

A Newly Recorded Spider of the Genus *Cheiracanthium* (Araneae, Clubionidae) from Taiwan

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(Received: 6 September 2004, accepted: 6 October 2004)

ABSTRACT

Cheiracanthium insulanum (Thorell, 1878) is recorded from Taiwan for the first time. Here, it is re-described based on Taiwanese specimens. It differs from congeners by having remarkably dark chelicerae and dark brown endites and labium. *Cheiracanthium adjacensoides* Song, Chen et Hou, 1990 from the Mainland China is considered a junior synonymy of *C. insulanum*.

Keywords: Araneae, Clubionidae, *Cheiracanthium*, new record, Taiwan

Introduction

The genus *Cheiracanthium* is of medium-sized, pale yellow, two-clawed hunting spiders. They are commonly found on foliage at night, staying in chambers or silken tube retreats of plant foliage during the day. The female deposits and takes care of her egg sac in a breeding nest constructed by rolling leaves or grasses. In some species, the offspring will eat their mother at the end of maternal care period (Toyoma, 2003).

Cheiracanthium differs from all other genera of the family by having the combination of following characteristics: palpal tibial apophysis well developed and basal retrolateral spur on the cymbium in males; epigynum in females with a central or posterior depression and funnel-shaped openings leading into dark copulatory ducts which often wind around the bacilliform, dumb-bell-shaped spermathecae, before entering them. Spiders of the genus *Cheiracanthium* have no thoracic groove or, if present, the thoracic groove is indicated by hardly noticeable dark pigments. Their leg I is the longest. The posterior side of trochanter is deeply notched.

Genus *Cheiracanthium* has spread virtually all over the world. To date, only one species has been recorded from Taiwan (Chen, 1996). Yaginuma (1970) first reported the occurrence of

Cheiracanthium lascivum Karsch, 1879 in Taiwan. His finding was confirmed by subsequent authors (Chu and Okuma, 1975; Yaginuma, 1977; Chen, 1996). No further study on *Cheiracanthium* was reported in Taiwan. For the past decade, the first author was able to collect specimens during a long-term investigation on the spider fauna of Taiwan. Many specimens were remained unknown. Recently, when we carefully examined these specimens, we found a second species of the genus *Cheiracanthium*. It is identical to *Cheiracanthium insulanum* (Thorell, 1878) in every aspect. In this paper, both sexes of *C. insulanum* are re-described and illustrated based on specimens obtained from Taiwan.

Materials and Methods

Spiders were collected on leaves of all sorts of vegetation at night from various locals in Taiwan. Specimens were preserved in 70% ethanol and deposited in the Arachnological collection of the Department of Life Science, National Taiwan Normal University (NTNUB-Ar). Alcohol-preserved specimens were examined and measured under a stereomicroscope. Female epigynum was dissected and cleaned in hot 10% KOH before examining the inner genital

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structures. All figures were made with a drawing tube attached to the microscope. Abbreviations used in this paper are: ALE, anterior lateral eye; MOA, median ocular area; PLE, posterior lateral eye.

Results and Discussion

Cheiracanthium insulanum (Thorell, 1878) (Figures 1, 2)

Eutittha insulana Thorell, 1878: 198.

Cheiracanthium adjacensoides Song, Chen and Hou, 1990: 427, figs. 1-4; Song, Zhu and Chen, 1999: 412, figs. 241E-F, 243C-D. NEW SYNONYMY

Cheiracanthium payteus Barrion and Litsinger, 1995: 156, fig. 87.

Cheiracanthium tigbauanensis Barrion and Litsinger, 1995: 161, figs. 91-92.

Cheiracanthium tingilium Barrion and Litsinger, 1995: 164, fig. 93.

Cheiracanthium bikakapenalcolium Barrion and Litsinger, 1995: 165, fig. 94.

Cheiracanthium hugiscium Barrion and Litsinger, 1995: 167, fig. 95.

Cheiracanthium insulanum: Deeleman-Reinhold, 2001: 228, figs. 272-279.

