

## A new species of the genus *Otacilia* (Araneae: Corinnidae) from Yunnan Province, China

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**Abstract** — A new species of the genus *Otacilia* belonging to the family Corinnidae from Yunnan Province, China, is diagnosed, described and illustrated under the name of *Otacilia yangi* sp. nov.

**Key words** — Araneae, Corinnidae, *Otacilia*, new species, China

### Introduction

The spider family Corinnidae currently contains 77 genera and 944 species in the world (Platnick 2008). The family is the tenth largest among Araneae. At present 10 genera containing 45 species have been reported from China (Platnick 2008, Song *et al.* 1999). Corinnids are free-living ground spiders, usually found in woody debris, litter or humus on the forest floor in shady deciduous forests.

The genus *Otacilia* erected by Thorell in 1897 on the basis of a single species from Burma (Kamura 2001) so far has included 14 species in the world (Platnick 2008). The genus *Otacilia* has a close relationship with the genus *Phrurolithus* and both are in the sub-family Phrurolithinae. However, over time, the genus *Phrurolithus* has become a taxon like a waste-basket containing many uncertain or unknown species. Many phrurolithine species with some pairs of spines on tibiae I, II and metatarsi I, II may have been erroneously assigned to *Phrurolithus* when they do not fit other genera. Some of these species have already been formally reassigned to other genera. *Phrurolithus komurai*, *P. lynx*, and *P. taiwanica*, for example, were transferred to *Otacilia* (Deeleman-Reinhold 2001; Kamura 2004).

While examining spider specimens collected from Dali City, Yunnan, China, we found a species that has a pair of centrally situated copulatory openings as in *O. armatissima* (type species of the genus *Otacilia*), femur I with four or five prolateral spines, and femur II with two or three prolateral spines. In the genus *Phrurolithus*, femur I has only one spine and femur II has no spines on the prolateral side. So we placed the species in the genus *Otacilia* and gave it a new species status under the name of *Otacilia yangi* sp. nov.

### Materials and Methods

Terminology is standard for Araneae. All measurements given are in millimeters. Carapace length was measured from the anterior margin to the rear margin of the carapace

medially. Total length is the sum of carapace and abdomen length regardless of the petiolus. Eye sizes were measured as the maximum diameter in dorsal or frontal view. Total length of a leg is the sum of femur, patella plus tibia, metatarsus and tarsus lengths. All specimens were preserved in 75% alcohol and examined, drawn and measured under a Tech XTL-II stereomicroscope equipped with an Abbe drawing device. Epigyne were removed and cleared in 10% warm solution of potassium hydroxide (KOH) and transferred to alcohol for drawing. Type specimens are deposited in the Museum of Hebei University (MHBUS), Baoding, China.

The following abbreviations are used: ALE, anterior lateral eye; AME, anterior median eye; AER, anterior eye row; MOA, median ocular area; PER, posterior eye row; PLE, posterior lateral eye; PME, posterior median eye; PMS, posterior median spinnerets; RTA, retrolateral tibial apophysis.

### Taxonomy

*Otacilia* Thorell, 1897

*Otacilia* Thorell, 1897: 243.

Type species: *Otacilia armatissima* Thorell, 1897.

