

Little-known Japanese Spider, *Clubiona zilla* (Araneae,  
Clubionidae) — Representative of a New and  
Peculiar Species-group

By

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**Abstract** *Clubiona zilla* DÖNITZ et STRAND, 1906, a little-known Japanese spider of the family Clubionidae, is redescribed based on the specimens recently collected in Ishikawa Prefecture, Japan. Details of the female and male genital organs are newly illustrated. These organs are so unique that the spider should be placed in its own species-group.

In the “Anhang” of BÖSENBERG and STRAND’s “Japanische Spinnen” (1906), 51 species of spiders were described under the author names of “DÖNITZ et STRAND” ad interim. This appendicular part of the article was said to have published by STRAND on the basis of the “Notizen” and coloured illustrations made by DÖNITZ. Depository of the specimens originally used for preparing it has been unknown up to the present. Consequently, many of their species have never been recognized since the original descriptions.

*Clubiona zilla* was one of these species and not recorded again for a long time. However, SHINKAI recently collected this spider from under the bark of cryptomeria on Mt. Takaosan in Tokyo and published a photograph of a female spider in nature (SHINKAI & TAKANO, 1984). This accords with DÖNITZ’s account, noting that the female used for his description was found on 22 September 1883 under a tree bark at Saga.

In 1985, I made a research trip to the Noto Peninsula and the southern part of Ishikawa Prefecture from the end of May to the beginning of June. During the research I collected 2 ♀♀ 3 ♂♂ of this interesting spider from a large hole in an old pine tree at Jôyama in Nanao-shi. Having these specimens at hands, I was able to make some significant observations, and the result will be reported in this paper. The genital organs of both sexes of the spider will be newly illustrated. Judging from its morphological characteristics, a new and peculiar species-group in the genus *Clubiona* will be proposed for this spider.

I wish to express my sincere thanks to Dr. S.-I. UENO of the National Science Museum, Tokyo, for his generous support at the field work of the research and for revising the manuscript of this paper. Many thanks are also due to Mr. E. SHINKAI, Tokyo, for important suggestions for this study, and to Professor Y. NISHIKAWA,

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Genus *Clubiona* LATREILLE, 1804

Group of *Clubiona zilla*

*Diagnosis.* Closely standing by the *abboti* group (DONDALE & REDNER, 1982), but the epigynum bears an expanded plate, the atrium is tube-shaped and connected with spermatheca by a thin tube, the spermatheca is small and globular, the retrolateral tibial apophysis of male palp is not much sclerotized, and the tegular apophysis is extremely developed, winding and distally branched. Small clubionid with body length approximately 3 mm; opisthosoma with markings. At present monotypic.

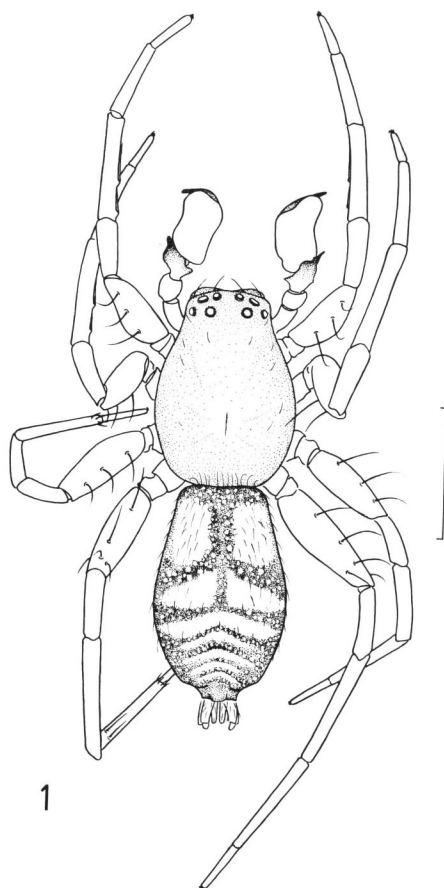


Fig. 1. *Clubiona zilla* DÖNITZ et STRAND, 1906, habitus of male. (Scale: 1 mm.)

