

***Tetragnatha shoshone* LEVI, 1981, a new spider species of longjawed orbweavers (Araneae, Tetragnathidae) in Poland**

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ABSTRACT. *Tetragnatha shoshone* is a rare spider species known for North America and Europe. The new site of *T. shoshone* was found in the middle-eastern Poland on the edge of Siedlce town in reed rushes of fishponds. The species can be considered as a specialist inhabits mainly habitats with tall rushes and it has been collected very rare. Further detailed study in such habitats is postulated.

KEY WORDS: rare species, eulittoral spiders, distribution, *T. shoshone*.

INTRODUCTION

Tetragnatha shoshone is a rare spider species of longjawed orbweavers (Tetragnathidae) and builds its horizontal webs above water surface in rushes of lakes and ponds (LEVI 1981, UHL et al. 1992, DONDALE 2003, ALMQUIST 2005). The species is known for North America and Europe (PLATNICK 2008) (Fig. 1). In North America it has been recorded from only 25 sites from Northwest Territories in Canada to California in USA (LEVI 1981, DONDALE et al. 2003) (Fig. 2). Similarly in Europe it has been collected also from 25 sites those spreads from southern Sweden (ALMQUIST 2005) across Germany (review in STAUDT 2008), Austria (KOMPOSCH 1995), Czech Republic (RŮŽIČKA, HOLEC 1998), Slovakia (GAJDOŠ et al. 1999), Hungary (SZINETÁR 2000) to Romania (UHL et al. 1992). The new site of *T. shoshone* was found in the middle-eastern Poland on the edge of Siedlce town in rushes of fishponds (Fig. 3).

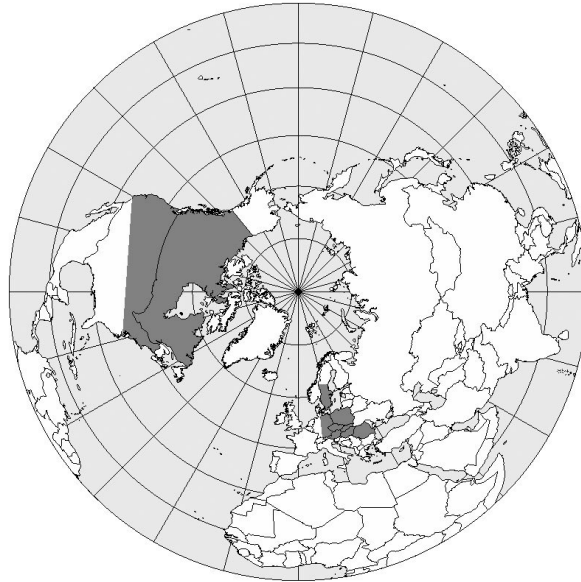


Fig. 1. Distribution of *Tetragnatha shoshone* LEVI, 1981.



Fig. 2. Distribution *Tetragnatha shoshone* in North America (after DONDALE et al. 2003).



Fig. 3. Distribution of *Tetragnatha shoshone* in Europe.

MATERIAL

Tetragnatha shoshone – 2 specimens, Siedlce, Poland leg./det. I. HAJDAMOWICZ

1) 1 male - 30.05.2006; total length – 8.3 mm (Fig. 4-6)

2) 1 male - 15.06.2008; total length – 9.2 mm

The spiders were caught with an entomological net in reed rushes of fishponds (52°11' N, 22°18' E). The complex of the ponds is located in the South Podlasie Lowland on the outskirts of Siedlce town. The main plant communities of eulittoral zone of fishponds were: tall rushes - *Phragmitetum australis*, *Typhetum angustifoliae*, *Typhetum latifoliae*, and short rushes - *Caricetum gracilis*, *Caricetum acutiformis*, *Equisetum fluviatilis* (detailed description of the site in HAJDAMOWICZ & JASTRZĘBSKI 2007).

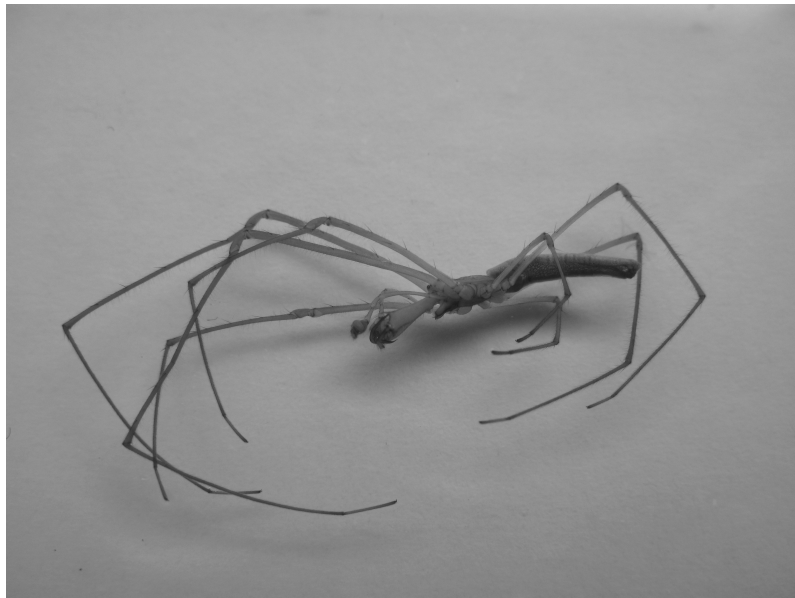


Fig. 4. *Tetragnatha shoshone* – male, the Polish specimen. (Photo by I. HAJDAMOWICZ).



