

**FOUR SPECIES OF HETEROPTERA
NEW TO THE FAUNA OF SLOVENIA**Andrej GOGALA¹, Duša VADNJAL² & Miroslav KASTELIC³

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Abstract – Four species of Heteroptera were detected in Slovenia for the first time, all in the vicinity of Koper: *Camptotylus yersini* (Mulsant & Rey) (Miridae), *Callistodema fasciata* (Kolenati) (Reduviidae), *Metacanthus meridionalis* (A. Costa) (Berytidae) and *Chorosoma schillingii* (Schilling) (Rhopalidae). They were photographed in the field and in one case collected afterwards.

KEY WORDS: Hemiptera, Heteroptera, introduced species, fauna, Slovenia

Izveček – ŠTIRI VRSTE STENIC (HETEROPTERA), NOVE V FAVNI SLOVENIJE

Štiri vrste podreda Heteroptera so bile prvič najdene v Sloveniji, vse v okolici Koper: *Camptotylus yersini* (Mulsant & Rey) (Miridae), *Callistodema fasciata* (Kolenati) (Reduviidae), *Metacanthus meridionalis* (A. Costa) (Berytidae) in *Chorosoma schillingii* (Schilling) (Rhopalidae). Na terenu smo jih fotografirali in v enem primeru pozneje tudi ujeli.

KLJUČNE BESEDE: Hemiptera, Heteroptera, vnešene vrste, favna, Slovenija

Introduction

During the years 2018 and 2019, four species of Heteroptera not known from Slovenia before were photographed in the field. Two of them live on the *Tamarix* bushes and are introduced species like their plant host. The other two were long expected in Slovenia as they are present in neighbouring countries. Specimens of one of them were also collected and are preserved in the collection of the Slovenian museum of

Natural History in Ljubljana (PMSL). The indentifications of the other three species were possible from the photographs without doubt.

List of species

Miridae

Camptotylus yersini (Mulsant & Rey, 1856)

Koper, Škocjanski zatok, UTM: VL04, 23. 9. 2018 on *Tamarix*, photo Miroslav Kastelic

A characteristic colour pattern distinguishes this member of the Phylini tribe and enable identification from the photograph. *Camptotylus* species are recognizable mirids for having one dark rounded spot in the radial part of the corium; the heme-lytra are green in color; Articles 3 and 4 of the rostrum are enlarged compared to the first and second. Four black rings on the second antennal segment differentiate *Camptotylus yersini* from other species in the same genus (Wagner 1973). It is a Mediterranean species, distributed in Southern Europe (France, Italy and Spain), Northern Africa, Middle East and Central Asia (Kerzhner & Josifov 1999). It lives on *Tamarix* species (Tamaricaceae) and was found and photographed on this plant also in Slovenia. Tamarisks are not native on the Slovenian coast, they are planted as ornamentals or expand further from such plants. Insects obligately dependent of them were thus also introduced, most probably together with the plant material, or they spread along the Mediterranean coast by themselves as tamarisks are present in many places. The record in Koper is the northernmost in the range of *Camptotylus yersini*. The nearest known locality is in Goro (Italy, Ferrara) on the opposite side of the Adriatic sea (Dioli 1995).



Fig. 1: *Camptotylus yersini* (Mulsant & Rey) on *Tamarix* in Škocjanski zatok near Koper, photo M. Kastelic

Reduviidae

Callistodema fasciata (Kolenati, 1857)

Koper, Škocjanski zatok, VL04, 8. 8. 2019 on *Tamarix*, 1 nymph, photo M. Kastelic, 29. 8. 2019, 1 nymph, photo M. Kastelic, 30. 8. 2019, 1 nymph, photo M. Kastelic, 2. 9. 2019, 1 nymph, photo M. Kastelic, 5. 9. 2019, 1 nymph, photo M. Kastelic, 10. 9. 2019 on *Tamarix*, 1♂, photo D. Vadnjal, 1♀, photo M. Kastelic, 11. 9. 2019, 1 freshly molted adult, photo D. Vadnjal, 13. 9. 2019, 1 nymph, photo D. Vadnjal, 15. 9. 2019, 1 nymph, photo D. Vadnjal, 21. 9. 2019, 1 freshly molted adult, photo M. Kastelic

