Description of a new water mite species of the genus Corticacarus Lundblad, 1936 from Chile (Acari, Hydrachnidia: Hygrobatidae)

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In this paper a new water mite species of the genus Corticacarus is described. The material was collected by V. Stolbov in 2014 in a streams in Chile. The material was sampled with a common hand net with 250 µm mesh size. Mites were fixed 75 % ethanol. Idiosomal setae and slit organs are named according to Tuzovskij (1987): $F_{ch}$ – frontales chelicerarum, $F_{p}$ – frontales pedipalporum, $V_{i}$ – verticales internae, $V_{e}$ – verticales externae, $O_{i}$ – occipitales internae, $O_{e}$ – occipitales externae, $H_{i}$ – humerales internae, $H_{e}$ – humerales externae, $H_{v}$ – humerales ventralia, $S_{c}$ – scapulares internae, $S_{c e}$ – scapulares externae, $L_{i}$ – lumbales internae, $L_{e}$ – lumbales externae, $S_{i}$ – sacrales internae, $S_{e}$ – sacrales externae, $C_{i}$ – caudales internae, $P_{i}$ – praeanales internae, $P_{e}$ – praeanales externae; $i_{1}$–$i_{5}$ – slit organs. Furthermore, the following abbreviations are used: $P_{1}$–$P_{5}$, pedipalp segments (trochanter, femur, genu, tibia and tarsus) i.e. $P_{3}$ = genu; $a c_{1}$–$a c_{3}$, genital acetabula 1-3; $I$-$L_{e g}$-1-6, first leg, segments 1-6 (trochanter, basifemur, telofemur, genu, tibia and tarsus) i.e. $I$-$L_{e g}$-1 = trochanter of third leg; $L$ – length; $W$ - width; $n$ = number of specimens measured. All measurements are given in micrometers (µm), length of appendage segments is dorsal length.

Systematics

Family Hygrobatidae Koch, 1842

Genus Corticacarus Lundblad, 1936

Corticacarus (Lundbladacarus) magellanicus sp. n.
(Figs. 1-7)

Type material: Holotype: female, slide 9889, South America, Chile, Region de Magallanes y de la Antartica Chilena, Provincia de Magallanes, NW of Villa Teihuelche, forest stream (52°05'537"S 71°48'061"W), depth 0.4 m, substrates: stones and mosses, 14. 08. 2014, leg. V. Stolbov. Paratypes (6 females) collected in same locality as holotype.

Additional material: 1 female, Provincia de Magallanes, stream to the south of Punta Arenas city (53°34'29" S 70°56'23" W), substrates: stones and mosses, 08.11.2014, leg. V. Stolbov.
All specimens are mounted in Hoyer medium. The holotype and the paratypes are deposited in the collection of the Institute for Biology of Inland Waters (Borok, Russia).

**Diagnosis. Female.** Dorsal and ventral shields present; setae *Fch* short, thick; dorsal shield usually bearing 9 pairs setae; coxal plates in three groups; anterior coxal plates completely fused to each other medially but suture line between them present; all genital acetabula subequal in size; P-3 ventral teeth much larger than teeth on P-2 ventrodistal projections; leg claws indented dorsally, with relatively long subequal central and internal clawlets and short external clawlet.

**Description**

Dorsal and ventral shields present. Dorsal shield (Fig. 1) elongate (ratio L/W 1.35-1.50), usually bearing 9 pairs of setae (*Vi, Oi, Oe, Ve, Hi, Sci, Li, Si, Ci*) and a posterior pair of slit organs (*i*3). Setae *Oe, Hi, Li* and *Ci* associated with so-called heart-shaped glandularia. Setae *Fch* thick, short; setae *Fp* thin, usually free but sometimes their bases incorporated into the anterior margin of dorsal shield. Primary sclerites (four pairs) slightly developed, anterior two pairs larger than posterior two pairs. Setae *Le* and anterior four pairs of slit organs (*i1-i4*) situated on soft integument along lateral margin of dorsum. Excretory pore located caudally.

