

## NEW RECORDS OF HETEROPTERA FROM SERBIA (INSECTA: HETEROPTERA: TINGIDAE)

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**Abstract** - The Serbian fauna of Heteroptera is increased by four new species from the family Tingidae. These species are: *Catoplatus fabricii* (Stål), *Copium teucarii teucarii* (Host), *Derephysia cristata* (Panzer), and *Dictyla convergens* (Herrich-Schaeffer). The paper also includes a summary of literature data on the heteropteran biology and distribution.

**Key words:** Distribution, zoogeography, ecology, Heteroptera, Tingidae, Serbia

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### INTRODUCTION

The family Tingidae is represented in Serbia with 50 species. The species from this family in Serbia have so far been mostly mentioned only in faunistic papers (Horváth, 1903; Protić, 1993/94, 1998, 2004, 2004a). Two species distributed in Serbia are of economic importance: *Corythuca ciliata* (Say) and *Stephanitis pyri* (Fabricius), and special research has been devoted to them (Bogavac, 1964; Balarin *et al.* 1979; Tomić and Mihajlović, 1974). The collection of the Natural History Museum includes 35 species. Four of them are new for the Serbian Heteroptera fauna: *Catoplatus fabricii* (Stål), *Copium teucarii teucarii* (Host), *Derephysia cristata* (Panzer), and *Dictyla convergens* (Herrich-Schaeffer).

### LIST OF SITES

New Tingidae were collected at the following seven sites in Serbia. [The marks in square brackets indicate UTM codes]:

Mt. Beljanica, 1300 m [EP58], 160 km SE of Belgrade on the road to Bor. The central plateau is mostly bare, while the slopes are covered by beech and oak forests.

Belgrade: Mt. Avala [DQ64], 17 km SE of Belgrade on the road to Kragujevac. The highest point is 511 m.

Mount Avala is under deciduous and coniferous forests and includes areas under mostly deciduous submediterranean forests. A part of its forested territory under influence of humans has been transformed into cultivated fields (agrocenoses) or ruderal ground, where a spontaneous herbaceous flora has developed.

Mt. Divčibare, 900 m [DP28]. The Divčibare Plateau is a constituent part of Mt. Maljen, which is about 100 km SW of Belgrade. It is characterized by mesophilous meadows.

The gorge Jelašnička Klisura [EN98] is situated 15 km E of Niš at 250-600 m alt. The Studenica River flows into this gorge, and in its lower part down to its joining the Nišava River is called the Jelašnička River. There are some characteristic elements of Mediterranean mountainous rocky ground, submediterranean Balkan forests, and shiblyaks (tall shrubs) on rocky ground.

Slankamen: The Koševac [DQ49] loess plateau is situated in SE Srem in the eastern foothills of Mt. Fruška Gora on the right bank of the Danube at an elevation of 80 m a.s.l. Slankamen is 55 km from Belgrade.

Mt. Tara: Šljivovica is at 1000 m alt [CP75] and lies within the Tara National Park in the extreme western part of Serbia. This area is situated between 43° 52' and 44° 02' N and 19° 15' and 19° 38' E. The highest peak is at 1544 m. A mixed forest association of fir, spruce, and

beech is dominant.

Lake Vlasina [FN02] is situated in SE Serbia and represents a natural boundary with Bulgaria. It is 320 km from Belgrade. The mountains Čemernik and Strešer with deciduous forests and mountain meadows surround the lake. The vicinity of the lake is characterized by mountain pastures with remains of European steppes and peatbogs on the banks.

## RESULTS

### *Catoplatus fabricii* (Stål, 1868)

Beograd: Avala, one female, 22.04.1984, coll. A. Četković, inv. nr. 5213.

Mt. Tara: Šljivovica, one female, 29.07.1988, coll. Lj. Protić, inv. nr. 5212.

### *Copium teucryi teucryi* (Host, 1788)

Jelašnička Klisura: 250-600 m, two males, three females, 02.08.1985, coll. M. Niketić, inv. nr. 5214.

Beljanica: 1300 m, one female, 03.08.1996, coll. M. Živković, inv. nr. 5218.

Divčibare: 900 m, seven females, 01.08.1999, coll. O. Petrović, inv. nr. 5219.

### *Derephysia cristata* (Panzer, 1806)

Slankamen: Koševac, one female, 28.06.2003, coll. A. Stojanović, inv. nr. 5627.

### *Dictyla convergens* (Herrich-Schaeffer, 1835)

Lake Vlasina: one female, 15.06.1984, coll. Lj. Protić, inv. nr. 5307.

