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A new *Sperchon* species from the high Andes of northern Chile (Acari: Hydrachnidia: Sperchontidae)

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Water mites of the genus *Sperchon* Kramer, 1877 occur worldwide except for Australasia. They are typical inhabitants of streams and springs. In South America the number of known species is limited. Rosso de Ferradás & Fernández (2005) reported only four species for South America, but Goldschmidt & Ramírez Sánchez (2020) reported undescribed species from Colombia and Ecuador.

In this paper, we describe the fifth known species for South America, collected in the high Andes in northern Chile.

Material and methods

The holotype will be lodged in the Museo Nacional de Historia Natural, Santiago (MNHN), paratypes in Naturalis Biodiversity Center, Leiden (RMNH). The following abbreviations have been used: Ac-1 – first acetabula; Cx-I – first coxae; dc-1 – dorsocentralia 1; dl-3-4 – dorsolateralia 3-4; H – height; IV-L-4-5 – fourth and fifth segments of fourth leg; L – length; P-1 – first palp segment; W – width.

Systematics

Family Sperchontidae Thor

Genus *Sperchon* Kramer, 1877

Sperchon quintus n. sp.

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(Figs. 1–2)

Material examined — Holotype ♂, dissected and slide mounted (MNHN), Chile, unnamed stream (limnocrene), National Park Lauca, Parinacota, 18°12.214 S 69°16.092 W, alt. 4424 m asl, 14 December

2023 leg. Smit. Paratypes: 2♀ (MNHN, RMNH), same data as the holotype, 1♀ dissected and slide mounted (MNHN). 1♂, Unnamed stream with filamentous algae, upstream Putre, 18°11.706 S 69°32.724 W, alt. 3660 m asl, 12 December 2023 leg. Smit (RMNH).

