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ZOOLOGY

Meioneta mossica Schikora 1993 in Poland (*Araneae: Linyphiidae*)

by

Janusz KUPRYJANOWICZ*, Alicja STANKIEWICZ* and Izabela HAJDAMOWICZ**

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Summary. *Meioneta mossica* is a species rare in Polish fauna. It was found in 5 bog localities of eastern Poland. A diagnosis, description and habitat in Poland are given.

Key words: *Meioneta mossica*, bogs, habitat, description, Biebrza National Park, Polesie National Park, Wigry National Park.

Meioneta mossica Schikora is a newly described species which, to date, has not been discriminated from *Meioneta saxatilis* (Blackwall) [2–4]. Schikora was the first, who described it from southern Sweden. *M. mossica* was also recorded from south-west Finland, Estland, Kaliningrad Region of Russia, Germany and northern England [3, 4]. Another two localities were given from Wigry and Biebrza National Parks in north-eastern Poland [1]. The centre of its distribution is localised in northern part of Europe. It prefers oligotrophic, insolated bog biotops predominated by *Sphagnum* in moss layer, in contrast to eurytopic *M. saxatilis*, which lives in great variety of habitats [4].

Meioneta mossica Schikora, 1993

Material. Poland. Biebrza National Park: Skieblewo (UTM FE 55) 8.05.1994, peat-bog, 1 male; Czerwone Bagno Reserve (UTM FE 24) 20.05.1994, ecotone:

*INSTITUTE OF BIOLOGY, BRANCH OF THE WARSAW UNIVERSITY, ŚWIERKOWA 20 B, 15-950 BIAŁYSTOK
(UNIWERSYTET WARSZAWSKI, FILIA W BIAŁYMSTOKU)
**AGRICULTURAL AND TEACHERS UNIVERSITY, INSTITUTE OF BIOLOGY, DEPARTAMENT OF ZOOLOGY, PRUSA 12, 08–110 SIEDLCE
(INSTYTUT BIOLOGII , ZAKŁAD ZOOLOGII, WSR-P)

sedge rushes-marshy coniferous forest, 1 male, leg. J. Kupryjanowicz. Polesie National Park: Jamniki (UTM FC 40), 21.05.1995, 1 male; 28.07.1995, 1 male, 1 female; 6.05.1995, 1 female; 14.07.1995, 1 femal; Nowiny (UTM FC 50), 28.09.1996, 1 female, leg. I. Hajdamowicz. Wigry National Park, Suche Bagno Reserve (UTM FE 38): 31.05.1993, 2 males, 1 female; 11.07.1993, 1 female; peat-bog, leg. A. Stankiewicz. All of them were collected by means of pitfall traps. They are deposited in Institutes of Biology in Białystok and Siedlce.

Diagnosis. Meioneta mossica is closely related and similar to *Meioneta saxatilis*, but male of *M. mossica* is easy to distinguish under stereomicroscope by the presence of single tooth on paracymbium (Fig. 1). Paracymbium of *M. saxatilis* has 2 teeth (Fig. 2). Lamella characteristica of *M. mossica* is more pointed and elongated than in *M. saxatilis*. It is sharply bent at about right angle of paracymbial pocket [3]. Biometrical comparison shows, that mean ratio *metatarsus I length/prosoma width* in *M. mossica* is 0.95 (s.d.=0.036). In *M. saxatilis* the mean ratio is 1.03 (s.d.=0.044) [3].

Female of *M. mossica* and *M. saxatilis* are very similar and no external structures of epigyne help in determination. They can be discriminated from each other only by detailed examination of vulva (after Schikora):

1. In *M. mossica* the anteriorly-run copulatory ducts are distinctly curved outwards from longitudinal axis, while in *M. saxatilis* copulatory ducts are almost parallel (Figs 3, 4). The x/y ratio (Fig. 3) ranges from 0.65 to 0.82 (mean=0.76, s.d.=0.05) in *M. mossica*, while in *M. saxatilis* ranges from 0.87 to 0.97 (mean=0.92, s.d.=0.03) [4].

2. In *M. mossica* receptacula of vulva are oblique, of their length from the posterior margin. Receptacula of *M. saxatilis* are longitudinally orientated, of their half length from the posterior margin (Figs 3, 4).