Specimens examined. ILAN Co.: DONGSHAN, Tahjinn, alt. 200 m, 1 male (NTNUB-Ar 6731), 10-II-2000; SUA0, Tungao, alt. 50 m, 1 male (NTNUB-Ar 9179), 24-V-1998. NANTOU Co.: TSAOTUN, Kanshi, alt. 300 m, 1 male (NTNUB-Ar 4700), 30-VI-2000; 1 male (NTNUB-Ar 4701), 7-VIII-2000; 3 males and 1 female (NTNUB-Ar 4705-4708), 5-IX-2000; 1 male (NTNUB-Ar 4702), 22-VI-2003; 1 male and 1 female (NTNUB-Ar 4703-4704), 22-III-2003. HUALIEN

Co.: YULI, Antung, alt. 150 m, 1 male (NTNUB-Ar 11732), 22-VI-2002. TAITUNG Co.: CHINFENG, alt. 500 m, 1 male and 2 females (NTNUB-Ar 14979-14981), 13-VIII-1993; CHIHSHANG, 2.5 km S Wan-an, alt. 250 m, 1 female (NTNUB-Ar 11762), 23-VI-2002; TUNGHO, Tulan, alt. 200 m, 1 male (NTNUB-Ar 18309), 27-VI-2003. All specimens were collected by the first author.

Diagnosis. *Cheiracanthium insulanum* can be distinguished from most other congeners by the dark chelicerae, dark brown endites, and labium in both sexes. The cymbial margin of male palp is expanded laterally (Figure 1C). The palpal tibial apophyses are faintly sinuated (Figures 1C, D). The epigynum in females has an oval depression in the middle. The S-shaped copulatory ducts curve laterally and anteriorly around the depression (Figures 1A, B).

Description. Measurements (in mm). Measurements for six males are followed by those of ten females (in parentheses): body length 5.65 - 7.95 (6.10 - 8.00); carapace length 2.70 - 3.70 (2.47 - 3.25), width 2.00 - 2.80 (2.00 - 2.45); abdomen length 2.95 - 4.25 (3.40 - 5.05), width 1.60 - 2.50 (2.05 - 3.55). Measurements of legs given in Table 1.

Male. Prosoma pale yellow, except for dark chelicerae, and dark brown endites and tip of palpal tarsi. Carapace (Figure 2A) longer than wide, with dark streak in thoracic groove region. All eyes equal in diameter, ALE and PLE almost touch. Anterior width of MOA equals to length; posterior width longer than anterior width. Chelicerae (Figure 2C) barely projected, armed with three teeth on each promarginal and retro-marginal fang groove. Labium dark brown, length equals width. Cymbial margin of male palp expanded laterally (Figure 1C). Palpal tibial

Table 1. Lengths of leg segments of *Cheiracanthium insulanum*. (mean \pm SD; in mm)

Leg	Femur	Patella+Tibia	Metatarsus	Tarsus	Total
Female (n = 10)					
I	3.20 \pm 0.42	3.97 \pm 0.23	2.59 \pm 1.04	1.36 \pm 0.08	11.12 \pm 0.98
II	2.27 \pm 0.21	3.03 \pm 0.23	2.17 \pm 0.19	0.96 \pm 0.13	8.43 \pm 0.68
III	1.75 \pm 0.17	2.15 \pm 0.12	1.64 \pm 0.13	0.84 \pm 0.04	6.38 \pm 0.38
IV	2.60 \pm 0.20	3.23 \pm 0.21	2.71 \pm 0.19	0.96 \pm 0.11	9.50 \pm 0.58
Male (n = 6)					
I	4.35 \pm 0.47	5.88 \pm 0.70	5.04 \pm 0.67	1.98 \pm 0.22	17.25 \pm 2.00
II	3.20 \pm 0.32	4.14 \pm 0.44	3.60 \pm 0.51	1.30 \pm 0.12	12.24 \pm 1.32
III	2.46 \pm 0.35	2.88 \pm 0.39	2.74 \pm 0.35	1.04 \pm 0.09	9.12 \pm 1.05
V	3.48 \pm 0.31	4.21 \pm 0.45	4.36 \pm 0.16	1.26 \pm 0.14	13.11 \pm 1.16

