

## A new water mite species of the genus *Atractides* Koch from European Russia (Acariformes: Hygrobatidae)

P.V. Tuzovskij

Tuzovskij, P.V. 2004. A new water mite species of the genus *Atractides* Koch from European Russia (Acariformes, Hygrobatidae). *Zoosystematica Rossica*, **13**(1): 1-3.

Female and male of the water mite *Atractides samaricus* sp. n. from a plain river in the Samara Province of Russia are described.

P.V. Tuzovskij. Institute for Biology of Inland Waters of the Russian Academy of Sciences, Borok, Yaroslavl Province, 152742 Russia. E-mail: tuz@ibiw.yaroslavl.ru

The following abbreviations are used: *s*1, proximal sword seta on tibia of leg I; *s*2, distal sword setae on tibia of leg I; *ac*1-3, genital acetabula (anterior, median, posterior).

### ***Atractides* (*Atractides*) *samaricus* sp. n.** (Figs 1-12)

*Holotype*. ♀, **Russia**, *Samara Prov.*, Neftegorsk Distr., Chapaevka River, 2 km upstream from settlement Dmitrievka, 25.V.1990 (P.V. Tuzovskij), slide 6131. The river bottom: silt, detritus, depth 0.3-0.5 m. The holotype is deposited in the collection of Institute for Biology of Inland Waters (Borok, Russia).

*Paratypes*. 2 ♀, 1 ♂, collected with the holotype.

*Description* (nomenclature of body setae according to Tuzovskij, 1987). *Female*. Colour yellow-brown. Body flat, oval; integument with thin wrinkles. Setae Fch (Fig. 1), Oe, Hi, He long and thick; other body setae short and thin. Coxae of legs in mature specimens cover less than half of ventral surfaces (Fig. 2). Posteromedial margin of coxae I+II convex. Suture line between coxae I clearly developed; apodeme short. Coxae IV trapezoid, their medial margins slanting. Setae Pi separated from setae Ci. Anal opening without secondary sclerotization.

Genital opening 1.5 times as long as genital plates. Genital plates narrow, with 11-13 thin setae; acetabulae arranged in arcuate line (Fig. 3-4). Anterior genital sclerite almost twice as wide as posterior sclerite.

Chelicera with large basal segment and short stylet (Fig. 5).

Pedipalp (Fig. 6) slender; trochanter short, with a single dorsodistal seta; femur with straight ventral margin and with 5 dorsal setae. Pedipalpal genu with slightly concave ventral margin, with 4 thick and 3 thin setae. Ventral setae subdivide

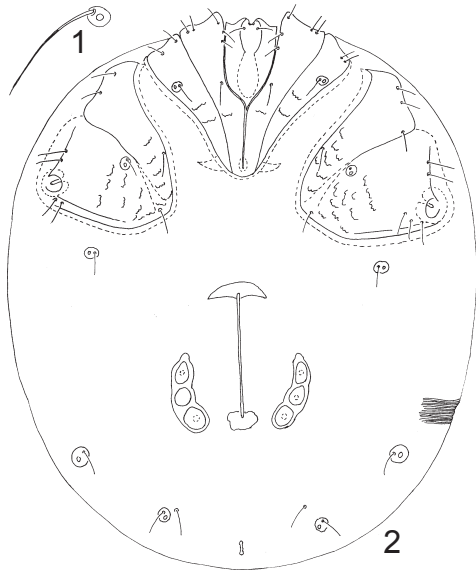
ventral margin of pedipalpal tibia in proportion 2 : 3 : 2; sword seta placed near venrodistal seta; dorsal solenidia not numerous and located mainly in distal half of tibia.

The tibia of leg I (Fig. 7) thickened distally; seta *s*2 shorter and wider than seta *s*1; setae *s*1 with roundish tip; setae *s*2 with sharp tip. Posterior legs, especially legs IV, slender; tibia of legs III-IV with 2 swimming setae, diameter of these setae half the thickness of distal setae (Fig. 8). Ambulacrae with 3 clawlets; ventral margin of lamella concave (Fig. 9).

