

## NEW DATA ON CYCLOSTOME BRACONID SUBFAMILIES DORYCTINAE, EXOTHECINAE, ROGADINAE AND BRACONINAE (HYMENOPTERA: BRACONIDAE) OF SERBIA AND NEIGHBOURING TERRITORIES

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### Abstract

Below is a contribution of faunistic and taxonomic data of 35 species belonging to the cyclostome braconid subfamilies Doryctinae, Exothecinae, Rogadinae and Braconinae. Material was collected from three ex-Yugoslav countries: primarily from Serbia, but also from Montenegro and the Former Yugoslav Republic of Macedonia. The following species are newly recorded for the fauna of the studied territories: *Doryctes striatellus* (Nees) f. *petrovskii* Kokujev, *Leluthia paradoxa* (Picard), *Rhaconotus aciculatus* Ruthe and *Spathius maderi* Fahringer (Doryctinae), *Cerophanes kerzhneri* Tobias, *Rhysipolis decorator* (Haliday), *Rh. similis* (Szepligeti), and *Clinocentrus cunctator* Haliday (Exothecinae), *Aleiodes* (*A. pallescens* Hellén, *A. (A.) circumscriptus* (Nees), *A. (A.) gastritor* (Thunberg), *A. (A.) coxalis* (Spinola), *A. (Chelonorhogas) rufipes* (Thomson), and *A. (Ch.) unipunctator* (Thunberg) (Rogadinae), *Atanycolus sculpturatus* (Thomson) and *Bracon (Habrobracon) hebetor* (Say) (Braconinae).

KEY WORDS: Hymenoptera, cyclostome Braconidae, new records, Serbia

### Introduction

The Serbian fauna of Braconidae has been sporadically investigated over the last 100 years. Information about braconid taxa was first published by GRAFFE (1908), and later new data were included in publications by FAHRINGER (1924), FISCHER (1959, 1961) and PAPP (1973, 1977) as well as by modern Serbian specialists

(BRAJKOVIĆ, 1989; BRAJKOVIĆ *et al.*, 1991, 1994; ŽIKIĆ *et al.*, 2000). In total, about 500 species of Braconidae were known in Serbia (BRAJKOVIĆ, 1989), compared with more than 5000 species of these parasitoids found in Europe (VAN ACHTERBERG, 2004). A great diversity of plants and habitats in Serbia and neighbouring countries in Europe support much greater braconid diversity in the area than has been documented.

## Material and Methods

For this study the braconid wasps were collected mainly in different types of habitat of Serbia: Mt. Kopaonik, lowland Popovac and Obrenovac, the Popšica Caves near Niš and Šljivovica, Mt. Tara and Sićevo Gorge. Sićevo Gorge belongs to an area hardly influenced by the Mediterranean. Examined material from Montenegro comes from, Durmitor Mountain (1700-2000 m a.s.l.), a very high mountain. Only a single specimen from the Former Yugoslav Republic of Macedonia (F.Y.R.O.M.) has been included in this investigation. All material was collected by sweeping, Malaise and light traps.

Most specimens are deposited in the Faculty of Sciences, Department of Biology and Ecology, Niš, Serbia, and several specimens are in the Zoological Institute RAS (St. Petersburg, Russia).

## Results

The examination of collected specimens has shown 35 taxa, species and partly morphological forms which belong to the following cyclostome braconid subfamilies: Doryctinae (12 taxa), Exothecinae (6 taxa), Rogadinae (13 taxa) and Braconinae (4 taxa). In this review 14 species marked by an asterisk (\*) were noted as new to the fauna of Serbia and neighbouring territories (Tab. I).

### Subfamily Doryctinae

#### Tribe Doryctini

*Doryctes leucogaster* (Nees) – 1♂, Serbia: Leskovac: Vučje, 06.05.1997, leg. Lj. Stanisavljević (Mal. Trap); 1♀, Serbia: Niš: Popovac, 20.05.2002, leg. V. Žikić; 1♀, Serbia: Niš: Popovac, 10.06.2002, leg. V. Žikić; 1♂, 1♀, Serbia: Niš: Popovac, 30.05.2002, leg. V. Žikić; 1♂, 1♀, Serbia: Niš: Popovac, 30.04.2002, leg. V. Žikić; 3♂, Serbia: Niš: Popovac, 25.04.2002, leg. V. Žikić; 2♀, Montenegro: Mt. Durmitor: Sušica (Mountain house), 06.08.2005, leg. V. Žikić.