## DISCUSSION

Up to now, *C. fabricii* (Stål) had been collected in Serbia at only two localities: on the mountains Avala and Tara. It overwinters in the imago stage in moss. The first specimens are recorded on vegetation in April. They are most numerous in May and June, when they are present on flowers of the host plant *Leucanthemum vulgare* Lamk. (Stehlík, 2002). It is known to be eurytopic and euryhygric, which is supported by our findings in Serbia. Avala is a mountain in Central Serbia whose highest point is at 511 m, while Tara is a mountain in Western Serbia whose highest point is at 1544 m alt. The Šljivovica locality is at about 1000 m alt. and has mesophilous meadows. In Moravia (Stehlík, 2002), this species was not recorded above 680 m alt. Our findings on Mt. Tara

represent additional data on the vertical distribution of this species. This is a European species. It is mostly distributed in Northern and Central Europe. Péricart (1983) cites Spain, Italy, and Bulgaria as individual points in the distribution of *C. fabricii*. Serbia is outside the normal range boundaries of this species and represents the southernmost limit of its distribution. In the region of former Yugoslavia, it was collected at several localities in Slovenia and two in Croatia (Protić, 1998).

*Copium teucryi teucryi* (Host) has so far been recorded in Serbia at three localities. These specimens were collected on *Teucrium montanum* L., in the galls produced by this species. The given records are important because they are for now the only known localities where this species has been collected in Serbia and contribute to our understanding of the overall range of this species on the Balkan Peninsula. Serbia occupies the central part of Balkan Peninsula, and no data on records of *C. teucryi* were known so far. On the Balkan Peninsula, this species is distributed along the Adriatic Coast, from Slovenia and Dalmatia to the Montenegrin Coast and Albania. It has also been found in Herzegovina, Macedonia, Bulgaria, and Romania.

The genus *Copium* in Serbia is also represented by another species: *C. clavicorne* (Linnaeus, 1758). The first data on distribution of this species are from Horváth (1903), who cites three localities: Golubac [EQ44], Dobra [EQ74], and Niš [EN79]. These used to be the only data for Serbia. However, the Heteroptera Study Collection of the Natural History Museum contains some specimens collected at the following localities in Serbia: Deliblatski Pesak: Korn [EQ07], inv. nr. 5215; Deliblatski Pesak: Devojački Bunar [EQ07], inv. nr. 5595 and 5609; and Šara: Ošljak [DM96], inv. nr. 5217.

The record of *Derephysia cristata* (Panzer) in Serbia at the Slankamen: Koševac locality represents the southernmost point in the distribution of this species. This is a Euro-Siberian species. According to the latest data on distribution of this species (Aukema and Rieger, 1996) its range includes the following European countries: Austria, Belarus, the Czech Republic, Estonia, Kazakhstan (European part), Latvia, Lithuania, Hungary, Germany, Poland, Russia (European part), Slovakia, Sweden, and Ukraine. In Asia, it has been recorded in Armenia, Kazakhstan (Asian part), and Russia (Western Siberia). Several species from the genus *Artemisia* have

been cited as host plants. The specimen from Serbia was collected on *Artemisia campestris* L. The Slankamen: Koševac locality is situated in Srem, on a loess plain along the Danube. It overwinters in the imago stage or larval stage V and can be found in colonies of the ant *Lasius brunneus* Latr.

*Dictyla convergens* (Herrich-Schaeffer, 1835) was collected at only one locality: Lake Vlasina. This species is distributed in Europe in the zone of deciduous forests.

By Lake Vlasina, it was collected at quite a high altitude, about 1200 m. The habitat was a wetland meadow where one of the plant species was *Myosotis palustris* (L.), the characteristic plant for this species. In Bulgaria it was recorded at the Blagoevgrad locality [FM75]. In the collection of Nikola Kormilev, which is deposited in the Natural History Museum in Belgrade, there is a submacropterous form of female, which was collected by Kormilev on April 24th, 1932 in Macedonia: Skopje [EM34]. P é r i c a r t (1983) mentioned only the macrop-

