



## FOUR SPECIES OF SEMIAQUATIC BUGS (HETEROPTERA, GERROMORPHA) NEW FOR CROATIAN FAUNA

WITH DISTRIBUTIONAL NOTES

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During the last few years (1994–1997), the author collected true bugs (*Heteroptera*) in Croatia. Analysis of that material produced four species of semiaquatic bugs not recorded in Croatia before: *Mesovelia furcata* Mls. & Rey, *Gerris asper* (Fieb.), *G. maculatus* (Tam.) and *G. odontogaster* (Zett.). This paper also contains distributional notes on these species. All specimens are deposited in the author's private collection.

**Key words:** Heteroptera, Gerromorpha, Croatia, true bugs, newly recorded species.

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U zadnjih nekoliko godina (1994–1997) autor se bavio sabiranjem stjenica u Hrvatskoj. Analiza tog materijala otkrila je prisutnost četiri vrste vodenih stjenica, dosada nezabilježene za Hrvatsku: *Mesovelia furcata* Mls. & Rey, *Gerris asper* (Fieb.), *G. maculatus* (Tam.) i *G. odontogaster* (Zett.). U radu se daju i zabilješke o rasprostranjenju navedenih vrsta. Svi primjerci su pohranjeni u autorovoj privatnoj zbirci.

**Ključne riječi:** Heteroptera, Gerromorpha, Hrvatska, stjenice, novozabilježene vrste.

Research into semiaquatic bugs in Croatia has so far been less intensive than research into land-inhabiting true bugs. The record of *M. furcata* is the first record of family, genus and species in Croatia, and three species of *Gerris* are recorded in Croatia for the first time (cf. STRPIĆ mscr.). A systematic inventory of the newly found species is given in Table 1. Material was identified using keys in ANDERSEN 1993 and POISSON 1961.

The following regions in Croatia were studied: Kvarner region (islands of Krk, Prvić and Rab) in the northern Adriatic, Turopolje and Hrvatsko Zagorje in Central Croatia. Localities visited are depicted in Fig. 1.

Standard methods of aquatic insect collecting were applied in the field, i.e. circular aquatic net with mesh size of about  $2 \times 2$  mm. Rocky and muddy bottoms, as well as hydrovegetation, were searched for aquatic bugs. Water striders (fam. Gerridae) were also collected with the net on the water surface.

Table 1. Systematic inventory of recorded species

Ordo	<b>Heteroptera</b> Latreille 1810
Subordo	<b>Amphibiocorisae</b> Leston, Pendergast & Southwood 1954
Infraordo	<b>Gerromorpha</b> Popov 1971
fam.	<b>Mesoveliidae</b> Douglas & Scott 1867
genus	<i>Mesovelia</i> Mulsant & Rey 1852 <i>M. furcata</i> Mulsant & Rey 1852
fam.	<b>Gerridae</b> Leach 1807
subfam.	<b>Gerrinae</b> Leach 1815
genus	<i>Gerris</i> Fabricius 1794
subgenus	<i>Gerris</i> s. s. <i>G. maculatus</i> (Tamanini 1946) <i>G. odontogaster</i> (Zetterstedt 1828)
subgenus	<i>Gerriselloides</i> Hungerford & Matsuda 1958 <i>G. asper</i> (Fieber 1861)

### *Mesovelia furcata* Mulsant & Rey 1852

This species has wide palearctic distribution, although it is confined to specific habitats, i.e. small water bodies with rich hydrovegetation. Mostly apterous, macropters are rare (cf. POISSON 1961, p. 166). Found in Slovenia (GOGALA & GOGALA 1986, 1989) and Bulgaria (JOSIFOV 1960), absent in Serbia (PROTIĆ 1988/89). Easily distinguished from similar species *M. vittigera* Horvath 1895, which has Mediterranean-Maghrebian-Turanian distribution, and can be expected to be found in southern parts of Croatia.

*M. furcata* was found in the vicinity of Starigrad-Paklenica, UTM 33T/WK30, 21. 10. 1994., near the mouth of Velika Paklenica brook, in a small pond with high *Typha* reeds. Two apterous males and two apterous females, in coll. Strpić (no. 1420, 1421, 1422, 1423).

