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A NEW WATER MITE SPECIES OF THE GENUS *HYGROBATES* KOCH, 1837 (ACARI, HYDRACHNIDIA, HYGROBATIDAE) FROM RUSSIA

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Abstract. An illustrated description of male of a new species *Hygrobates neosokolowi* **sp. nov.** from running waters of Primorsky Krai of Russia is given. The genital field of the new species with large genital acetabula occupying about one half of acetabular plate surface, posteromedial indentation without median projection, genital field with 24–25 pairs setae, five pairs longer and thicker than other genital setae.

Keywords: Hydrachnidia, Hygrobatidae, *Hygrobates*, water mites, morphology, male.

НОВЫЙ ВИД ВОДЯНОГО КЛЕЩА РОДА *HYGROBATES* KOCH, 1837 (ACARI, HYDRACHNIDIA, HYGROBATIDAE) ИЗ РОССИИ

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Аннотация. Иллюстрированное описание самца нового вида водяного клеща *Hygrobates neosokolowi* **sp. nov.** из проточных вод Приморского края России. Генитальное поле нового вида с крупными генитальными присосками, занимающими около половины поверхности генитальной пластины, с 24–25 парами щетинок, 5 пар из них длиннее и толще, чем другие генитальные щетинки.

Ключевые слова: Hydrachnidia, Hygrobatidae, *Hygrobates*, водяные клещи, морфология, самец.

INTRODUCTION

This paper describes the male of a new water mite species, *Hygrobates neosokolowi.* The material was collected by T. S. Vshivkova in the running waters in the Far East of Russia. Idiosomal setae are named according to Tuzovskij (1987). Furthermore, the following abbreviations are used: P–1–5, pedipalp segments (trochanter, femur, genu, tibia and tarsus); I–leg–1–6, first leg, segments 1–6 (trochanter, basifemur, telofemur, genu, tibia and tarsus) i.e. I–Leg–1 = trochanter of first leg; L—length; W—width; n = number of specimens measured; all measurements are given in micrometers (μm).

SYSTEMATICS

Family **Hygrobatidae** Koch, 1837

Genus ***Hygrobates*** Koch, 1837

***Hygrobates neosokolowi* sp. nov.**

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(Figs 1–8)

Type material: Holotype: male, slide 6301, Russia, Primorsky Krai, Rakovka stream, 17 July 1978, leg. T. S. Vshivkova. Holotype is deposited in the collection of the Papanin Institute for Biology of Inland Waters (Borok, Russia).

Diagnosis. Integument soft and finely striated; anterior coxal plates with short apodemes, posteromedial margin convex in shape; coxal plate IV trapezoidal with almost parallel anterior and posterior margin, medial margin in an obtuse angle; genital field with three pairs large genital acetabula and 24–25 pairs setae, posterior margin of genital plate of male deeply indented without median projection; P–2 with long rounded ventrodistal protrusion; P–4 ventral setae moderately separated in distal portion of segment.

Description

Male. Idiosoma oval and somewhat flattened dorsoventrally. Integument soft and finely striated (Fig. 1). Trichobothria *Fp*, *Oi* and setae *Pi* not associated with glandularia, other idiosomal setae associated with glandularia. Setae *Fch* (Fig. 2) much thicker than other idiosomal setae. Anterior coxal plates with short apodemes, posteromedial margin convexin shape (Fig. 3). Coxal plate IV trapezoidal, with nose-like protruding medial margin.

Genital field (Fig. 4) wider than long (L/W ratio 0.7), anterior margin slightly convex, with a small median protrusion, posterior margin deeply indented without median projection. Genital acetabula large in obtuse triangle, distance between ac–1 and ac–2, ac–2 and ac–3, and ac–1 and ac–3 less than length of any acetabulum. Genital field with 24–25 pairs setae, five pairs longer and thicker than other genital setae.