*Doryctes leucogaster* (Nees) var. *pulchripes* Szépligeti – 2♀, Serbia: Niš: Popovac, 10.05.2002, leg. V. Žikić.

\* *Doryctes striatellus* (Nees) f. *petrovskii* Kokujev – 1♂, Serbia: Obrenovac: Draževac (Mal. Trap), 30.07. – 06.08.1994, leg. Lj. Mihajlović.

*Ontsira ignea* (Ratzeburg) – 1♀, Serbia: Mt. Svrliška: Popšica cave, 06.2001, leg. D. Pavićević.

*Ontsira imperator* (Haliday) – 1♂, Serbia: Mt. Goč, 18.06.1991, leg. Ž. Tomanović.

*Rhoptrocentrus piceus* Marshall – 1♀, Serbia: Stara Pazova, 10.06.1997, leg. Ž. Tomanović; 1♀, Serbia: Obrenovac: Draževac (Mal. Trap), 30.07 - 06.08.1994, leg. Lj. Mihajlović.

## Tribe Rhaconotini

*Rhaconotus aciculatus* Ruthe – 1♂, 1♀, Serbia: Sićevo Gorge: Ostrovica, 10.06.1996, leg. V. Žikić; 2♂, Serbia: Sićevo Gorge: Ostrovica, 28.10.1996, leg. V. Žikić; 1♂, Serbia: Sićevo Gorge: Ostrovica, 29.09.1997, leg. V. Žikić.

## Tribe Hecabolini

\* *Leluthia paradoxa* (Picard) – 1♂, F.Y.R.O.M.: Ohrid: Galičica: Trepča, 20.06.1987, leg. A. Četković.

## Tribe Heterospilini

*Heterospilus hemipterus* (Thomson) – 1♂, Serbia: Sićevo Gorge: Ostrovica, 29.09.1997, leg. V. Žikić.

*Heterospilus tauricus* Telenga f. *graefferi* Fischer – 1♀, Serbia: Sićevo Gorge: Sićevo, 11.06.1998, leg. V. Žikić; 1♀, Serbia: Sićevo Gorge: Ostrovica, 28.08.1997, leg. V. Žikić; 1♂, Serbia: Sićevo Gorge: Prosek, 15.05.1996, leg. V. Žikić; 1♂, Serbia: Sićevo Gorge: Prosek, 23.09.1996, leg. V. Žikić; 1♂, Serbia: Sićevo Gorge: Prosek, 17.07.1998, leg. V. Žikić.

## Tribe Spathiini

*Spathius curvicaudis* Ratzeburg – 2♀, Serbia: Niš: Popovac, 30.09.2002, leg. V. Žikić; 1♀, Serbia: Niš: Popovac, 10.04.2002, leg. V. Žikić.

\* *Spathius maderi* Fahringer – 1♀, Serbia: Mt. Svrljiška: Popšica cave, 06.2001, leg. D. Pavićević.

## Subfamily Exothecinae

## Tribe Rhysipolini

\* *Cerophanes kerzhneri* Tobias – 1♂, Serbia: Obrenovac: Draževac (Mal. Trap), 30.07. - 06.08.1994, leg. Lj. Mihajlović.

\* *Rhysipolis decorator* (Haliday) – 1♀, Serbia: Prokuplje: Mala Draguša, 22.08.1987, leg. A. Četković; 1♀, Serbia: Obrenovac: Draževac (Mal. Trap), 27.07. - 04.08.1996, leg. Lj. Mihajlović.

\* *Rhysipolis similis* (Szépligeti) – 1♀, Serbia: Sićevo Gorge: Prosek, 23.06.1996, leg. V. Žikić; 1♀, Serbia: Sićevo Gorge: Prosek, 10.09.1996, leg. V. Žikić; 1♀, Serbia: Sićevo Gorge: Ostrovica, 29.10.1997, leg. V. Žikić; 2♀, Serbia: Prokuplje: Mala Draguša, 22.08.1987, leg. A. Četković; 1♀, Serbia: Vršački Ritovi, 02.10.1996, leg. S. Vasilijć.

## Tribe Hormiini

*Hormius moniliatus* (Nees) – 2♀, Serbia: Prokuplje: Mala Draguša, 22.08.1987, leg. A. Četković.

*Hormius similis* (Szépligeti) – 1♂, Montenegro: Mt. Durmitor: Škrka: Uva, 23.07.2004, leg. V. Žikić.

## Tribe Clinocentrini

\* *Clinocentrus cunctator* Haliday – 1♀, Montenegro: Mt. Durmitor: Žabljak (1850-1920 m a.s.l.), 07.06.1985, leg. D. Pavićević.

