

A contribution to the knowledge of the Slovenian spider fauna: eleven species new for Slovenia and some other interesting findings (Arachnida, Araneae)

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ABSTRACT

Eleven spider species new for Slovenia are discussed: *Araneus angulatus* (Cl.), *Larinioides folium* (Schr.), *Larinioides sclopetarius* (Cl.), *Trachelas maculatus* Th., *Dictyna uncinata* Th., *Oxyopes heterophthalmus* Latr., *Leptorchestes berolinensis* (C. L. K.), *Segestria florentina* (Rossi), *Episinus maculipes* Cavanna, *Misumenops tricuspoidatus* (Fabr.) and *Pistius truncatus* (Pallas). For *Trachelas maculatus* Th., the rare eastern Mediterranean species, the most western locality is given. Some other interesting species are also mentioned: *Argyroneta aquatica* (Clerck), *Uroctea durandi* (Latr.), *Scytodes thoracica* (Latr.) and *Coelotes inermis* (L. K.).

INTRODUCTION

In comparison to the existing checklists (Nikolić & Polenec 1981; Polenec 1989, 1992), eleven species of spiders are established to be new for the Slovenian fauna. Some other species - rarely found or interesting are also discussed. The systematics and nomenclature follow Platnick (1993), with important synonymies added. For each species the collected material, localities (with UTM co-ordinates and elevation in metres), distribution, possible endangered status in Europe and comments on the findings and observations are given. The spiders were identified using the works by Heimer and Nentwig (1991), Roberts (1993, 1995), Chyzer and Kulczyński (1897), Mikhailov (1987), Haupt and Haupt (1993). The geographical distribution is given according to Nikolić and Polenec (1981) and Polenec (1989, 1992) for Slovenia; Nikolić and Polenec (1981) for Croatia; Pesarini (1994) for Italy; Thaler (pers. comm.) for Austria; Kropf and Horak (1996) for Styria (= Steiermark); Samu (pers. comm.) for Hungary; Platen *et al.* (1995) for Germany; Maurer and Hänggi (1990) for Switzerland; Buchar *et al.* (1995) for the Czech Republic; Heimer and Nentwig (1991) for Central Europe; Roberts (1995) for Great Britain and Northern Europe, and Platnick (1989, 1993), unless indicated otherwise.

SPECIES NEW FOR SLOVENIA

Family Araneidae

Araneus angulatus Clerck, 1757

Material: 3 FF, 1 juv. F, SLO: UTM UL94. Belvedere near Izola, 50-100 m, 14.7.1994, on webs in bush at daytime, leg., det., coll. M. Kuntner. 1 M, SLO: UTM VL84/85 Kočevska reka - Lovski dom Koče, 15.7.1995, near house at daytime, leg., det., coll. M. Kuntner. 1 F, SLO: UTM VL74, Taborska stena, 4 km west of Kočevska reka, 950 m, 25.9.1995, on web at a cliff at daytime, leg., det., coll. M. Kuntner. 1 M, SLO: UTM UL93, river bank of the Dragonja river, 2.7.1989, leg., coll. material University of Ljubljana, Department of Biology¹ - BF, det. M. Kuntner. 1 juv., SLO: UTM WM67 Slovenske gorice, Marija Snežna (Zg. Velka), 7.5.1995, on web at the roadside at daytime, leg., det., coll. M. Kuntner. 1 juv., SLO: UTM WM40, Kozjansko, 1.5 km north of the village Kozje, 400-440 m, 1.8.1995, on web in the forest (*Luzulo-Fagetum*) at night, leg. R. Kostanjšek, det., coll. M. Kuntner.

Distribution and endangered status: the Palaearctic species, widespread in Europe, uncommon in Great Britain, rare in northern Europe, recorded in Croatia, Italy, Austria, Hungary, Germany, Switzerland and the Czech Republic. In Bavaria it has the status of endangered species (Blick & Scheidler 1992).

Comments: *Araneus angulatus* is the type species of the genus *Araneus*. The species has not been recorded in Slovenia due to the sparse knowledge of the web building spiders of the country. Scarce data on the species distribution in Slovenia make any conclusions about its endangered status impossible. The specimens of both sexes collected from two neighbouring localities in Southern Slovenia (near Kočevska Reka) are uncharacteristically dark in comparison to the descriptions and the material from other localities.