Coxal plates and genital field incorporated into ventral shield (Fig. 2). Coxal plates in three groups. Capitular bay V-shaped; coxal plates I fused to each other medially but suture line between them present. Sclerites, bearing setae *Hv*, located on coxal plates II posterolaterally. Anterior coxal group with narrow posterior apodemes directed laterally. Glandularia *Pe* on the coxal plate IV shifted from suture line between coxal plates III+IV. Genital field subterminal, with three pairs of subequal acetabula; acetabular plates triangular, their outlines are distinct, with 8-9 thin setae each. Gonopore considerably longer than acetabular plates.

Capitulum (Fig. 3) with moderately long anchoral process and two pairs of subequal anterior setae; rostrum relatively short. Chelicera with large basal segment and short chela (Fig. 4).

**Figures 1-2.** *Corticacarus magellanicus* sp. n., female: 1 - dorsal view; 2 - ventral view. Scale bar: 1-2 = 100 μm.
Figures 3-7. *Corticacarus magellanicus* sp. n., female: 3 – capitulum, lateral view; 4 – chelicera, lateral view; 5 – pedipalp, lateral view; 6 – Leg I; 7 – claw. All bars: 50 μm.

Pedipalp (Fig. 5) compact: P-1 short, with single short dorsodistal seta; P–2 with long ventrodistal projection, bearing numerous small teeth, with three subequal proximal and two unequal distal short dorsal setae; P–3 ventrally denticulate, with single dorsoproximal spine and two thin dorsodistal setae; P–4 slender, with obtuse ventral protrusion bearing peg-like seta and thin seta near middle of segment, second ventral seta located on half way between anterior ventral seta and end of segment and three thin distal setae; P–5 thin, with two hook-like distal spines and six unequal distal setae. Surface P-2 - P-4 striated. P-3 ventral teeth much larger than teeth on P-2 ventrodistal projection.

Legs without swimming setae. Shape and arrangement of setae on legs I as shown in Fig. 6.

I-Leg-1 with long distoventral seta, I-Leg-2 and I-Leg-3 with sword-like distoventral seta each. I-Leg-5-6 bearing only thin setae. All legs claws (Fig. 7) with three clawlets, central and internal clawlets nearly equal.
in length and longer than external clawlet; lamella with slightly convex ventral margin. All claws slightly indented dorsally.

Measurements (n=7). Idiosoma L 455-510; dorsal shields L 405-485, W 275-320; acetabular plates L 78-85, W 65-72; genital acetabula (ac-1-3) L 25-30, 30-35, 25-30; capitulum L 125-140, rostrum L 24-30; cheliceral segments: base L 150-162, chela L 40-48; pedipalp segments (P-1-5) L: 21-30, 70-73, 81-90, 96-102, 35-37; leg segments L: I-Leg-1-6: 30-35, 45-60, 60-63, 77-84, 78-95, 70-90; II-Leg-1-6: 35-42, 42-55, 54-65, 84-95, 84-90, 72-90; III-Leg-1-6: 35-48, 48-54, 72-75, 102-115, 108-120, 95-102; IV-Leg-1-6: 78-90, 65-72, 95-108, 135-145, 150-156, 108-125.

Figure 8. Corticacarus argentinensis Cook, 1988, female: 8 – pedipalp, lateral view (after Cook 1988).

Remarks. The present species is similar to Corticacarus argentinensis Cook, 1988 but differs in the following characters (character states of female C. argentinensis given in parenthesis, data from Cook 1988): the excretory pore located dorsocaudally, Fig. 1 (ventrocaudally); the acetabular plates with distinct outlines, Fig. 2 (without outlines); P-3 with comparatively large teeth, Fig. 5 (with very small teeth, Fig. 8); the leg claws with dorsal indentation, Fig. 7 (without dorsal indentation).

Etymology. The species is named after the Province (Magellan) where it was collected.

Habitat. Running waters.

Distribution. South America (Chile: Magellan Province).

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