## Subfamily Rogadinae

## Tribe Rogadini

*Aleiodes (A.) bicolor* (Spinola) – 1♀, Serbia: Obrenovac: Draževac (Mal. Trap), 06. - 11.08. 1995, leg. Lj. Mihajlović; 1♂, Serbia: Sićevo Gorge: Prosek, 10.06.1996; 1♂, Serbia: Sićevo Gorge: Prosek, 17.07.1997, leg. V. Žikić; 1♀, Serbia: Sićevo Gorge: Prosek, 27.07.1996, leg. V. Žikić; 1♀, Serbia: Sićevo Gorge: Ostrovica, 19.11.97, leg. V. Žikić; 1♂, 1♀, Serbia: Sićevo Gorge: Sićevo, 10.06.1998, leg. V. Žikić; 1♂, Serbia: Niš: Popovac, 30.07.2002, leg. V. Žikić; 1♂, Serbia: Mt. Kopaonik: Bare (1700-1800 m a.s.l.), 13.07.1988, leg. A. Četković; 1♂, Montenegro: Mt. Durmitor: Struga (1850-1920 m a.s.l.), 20.08.1988, leg. A. Četković; 1♀, Serbia: Prokuplje: Mala Draguša, 28.08.1987, leg. A. Četković.

*Aleiodes (A.) signatus* (Nees) – 1♀, Serbia: Sićevo Gorge: Ostrovica, 12.07.1998, leg. V. Žikić.

\* *Aleiodes (A.) pallescens* Hellén – 1♂, Montenegro: Mt. Durmitor: Žabljak (1850-1920 m a.s.l.), 07.06.1985, leg. D. Pavićević.

\* *Aleiodes (A.) circumscriptus* (Nees) – 1♀, Serbia: Ostrovica: Sićevo Gorge, 05.05.1996, leg. V. Žikić; 1♀, Serbia: Ostrovica: Sićevo Gorge, 04.10.1996, leg. V. Žikić.

\* *Aleiodes (A.) gastritor* (Thunberg) – 1♀, Serbia: Niš: Popovac, 13.10.2002, leg. V. Žikić; 1♀, Serbia: Mt. Kopaonik: Bare (1700-1800 m a.s.l.), 13.07.1988, leg. A. Četković; 1♂, Montenegro: Mt. Durmitor: Komarnica, 15.08.1986, leg. A. Četković; 4♂, Serbia: Mt. Kopaonik: Suvi Jelak (1550-1650 m a.s.l.), 20.06.1986, leg. A. Četković; 2♂, Montenegro: Mt. Durmitor: Žabljak (1850-1920 m a.s.l.), 07.06.1985, leg. D. Pavićević; 1♂, Montenegro: Mt. Durmitor: Sušica lake (1100-1200 m a.s.l.) (light trap), 13.08.1986, leg. A. Četković.

\* *Aleiodes (A.) coxalis* (Spinola) – 1♀, Montenegro: Mt. Durmitor: Struga (1850-1920 m a.s.l.), 20.08.1988, leg. A. Četković; 1♂, Serbia: Mt. Tara: Šljivovica: Šljivovica cave, 28.11.2003, leg. S. Ugljenović; 1♂, Serbia: Mt. Goč, 18.06.1991, leg. Ž. Tomanović.

*Aleiodes (A.) nigricornis* Wesmael – 1♀, Serbia: Sićevo Gorge: Sićevo, 23.07.1998, leg. V. Žikić; 2♂, Serbia: Prokuplje: Mala Draguša, 22.08.1987, leg. A. Četković.

*Aleiodes (Chelonorhogas) ductor* (Thunberg) – 1♂, Serbia: Sićevo Gorge: Prosek, 19.09.1996, leg. V. Žikić; 1♀, Serbia: Sićevo Gorge: Prosek, 25.08.1997, leg. V. Žikić; 1♀, Serbia: Sićevo Gorge: Prosek, 17.07.1998, leg. V. Žikić.

*Aleiodes (Ch.) gasterator* (Jurine) – 3♂, Montenegro: Mt. Durmitor: Tepca (550-700 m a.s.l.), 28.08.1990, leg. A. Četković; 1♂, Serbia: Mt. Kopaonik: Bačište / Kostovac (1500-1680 m a.s.l.), 16.07.1987, leg. A. Četković; 1♂, Montenegro: Mt. Durmitor: Barno lake (1480-1520 m a.s.l.), 02.07.1988, leg. A. Četković.