Larinioides folium (Schrank, 1803)

1981 *Cyphepeira cornuta*: Nikolić, Polenec, Cat. Faun. Jugosl. III/4 Araneae, p. 61.

Material: 1 M, 2 FF, 1 juv., SLO: UTM WL58. Jovsi, Kapele, 140 m, 4.8.1995, leg. S. Polak, det. M. Kuntner, coll. Notranjski muzej, Postojna.

Distribution and endangered status: the species is distributed in Southern Europe and North Africa. It is rare in Central Europe, found in dry localities unlike the similar species *Larinioides cornutus* (Heimer & Nentwig 1991). Among the neighbouring countries it has been recorded in northern Italy, Hungary, Germany ((rare in Bavaria (Blick & Scheidler 1992), the Czech Republic) and the Austrian lands of Styria and Burgenland. Eastern Austria probably is the border of distribution for the both above mentioned species (Kropf pers. comm.).

Synonymies and comments: Nikolić and Polenec (1981) recognize *Larinioides folium* and *L. cornutus* as one species: *Cyphepeira cornuta* (Clerck, 1757). The species is recorded in Croatia, but not in Slovenia. The finding of the other species *Larinioides cornutus*, more common of the two, is also expected in Slovenia.

***Larinioides sclopetarius* (Clerck, 1757)**

1981 *Cyphepeira sericata*: Nikolić, Polenec, Cat. Faun. Jugosl. III/4 Aranea, p. 61.

Material: 2 MM, 4 FF, SLO: UTM VM60. Ljubljana-Centre, at the Ljubljana river, 300 m, on webs at night, 26.8.1994, leg., det., coll. M. Kuntner.

Distribution: the species has Holarctic distribution. In Europe it is sporadically common on rocks, walls and bridges near running waters (Heimer & Nentwig 1991). It has been recorded in the Quarner region of Croatia, in Italy, Austria, Hungary, Germany, Switzerland and the Czech Republic.

Comments and observations: the finding of this common European species in Slovenia is not surprising. In the centre of Ljubljana large numbers of spiders were observed in the summer 1994 and 1995. They build their orb webs near the Ljubljana river, on walls, bridges, inside telephone booths etc. Adult males have been observed entering females' webs where they mate (pers. obs.).

Family Corinnidae

***Trachelas maculatus* Thorell, 1875**

Material: 1 F, SLO: UTM VM60 Ljubljana - Bežigrad, 300 m, inside a house, 11.11.1994, leg. M. Škoberne, det. J. Wunderlich, coll. M. Kuntner.

Distribution and endangered status: Platnick (1989) cites the species distribution as Eastern Europe and former USSR. Mikhailov (1987) discusses the species as a rare Mediterranean one, described from the Crimea (Ukraine), with recent material collected in Crimea and Bulgaria and erroneously noted in Turkmenia. Mikhailov divides Mediterranean spiders of the genus *Trachelas* into two groups of species: '*maculatus*' and '*minor*'. The species *T. maculatus* has been also recorded in Croatia and Hungary, but not in other neighbouring countries of Slovenia, which makes the new locality in Slovenia the westernmost known finding of this rare species.

Comments: this is the first record of the spider family Corinnidae in Slovenia.

Family Dictynidae

***Dictyna uncinata* Thorell, 1856**

Material: 2 FF, SLO: UTM WL58, Dobrava, Kapele, 200 m, 4.8.1995, leg. S. Polak, det. M. Kuntner (confirmed by J. Wunderlich), coll. Notranjski muzej, Postojna.

Distribution: the Palaearctic species is widespread and common in Europe, already recorded in Croatia, Italy, Austria, Hungary, Germany, Switzerland and the Czech Republic.

Comments: one of the two collected females has an atypical epigyne and might belong to another species.

Family **Oxyopidae**

Oxyopes heterophthalmus Latreille, 1804

Material: 2 FF, SLO: UTM UL94/VL04, Koper, sea level, June 1974, leg., coll. material University of Ljubljana, Department of Biology - BF, det. M. Kuntner.

Distribution: the northern distribution limits of the Mediterranean species are Great Britain and Austria (Heimer & Nentwig 1991). Recorded in Croatia, Italy, Hungary. The old findings in the Austrian Styria are doubtful (Thaler pers. comm.; Kropf pers. comm.). The species is common in France and the Netherlands (Roberts 1995) and also recorded in Germany.

