

# New records of jumping spiders (Araneae: Salticidae) for Slovenia\*

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**Abstract.** Eight species of jumping spiders, new for Slovenian fauna have been recorded: *Aelurillus v-insignitus* (Clerck, 1758), *Icius subinermis* Simon, 1937, *Phlegra bresnieri* (Lucas, 1846), *Phlegra cinereofasciata* (Simon, 1868), *Pseudeuophrys vafra* (Blackwall, 1867), *Salticus unciger* (Simon, 1868), *Sitticus inexpectus* Logunov & Kronstedt, 1997, *Sitticus terebratus* (Clerk, 1757).

Keywords: jumping spiders, Salticidae, Slovenia

**Izveček. NOVE NAJDBE PAJKOV SKAKAČEV (ARANEAE: SALTICIDAE) V SLOVENIJI** - Prispevek obravnava osem, do sedaj v Sloveniji še neodkritih vrst pajkov skakačev: *Aelurillus v-insignitus* (Clerck, 1757), *Icius subinermis* Simon, 1937, *Phlegra bresnieri* (Lucas, 1846), *Phlegra cinereofasciata* (Simon, 1868), *Pseudeuophrys vafra* (Blackwall, 1867), *Salticus unciger* (Simon, 1868), *Sitticus inexpectus* Logunov & Kronstedt, 1997, *Sitticus terebratus* (Clerk, 1757).

Ključne besede: pajki skakači, Salticidae, Slovenija

## Introduction

With more than 5000 species (Platnick 2005), the jumping spiders (family Salticidae) represent the most diverse spider family in the World. Although most of the jumping spiders are tropical and only about 100 species are recorded in central Europe, the family is still among the numerous in Europe (Blick et al. 2004).

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\* In October 2003 Luděk Jindřich Dobroruka from Prague kindly offered us his unpublished data on jumping spiders collected in Slovenia, including the previously unrecorded *Phlegra cinereofasciata* Simon, 1868. The correspondence was leading towards a joint publication on Slovenian jumping spiders, but was broken with a sudden death of our Czech colleague in July 2004. We dedicate the paper to his memory

So far 57 species of jumping spiders have been recorded in Slovenia (Nikolić & Polenec 1981, Polenec 1982, 1988, 1992, Kuntner 1997, Fišer & Kostanjšek 2001, Kuntner & Šereg 2002). This is fairly high compared to 136 recorded species in Italy (Stoch 2003), 80 in Germany, 75 in Switzerland, 68 in Czech Republic, 74 in Slovak Republic, 71 in Austria (Blick et al. 2004), 64 in Hungary (Samu & Szinetár 1999), 82 in Croatia (Nikolić & Polenec 1981) and 49 in Serbia (Detshev et al. 2003), considering Slovenia's small area.

According to the existing checklist (Nikolić & Polenec 1981) and previous records on jumping spiders in Slovenia cited above, eight species were established to be new for Slovenian fauna and are listed here. The nomenclature follows Platnick (2005). For each species data on the collected material including the description of the collecting site (with altitude in meters, latitude and longitude in Gauss-Krüger coordinates) and the date, followed by data on distribution of the species in other countries in the area and comments on the findings are given. If not stated otherwise the specimens are deposited in the collection of Department of Biology, Biotechnical Faculty, University of Ljubljana (Oddelek za biologijo, Biotehniška fakulteta, Univerza v Ljubljani). Specimens, which were donated or obtained from other collections, are listed in the section *New records*.

## New records

### ***Aelurillus v-insignitus* (Clerck, 1757)**

#### **Material:**

1♂ on Mlake in Vipavska dolina, altitude: 210m, coordinates: y: 420408, x: 5076549, 10. 6. 2002, leg.: students of biology., det.: C. Fišer, coll.: the specimen has been donated to Manchester Museum (Dr. D. V. Logunov).

#### **Distribution:**

Trans-Eurasian temperate range (Logunov & Marusik 2000). The species has been recorded throughout Central Europe and in all neighboring countries (Samu & Szinetár 1999, Stoch 2003, Blick et al. 2004) except Croatia.