*Aleiodes (Ch.) pallidicornis* (Herrich-Schäffer) – 1♀, Montenegro: Mt. Durmitor, 16.07.2006, leg. V. Žikić.

*Aleiodes (Ch.) rufipes* (Thomson) – 1♀, Serbia: Sićevo Gorge: Prosek, 28.08.1997, leg. V. Žikić; 1♀, Serbia: Sićevo Gorge: Ostrovica, 22.05.1997, leg. V. Žikić; 1♀, Serbia: Prokuplje: Mala Draguša, 22.08.1987, leg. A. Četković.

\* *Aleiodes (Ch.) unipunctator* (Thunberg) – 1♀, Montenegro: Mt. Durmitor (on *Picea* sp.), 02.08.2006, leg. V. Žikić.

*Petalodes compressor* (Herrich-Schaffer) – 1♂, Montenegro: Mt. Durmitor: Komarnica: Nevideo, 26.04.1988, leg. A. Četković.

## Subfamily Braconinae

## Tribe Braconini

\* *Atanycolus sculpturatus* (Thomson) – 1♀, Serbia: Obrenovac: Draževac (Mal. Trap), 11. - 18.08.1995, leg. Lj. Mihajlović.

\* *Bracon hebetor* (Say) – 50♂, 11♀, Serbia: Niš (ex *Plodia interpunctella*), 27.08.2008, 04.09.2008, leg. V. Žikić.

*Pseudovipio castrator* (Fabricius) – 1♀, Serbia: Obrenovac: Draževac (Mal. Trap), 01. - 05.08.1995, leg. Lj. Mihajlović; 3♀, Serbia: Obrenovac: Draževac (Mal. Trap), leg. Lj. Mihajlović.

*Vipio humerator* (Costa) [*frivaldskyi* (Szepligeti)] – 1♀, Serbia: Palić, 08.09.1995, leg. Ž. Tomanović.

Table I. The list of the new species of certain national faunas.

| Subfamily   | Species   | Country            |
|-------------|---|--------------------|
| Doryctinae  | <i>Doryctes striatellus</i> (Nees) f. <i>petrovskii</i> Kokujev | Serbia             |
|             | <i>Leluthia paradoxa</i> (Picard)                               | F.Y.R.O.M          |
|             | <i>Spathius maderi</i> Fahringer                                | Serbia             |
|             | <i>Cerophanes kerzhneri</i> Tobias                              | Serbia             |
| Exothecinae | <i>Rhysipolis decorator</i> (Haliday)                           | Serbia             |
|             | <i>Rhysipolis similis</i> (Szépligeti)                          | Serbia             |
|             | <i>Clinocentrus cunctator</i> Haliday                           | Montenegro         |
| Rogadinae   | <i>Aleiodes</i> (A.) <i>pallescens</i> Hellén                   | Montenegro         |
|             | <i>Aleiodes</i> (A.) <i>circumscriptus</i> (Nees)               | Serbia             |
|             | <i>Aleiodes</i> (A.) <i>gastritor</i> (Thunberg)                | Serbia, Montenegro |
|             | <i>Aleiodes</i> (A.) <i>coxalis</i> (Spinola)                   | Serbia, Montenegro |
|             | <i>Aleiodes</i> (Ch.) <i>unipunctator</i> (Thunberg)            | Montenegro         |
| Braconinae  | <i>Atanycolus sculpturatus</i> (Thomson)                        | Serbia             |
|             | <i>Bracon hebetor</i> (Say)                                     | Serbia             |

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# НОВИ НАЛАЗИ ЦИКЛОСТОМНИХ БРАКОНИДА ИЗ ПОТПОРОДИЦА DORYCTINAE, EXOTHECINAE, ROGADINAE И BRACONINAE (HYMENOPTERA: BRACONIDAE) ЗА СРБИЈУ И СУСЕДНЕ ЗЕМЉЕ

СЕРГЕЈ АЛЕКСАНДРОВИЧ БЕЛОКОБИЉСКИЈ И ВЛАДИМИР ЖИКИЋ

## Извод

У истраживаним узорцима идентификовано је 35 врста циклостомских, браконида за подручје Србије, Црне Горе и Бивше Југословенске Републике Македоније. Највећи број узорака прикупљен је на различитим локалитетима у Србији, затим на више локалитета на Дурмитору у Црној Гори и један узорак из Бивше Југословенске Републике Македоније. Идентификовани таксони припадају следећим потпородицама: Doryctinae (12), Exothecinae (6), Rogadinae (13) и Braconinae (4). Од 35 идентификованих врста 14 је ново за подручје Србије и суседних земаља.

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