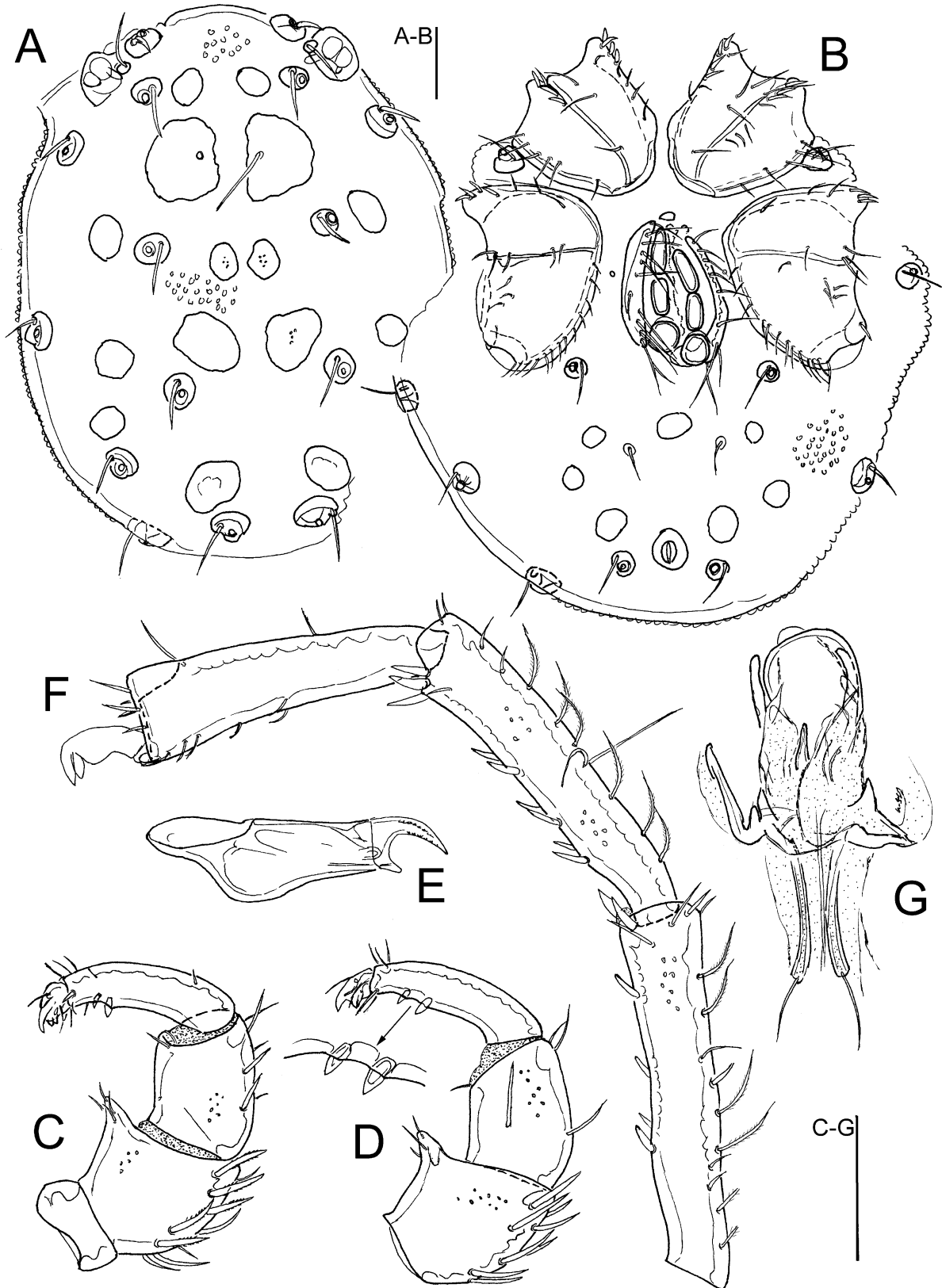


Figure 1. *Sperchon quintus* n. sp., ♂ holotype: A – idiosoma, dorsal view; B – idiosoma, ventral view; C – palp, medial view; D – palp, lateral view (P-1 lacking), inset: peg-like setae, enlarged 2x; E – IV-L-4-6; F – IV-L-4-6; G – ejaculatory complex. Scale bars = 100 µm.

Diagnosis — Dorsum with enlarged glandularia platelets, integument papillate, Cx-III without glandularia, palp with a sexual dimorphism, ventral margin of P-4 with relatively stout peg-like setae.

Description — Integument dorsally and ventrally papillate; dorsum with eight muscle attachment plates in both sexes, from anteriorly to posteriorly: medially, (1) roundish praefrontalia, (2) larger plates consisting of fused postfrontalia, postocularia (and dc-1?), (3) roundish dc-2, (4) dc-3 close to each other but not fused, (5) dc-4 more distanced from each other than dc-3, (6) dc-5 and, laterally, (7–8) dl-3-4 both on a rounded platelet (Figs. 1A, 2A). Ventral view: Cx-I+II medially close to each other, but not fused (Fig. 1B); Cx-III without a medial glandular opening (Cxgl-4). Ac-1-2 longish, Ac-3 roundish. An unpaired postgenital sclerite well distanced from genital field; excretory pore surrounded by a sclerotized ring.