*Clubiona zilla* DÖNITZ et STRAND, 1906

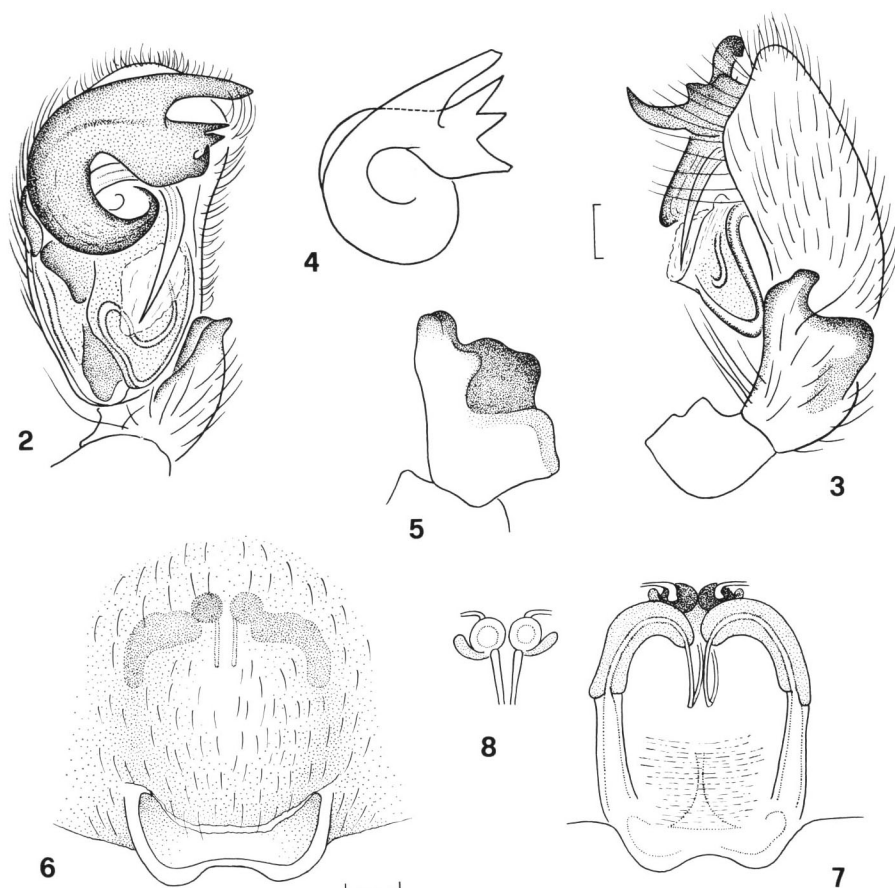
[Japanese name: Ukon-fukurogumo]

(Figs. 1-8)

*Clubiona zilla* DÖNITZ et STRAND, 1906, in BÖSENBERG & STRAND, Abh. senckenb. naturf. Ges., 30, p. 386. — SHINKAI & TAKANO, 1984, Field Guide Spid. Japan, p. 163.

*Specimens examined.* 2♀♀ 3♂♂, Jôyama, 200-270 m alt., Furushiro-machi, Nanao-shi, Ishikawa Pref., Japan, 28-V-1985, H. ONO leg. (NSMT-Ar 1212-1214).

*Measurement.* Body length ♀ 3.18-3.26 mm, ♂ 2.88-3.19 mm; prosoma length



Figs. 2-8. *Clubiona zilla* DÖNITZ et STRAND, 1906. — 2. Male palp, ventral view. 3. Ditto, retrolateral view. 4. Tegular apophysis, frontal view. 5. Tibia of male palp, dorsal view. 6. Epigynum. 7. Female genitalia, dorsal view. 8. Spermathecae, ventral view. (Scale: 0.1 mm.)

♀ 1.33–1.41 mm, ♂ 1.40–1.52 mm, width ♀ 0.99–1.04 mm, ♂ 1.11–1.19 mm; opisthosoma length ♀ 1.70–1.78 mm, ♂ 1.40–1.67 mm, width ♀ 1.03–1.23 mm, ♂ 0.92–1.00 mm. Lengths of legs in 1 ♀ 1 ♂ (in mm; ♀/♂):

| Leg | Tarsus    | Metatarsus | Tibia     | Patella   | Femur     | Total      |
|-----|-----------|------------|-----------|-----------|-----------|------------|
| I   | 0.26/0.28 | 0.43/0.55  | 0.58/0.75 | 0.41/0.46 | 0.70/0.86 | 2.38/2.91  |
| II  | 0.28/0.32 | 0.46/0.61  | 0.61/0.76 | 0.43/0.49 | 0.74/0.88 | 2.52/3.06  |
| III | 0.29/0.31 | 0.60/0.74  | 0.54/0.65 | 0.39/0.43 | 0.75/0.88 | 2.57/3.01  |
| IV  | 0.37/0.40 | 0.88/1.04  | 0.85/1.00 | 0.53/0.54 | 1.03/1.24 | 3.66/4.22. |

