Two new erigonine spiders from Nepal (Aranei: Linyphiidae)

Два новых вида пауков-эригонин из Непала (Aranei: Linyphiidae)

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ABSTRACT. Two new linyphiid spiders from the subfamily Erigoninae, *Erigone acuta* sp.n. (♀) and *Gongylidiellum koshi* sp.n. (♂ & ♀), are described from the Nepal Himalayas. *Erigone acuta* sp.n. somewhat resembles *E. autumnalis* Emerton, 1882, while *G. koshi* sp.n. is similar to *G. nepalense* Wunderlich, 1983. Both new species can easily be distinguished from their congeners mainly by certain details of the genitalic structure.


Material and methods

This paper is fully based on material kept at the MHNG. Sample numbers are given in square brackets. Specimens preserved in 70% ethanol were studied using a MBS-9 stereomicroscope. A Levenhuk C-800 digital camera was used for photos. Leg chaetotaxy is presented in a formula, e.g., 1.1.1.1 or 2.2.1.1, which refers to the number of dorsal spines on tibiae I–IV. The sequence of leg segment measurements is as follows: femur + patella + tibia + metatarsus + tarsus. All measurements are given in mm. Scale lines in the figures correspond to 0.1 mm unless indicated otherwise. Figure numbers are given above the scale lines, the alternative distance below them.

The terminology of copulatory organs mainly follows that of Merrett [1963] and those of the authors mentioned in the Abbreviations section below.


Descriptions

Order Aranei Clerck, 1758
Family Linyphiidae Blackwall, 1859
Subfamily Erigoninae Emerton, 1882
Erigone acuta sp.n.
Figs 1, 6–10.

HOLOTYPE ♀ (MHNG), NEPAL, Kosi (= Koshi) Province, Sankhuwasawa (= Sankhuwasabha) District, east side of Goru Dzure Dara, 3350 m a.s.l., sifting mosses, ferns and herbs, 9.IV.1984, leg. I. Löbl & A. Smetana [12].

NAME. The specific epithet is a Latin adjective, meaning "sharpened, pointed", referring to the spike-shaped embolic membrane.

DESCRIPTION. Male holotype. Total length 1.43. Carapace unmodified (Fig. 1), 0.70 long, 0.53 wide, pale brown. Lateral edges of carapace toothless, its cephalic part not elevated. Chelicerae 0.30 long, a mastidion absent. Legs pale brown. Leg I, 1.77 long (0.48 + 0.18 + 0.40 + 0.38 + 0.33), IV, 1.87 long (0.53 + 0.18 + 0.48 + 0.38 + 0.30). Chaetotaxy 1.1.1.1, spines 1–1.5 diameters of corresponding leg segment. Metatarsus IV without trichobothrium. TmI 0.43. Palp (Figs 6–10): Patella small, rounded, a typical distal ventro-apical apophysis absent. Tibia slightly elongated, ending sharp. Paracymbium U-shaped. Distal suprategular apophysis elongated, well-sclerotized, rounded distally. Embolic membrane sclerotized, widened proximally, with a serrate edge, its distal part spike-shaped. Posterior radial apophysis relatively long, slightly curved, not widening distally, serrate apically. Embolus proper very short, knob-shaped. Abdomen 0.78 long, 0.55 wide, pale grey.

Female unknown.

TAXONOMIC REMARKS. The new species somewhat resembles E. autumnalis Emerton, 1882, originally known from North and Central America, introduced to the Azores, Europe, the United Arab Emirates, and New Caledonia [Word Spider Catalog, 2020]. Erigone acuta sp.n. can easily be distinguished by the absence of a distal ventro-apical apophysis on the palpal patella, by a missing terminal knob on the posterior radical apophysis, as well as by the atypical chaetotaxy formula, 1.1.1.1 versus 2.2.2.1 in Erigone. This case is not unique, as another non-typical chaetotaxy formula, i.e. 2.2.1.1, is also known to occur in some Oriental congeners, i.e. E. bifurca Locket, 1982, E. apophysalis Tanasevitch, 2017 and E. sumatranus Tanasevitch, 2017 (see Tanasevitch [2017]).

DISTRIBUTION. Known from the type locality only.

Gongylidiellum koshi sp.n.
Figs 2–5, 11–17.

HOLOTYPE ♀ (MHNG), NEPAL, Kosi (= Koshi) Province, Sankhuwasawa (= Sankhuwasabha) District, Induwa Kola Valley,
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Figs 6–10. Details of male palpal structure of *Erigone acuta* sp.n., ♀ holotype. 6 — right palp, retrolateral view; 7 — palpal tibia, dorsal view; 8—9 — embolic division, different aspects; 10 — embolus proper. Fig. 10, not to scale.

**Description.**

**Male holotype.** Total length 1.63. Carapace unmodified (Fig. 2), 0.83 long, 0.68 wide, pale brown. Chelicerae 0.33 long, mastidion as a sharp tooth in distal part of chelicera (Fig. 3). Legs pale brown. Leg I, 2.26 long (0.63 + 0.20 + 0.55 + 0.50 + 0.38), IV, 2.29 long (0.55 + 0.20 + 0.53 + 0.48 + 0.53). Chaetotaxy 2.2.1.1, spines 1–1.5 diameters of corresponding leg segment or spinos lost. Metatarsus IV without trichobothrium. TmL 0.34. Palp (Figs 11–15): Tibia short and wide, with a dark, prolateral, slightly curved process. Paracymbium L-shaped. Median membrane small, swollen. Distal suprategular apophysis well-sclerotized, almost black. Radix large, flat, darkened distally. Embolus relatively short and wide. Abdomen 1.00 long, 0.65 wide, pale grey.

**Female.** Total length 1.60. Carapace unmodified (Fig. 4), 0.70 long, 0.55 wide, yellow to pale brown. Chelicerae 0.30 long, a mastidion absent. Legs yellow to pale brown. Leg I, 1.85 long (0.48 + 0.23 + 0.43 + 0.38 + 0.33), IV, 1.76 long (0.50 + 0.30 + 0.43 + 0.35 + 0.28). Chaetotaxy as in male. TmL 0.32. Abdomen 0.95 long, 0.80 wide, pale grey. Epigyne as in Figs 5, 16–17. Epigynal cavity a subrectangular box. Anterior wall with a small, pointed projection, somewhat overhanging the cavity. Receptacles narrow, oblong.

**Taxonomic remarks.** The new species seems to be especially similar to *G. nepalense* Wunderlich, 1983, widespread in the Nepal Himalayas [Wunderlich, 1983], but the male is distinctly distinguished by the shape of the radix and embolus (Fig. 15 cf. Wunderlich, 1983: figs 55–56). The female differs by a twice as wide anterior wall of the epigyne.

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Figs 11–17. Details of male palpal structure and female epigyne of Gongylidiellum koshi sp.n., ♀ holotype (11–15), and ♂ paratype (16–17). 11–12 — right palp, retrolateral and prolateral views, respectively; 13 — palpal tibia and paracymbium, dorsal view; 14 — distal suprategular apophysis; 15 — embolic division; 16–17 — epigyne, ventral view, different aspects.

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References


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