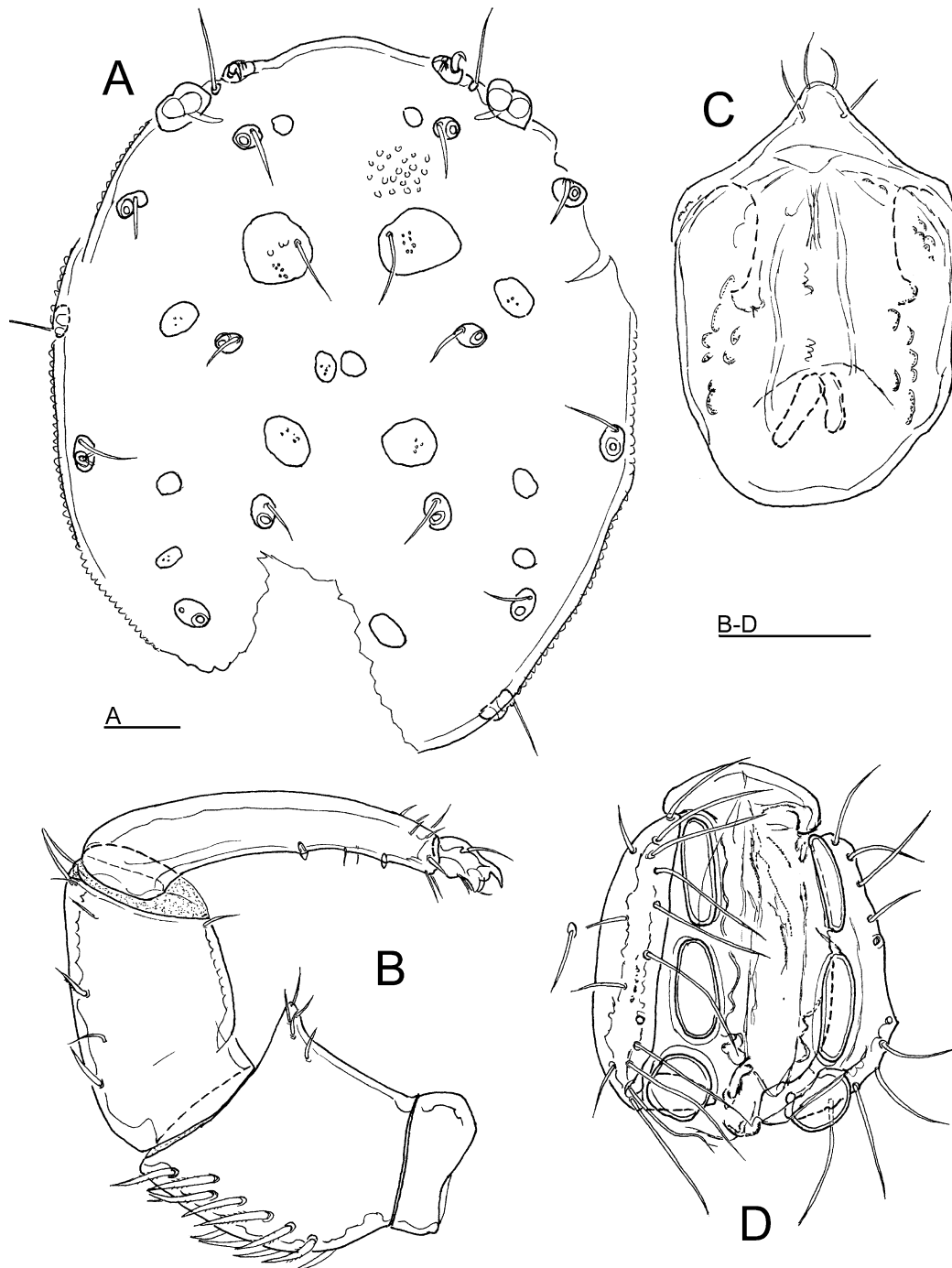


Figure 2. *Sperchon quintus* n. sp., ♀ paratype: A – idiosoma, dorsal view; B – palp, medial view; C – gnathosoma; D – genital field. Scale bars = 100 µm.

Gnathosoma with rostrum shorter than gnathosomal base (Fig. 2C). Palp with a sexual dimorphism: P-1 without a dorsal seta; P-2 with a bluntly pointed distoventral projection, at its tip bearing four fine setae; P-3 with a hair-like seta close to ventrodorsal margin; P-4 longer than P-3, P-4 with two slightly developed ventral tubercles, bearing peg-like setae, proximal tubercle slightly larger than distal one, in males tubercles more developed than in female, peg-like setae in male larger and closer to each other (Figs. 1C-D), P-3 and P-4 more slender in female. Male — Ejaculatory complex as given in Fig. 1G.

Leg segments slender, IV-L-3-5 with a few plumose dorsal setae, ambulacrum with claw blade well protruding bearing a long dorsal and a shorter ventral clawlet (Fig. 1G).

Measurements — *Male* (holotype) — Idiosoma L 831, W 638; distance between anterior end of Cx-I and posterior end of Cx-IV, 453; Cx-III W, 502. Genital valves L 173-178; L Ac-1–3: 62-63, 50-51, 45-47. Ejaculatory complex L 247.

Palp total 417, dL/H, dL/H ratio: P-1, 27/66, 0.41; P-2, 113/94, 1.2; P-3, 107/73, 1.46; P-4, 131/41, 3.17; P-5, 39/20, 1.93; L ratio P-2/P-4, 0.86. Gnathosoma L 219; chelicera (Fig. 1E) L 212. Leg segments dL: I-L-2–6: 78, 97, 158, 159, 166; IV-L: 131, 113, 136, 275, 259, 225.

Female (paratype) — Idiosoma L 988, W 800; distance between anterior end of Cx-I and posterior end of Cx-IV, 584; Cx-III W, 681. Genital valves L 197-199; L Ac-1–3: 67-72, 67-72, 45-47; pregenital sclerite W 106.

Palp total 689, dL/H, dL/H ratio: P-1, 31/97, 0.32; P-2, 172/140, 1.23; P-3, 191/106, 1.8; P-4, 240/63, 3.84; P-5, 55/27, 2.0; L ratio P-2/P-4, 0.72. Gnathosoma L 284; chelicera L 288. Leg segments dL: I-L-2–6: 119, 156, 284, 284, 256; IV-L: 172, 170, 219, 447, 423, 316.

Etymology — Named for being the fifth *Sperchon*-species from South America.

Discussion — Due to the papillate integument, the shape of dorsum with several isolated plates in both sexes, a similar structure of the palp with P-3 bearing a hair-like seta close to ventrodorsal margin, Cx-III without a glandularium, and the shape of ejaculatory complex, the new species from northern Chile resembles *Sperchon motasi* Lundblad, 1954, a species known in both sexes from Rio San Juan river (Huila) and Coconuca (Cauca) in Colombia (Lundblad 1954). The latter species can be separated from the new species from northern Chile by comparatively less developed dorsal platelets (compare fig. 9A in Lundblad 1954 with Fig. 1A), P-4 of male more slender, ventrodorsal projection of P-2 comparatively slender, and P-4 without sexual dimorphism in the peg-like setae (see Figs. 9E-G in Lundblad 1954).

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