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FIRST DATA ON APHIDIINE WASPS (BRACONIDAE: APHIDIINAE) OF THE KANIV NATURE RESERVE

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Aphidiine species composition of Kaniv Nature Reserve, as a model object of natural ecosystem of Wood-and-Steppe zone of Ukraine, was studied. Totally 13 species of 6 genera were identified from the territory of research: *Ephedrus cerasicola* Starý, 1962; *Ephedrus niger* Gautier, Bonnamour et Gaumont, 1929; *Ephedrus plagiator* (Nees, 1811); *Praon necans* Mackauer, 1959; *Praon volucre* (Haliday, 1833); *Aphidius ervi* Haliday, 1834; *Aphidius funebris* Mackauer, 1961; *Aphidius rhopalosiphi* de Stefani-Perez, 1902; *Aphidius urticae* Haliday, 1834; *Adialytus ambiguus* (Haliday, 1834); *Pauesia unilachni* (Gahan, 1926); *Binodoxys acalephae* (Marshall, 1896); *Binodoxys angelicae* (Haliday, 1833). Trophic specialization and habitat preferences of these species are stated. By trophic specialization: three species are polyphagous, six species are wide oligophagous, and four species are narrow oligophagous. As for habitat preferences: five species located mostly in meadows and steppes, four species — in agrocenoses and habitats with ruderal vegetation, four species — in habitats of deciduous forests, one species connected with aphids on conifers, one species — with aphids on wetland vegetation. Aphidiine species composition of Kaniv Nature Reserve is almost identical to species list of nearby anthropogenically changed areas; it differs in one species, *P. unilachni,* which was recorded only in natural area.

Key words: Aphidiinae, aphid parasitoids, Kaniv Nature Reserve, species composition.

Перші дані щодо їздців-афідіїн (Braconidae: Aphidiinae) Канівського природного заповідника.
М.О. Калюжна
Наведено попередні дані вивчення їздців-афідіїн Канівського природного заповідника. Виявлено представників 13 видів афідіїн з 6 родів (*Adialytus, Aphidius, Binodoxys, Ephedrus, Pauesia, Praon*), з'ясовано особливості їх трофічної спеціалізації та біотопічного розподілу. При порівнянні видового складу афідіїн Канівського природного заповідника та прилеглих антропогенно змінених територій Черкаської та Київської областей виявлено, що вони майже ідентичні, за виключенням виду *Pauesia unilachni* (Gahan, 1926), який був виявлений лише на території природно-заповідного об'єкту.

Ключові слова: Aphidiinae, паразитоїди попелиць, Канівський природний заповідник, видовий склад.

Первые данные о наездниках-афидиинах (Braconidae: Aphidiinae) Каневского природного заповедника.
М.А. Калюжная
Приведены предварительные данные изучения наездников-афидиин Каневского природного заповедника. Выявлены представители 13 видов афидиин из 6 родов (*Adialytus, Aphidius, Binodoxys, Ephedrus, Pauesia, Praon*), выяснены особенности их трофической специализации и биотопического распределения. При сравнении видового состава афидиин Каневского природного заповедника и прилегающих антропогенно измененных территорий Черкасской и Киевской областей обнаружено, что они почти идентичны, за исключением вида *Pauesia unilachni* (Gahan, 1926), который был обнаружен только на территории природно-заповедного объекта.

Ключевые слова: Aphidiinae, паразитоиды тлей, Каневский природный заповедник, видовой состав.

Introduction.

The aphidiine wasps (Braconidae: Aphidiinae) are specialized aphid endoparasitoids and essential component of terrestrial communities (Тобиас, Кирияк, 1986; Давидьян, 2007; Starý, 1970). The representatives of this braconide subfamily play an important role in aphid population control in natural ecosystems and agrocenoses (*Aphid parasitoids...*, 2005; *Regional…*, 2009; Starý,

Havelka, 2008). Along with other parasitic Hymenoptera, aphidiines have a potential to be used as indicators of the arthropod biodiversity (*The potential…*, 2011) that could be useful in evaluation of natural and anthropogenically changed areas.

Kaniv Nature Reserve (Kaniv NR) is located near the city of Kaniv within the Cherkasy Region on the right side of the Dnieper River and its floodplain islands. The Reserve is situated in the Wood-and-Steppe zone of Ukraine. Due to significant dissection of landscape of the territory, there is a large variety of micro-climatic conditions, high level of flora and fauna diversity (Канівський…, 1999). Despite the high state of knowledge about the fauna of Kaniv NR, data on aphidiines was lacking by far. We select this NR as model object of natural ecosystem with the aim to compare species composition of this object with anthropogenically changed areas of Wood-and-Steppe zone of Ukraine.

In this article we report in more details the preliminary results of material identification that were presented on the I (IV) International Scientific an Practical Meeting «Problems of Modern Entomology» (Uzhgorod, 15-17 September 2016) (Kaliuzhna, 2016).