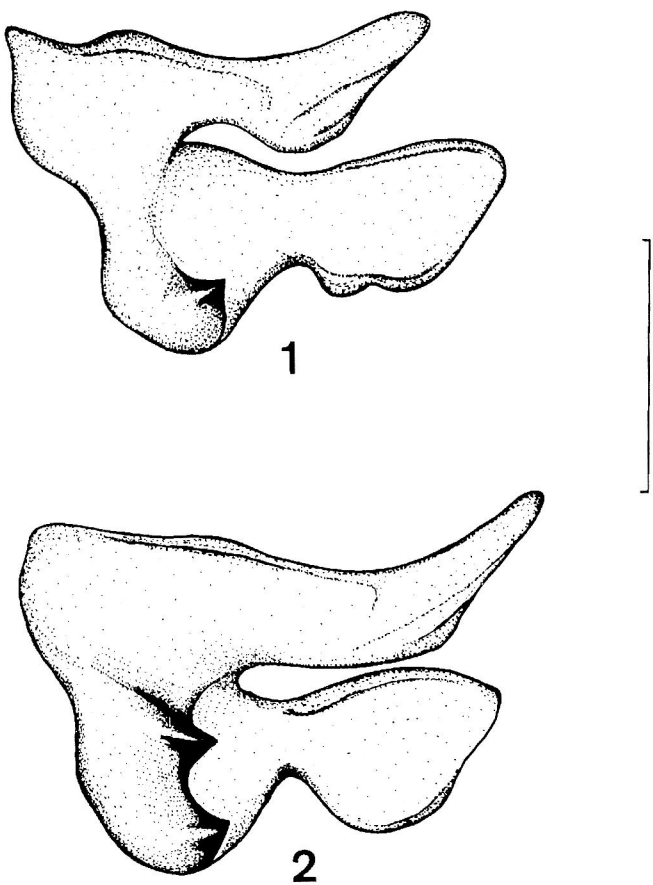
Measurements of vulva of *Meioneta* from eastern Poland show that x/y ratio in *M. mossica* ranges from 0.71 to 0.77, with a mean 0.73 (n=3). The x/y ratio (Fig. 3), based on single measurement of *M. saxatilis* is 0.91. These results coincide with that of Schikora [4].

According to our observations differences in the shape of lamella characteristica of both species are more difficult to see under stereomicroscope.

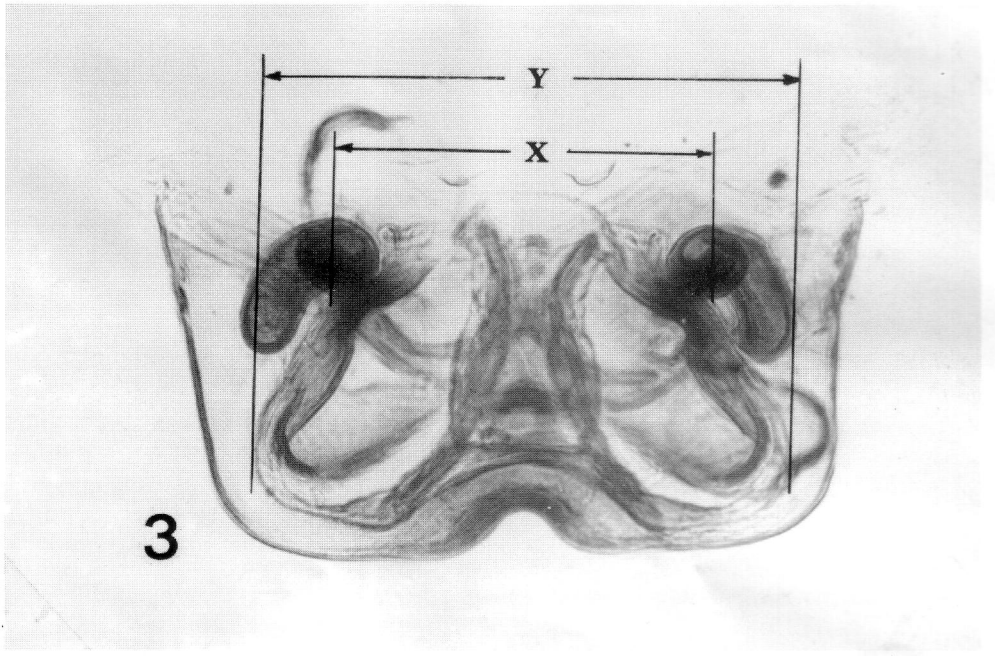
Description. M a l e: total length approximately 1.89 mm (n=5). Carapace length: 0.89 mm, width: 0.68 mm, pale yellow, usually without dark patern in the middle of carapace. Legs: pale yellow. Abdomen length: 1.00 mm, greyish.