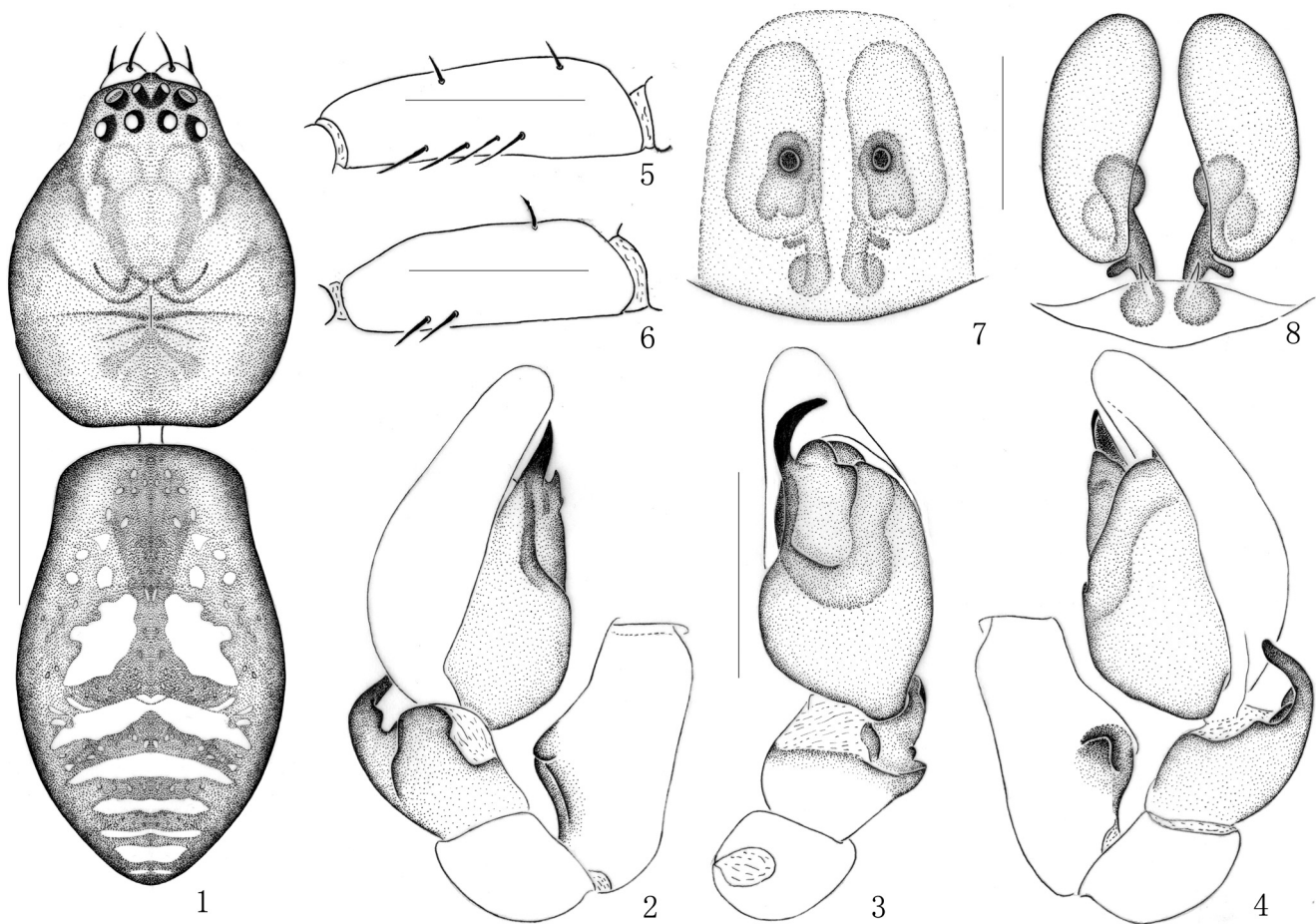
*Diagnosis and description*: see Deeleman-Reinhold 2001 and Kamura 2004.

*Otacilia yangi*, new species  
(Figs. 1–8)

*Type material*. Holotype male (MHBUS), CHINA: Yunnan Province, Dali City, Dali Normal College campus (25.34°N, 100.13°E), 23 October 2001, collected by Zizhong Yang. Paratypes: two males and three females, same data as holotype (MHBUS).

*Etymology*. The specific name is a patronym in honor of Dr. Zizhong Yang who collected the type specimens.

*Diagnosis*. This species is characterized by (1) apical tegulum with a short round tegular apophysis, (2) retrolateral tibial apophysis thumb-shaped, and (3) copulatory



**Figs. 1–8.** *Otacilia yangi*, new species. 1, Male body, dorsal view; 2, Male left palp, prolateral view; 3, Same, ventral view; 4, Same, retrolateral view; 5, Male femur I, dorsoprolateral view, showing spines; 6, Male femur II, dorsoprolateral view, showing spines; 7, Epigynum, ventral view; 8, Same, dorsal view. Scale lines: 1.0 mm (1, 5–6), 0.4 mm (2–4), 0.3 mm (7–8).

openings situated on central part of epigynum.