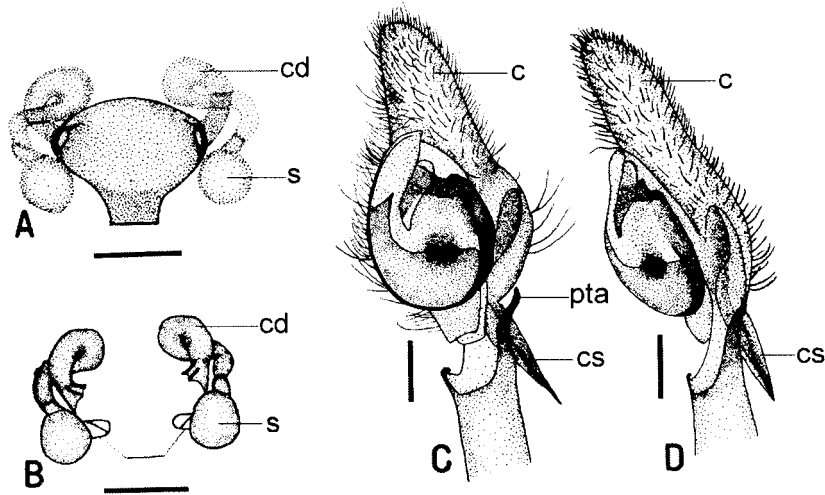


Figure 1. Genital organs of *Cheiracanthium insulanum* (Thorell, 1878): A. Epigynum, ventral view; B. Vulva, dorsal view; C. Left male palp, ventral view; D. *ditto*, lateral view. Abbreviations are: c, Cymbium; cd, Copulatory duct; cs, Retrolateral spur of cymbium; pta, Palpal tibial apophyses; s, Spermatheca. Scales = 0.2 mm.

apophyses faintly sinuated (Figures 1C, D). Abdomen pale yellow, longer than wide, pale grayish cardiac pattern dorsally. Leg formula: 1-4-2-3.

Female. Similar to males in general aspect and color pattern (Figure 2B). Carapace slightly smaller than that of males. Legs shorter than those of males, especially leg I. Epigynum (Figures 1A, B) with oval depression in middle, both copulatory openings on sides; each copulatory duct directed forward, then backward through S-shaped duct leading to spermatheca. Ventral view: part of dark copulatory duct seen through tegument (Figure 1A).

Distribution. Myanmar, Thailand, Indonesia,

Philippines, China (Anhui and Sichuan), and Taiwan (new record).

Remarks. *Cheiracanthium insulanum* cannot be confused with *C. lascivum* (characters in parenthesis) by having the remarkable dark chelicerae and the dark brown endites and labium (deep reddish brown chelicerae, endites, and labium). Although we did not examine the type specimen, original description and figures of *Cheiracanthium adjacensoides* by Song *et al.* (1990) from Mainland China agree with all diagnostic characters of *C. insulanum*. Thus, we consider *Cheiracanthium adjacensoides* a junior synonymy of *C. insulanum*.

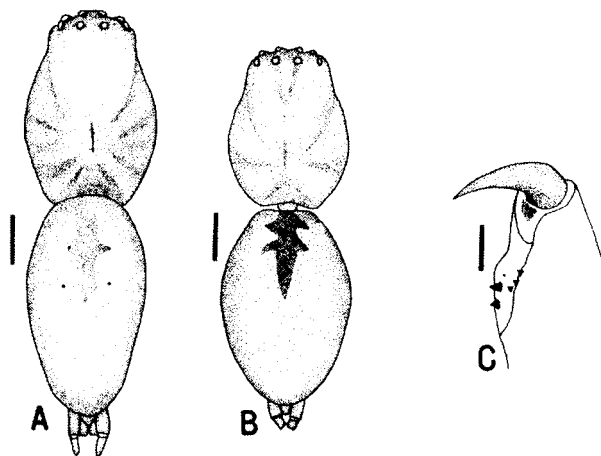


Figure 2. *Cheiracanthium insulanum* (Thorell, 1878): A. Male carapace and abdomen, dorsal view; B. Female carapace and abdomen, dorsal view; C. Left chelicera, posterior view. Scales = 1 mm (A, B) and 0.2 mm (C).

Acknowledgments

We sincerely thank Dr. Sun-Chih Chen at the National Taipei Teachers College and Messrs. Hong-Zen Wei, Ya-Huih Chen, Ya-Ching Yang, Yu-Ting Lin, and Jia-Yuan Yang, at the National Taiwan Normal University, Taiwan, for field assistance. The study was supported in part by the Taiwan Endemic Species Research Institute, Council of Agriculture (grant no. 92AS-2.4.2-EI-W1 (03-2)).

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台灣產紅螫蛛屬的一種新紀錄 (蜘蛛目: 袋蛛科)

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(收稿日期: 2004.9.6, 接受日期: 2004.10.6)

摘 要

本文首次記錄島嶼紅螫蛛 (*Cheiracanthium insulanum*) 在台灣之分布, 並根據台灣標本重新描述與繪圖。島嶼紅螫蛛具有顯著黑褐色的螫肢、下顎及下唇, 可與本屬其他近似種相區別。另外, 本文將中國大陸所產的擬鄰紅螫蛛 (*C. adjacensoides*) 處理為島嶼紅螫蛛的同物異名。

關鍵詞: 蜘蛛目, 袋蛛科, 紅螫蛛屬, 新紀錄, 台灣