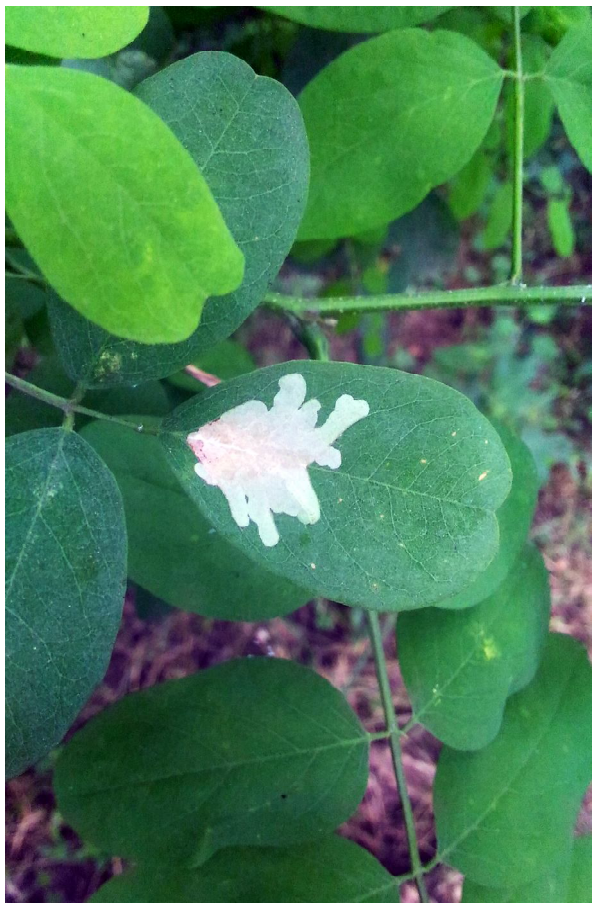

Fig. 1. *Parectopa robiniella* — mines on *Robinia pseudoacacia* leaves, Georgia: Imereti, 29.06.2017.

Рис. 1. *Parectopa robiniella* — мины на листе *Robinia pseudoacacia* leaves, Georgia: Imereti, 29.06.2017.

Поступила в редакцию 7.09.2017