### *Gerris (Gerris) maculatus* (Tamanini 1946)

The species belongs to the *lacustris* group of the subgenus (cf. ANDERSEN 1993, p. 2486). It was much confused with *G. (G.) gibbifer* in the earlier literature (described as variety of *gibbifer*, and later raised to species level by the same author). It is feasible that it was recorded from Croatia before, as *G. gibbifer*. This paper provides the first verified record for Croatia (ANDERSEN 1995a records this species

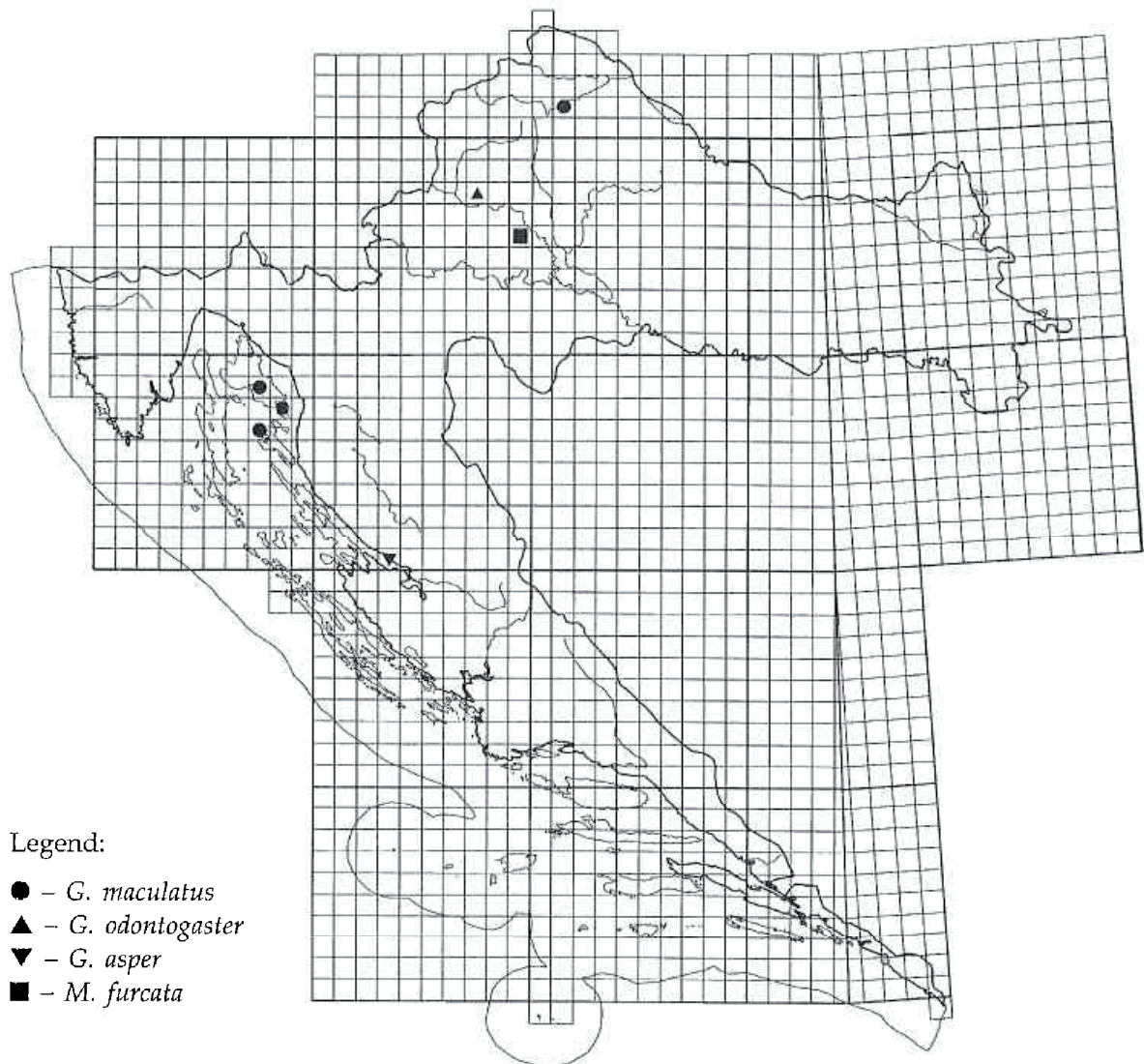


Fig. 1. UTM map of Croatia showing the localities visited and species found.

for Croatia, but without further details). A species of east Mediterranean-Maghrebian-Turanian distribution (ANDERSEN 1995a, 1995b). Recorded in Bulgaria (JOSIFOV 1960, as *G. italicus*), absent in Slovenia (GOGALA & GOGALA 1986, 1989) and Serbia (PROTIĆ 1988/89), although ANDERSEN 1995a gives a record from »Yugoslavia« (Serbia & Montenegro), probably based on newer material not published in Protić (l.c.)