Fig. 5. Pedipalps and chelicerae of a male of *T. shoshone* – the Polish specimen. (Photo by M. STAŃSKA).

DIAGNOSTIC FEATURES

The first two pairs of carapace appendages - chelicerae and pedipalps, and carapace and legs of the males of *T. shoshone* are yellowish. Whereas an abdomen is brownish and it is covered with small silver spots. The females coloration resembles coloration of males (LEVI 1981). According to the literature (LEVI 1981, UHL et al. 1992, ALMQUIST 2005), the total length of male's body measures between 5.4-9.9 mm and female's – 8.6-10.3 mm.

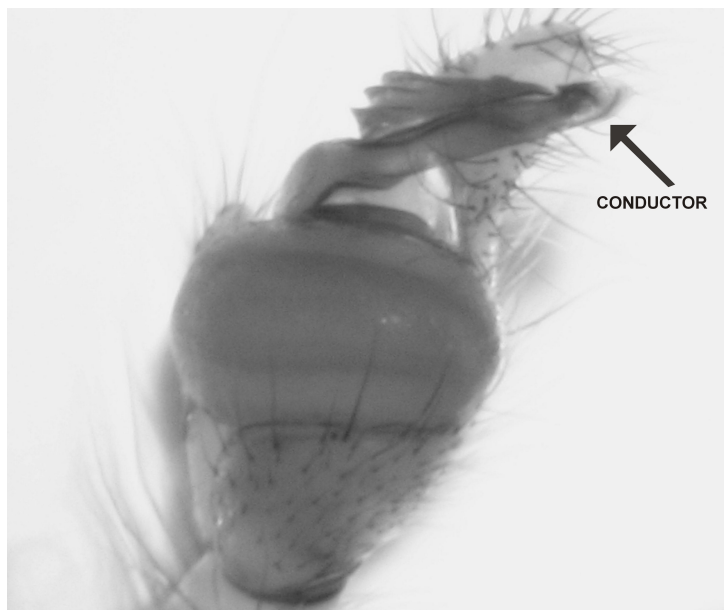


Fig. 6. Pedipalp of a male of *T. shoshone* – the Polish specimen (Photo by M. STAŃSKA).

The male's carapace is 2.2-3.11 mm long, 1.4-1.89 mm wide. And female's carapace is 2.6-3.2 mm long, 1.7-2.2 mm wide. On the other hand the male's legs are usually longer than female's. The longest first pair of male's legs (from femur to tarsus) is 17.6-30.1 mm long, females 17.3-28.1 mm long (LEVI 1981, UHL et al. 1992, ALMQUIST 2005). The species can be distinguished by copulative organs. Males can be separated by their pedipalps - shape of conductor (Figs 5,6); females by inner sexual organs - seminal receptacles (LEVI 1981, UHL et al. 1992, ALMQUIST 2005).

DISCUSSION

Tetragnatha shoshone was described just less than thirty years ago by LEVI (1981). Despite the fact that the species belongs to quite big web spiders it has been collected very rarely (LEVI 1981, UHL et al. 1992, DONDALE 2003, ALMQUIST 2005). One of the reason can be that it occurs in inaccessible habitats by people – rushes of eulittoral part of a body of water. The Polish site is located about four hundred kilometers from the known European sites of this species. After more detailed study of such habitats in Poland and other countries we can expect further findings. In Germany there were conducted studies on distribution of *T. shoshone* in three belts of rushes zone. The species was the most abundant in the most remote belt of dens reeds. It has been occurred also in the middle belt of thin reeds and sedges. Whereas in the nearest belt of sedges the most abundant was *T. reimoseri* (ROSCA, 1939) and in the middle belt - *T. striata* (KOCH, 1862) (UHL et al. 1992). *T. shoshone* can be considered as a specialist inhabits mainly habitats with *Phragmites communis*, but also with *Cladium mariscum*, *Typha* sp., and *Schoenoplectus lacustris* (UHL et al. 1992, HOLEC 2000).

The vegetation of eulittoral zone of the fishponds in Siedlce provides suitable habitats for *T. shoshone* similarly like for rare *Tetragnatha reimoseri* that has been collected for 10 years in this place. The ponds because of their natural value are important for country as a nesting and resting place for waterfowl (review in HAJDAMOWICZ & JASTRZEBSKI 2007).

Generally the European specimens of *T. shoshone* are bigger and they have relatively longer legs than Nearctic's specimens (LEVI 1981, UHL et al. 1992, ALMQUIST 2005). UHL et al. (1992) reported that the first pair of legs of both sexes in Germany is 9-10 times longer than width of their carapace, while the factor for North American specimens is 7-9. The observed differences should be confirmed yet by further studies, because of small number of checked specimens.

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