#### **Comments:**

The species can occur in grey and black color variations.

***Icius subinermis* Simon, 1937****Material:**

1♀ in garden of the restaurant "Pizzeria Lanterna" on Tržaška Road, Ljubljana, altitude: 298 m, coordinates: y: 459987, x: 5099908, 30.9.2004, leg. and det.: C. Fišer.

1♂ in apartment in Tržaška Road 117, Ljubljana, altitude: 298 m, coordinates: y: 459638, x: 5099677, 1.6. 2005 leg. and det.: C. Fišer.

**Distribution:**

Presumably western Mediterranean range (Alicata & Cantarella 1993), although the species has been found in Germany (Platnick 2005) and Switzerland (Blick et al. 2004). Italy is the only country adjacent to Slovenia in which this species has been recorded (Stoch 2003).

***Phlegra bresnieri* (Lucas, 1846)****Material:**

1♀ on Planina Zapirkraj, Kobarid, altitude: 1100 m, coordinates: y: 394392, x: 5127886, 14.7.2002, leg. and det.: C. Fišer.

2♀ at limestone cliff in Stena, Dragonja, altitude: 40 m, coordinates: y: 395504, x: 5035166, 1.5.2003, leg.: Students research camp Dekani '03; det.: R. Kostanjšek.

2♀ on Belvedere, Izola, altitude: 80 m, coordinates: y: 393734; x: 5043866, 31.5.2004, leg. and det.: C. Fišer.

1♀ on the coast near Sv. Katerina, Ankaran, altitude: 0-1 m, coordinates: y: 402308, x: 5048138, 11. 6. 2004, leg. and det.: C. Fišer. Specimens from Stena were donated to Manchester Museum (Dr. D. V. Logunov).

**Distribution:**

Mediterranean range including Southeastern Europe (Metzner 1999) and Tanzania (Platnick 2005). Recorded in Czech Republic (Blick et al. 2004), Italy (Stoch 2003) and Croatia (Nikoloć & Polenec 1981).

***Phlegra cinereofasciata* (Simon, 1868)****Material:**

1♂ in the Secnod World war concentration camp, Ljubelj, altitude: 940 m, coordinates: y: 444180, x: 5143168, 8.7.1995; leg., det. and coll.: L. J. Dobroruka.

**Distribution:**

Central Europe, eastward to the East Caucasus (Azarkina 2003). The species has been recorded in all neighboring countries, Czech Republic and Slovak Republic.

***Pseudeuophrys vafra* (Blackwall, 1867)****Material:**

1♂ in Piran, coordinates: altitude: 20 m, y: 388595, x: 5043761, 1. 10. 2001, leg. and det.: C. Fišer.

1♂ in Fiesa, Portorož, coordinates: altitude: 10 m, y: 389733, x: 5043257, 11.10.2001, leg. and det.: C. Fišer.

1♂ in Mlake, Vipavska dolina, coordinates: altitude: 210 m, y: 420408, x: 5076549, 10. 6. 2002, leg.: students of biology, det.: C. Fišer.

**Distribution:**

South European range including Azores and Madeira (Platnick 2005), with easternmost locality in the Crimean Peninsula in Ukraine (Logunov 1998). Recorded in Switzerland, Slovak Republic (Blick et al. 2004), Italy (Stoch 2003), Hungary (Samu & Szinetár 1999) and Croatia (Nikolić & Polenec 1981).

***Salticus unciger* (Simon, 1868)****Material:**

1♀ in Fiesa, Piran, altitude: 10 m, coordinates: y: 389733, x: 5043257, 28.7.2002, leg. and det.: C. Fišer.

1♀, forest along the path to cave Osapska jama, Osp, altitude: 60 m, coordinates: x: y: 411643, 5048155, 20.7.2004, leg: students summer research camp Dekani 2004, det.: C. Fišer.

Specimen from Fiesa was donated to Manchester Museum (Dr. D. V. Logunov).

