

**Salticidae from the Himalaya:
The genus *Carrhotus* THORELL 1891¹
(Araneae, Salticidae)**

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Abstract

The genus *Carrhotus* THORELL 1891 from Nepal, Bhutan and India is studied. Seven species are diagnosed, described and illustrated. Five species, *C. erus*, *C. kamjeensis*, *C. samchiensis*, *C. catagraphus* and *C. operosus*, are described as new.

Key words: Arachnology, Araneae, Salticidae, *Carrhotus*, Himalaya, new species.

Introduction

The genus *Carrhotus*, described by THORELL (1891), consists of about 15 species (PRÓSZYŃSKI 1990), most of them found in India, South-East Asia and Africa (CAPORIACCO 1947, CLARK 1974, PRÓSZYŃSKI 1992a, b, ŻABKA 1985). No representatives are known from Australia and the Americas.

The relationships of the genus are unclear. SIMON (1901) placed *Carrhotus* into Hylleae, together with 11 other genera. PETRUNKEVITCH (1928) added few other, unrelated genera. PRÓSZYŃSKI (1976), on the basis of the genitalic pattern, suggested close affinities to *Chrysilla* THORELL 1887, *Siler* SIMON 1889, *Silerella* BÖSENBERG & STRAND 1906, *Heliophanus* C. L. KOCH 1833, and some other genera.

The distribution of *Carrhotus* suggests it is of Oriental origin (PRÓSZYŃSKI 1992b, STRAND 1907, ŻABKA 1985). Six species are recorded in Africa (CAPORIACCO 1947, CLARK 1974, PRÓSZYŃSKI 1992a), one (*C. xanthogramma* LATREILLE 1819) is found in the Palearctic Region (BOHDANOWICZ & PRÓSZYŃSKI 1987, PRÓSZYŃSKI 1976).

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Abbreviations used: AEW = anterior eye width, ag = accessory gland, AL = abdomen length, CL = cephalothorax length, c = cymbium, co = copulatory openings, CW = cephalothorax width, e = embolus, EFL = eye field length, fd = fertilization duct, id = insemination duct, PEW = posterior eye width, s = spermatheca, sr = seminal reservoir, ta = tibial apophysis, tg = tegulum.

Collections studied:

NHMB = Naturhistorisches Museum, Basel.

SMF = Naturmuseum und Forschungsinstitut Senckenberg, Frankfurt am Main.

JS = Coll. Jaroslav SVATON (Andrei Kmet Museum, Martin).

AMNH = American Museum of Natural History, New York.

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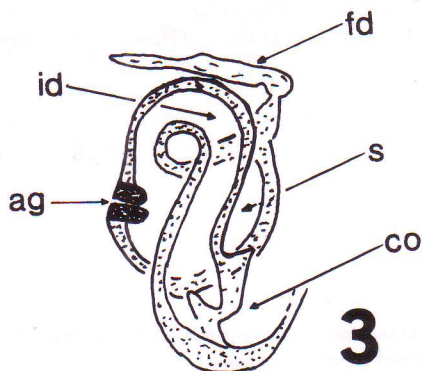
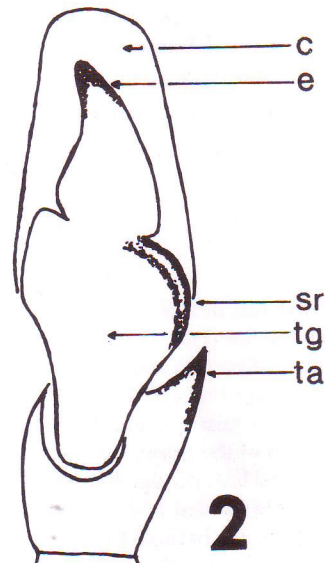
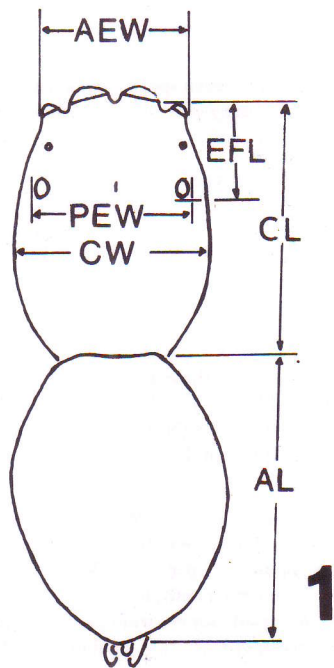
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Carrhotus THORELL 1891