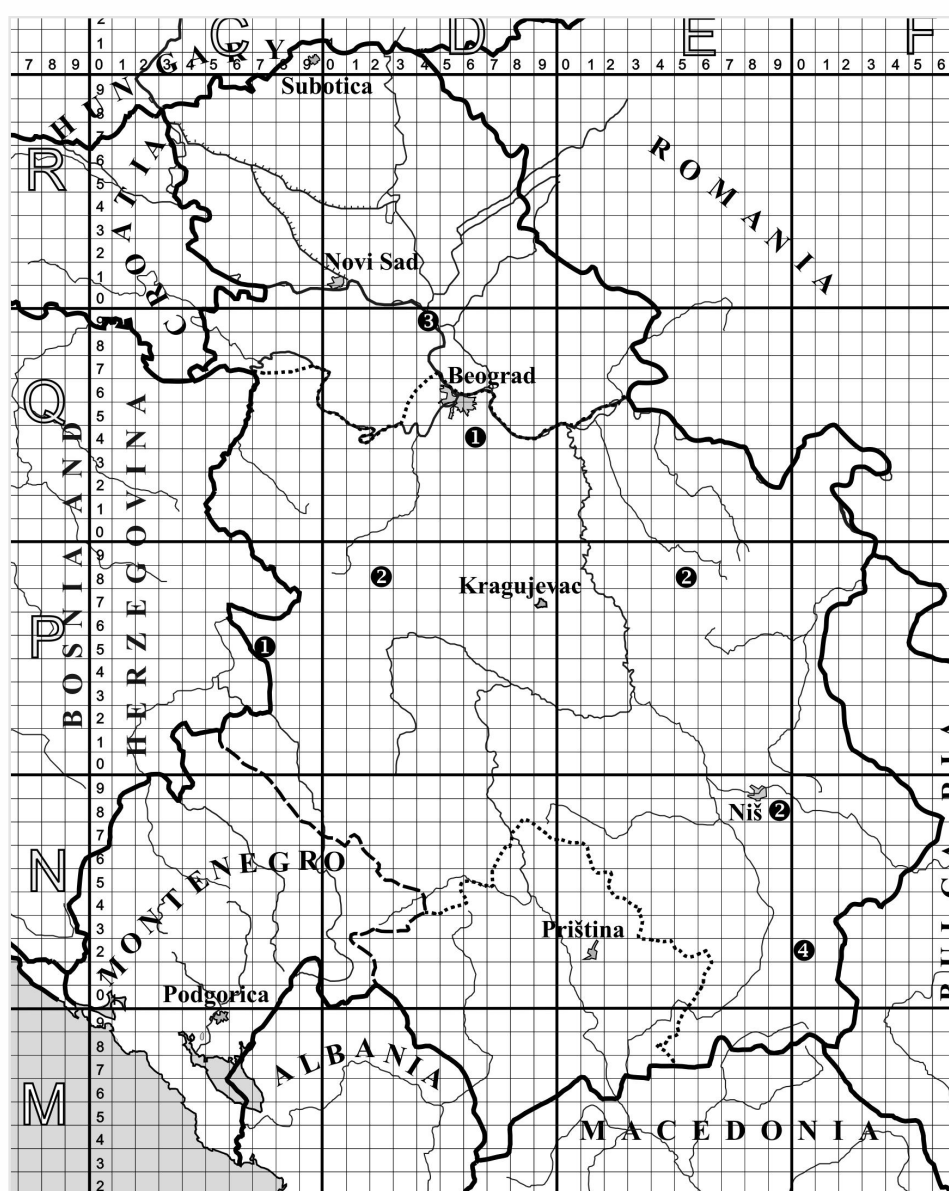


Fig. 1. Map showing the sites of finding of tingid species new for Serbia: 1 - *Catoplatus fabricii* (Stål); 2 - *Copium teucii* (Host); 3 - *Derephysia cristata* (Panzer); 4 - *Dictyla convergens* (Herrich-Schaeffer).

terous form in the key for this species. Records of *D. convergens* on the Balkan Peninsula represent the southernmost points in the distribution of this species.

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## НОВИ ПОДАЦИ О ХЕТЕРОПТЕРАМА СРБИЈЕ (INSECTA: HETEROPTERA: TINGIDAE)

ЉИЉАНА ПРОТИЋ

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Фамилија Tingidae у Србији је заступљена са 50 врста.. У збирци Природњачког музеја налази се 35 врста. Четири су нове за фауну Heteroptera Србије: *Catoplatus fabricii* (Stel), *Copium teucarii teucarii* (Host), *Derephysia cristata* (Panzer) и *Dictyla convergens* (Herrich-Schaeffer).

*Catoplatus fabricii* (Stel, 1868) у Србији је до сада уловљен само на два локалитета: Београд - Авала и планина Тара- Шљивовица. Распрострањен је највећим делом у средњој и северној Европи. Péricart (1983) као појединачне тачке у распрострањењу *C. fabricii* наводи Шпанију, Италију и Бугарску. Подаци о налазишту ове врсте у Србији су на неки начин изван граница ареала и представљају најјужније тачке распрострањења ове врсте. На просторима бивше Југославије ловљена је на више локалитета у Словенији и два у Хрватској (Protić, 1998).

*Copium teucarii teucarii* (Host, 1788) у Србији је до сада нађена на три локалитета: Јелашинска клисура,

Бељаница и Дивчибаре. На Балканском полуострву ова врста је распрострањена дуж обале Јадранског мора од Словеније, Далмације до Црногорског приморја и Албаније. Затим је нађена у Херцеговини, Македонији, Бугарској и Румунији.

*Derephysia cristata* (Panzer, 1806) од сада је регистрована и у Србији на локалитету Сланкамен - Кошевац, који је најјужнија тачка у распрострањењу ове врсте. То је евросибирска врста.

*Dictyla convergens* (Herrich-Schaeffer, 1835) уловљена је на само једном локалитету: Власинско језеро. Ова врста распрострањена је у Европи у зони листопадних шума. На Балканском полуострву забележена је још у Бугарској и Македонији.