**Description.** Male. Holotype total length 3.42: cephalothorax 1.58 long, 1.02 wide; abdomen 1.84 long, 1.02 wide. Carapace elongate-ovoid in dorsal view, bulging, highest near median fovea, widest at coxae II and III (Fig. 1); dark yellow or brown, darker in eye area; cephalic groove and radial furrow brown; median fovea short, longitudinal. Eyes moderately large, arranged in two transverse rows. From above, AER slightly recurved, PER slightly wider than AER and procurved (Fig. 1); AME slightly smaller than other eyes; eye diameter: AME 0.07, ALE 0.10, PME 0.10, PLE 0.09; Eye interdistance: AME–AME 0.05, AME–ALE 0.03, PME–PME 0.10, PME–PLE 0.05, ALE–PLE 0.08; MOA 0.28 long, anterior width 0.23, posterior width 0.30. Clypeal height 0.13. Chelicerae moderately long, brown and with two promarginal and five retromarginal teeth (fifth the biggest); with two spines anterior, one short, one long. Endites longer than wide (4/3), convex on lateral margin, obliquely depressed, greatly narrowed at palpal insertion; labium broad, rebordered, round distally; sternum truncate at front, pointed behind, with strongly rebordered margins. Measurements of legs: I 4.99 (1.43 + 1.73 + 1.12 + 0.71), II 4.39 (1.33 + 1.63 + 0.92 + 0.51), III 3.88 (1.02 + 1.33 + 0.92

+ 0.61), IV 6.15 (1.94 + 1.73 + 1.63 + 0.85). Leg formula: 4123. Legs brown, femur I with two dorsal spines, four prolateral spines (Fig. 5); tibia I with eight pairs of ventral spines; metatarsus I with four pairs of ventral spines; femur II with one dorsal spine and two prolateral spines (Fig. 6), tibia II with seven pairs of ventral spines, metatarsus II with two rows of spines; femur III and femur IV each with one dorsal spine, no prolateral spine; other segments have no spines. Dorsal abdomen ovoid, yellowish, a narrow anterior scutum, two white shoulder markings, posterior half with several chevron-like white stripes. Male palp (Figs 2–4) with single, large retrolateral tibial apophysis extending posteriorly, femur with a hump on ventral side and with a small depression on retrolateral side. Tegulum convex, without conspicuous apophysis; embolus sickle-shaped, relatively long, erect, tapered, situated at tip of tegulum; sperm duct short, thick and distinct.

**Female.** A paratype female was measured, total length 4.85: cephalothorax 1.73 long, 1.50 wide; abdomen 3.12 long, 2.19 wide. Clypeal height 0.13. Eye diameter AME 0.10, ALE 0.10, PME 0.11, PLE 0.10. Distance AME–AME 0.07, AME–ALE 0.02, PME–PME 0.10, PME–PLE 0.08, ALE–PLE 0.09. MOA 0.30 long, front width 0.26,

back width 0.31. Leg measurements: I 6.16 (1.63 + 2.35 + 1.43 + 0.75); II 5.29 (1.63 + 1.73 + 1.22 + 0.71); III 5.24 (1.43 + 1.84 + 1.22 + 0.75); IV 6.87 (1.84 + 2.24 + 1.84 + 0.95). Leg formula: 4123. PMS enlarged, laterally compressed and with two parallel rows of atypical cylindrical gland spigots. Epigynum with two round copulatory openings (Fig. 7), situated centrally; spermatheca in two parts (Fig. 8), anterior part large, kidney-shaped, posterior part smaller and globose; a short connecting tube between the anterior and posterior spermatheca.

*Variation.* Body length: male 3.31–3.42, female 3.97–4.85. Femur I prolateral spines in other males: 4, 4; femur II prolateral spines in other males: 2, 2; femur I prolateral spines in females: 5, 5, 4; femur II prolateral spines in other males: 2, 3, 3.

*Distribution.* Presently known only from the type locality, Yunnan, China.

*Remarks.* This new species resembles *Otaçilia komurai* (Yaginuma 1952) (cf. Kamura 2004: 90, figs. 7–11) in the shape of the genital organs and dorsal markings of abdomen, but in the males can be distinguished from the latter by the apical tegulum which is short and round without an apparent conductor while the latter tegulum is long and beak shaped with an apical conductor. Also by the retrolateral thumb-shaped tibial apophysis, while the latter's is boot-shaped. In the female the copulatory openings are situated centrally, while in the latter the openings are near the anterior margins.

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