Comments: except for the Slovenian Adriatic coast, the species is probably present in other parts of the country, where it might have been overlooked.

Family **Salticidae**

Leptorchestes berolinensis (C. L. Koch, 1846)

Synonymies: *Leptorchestes berolinensis* and *L. cinctus* Thorell represent two species (*sensu* Platnick 1993).

Material: 1 F, SLO: UTM VM60, Ljubljana, Bežigrad, outer wall of a house, 300 m, 17.6.1994, leg., det., coll. M. Kuntner. 1 F, SLO: UTM VM50, Ljubljana, Šiška, inside an apartment, 300 m, 8.5.1995, leg. G. Antauer, det., coll. M. Kuntner. 1 subad. M, SLO: UTM VL69, Ljubljana, Murgle, inside a house, 300 m, 13.5.1995, leg., det., coll. M. Kuntner. 1 juv., SLO: UTM VM60, Ljubljana, inside a car, 29.7.1995, leg. M. Bedjanič, det., coll. M. Kuntner.

Distribution: recorded e.g. in Italy, Switzerland, Germany, the Czech Republic and Poland.

Comments: according to Roewer (1942), Platen *et al.* (1995) and Maurer and Hänggi (1990), but not according to Platnick (1993), the names *Leptorchestes berolinensis* and *L. cinctus* are synonyms. Polenec (1989) recorded one specimen of the species *Leptorchestes cinctus* in Slovenia (Puštal in the Škofjeloško pogorje).

Family **Segestriidae**

Segestria florentina (Rossi, 1790)

Material: 3 juv., SLO: UTM UL84, Piran, on the wall of the Morska biološka postaja near the sea, 3 m, 21.6.1994, leg., det., coll. M. Kuntner. 2 MM,

1 F, 6 juv., SLO: UL84, Piran, on the wall of the Morska biološka postaja and adjacent buildings near the sea, 3 m, 19.9.1995, leg. M. Kuntner, I. Šereg, det., coll. M. Kuntner. 1 F, SLO: UTM UL93, Sečovlje-soline, 2 m, on a wall of a deserted house near the sea, 19.9.1995, leg., det., coll. M. Kuntner.

Distribution: Central and Southern Europe, Atlantic islands (Roewer 1942). The findings of the species in northern Europe and Great Britain are mainly confined to the harbours (Roberts 1995). The species has been recorded in Croatia (Dalmatia) and Italy. In central Europe it is known from Germany and Switzerland. The spider is abundant on the Slovenian Adriatic coast and it is believed that it is there indigenous. How far inland the distribution of the species goes is still to be examined in Slovenia.

Observations: at investigated localities many webs of this species were observed, webs were also observed on 31 December 1995 in the village of Padna, 7.5 km inland of the Adriatic coast, at the elevation of 215 m above sea level. A silken lair of an adult male caught at the second mentioned locality was examined. The dry arthropod remains show that the diet of the spider was mainly composed of ants and isopods ((Formicidae - more than 100, Isopoda (Oniscidea) - 25) but also of Coleoptera (5 adults and 7 larvae, of them alive - may not be spider's prey), Diplopoda (6), Hymenoptera (5), Araneae (2).

Family Theridiidae

Episinus maculipes Cavanna, 1876

1981 *Episinus maculipenis*: Nikolić, Polenec, Cat. Faun. Jugosl. III/4 Aranea, p. 26.

Material: 11 FF, SLO: UTM WM40, Kozjansko region, 1.5 km north of Kozje, 400-440 m, forest (*Luzulo-Fagetum*), on webs at night, 31.7.-1.8.1995, leg. M. Kuntner, G. Antauer, S. Polak, I. Baxter, C. Fišer, R. Kostanjšek, det., coll. M. Kuntner.

Distribution: the southern and eastern European species, recorded in Germany, France, England (Roberts 1995) and in Italy.

Comments: the finding of the Mediterranean species in eastern Slovenia is somewhat surprising. It is probably also present in other parts of the country, especially in the south-western Submediterranean region. It is surely present in Croatia, though not listed by Nikolić and Polenec (1981). Nikolić and Polenec (1981) list the species as *Episinus maculipenis*.