Prosoma longer than wide (length/width ♀ 1.28–1.41, ♂ 1.26–1.34), covered with short hairs and several weak setae. Anterior row of eyes slightly procurved in frontal view, posterior row almost straight in dorsal view; all eyes similar in size, ALE\* slightly larger than the others, ALE/AME ♀ 1.00–1.09, ♂ 1.08–1.25, PLE/PME ♀ 1.00–1.09, ♂ 0.92–1.00, AME-AME/AME-ALE ♀ 3.00–5.00, ♂ 2.40–3.33, PME-PME/PME-PLA ♀ 1.71–1.93, ♂ 1.75–2.00, MOA wider than long (length/width ♀ 0.69–0.75, ♂ 0.64–0.73), wider behind than in front (anterior width/posterior width ♀ 0.71–0.75, ♂ 0.64–0.71), clypeus very narrow, clypeus/AME-AME ♀ 0.20–0.34, ♂ 0.16–0.30. Promargin of cheliceral fang furrow with six teeth, the fifth larger, retromargin with six or seven small teeth; labium longer than wide (length/width ♀ 1.15–1.17, ♂ 1.14–1.23), sternum longer than wide (length/width ♀ 1.35–1.43, ♂ 1.39–1.43). Leg formula IV–II–III–I or IV–III–II–I.

Spiniformation of legs. 1 ♀: Femur: I–IV dorsal 0–1–1–1, I prolateral, IV pro- and retrolateral each 0–0–0–1; tibia: I–II ventral 2–2–0, III ventral 0–1–1 ap, IV pro- and retrolateral 1–1, ventral 0–1–1 ap; metatarsus: I–II ventral 2–0–0, III pro- and retrolateral, IV retrolateral each 1–0–2 ap, IV prolateral 1–1–2 ap, III–IV ventral 2–0–2 ap.

1 ♂: Femur: I–II dorsal 0–1–1–1, prolateral 0–0–0–1, III–IV dorsal 1–0–1–1; tibia: I–II ventral 2–2–0, III prolateral 0–1–1, ventral 0–1–1 ap, IV prolateral 0–1–1, retrolateral 1–1, ventral 1–1–1 ap; metatarsus: I–II ventral 2–0–0, III pro- and retrolateral 1–0–2 ap, IV pro- and retrolateral 1–1–2 ap, III–IV ventral 2–0–2 ap.

Male palp (Figs. 2–5). Tibia with retrolateral and dorsal apophyses; retrolateral apophysis not much sclerotized, dorsal apophysis amber-coloured, heavily sclerotized. Tarsus large; bulb with extremely developed tegular apophysis distally branched into four parts and covering basal part of embolus; embolus spiniform, apically pointed, extending in proximal direction, its distal part lying on membranous conductor.

Opisthosoma covered with hairs, longer than wide (length/width ♀ 1.45–1.65, ♂ 1.52–1.67).

Female genitalia (Figs. 6–8). Epigynum large, expanded, without folds; in-

\* The abbreviations used in this paper are the same as those explained in my preceding paper (ONO, 1986).

tromittent orifices in transverse cavity situated on posterior margin of epigynum. Intromittent canal pararell, extending in anterior direction; atrium tube-shaped, connected with spermatheca by a thin tube; spermatheca small, globular, with finger-shaped gland.

Coloration and markings (Fig. 1). ♀♂ Prosoma yellow to light yellowish brown without any marking; chelicerae, maxillae and labium darker; sternum, legs and palps yellow to yellowish brown. Opisthosoma light yellowish brown, with a vertical and several transverse stripes in blackish brown; underside without markings.

*Range.* Japan (Honshu, Kyushu).

*Biology.* Found under barks of trees.

*Remarks.* I have been unable to find any clubionid spider closely related to *C. zilla*. For the time being, this species had better be regarded as constituting a monotypic species-group in view of the unique structure of genital organs explained in the above diagnosis.

The specific name is derived from a spiny crucifer, *Zilla*, occurring in Egypt.

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