

***Podalonia affinis* (W. Kirby, 1798) (Hymenoptera: Apoidea:  
Sphecidae), a new host species of the strepsipteran  
*Paraxenos sphecidarum* (Dufour, 1837) in Belarus**

***Podalonia affinis* (W. Kirby, 1798) (Hymenoptera: Apoidea:  
Sphecidae) — новый хозяин веерокрылого  
*Paraxenos sphecidarum* (Dufour, 1837) в условиях Беларусь**

**A.M. Ostrovsky**  
**А.М. Островский**

Gomel State Medical University, Lange Str. 5, Gomel 246000 Belarus. E-mail: Arti301989@mail.ru.  
Гомельский государственный медицинский университет, ул. Ланге 5, Гомель 246000 Беларусь.

**Key words:** *Podalonia affinis*, *Paraxenos sphecidarum*, new host, Belarus.

**Ключевые слова:** *Podalonia affinis*, *Paraxenos sphecidarum*, новый хозяин, Беларусь.

**Abstract.** The solitary wasp *Podalonia affinis* (W. Kirby, 1798) (Hymenoptera: Apoidea: Sphecidae), collected between the dacha settlement «Glushets» and the Mikhal'ki village in September 2019, is newly recorded from Homiel Voblasts of Belarus as a host-species for the strepsipteran *Paraxenos sphecidarum* (Dufour, 1837).

**Резюме.** Одиночная оса из семейства Sphecidae (Hymenoptera: Apoidea), найденная в Гомельской области между СТ «Глушец» и деревней Михальки (сентябрь 2019), впервые отмечена как хозяин веерокрылого *Paraxenos sphecidarum* (Dufour, 1837) для Беларуси.

## Introduction

Members of the order Strepsiptera display highly peculiar morphology and lifestyles. They are small to medium sized insects (1.0–7.5 mm long) exhibiting extreme sexual dimorphism [Kinzelbach, 1971; Kathirithamby, 1989]. Free living and flying males have twisted hind wings, while their fore wings are reduced to club-like appendages. Usually endoparasitic and wingless females are known to colonize members of seven insect orders [Kathirithamby, 1989, 2009]. Approximately 600 Strepsiptera species are known to exist globally [Kathirithamby, 2002; Kinzelbach, Pohl, 2003], while 30 species from 7 families are known in Europe [Pohl, 2010; Soon et al., 2011]. There are 4 species registered in Belarus [Medvedev, 1965; Ostrovsky, 2018, 2019a, b].

*Paraxenos sphecidarum* (Dufour, 1837) (Strepsiptera: Xenidae) is a typical parasite of solitary wasps of the genus *Ammophila* W. Kirby, 1798 (Hymenoptera: Apoidea: Sphecidae) [Medvedev, 1965; Klaus, 2016]. Until recently, from this genus of sphecid wasps for Belarus only *A. sabulosa* (Linnaeus, 1758) has been recorded as its host [Ostrovsky, 2019a].

## Results

The female of *Podalonia affinis* (W. Kirby, 1798), a solitary wasp from the family Sphecidae, stylopized by a female of *P. sphecidarum* was captured in Gomel region in the course of faunal studies of Hymenoptera of the South-Eastern Belarus for the first time registered as a new host of this strepsipteron in Republic (Fig. 1).

*Podalonia affinis* (W. Kirby, 1798)

Fig. 1.

**Material.** Republic of Belarus, Gomel Area, sandy road along the mixed forest between the horticultural partnership «Glushets» and Mikhal'ki village, 8.09.2019 — 1♀ of *P. affinis* stylopized by female of *P. sphecidarum*. A.M. Ostrovsky leg. et det.

## Conclusion

The genus *Podalonia* Fernald, 1927 and species *Podalonia affinis* (W. Kirby, 1798) are new to Belarusia's host of strepsipteron *Paraxenos sphecidarum* (Dufour, 1837). Before that, in Belarus only *A. sabulosa* has been recorded as its host of *P. sphecidarum*.

## References

- Kathirithamby J. 1989. Review of the Order Strepsiptera // Systematic Entomology. Vol.14. P.41–92.  
Kathirithamby J. 2002. Strepsiptera. Twisted-wing parasites. Version 24 September 2002 (under construction). — The Tree of LifeWeb Project. Available at <http://tolweb.org/Strepsiptera/8222/2002.09.24> (accessed 12 February, 2020).  
Kathirithamby J. 2009. Host-Parasitoid Associations in Strepsiptera // Annual Review of Entomology. Vol.54. P.227–249.  
Kinzelbach R.K. 1971. Morphologische Befunde an Fächerflüglern und ihre phylogenetische Bedeutung (Insecta: Strepsiptera) // Zoologica. H.119. S.1–256.



Fig. 1. A — *Podalonia affinis*: specimen (female) stylopized by a female of *Paraxenos sphecidarum*; B — Posterior dorsum of female *P. affinis* showing the cephalothorax female of *P. sphecidarum* exserted at posterior border of gastral tergums IV and V.

Рис. 1. А — *Podalonia affinis*: экземпляр (самка), стилопизированный самкой *Paraxenos sphecidarum*; В — конец брюшка самки *P. affinis* с головогрудью самки *P. sphecidarum* на задней границе IV и V тергитов брюшка.

Kinzelbach R.K., Pohl H. 2003. Ordnung Strepsiptera, Fächerflüger // Wirbellose Tiere. 5. Teil: Insecta. Heidelberg-Berlin: Spektrum Akademischer Verlag. S.526–539.

Klaus M. 2016. Über Fächerflügler (Strepsiptera) bei Hautflüglern (Hymenoptera) in Franken und darüber hinaus // Galathea. Bd.2. S.83–99.

Medvedev L.N. 1965. [The order Strepsiptera] // Keys to the insects of the European part of the USSR. Coleoptera and Strepsiptera. M.-L.: Nauka Publ. Vol.2. P.641–645 [In Russian].

Ostrovsky A.M. 2018. A first record of *Stylops melittae* Kirby, 1802 (Insecta: Strepsiptera: Stylopidae) in Belarus // Euroasian entomological journal. Vol.17. No.3. P.189–190. DOI: 10.15298/euroasentj.17.3.08.

Ostrovsky A.M. 2019a. A new record of strepsipteron *Paraxenos sphecidarum* (Dufour, 1837), (Insecta, Strepsiptera: Xenidae) from Belarus // Euroasian entomological journal. Vol.18. No.3. P.186–187. DOI: 10.15298/euroasentj.18.3.07.

Ostrovsky A.M. 2019b. *Hylecthrus rubi* Saunders, 1850 — a new species of strepsipteron (Insecta: Strepsiptera: Stylopidae) in the fauna of Belarus // Euroasian entomological journal. Vol.18. No.6. P.412–413. DOI: 10.15298/euroasentj.18.6.9.

Pohl H. 2010. Fauna Europaea: Strepsiptera. Fauna Europaea, ver. 2.4. Available at <http://www.faunaeur.org> (accessed 12 February, 2020).

Soon V., Keskula T., Kurina O. 2011. Strepsiptera species in Estonia // Entomologica Fennica. Vol.22. P.213–218.

Поступила в редакцию 13.02.2020