Pedipalp moderately long (Fig. 5): P–1 short, with single dorsodistal seta; P–2 with five short, thick dorsal setae, ventral margin proximally nearly straight, distoventrally protruding in a long and slender projection with rounded tip, apically covered by a few denticles; P–3 with three dorsoproximal, two dorsodistal short, thick setae and single thin dorsodistal seta, ventral margin straight with denticles covering distal half of ventral surface; P–4 slender, longer than P–2 (P–4/P–2 L ratio 1.3), ventral setae subequal in length and moderately separated in distal portion of segment.

Legs—6, segmented, slender and without swimming setae. I–Leg–5 with two subequal rather long pointed distoventral setae (Fig. 6); IV–Leg–4/5 with three short, thick unequal distal setae, IV–Leg–6 usually with two short, thick ventral setae (Fig. 7). Claws of all legs with long external clawlet and short internal one, lamella well-developed with slightly concave ventral margin (Fig. 8).

Measurements (n = 1). Idiosoma L 870; seta *Fch* L 90; coxal plates I + capitulum mL 265; coxal plates III+IV L 300, W 250; genital plate L 120, W 175; genital acetabula (ac–1–3) L/W 80–85/54–60, 102–105/48–54, 95–98/72–78; pedipalp segments (P–1–5) L: 42, 126, 108, 162, 48; leg segments L: I–Leg–1–6: 60, 110, 115, 162, 168, 150; II–Leg–1–6: 65, 100, 120, 175, 190, ?; III–Leg–1–6: 78, 108, 132, 210, 240, 192; IV–Leg–1–6: 145, 150, 175, 240, 270, 210.

Female. Unknown.

Differential diagnosis. The new species is similar to *Hygrobates sokolowi* Thor, 1927. The male of the new species differs in genital field (Fig. 4) with large genital acetabula occupying about one half of acetabular plate surface, distance between ac–1 and ac–3 less than length of any acetabulum, posteromedial in-

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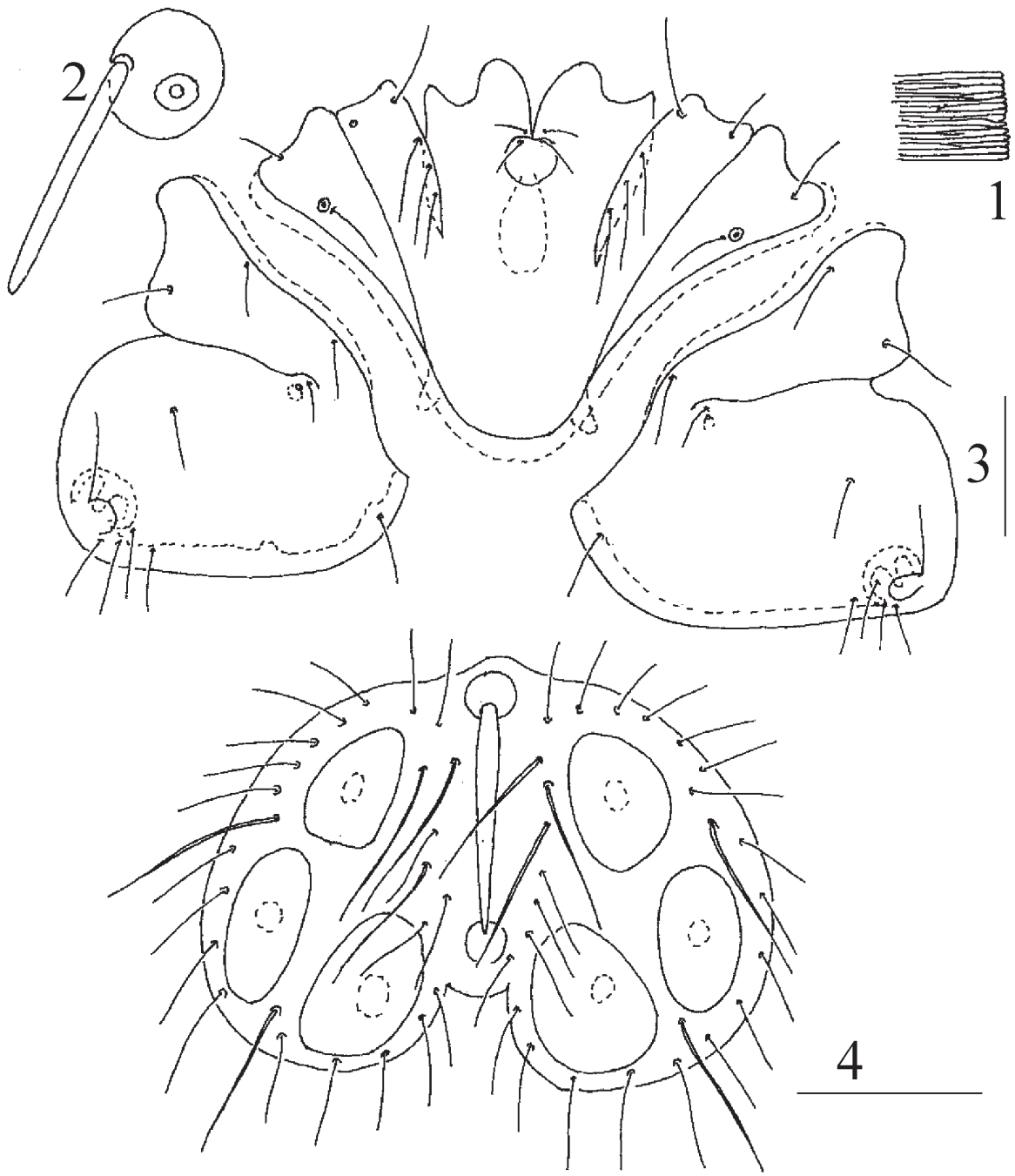


