

Rediscovery of *Cnodalia harpax* (Araneae: Araneidae) after an interval of 116 years

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Abstract — *Cnodalia harpax* Thorell 1890 is recorded from Japan for the first time using the specimens collected from Amami-ôshima Is. and Okinawajima Is. This species has never been rediscovered for 116 years since it was described as a new genus and species in 1890. This species can be easily distinguished from other spiders by its general appearance, especially by the abdomen having a pair of hone-shaped projections. The most spectacular feature of this spider is its extremely long anterior claws on tarsi I and II as in a Hawaiian tetragnathid spider *Doryonychus raptor* Simon 1900 which captures prey using the long claw to impale them. Although foraging behavior of *C. harpax* is still unknown, this resemblance suggests that *C. harpax* also uses the long claws to capture prey.

Key words — taxonomy, *Cnodalia harpax*, long claw, new record, Japan, Amami, Okinawa

Cnodalia harpax was described as a new genus and species by Thorell (1890) using a single specimen, a female holotype, from Sumatra. Additional record of this spider has never been reported since then. Recently, I examined several specimens collected from Amami-ôshima Is. and Okinawajima Is., whose general appearances resemble that of *C. harpax* in Murphy & Murphy (2000). Although I could not examine the holotype, I identified them as *C. harpax* by the figures of the holotype drawn by Dr. Herbert W. Levi (pers. com.). It will be recorded from Japan for the first time and will be redescribed in this paper. All measurements are given in mm.

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Taxonomy

Genus *Cnodalia* Thorell 1890

[Japanese name: Tsumenaga-onigumo Zoku]

Cnodalia harpax Thorell 1890

[Japanese name: Tsumenaga-onigumo]

(Figs. 1–8)

Cnodalia harpax Thorell 1890, p. 116 [female holotype from Sumatra, preserved in Museo Civico di Storia Naturale, Giacomo Doria, Genova, not examined]; Murphy & Murphy

2000, p. 89, fam. 15: fig. 5.

Specimens examined. 1juv., Honchatôge Pass, Amami-ôshima Is, Kagoshima Pref., Japan, 1-I-1996, A. Tanikawa leg. 1♀, Kinsakubaru, the same Island, 20-III-2005, Y. D. Watari leg. (NSMT-Ar 5909). 1♀, Santarôtôge Pass, the same Island, 7-IV-2003, K. Ogata leg. (NSMT-Ar 5910). 1juv., Mt. Yonahadake, Okinawajima Is., Okinawa Pref., Japan, 28-XII-2003, A. Tanikawa leg.

Description. Coloration and markings. Female (Fig. 1): carapace dark brown with three light colored parts (Fig. 2); dorsum of abdomen light brown, around sigillae and anterior part darker.

Measurements. Based on the Japanese female specimens (Kinsakubaru/Santarôtôge). Body 3.92/4.09 long. Carapace 1.69/1.72 long; 1.44/1.44 wide. Length of legs [tarsus + metatarsus + tibia + patella + femur = total]: I, 0.64 + 0.89 + 1.02 + 0.78 + 1.85 = 5.18/0.64 + 0.91 + 1.02 + 0.76 + 1.84 = 5.17; II, 0.53 + 0.84 + 0.93 + 0.73 + 1.64 = 4.67/0.60 + 0.84 + 0.96 + 0.71 + 1.62 = 4.73; III, 0.35 + 0.45 + 0.47 + 0.44 + 0.89 = 2.60/0.33 + 0.47 + 0.47 + 0.44 + 0.87 = 2.58; IV, 0.38 + 0.71 + 0.73 + 0.56 + 1.31 = 3.69/0.33 + 0.69 + 0.76 + 0.53 + 1.29 = 3.60. Abdomen 2.23/2.53 long; 2.83/3.27 wide.

Female. Carapace longer than wide (length divided by width 1.17/1.19), posterior part of head region with hairs whose socket broad and hooded (Fig. 8). Median ocular area (Fig. 3) wider than long (length divided by width 0.70/0.68); wider behind than in front (anterior width divided by posterior width 0.85/0.86); posterior median eyes slightly projecting (Figs. 2–3). Labium longer than wide (length divided by width 0.65/0.65). Sternum slightly longer than wide (length