Harpactorine assassin bug strictly bound to *Tamarix* bushes where it feeds on small Auchenorrhyncha and Heteroptera (Miridae like *Tuponia* and Lygaeidae – *Artheneis*) (Putshkov & Moulet 2009). The red and black colour pattern of adults reminds of *Lygaeus* and *Spilostethus* species (Lygaeidae). Nymphs that do not fly have a camouflage appearance among the leaves of the tamarisk (Fig. 2). Adults have instead aposematic colours like the poisonous Lygaeidae, e.g. *Lygaeus* and *Spilostethus*, to be safer from predators (Fig.3).

Callistodema fasciata is an East Mediterranean species, distributed from Greece to Turkey, Dagestan (Russia), Armenia, Georgia, Azerbaidjan and Iran (Putshkov P.V. & V.G. 1996, Putshkov & Moulet 2009). The locality on the Slovenian coast is far away from the known distribution but at the port of Koper, a possible spot of introduction. Warmer climate of recent years enable such southern species to survive far north to their native range.

Berytidae

Metacanthus meridionalis (A. Costa, 1843)

Koper, Škocjanski zatok, VL04, 3. 6. 2019 on *Epilobium hirsutum*, 1♀, photo Duša Vadnjal, 3. 8. 2019, 2♂1♀, Duša Vadnjal leg., PMSL



Fig. 2: *Callistodema fasciata* (Kolenati) nymph on *Tamarix* in Škocjanski zatok near Koper, photo M. Kastelic



Fig. 3: *Callistodema fasciata* (Kolenati) female on *Tamarix* in Škocjanski zatok near Koper, photo M. Kastelic



Fig. 4: *Metacanthus meridionalis* (A. Costa) female in Škocjanski zatok near Koper, photo D. Vadnjaj



Fig. 5: *Chorosoma schillingii* (Schilling) female in Dekani near Koper, photo D. Vadnjal

North Mediterranean and Pontic species, living on *Epilobium* species (Onagraceae) (Péricart 1984). Its main foodplant is *Epilobium hirsutum*, confirmed also in Slovenia. Its presence was expected as it is distributed in neighbouring countries. It was found also in Gorizia, at the border between Italy and Slovenia (Péricart 1984).

Rhopalidae

Chorosoma schillingii (Schilling, 1829)

Koper, Dekani, VL04, 12. 8. 2018, 1♀, photo Duša Vadnjal, 20. 8. 2018, 1♂1♀, photo Miroslav Kastelic, 5. 9. 2018, 1♀, photo Duša Vadnjal

European species feeding predominantly on various Poaceae (Moulet 1995). It was expected in Slovenia as it is present in all neighbouring countries. Another species present in Europe, *Chorosoma gracile* Josifov 1968, is similar, but distributed only in the Pannonian part of Central Europe. It is unlikely to be present near the Adriatic coast. The identification is proved also by long pilosity of the hind tibiae, characteristic for *Ch. schillingii* and evident on the photographs.

Conclusions

All four species new to the country have been found in the Slovenian part of Istria, region with the warmest climate in Slovenia and where species which expand their distribution ranges due to climate change are expected to appear. Two species, *Metacanthus meridionalis* and *Chorosoma schillingii* may have been overlooked before as they are present in neighbouring countries. Two species which live exclusively on *Tamarix*, however, most probably colonized the Slovenian locality near Koper only in recent times. In the same locality other Heteroptera species were found on the *Tamarix* bushes before: *Tuonia hippophaes* (Fieber, 1861), *Tuonia mixticolor* (A. Costa, 1862) and *Megalodactylus macularubra* (Mulsant & Rey, 1852) (Gogala 2006). They were collected by the first author in the year 2000 during survey of the Škocjanski zatok, area provided for conservation. *Camptotylus yersini* and *Callistodema fasciata* were not detected then. The latter seems to be quite numerous now as it was photographed on many visits to the area, first as nymphs and in September finally as adults.

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