Family Thomisidae

Misumenops tricuspidatus (Fabricius, 1775)

1991 *Misumenops tricuspidata*: Heimer, Nentwig, Spinn. Mitteleur., p. 472.

Material: 1 subad. F, SLO: UTM WM41, Sotelsko jezero, 2.5 km north-east of Podčetrtek, 210 m, 30.7.1995, leg., det., coll. S. Polak.

Distribution and endangered status: the Palaearctic species, widespread in Europe apart from Great Britain and Scandinavia. In Austria it is common at

low altitudes on vegetation near rivers (Thaler pers. comm.). It has also been recorded in Croatia, Italy, Hungary, Germany, Switzerland and the Czech Republic. In Bavaria the species is rare (Blick & Scheidler 1992).

Comments: it is believed that the species is widespread but overlooked in Slovenia.

Pistius truncatus (Pallas, 1772)

Material: 1 F, SLO: UTM WM41, Olimski Rog, 3 km SW of Podčetrtek, 270 m, 30.7.1995, leg. S. Lešnik, det., coll. M. Kuntner.

Distribution and endangered status: the Palaearctic species, widespread but not common in Europe (Heimer & Nentwig 1991), recorded in Croatia, Italy, Austria, where it is rare (Thaler, pers. comm.), Hungary, Germany, Switzerland and the Czech Republic. In Bavaria the species is rare (Blick & Scheidler 1992). In Great Britain only two records of the species in the last 100 years exist (Roberts 1995).

Comments: it is believed that this so far overlooked species is widespread in Slovenia. With the data available today any possible endangered status of similarly poorly known species in Slovenia is impossible to determine.

OTHER INTERESTING FINDINGS

Family Amaurobiidae

Coelotes inermis (L. Koch, 1855)

Material: 1 F, SLO: UTM VM61, Rašica. 500 m, forest ground, 7.4.1995, leg., det., coll. M. Kuntner.

Distribution and comments: the finding itself has no special importance. Of interest is the lack of the left anterior median eye, whereas all other eyes of the specimen are normally developed. The genus *Coelotes* has been traditionally included in *Agelenidae* (Nikolić & Polenec 1981; Heimer & Nentwig 1991; Roberts 1995).

Family Argyronetidae

Argyroneta aquatica (Clerck, 1757)

Material: 3 juv., SLO: UTM VL56, the lake of Cerknica (Cerkniško jezero), May, 1969, leg., coll. material University of Ljubljana, Department of Biology - BF, det. M. Kuntner.

Distribution and endangered status: the Palaearctic species, widespread in Europe, recorded in Slovenia (Nikolić & Polenec 1981), but rarely found. In Slovenia, Polenec (1992) lists the species as vulnerable, whereas in Bavaria it is highly endangered (Blick & Scheidler 1992). A 1995 survey showed depleting localities of the species in Great Britain (Baxter pers. comm.).

Comments: due to the facts that *Argyroneta aquatica* is the only real aquatic spider in the world and its habitats are threatened today, every finding of this interesting species is worth recording.

Family Oecobiidae

Uroctea durandi (Latreille, 1809)

Material: 1 F, SLO: UTM UL93, Sečovlje, 1991, leg., coll. material University of Ljubljana, Department of Biology - BF, det. M. Kuntner.

Distribution, endangered status and comments: the Mediterranean species (Platnick 1989), recorded in Slovenia, the Adriatic coast of Croatia and in Italy. In Slovenia it is rare (Polenec 1992).

Family Scytodidae

Scytodes thoracica (Latreille, 1804)

Material: 2 FF, SLO: UTM UL94, Belvedere near Izola, 100 m, 15.7.1994, pitfall traps, leg., det., coll. M. Kuntner. 1 F, SLO: UTM VL69, Ljubljana, Murgle, inside a house, 22.11.1994, leg., det., coll. M. Kuntner. 2 FF, SLO: UTM VL69, Ljubljana, Galjevica, inside a house, 15.5.1996, leg., det., coll. M. Kuntner.

Distribution, endangered status and comments: the Holarctic species occurs in Central and Southern Europe - mainly synanthropically (Heimer & Nentwig 1991). In Slovenia it is very common inside houses (Kuntner unpubl.), but it has been rarely observed in the wild. Polenec (1992) lists the species as rare in Slovenia.

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