(Figs. 1-3)

Carrhotus THORELL 1891: Kongl. Svenska Vet.-Akad. Handl. 24: 140.Type species: *Plexippus viduus* (C. L. KOCH 1846).**Diagnosis:** The genus can be recognized by the body form and by the genitalia of both sexes.**Description** (Fig. 1): Medium spiders, 4.24 to 8.80 mm in length. Cephalothorax longer than wide, eye field shorter than 50 % of total cephalothorax length, posterior slope distinc-

tive. Posterior median eyes in the midway between anterior and posterior laterals. Abdomen egg-shaped, beige to brown with lighter pattern. Chelicerae of unident pattern with 2 pro-marginal teeth and 1 retromarginal tooth. Cymbium in some species with apical process. Embolus narrow, hook-like, set laterally or wider, based on the top of tegulum, the latter with posterior lobe (Fig. 2). Conductor missing. Female epigyne (Fig. 3) moderately sclerotized, strongly haired. Insemination ducts straight, curved or coiled. Spermathecae one chambered, oval pear-like. Accessory glands distinctive, on external spermathecal walls. Legs I and II robust with scopulae, III and IV more delicate. Hairs and bristles blackish. Legs formula: 1-2-4-3.



Figs. 1-3. General characters of *Carrhotus*. Fig. 1. Dorsal aspect of female. Fig. 2. Male palpal organ. Fig. 3. Female genitalia. Abbreviations in the text.

Alphabetical list of species in the genus *Carrhotus* THORELL 1891 (after PRÓSZYŃSKI 1990, verified and completed):

- C. aeneochelis* STRAND 1907: Java.
C. affinis CAPORIACCO 1934: Libya.
C. barbatus (KARSCH 1880): Philippines (Luzon).
C. bellus WANLESS 1983: Seychelles.
C. catagraphus n. sp.: Nepal.
C. coronatus (SIMON 1885): Vietnam, Burma, Sumatra, Java.
C. erus n. sp.: Nepal.
C. harringtoni PRÓSZYŃSKI 1992 a: Madagascar.
C. kamjeensis n. sp.: Bhutan.
C. malayanus PRÓSZYŃSKI 1992 a: Malaysia.
C. operosus n. sp.: Nepal.
C. samchiensis n. sp.: Bhutan.
C. sannio (THORELL 1877): India (Orissa), Vietnam, Malaysia, Sumatra, Java, Celebes, Philippines, Bhutan, Nepal.
C. scriptus SIMON 1902: Gabon.
C. singularis SIMON 1902: S Africa
C. subaffinis CAPORIACCO 1947: Ethiopia.
C. taprobanicus SIMON 1902: Sri Lanka.
C. tristis THORELL 1895: Burma, India (West Bengal).
C. viduus (C. L. KOCH 1846): India (Assam, Maharashtra), Sri Lanka, Burma, Malaysia, Java, Bhutan.
C. xanthogramma (LATREILLE 1819): Palearctic.