**Distribution:**

Southern European range (Hansen 1994). Recorded in Italy (Stoch 2003) and Switzerland (Blick, 2004).

***Sitticus inexpectus* Logunov et Kronstedt, 1997****Material:**

1♀ collected on the coast of Cerknjiško jezero, Cerknica, altitude: 200 m, coordinates: y: 450417, x: 5069897, 10. 6. 1993, leg. M. Kuntner, det.: D. V. Logunov, coll.: M. Kuntner.

**Distribution:** Euro-Siberian to Central Asian temperate range (Logunov & Marusik 2000). The species is common in lowlands near water sources including seashores (Nentwig et al. 2003). Recorded in Germany, Poland and Austria (Blick et al. 2004).

***Sitticus terebratus* (Clerk, 1757)****Material:**

1♀ on a meadow, 50 m N from crossing for Gornja Paka at the road Črnomelj-Semič, altitude: 250 m, coordinates: y: 513692, x: 5051388, 26.7.2001, leg.: Students summer research camp Semič 2001, det.: R. Kostanjšek.

**Distribution:**

Euro-Siberian temperate range (Logunov & Marusik 2000), rarely found in northern Europe (Nentwig et al., 2003). Recorded from Germany, Switzerland, Czech Republic, Slovak Republic and Poland (Blick et al. 2004). Among adjacent countries the species has been recored in Austria (Blick et al. 2004) and Italy (Stoch 2003).

**Discussion**

Some of the species listed above, like *Aelurillus v-insignitus*, *Phlegra cinereofasciata*, and *Pseudeuophrys vafra*, were expected in Slovenia, which fits their presumable distribution range, whereas other species like *Icius subinermis* and *Salticus unciger* come as a surprise. The presence of western Mediterranean species *I. subinermis* in a garden on one of the busiest streets in Ljubljana was surprising, and the species seemed to be exotic for the area, like e.g. *Saitis barbipes* in the Netherlands (van Helsdingen 2000), or the scorpion *Euscorpius italicus* in Ljubljana (Fet et al. 2001). However, a male of *I. subinermis* collected in Ljubljana a year later indicates a more firm presence of the species in central Slovenia, representing therefore the eastern margin of the species range. The same might be true for *S. unciger*, for which Slovenia represents one of the most northern records for the species (Hansen, 1994).

With 3,2 jumping spider species per 1000 km<sup>2</sup> Slovenia is the richest country among central European and Balkan countries. Caution is recommended in such overall comparisons due to underestimation of species richness in countries with poorly known spider faunas. However, the following well studied countries may be compared to Slovenia: Germany with 0,22 species per 1000 km<sup>2</sup>, Austria (0,85) and Switzerland (1,81). The above figure may seem to indicate a well known jumping spider fauna in Slovenia. However, this may be true only for southern parts of Slovenia, where extensive field studies in Primorska region have taken place in the recent years. More species are expected in other, less studied regions in Slovenia, and our earlier prediction (Fišer & Kostanjšek 2001) on additional 20-30 species of jumping spiders for Slovenian fauna, may be even underestimated.

## Povzetek

Prispevek dopolnjuje seznam 57 poznanih vrst slovenskih pajkov skakačev z osmimi, v Sloveniji do sedaj še neodkritimi vrstami. To so: *Aelurillus v-insignitus* (Clerck, 1757), *Icius subinermis* Simon, 1937, *Phlegra bresnieri* (Lucas, 1846), *Phlegra cinereofasciata* (Simon, 1868), *Pseudeuophrys vafra* (Blackwall, 1867), *Salticus unciger* (Simon, 1868), *Sitticus inexpectus* Logunov & Kronstedt, 1997 in *Sitticus terebratus* (Clerk, 1757). S tem se skupno število poznanih skakačev v Sloveniji postopoma približuje številu skakačev v sosednjih državah z bolj raziskano favno pajkov. Kljub temu, pa lahko, ob intenzivnejši inventarizaciji pajkov, zlasti v predelih Slovenije s slaše poznano favno pajkov, pričakujemo nadaljne nove najdbe pajkov skakačev v Sloveniji.

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