Record from Slanje in Hrv. Zagorje is probably the most northern record of the species ( $16^{\circ}32'30''$  N), which is not surprising, as those bugs were found in a warm saline spring. It is worth emphasizing that both *G. maculatus* and *G. gibbifer* were found together (Žanac waterfall, Krk i.), in spite the previous statement (cf. ANDERSEN 1993, p. 2501) that these two species are normally allopatric. A third species from the *lacustris* group, *G. lacustris*, was also found in the same habitat, which is

very interesting example of sympatry. In another locality on the same island (small pond in karst field in Dokolovo region near Stara Baška, UTM 33T/VK78) only *G. gibbifer* was found.

Material in coll. Strpić: Žanac waterfall, Vela rika brook, Krk i., UTM 33T/VK78, 6.4.1996., lenitic habitat, one male (no. 1796); Slanje near Ludbreg, UTM 33T/XM11, 19.5.1996., warm saline spring, two males and one female (no. 1868, 1869, 1870); Mouth of Veli Potok brook, Rab i., UTM 33T/VK76, 29.5.1996., *Tamarix* bushes, one male (no. 1938); Pescaki ponds, Prvić i. near Krk i., UTM 33T/VK87, 4.6.1996., one male (no. 1943).

### *Gerris (Gerris) odontogaster* (Zetterstedt 1828)

A species of the *odontogaster* group of the subgenus. Males are very easily recognized from the other species in the subgenus by a pair of recurved processes on the sternum 7 (cf. ANDERSEN 1993, p. 2488). Species of wide palearctic distribution (ANDERSEN 1995a, 1995b). ANDERSEN 1995a gives records for Slovenia and »Yugoslavia«, but records were not published in the earlier literature (GOGALA & GOGALA 1986, 1989, Protić 1988/89). Recorded in Bulgaria (JOSIFOV 1960).

Found in Savica, an old backwater of the Sava river, near Zagreb, UTM 33T/WL77, 13.3.1997. In dense hydrovegetation with dominant *Myriophyllum*. One male, in coll. Strpić (no. 1995).

### *Gerris (Gerriselloides) asper* (Fieber) 1861

Euromediterranean-Maghrebian-Turanian species. Widely mistaken for another European species of this subgenus, *G. lateralis*. These species can be distinguished by means of genital armatures (cf. ANDERSEN 1993, p. 2482). The latter species has boreo-European-central Asian distribution, and is expected to be found in northern parts of Croatia. Neither of these two species are recorded in Slovenia (GOGALA & GOGALA 1986, 1989), while *G. lateralis* recorded in Serbia (PROTIĆ 1988/89) is probably *G. asper* (JOSIFOV 1960 reports *G. asper* for Yugoslavia). Recorded in Bulgaria also (JOSIFOV l.c.).

Found in Turopoljski lug forest, UTM 33T/WL95, 22.5.1994., in a small pond with *Typha* and *Iris pseudacorus* near the forest border. One female in coll. Strpić (no. 514).

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## Sažetak

### Četiri vrste vodenih stjenica (Heteroptera, Gerromorpha) nove za hrvatsku faunu s bilješkama o rasprostranjenju

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Tokom posljednjih nekoliko godina autor je prilikom istraživanja faune *Heteroptera* Hrvatske otkrio prisutnost četiri vrste vodenih stjenica koje dosada nisu bile zabilježene na području Hrvatske, poimence: *Mesovelia furcata* Mls. & Rey, *Gerris (Gerriselloides) asper* (Fieb.), *Gerris (Gerris) maculatus* (Tam.) i *Gerris (Gerris) odontogaster* (Zett.). Nalaz vrste *Mesovelia furcata* predstavlja prvi podatak o porodici *Mesoveliidae* i rodu *Mesovelia* za Hrvatsku, a preostale tri vrste iz roda *Gerris* su po prvi put zabilježene za Hrvatsku. Istraživanjem su pokrivena sljedeća područja: Kvarner (otoci Krk, Prvić i Rab) u sjevernojadranskom primorju, Turopolje i Hrvatsko Zagorje u središnjoj Hrvatskoj. Niti jedna od novozabilježenih vrsta za Hrvatsku nije naročito rijetka, ali njihovi sadašnji nalazi u Hrvatskoj odražavaju dosada nedovoljnu istraženost skupine i potrebu daljih detaljnijih istraživanja, u cilju proširenja poznavanja faune, kao i areala poznatih vrsta.