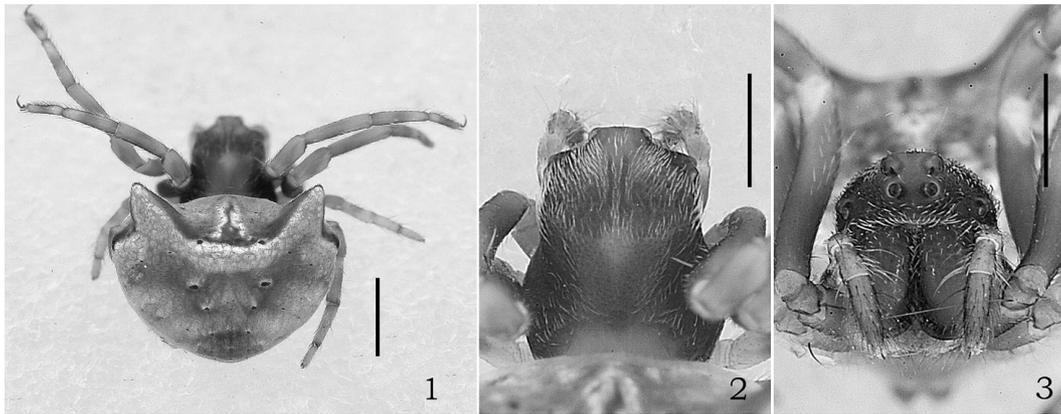


Fig. 1-3. Female of *Cnodalia harpax* Thorell 1890 — 1, habitus; 2, cephalothorax, dorsal view; 3, same, frontal view (NSMT-Ar 5910). (Scales: 1 mm.)

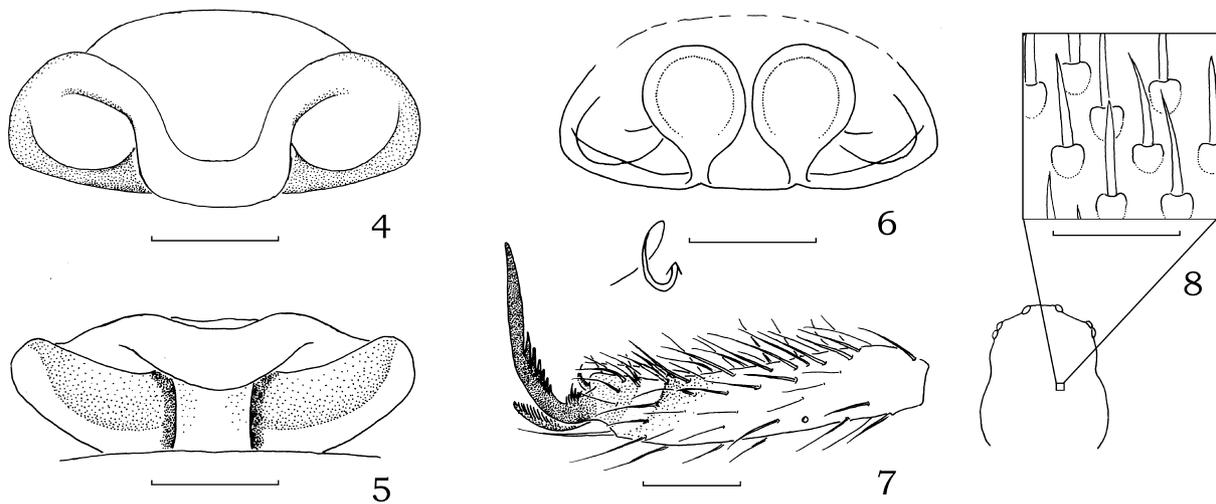


Fig. 4-8. *Cnodalia harpax* Thorell 1890 — 4, epyginum ventral view; 5, same, posterior view; 6, same, dorsal view; 7, tarsus I, prolateral view; 8, surface of carapace. (6, NSMT-Ar 5909; others, NSMT-Ar 5910; scales: 0.1 mm.)

divided by width 1.04/1.06). Length of leg I aivided by length of carapace 3.07/3.01. Tarsus I and II with very long anterior claw (Fig. 7), apically with membranous part (Fig. 7), and ventrally with many spines (Fig. 7). Abdomen wider than long (length divided by width 0.79/0.78); anteriorly with a pair of horn-shaped projections (Fig. 1). Epigynum (Figs. 4-6): with a short scape; copulatory duct winding (Fig. 6).

Male unknown.

Distribution. Japan (Amami-ôshima Is. and Okinawajima Is.), Indonesia (Sumatra Is.)

Remarks. This species can be easily distinguished from other araneid spiders by its characteristic general appearance (Fig. 1), especially a pair of horn-shaped projections of abdomen.

Notes. The most spectacular feature of this spider is its extremely long anterior claws on tarsi I and II (Figs. 1, 7). Such long prolateral claws have been known only in a Hawaiian tetragnathid spider *Doryonychus raptor* Simon

1900 (Okuma 1990, Gillespie 1992). Moreover, *Cnodalia harpax* has a segment-like part at the base of the long claws similar to *D. raptor*, which captures its prey using the long claw to impale them (Gillespie 1992). Although the foraging behavior of *C. harpax* is still unknown, the resemblance of *Cnodalia* to *Doryonychus* suggests that *Cnodalia* also has a possibility to use its long claw to impale prey.

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