Material and methods.

Material was collected in July 2004 on the territory of Kaniv NR by Dr. S. A. Simutnik. Specimens were collected using sweeping technique. Material is deposited in the collection of I. I. Schmalhausen Institute of Zoology NAS of Ukraine.

Results and discussion.

The study of aphidiine species composition of Kaniv NR resulted in 13 species of 6 genera: *Adialytus, Aphidius, Binodoxys, Ephedrus, Pauesia, Praon.*

Species List of Aphidiinae of Kaniv Nature Reserve

***Ephedrus cerasicola* Starý, 1962**

Specialization[1]. Wide oligophagous. Habitats. Deciduous forests, gardens, orchards, vineyards, parks.

***Ephedrus niger* Gautier, Bonnamour et Gaumont, 1929**

Specialization. Wide oligophagous. Habitats. Meadows and steppes, parks, gardens, fields, habitats with ruderal vegetation.

***Ephedrus plagiator* (Nees, 1811)**

Specialization. Polyphagous. Habitats. Deciduous and mixed forests, parks, meadows and steppes, agrocenoses, habitats with ruderal vegetation.

***Praon necans* Mackauer, 1959**

Specialization. Narrow oligophagous. Habitats. Wetlands, watersides.

***Praon volucre* (Haliday, 1833)**

Specialization. Polyphagous. Habitats. Meadows and steppes, habitats with ruderal vegetation, agrocenoses.

[1] Statement of trophic specialization and habitat preferences is based on author's previous studies during 2010-2015 and data of colleagues (Давидьян, 2007; Тобиас, Кирияк, 1986; Starý, 2006; Starý, Lukáš, 2009; Yu et al., 2012).

***Aphidius ervi* Haliday, 1834**

Specialization. Polyphagous. Habitats. Meadows and steppes, fields, habitats with ruderal vegetation.

***Aphidius funebris* Mackauer, 1961**

Specialization. Narrow oligophagous. Habitats. Meadows and steppes.

***Aphidius rhopalosiphi* de Stefani-Perez, 1902**

Specialization. Wide oligophagous. Habitats. Edges of deciduous forests, meadows and steppes, agrocenoses.

***Aphidius urticae* Haliday, 1834**

Specialization. Wide oligophagous. Habitats. Deciduous and mixed forests undergrowth, forest-steppes, habitats with ruderal vegetation.

***Adialytus ambiguus* (Haliday, 1834)**

Specialization. Wide oligophagous. Habitats. Meadows and steppes, edges of fields, habitats with ruderal vegetation.

***Pauesia unilachni* (Gahan, 1926)**

Specialization. Narrow oligophagous. Habitats. Coniferous forests, mixed forests. Mostly plant associations of *Pinus* spp.

***Binodoxys acalephae* (Marshall, 1896)**

Specialization. Narrow oligophagous. Habitats. Meadows and steppes.

***Binodoxys angelicae* (Haliday, 1833)**

Specialization. Wide oligophagous. Habitats. Deciduous forests, gardens and parks.

By trophic specialization, three species are polyphagous (*Ap. ervi, E. plagiator, Pr. volucre*), six species are wide oligophagous (*Ad. ambiguus, Ap. rhopalosiphi, Ap. urticae, B. acalephae, E. cerasicola, E. niger*), four species can be classified as narrow oligophagous (*Ap. funebris, B. angelicae, Pa. unilachni, Pr. necans*). By habitat preferences, five species are common mostly for meadows and steppes (*Ad. ambiguus, Ap. ervi, Ap. funebris, Ap. rhopalosiphi, B. acalephae*), four species regularly can be found in agrocenoses and habitats with ruderal vegetation (*Ap. ervi, E. niger, E. plagiator, Pr. volucre*), four species prefer habitats of deciduous forests and parks (*E. cerasicola, B. angelicae, Ap. urticae, Ap. rhopalosiphi*); one species connected with aphids on conifers (mostly *Pinus* spp.) (*Pa. unilachni*), and one species — with aphids on swamp and waterside vegetation (*Pr. necans*), so these two latter species are located in their relevant habitats.

Aphidiine species composition of Kaniv NR was compared with species list of nearby anthropogenically changed areas (Калюжна, 2010, 2015; Kaliuzhna, Zubenko, 2013; Зубенко, 2014). It was found that these lists are almost identical and differs in one species, *P. unilachni*, which was recorded only in NR area.

Conclusion. Aphidiine species composition of Kaniv NR was studies for the first time. Totally 13 species of 6 genera were identified. Majority of found species are common in the fauna of Wood-and-Steppe zone of Ukraine. We expect that further study will bring new more complete data on aphidiine species composition in Kaniv NR and detailed information on differences between aphidiine diversity on natural and anthropogenically changed areas.

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