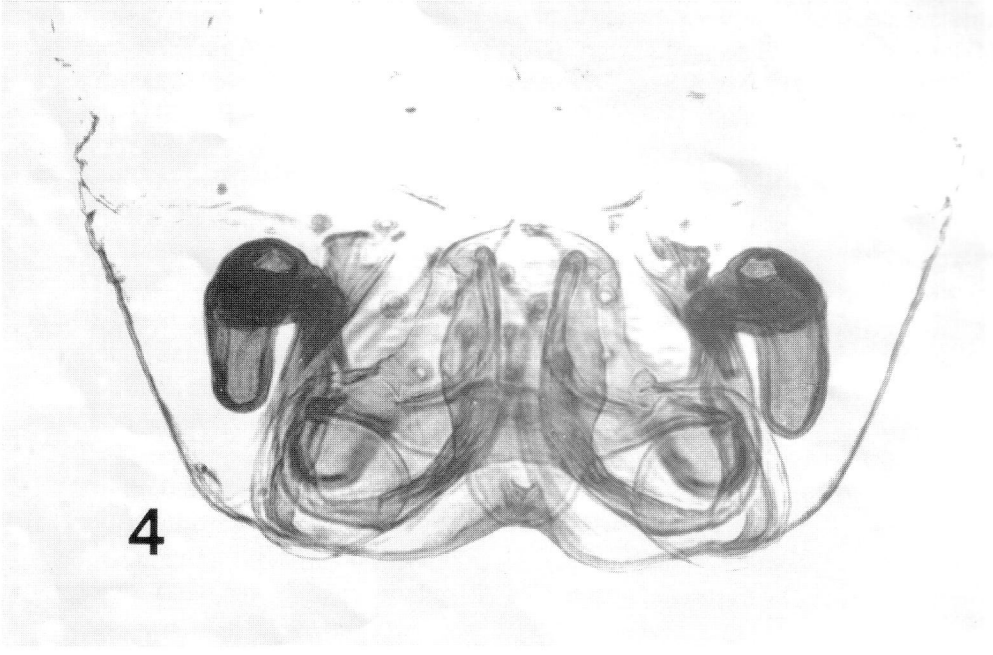
F e m a l e: total length approximately 2.03 mm (n=4). Carapace length 0.80 mm, width: 0.61 mm. Abdomen length: 1.23 mm. Coloration of carapace, legs and abdomen as in male.

Distribution and habitat in Poland. Meioneta mossica is known from 5 localities in eastern Poland. It occupies peat-bogs (*Ledo-Sphagnetum magellanici* association) covered by scrub pine in both Wigry and Polesie National Parks. It is found in the treeless peat-bog (*Sphagnetum magellanici*) and in the ecotone between *Vaccinio uliginosi-Pinetum salicetosum* and *Scorpidio-Caricetum* in Biebrza Na-



Figs 1, 2. Paracymbium of male palp
1 — *Meioneta mossica* Schikora; 2 — *Meioneta saxatilis* (Blackwall); scale line = 0.1 mm





Figs 3, 4. Vulva

3 — *Meioneta mossica* Schikora. Magn. × 320; 4 — *Meioneta saxatilis* (Blackwall). Magn. × 320

tional Park. It lives in moss layer predominated by *Sphagnum recurvum*, where it builds its webs. Nowiny locality in Polesie National Park differs from the others because it represents regenerating stage of a formerly drained low peat-bog. It is dominated by low, annual dicotyledonous plants such as *Bidens cernuus*, *Oenothera aquatica* and *Juncus effusus*. All these sites are not only wet, but also well insolated. Habitats of *M. mossica* in Poland confirm, that insolation is probably the most important environmental factor that affects its distribution. *Meioneta mossica* coexists with *Pardosa sphagnicola* (Dahl), *Pirata uliginosus* (Th.), *Trochosa spinipalpis* (F.P.-C.), *Haplodrassus signifer* (C.L.K.), *Zelotes clivicola* (L.K.) and *Neon valentulus* Falc. in Polish bogs. However its populations are not numerous, *Meioneta mossica* is a constant element of spider communities which live in bog biotops of eastern Poland.

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