Figs 1–4. *Hygrobates neosokolowi* **sp. n.**, male: *1* — fragment of integument; *2* — seta *Fch*; *3* — ventral view; *4* — genital field. Scale bars: *1, 2, 4* = 50 μm; *3* = 100 μm

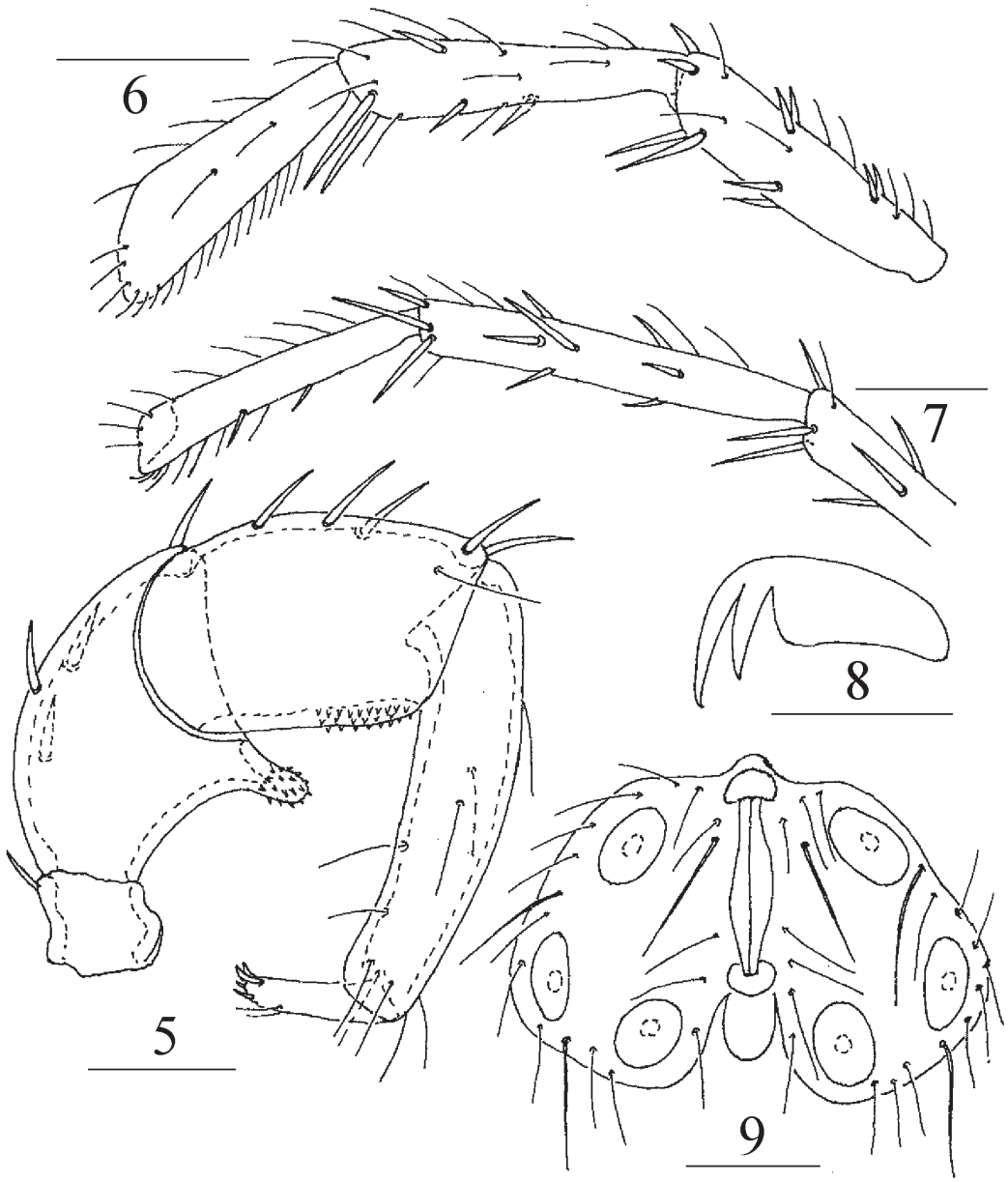
Рис. 1–4. *Hygrobatesneosokolowi* **sp. n.**, самец: *1* — фрагмент покрова; *2* — щетинка *Fch*; *3* — вентральная сторона; *4* — генитальное поле. Шкалы: *1, 2, 4* = 50 μm; *3* = 100 μm

dentation without median projection, genital field with 24–25 pairs setae, five pairs longer and thicker than other genital setae. In contrast, *H. sokolow*i male genital field with small genital acetabula occupying much less than one half of acetabular plate surface, distance between ac–1 and ac–3 larger than length of any acetabulum, posteromedial indentation with median projection, genital field with 17–19 pairs setae, three pairs longer and thicker than other genital setae (Fig. 9).

Etymology. The species' epithet, *neosokolowi,* is derived from the name of *Hygrobates sokolowi.*

Habitat. Running waters.

Distribution. Asia (Russia, Primorsky Krai).



Figs 5–9. *Hygrobates neosokolowi* sp.n., male: *5* — pedipalp; *6* — I–Leg–4–6; *7* — IV–Leg–4–6; *8* — leg claw. Scale bars: *5, 8* = 50 μm; *6, 7* = 100 μm. *Hygrobates sokolowi* (Thor, 1927), male: *9* — genital field. Scale bar: 50 μm

Рис. 5–9. *Hygrobates neosokolowi* sp. n., самец: *5* — педипальпа; *6* — колено, голень и лапка ноги I; *7* — колено, голень и лапка ноги IV; *8* — коготок ног. Шкалы: *5, 8* = 50 μm; *6, 7* = 100 μm. *Hygrobates sokolowi* (Thor, 1927), самец: *9* — генитальное поле. Шкала: 50 μm

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