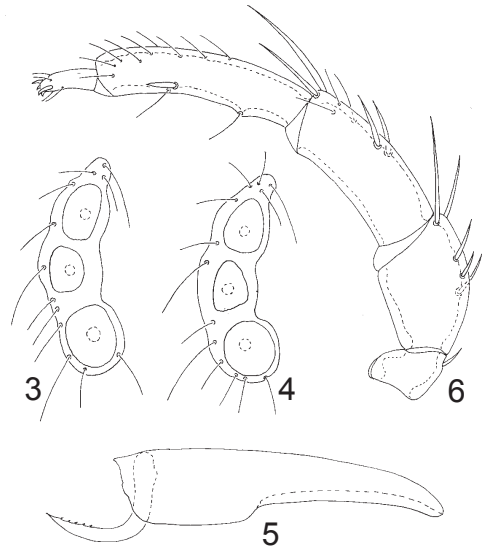
Measurements, µm. Length of body 730-900; length of coxae I+II 205-210, width 245-270; length of medial portion of coxae I 90-105; length of coxae III+IV 210-225, width 180-195; length of genital plates 95-105, width 30; lengths of genital acetabulae (*ac*1-3): 24-30, 21-24, 27-30; length of basal segment of chelicera 150, length of stylet of chelicera 55; lengths of pedipalpal segments: 33, 65-75, 80-90, 95-105, 32, distance between ventral setae of pedipalpal tibia 36-42, length of sword seta 15-18; lengths of leg segments (1-6): I – 55-60, 95-105, 115-130, 185-195, 185-195, 110-115; II – 55-60, 80-100, 90-105, 135-140, 145-165, 130-145; III – 55-60, 90-100, 105-115, 150-165, 180-190, 150-160; IV – 105-115, 120-140, 160-165, 210-230, 225-245, 205-220; length of setae *s*1 84-96, width 9-12; length of setae *s*2 72-78, width 15; distance between setae *s*1 and *s*2 9-12.

*Male*. Similar to female, but differing in smaller sizes, structure of genital plates and armament of pedipalpal tibia.

Suture line between coxae I clearly developed only in their anterior half (Fig. 10). Genital plates (Fig. 11) wide, fused by anterior and posterior ends, with 20-25 thin setae; posterior acetabulae



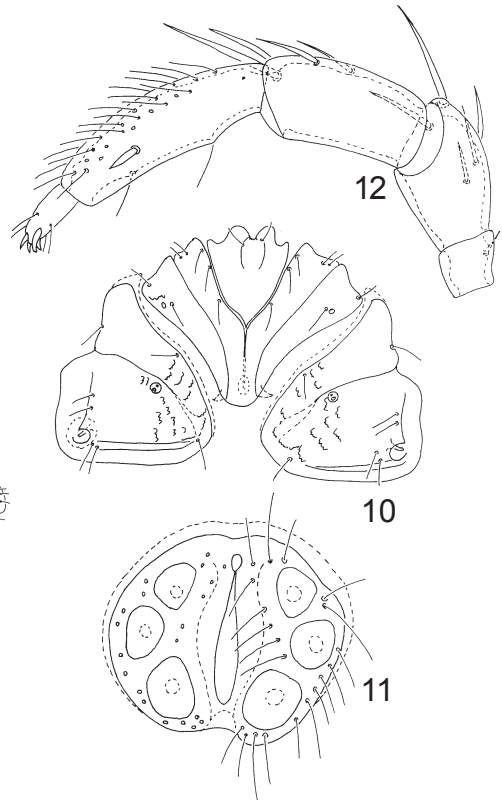
**Figs 1-2.** *Atractides samaricus* sp. n., female: 1, seta Fch; 2, body, ventral view.



**Figs 3-6.** *Atractides samaricus* sp. n., female: 3-4, genital plate; 5, chelicera, lateral view; 6, pedipalp, lateral view.



**Figs 7-9.** *Atractides samaricus* sp. n., female: 7, distal part of genu, tibia and tarsus of leg I; 8, genu, tibia and tarsus of leg IV; 9, ambulacra IV.