Carrhotus sannio (THORELL 1877)

(Figs. 4–7)

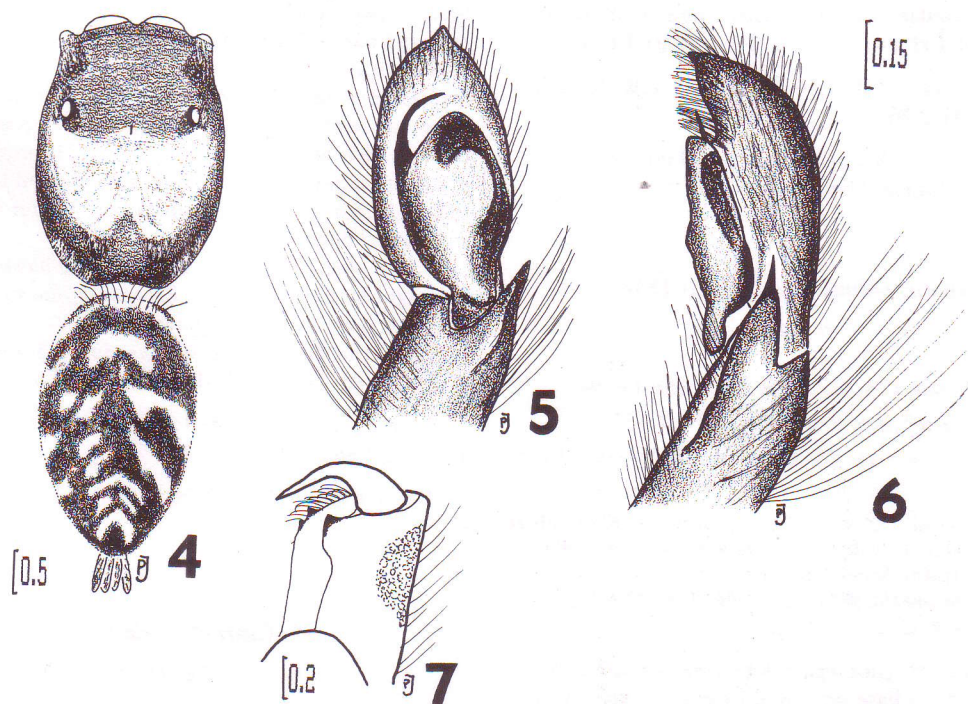
- 1877 *Plexippus sannio* THORELL: Ann. Mus. Stor. nat. 10: 617.
 1902 *Eugasmia sannio* — SIMON (Ann. Soc. ent. Fr. 71: 395).
 1985 *Carrhotus sannio* — ŽABKA (Ann. zool. 39: 207–208).

Material: Bhutan: 1 ♂ (NHMB), Samchi, 300 m, 7.–11. v. [19]72, WITTMER, STEMLER, BARONI-URBANI, WÜRMLI. 1 ♂ (NHMB), 7. vi. [19]72, WITTMER, STEMLER, BARONI-URBANI, WÜRMLI. — Nepal: 1 ♂ (SMF), Taplejung Distr., Yamputin, cultural land, open forest, 1650–1800 m, 26. iv.–1. v. [19]88, MARTENS & AUSOBSKY. 1 ♂ (SMF), Gorkha Distr., Buri Gandaki, Labubesi-Gorlabesi, 900–1000 m, Laubwald, 29. vii. [19]83, MARTENS & SCHAWALLER.

Diagnosis: Cymbium with apical process, embolus hook-like, tibial apophysis pointed.

Description, Male (Fig. 4): Cephalothorax brown. Lower margin and surroundings of eyes darker with white hairs. Abdomen generally grey with irregular beige patches and beige sides, whole surface covered with a few short, whitish hairs. In the anterior part hairs longer and thicker. Spinnerets beige. Clypeus light brown, coated with dense, white hairs. Chelicerae (Fig. 7) brown, their basal parts with numerous white hairs. Maxillae and labium brown with lighter tips. Sternum pale yellow. Venter with grey median and lateral beige belts.

Palpal organ (Figs 5, 6) brown, tibia and cymbium fringed with long, dark hairs. Cymbium with apical process. Embolus hook-like. Tibial apophysis single, pointed.



Figs. 4–7. *Carrhotus sannio* (THORELL 1877). Fig. 4. Body colouration. Fig. 5. Male palpal organ, ventral view. Fig. 6. Male palpal organ, lateral view. Fig. 7. Cheliceral dentition. — Scales in mm.