**Figs 10-12.** *Atractides samaricus* sp. n., male: 10, coxal plates; 11, genital field; 12, pedipalp, ventrolateral view.

larger than anterior and medial ones. Tibia of pedipalp (Fig. 12) with numerous solenidia located on all of its dorsal surface.

Measurements,  $\mu\text{m}$ . Length of body 570; length of coxae I+II 190, width 260; length of medial portion of coxae I 85; length of coxae III+IV 190, width 180; length of genital plates 90, width 102, length of genital acetabulae (*ac*1-3): 18-21, 21-24, 27-30; length of basal segment of chelicera 115, length of stylet of chelicera 50; lengths of pedipalpal segments: 28, 64, 70, 94, 29; distance between ventral setae of pedipalpal tibia 42; length of sword seta 15; length of leg segments (I-6): I – 35, 85, 105, 150, 160, 90; II – 40, 80, 80, 110, 130, 120; III – 48, 80, 90, 130, 150, 135; IV – 100, 105, 140, 180, 190, 175; length of setae *s*1 78, width 9; length of setae *s*2 60, width 15; distance between bases of setae *s*1 and *s*2 9.

*Comparison.* *A. samaricus* is similar to *A. ovalis* Koenike, 1883. The information on morphology of adults mites of this species is contained in many works (Koenike, 1883, 1908; Viets, 1935; Sokolow, 1940; Şoarec, 1942; Motaş & Tanasachi, 1948; Besseling, 1974). The type series of *A. ovalis* is missing; Gerecke (2003) has designated a neotype and has given a description of the male and female of this species. The new species has been compared with the neotype. The posterior legs of *A. ovalis* are without true swimming setae (all distal setae on tibia of legs IV are of equal thickness); ambulacrae with two clawlets; ventral setae subdivide the ventral margin of pedipalpal tibia in proportion 1 : 1 : 1; sword seta on pedipalpal tibia of female situated half way between ventral setae (Gerecke, 2003). In *A. samaricus*, the tibiae of legs III-IV are with true swimming setae (their diameter is half the

thickness of other distal setae); ambulacrae with 3 clawlets; ventral setae subdivide the ventral margin of pedipalpal tibia of female in proportion 2 : 3 : 2; sword seta on tibia of pedipalp of female situated near to ventrodorsal seta.

#### Acknowledgements

The present work was supported by the Russian Foundation for Basic Research, grant 03-04-49081.

#### References

- Besseling, A.J.** 1964. Nederlandse Watermijten (Hydrachnellae Latreille 1802). *Monogr. Ned. entomol. Ver.*, **1**: 1-199.
- Gerecke, R.** 2003. Water mites of the genus *Atractides* Koch, 1837 (Acari: Parasitengona: Hygrobatidae) in the western Palaearctic region: a revision. *Zool. J. Linn. Soc.*, **138**: 141-378.
- Koenike, F.** 1883. Verzeichnis der im Harz gesammelten Hydrachniden. *Abhandl. naturwiss. Ver. Bremen*, **8**: 31-37.
- Koenike, F.** 1908. Beitrag zur Kenntnis der Hydrachniden. *Abhandl. naturwiss. Ver. Bremen*, **19**(2): 217-266.
- Motaş, C. & Tanasachi, J.** 1948. Espèces nouvelles et connues du genre *Megapus* Neuman (Hydrachnelles) trouvées dans eaux souterraines. *Ann. sci. Univ. Jassy*, **31**: 152-169.
- Şoarec, J.** 1942. Contribution à l'étude des Hydracariens de Roumanie. *Ann. sci. Univ. Jassy*, **2**, *Sci. natur.*, **29**(1): 1-191.
- Tuzovskij, P.V.** 1987. *Morfologiya i postembrional'noe razvitie vodyanykh kleshchey* [Morphology and postembryonic development of water mites]. Moscow: Nauka. 172 p. (In Russian).
- Viets, K.** 1936. Wassermilben oder Hydracarina. In: F. Dahl (Ed.), *Tierwelt Deutschlands*, **31-32**. Jena: G. Fischer. 652 p.

Received 18 April 2004