Two New Species of the Genus *Phrurolithus* (Araneae: Clubionidae) from Iriomotejima Island, Southwest Japan

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加村隆英¹⁾: 西表島産ウラシマグモ属 (クモ目: フクログモ科)
の 2 新種

Abstract Two new spider species of the genus *Phrurolithus* (Clubionidae) are described from Iriomotejima Island, Okinawa Prefecture, Southwest Japan, under the names *P. luna* sp. nov. and *P. lynx* sp. nov.

Up to the present, five species of the genus *Phrurolithus* have been known from Japan (YAGINUMA, 1986; CHIKUNI, 1989; YAGINUMA *et al.*, 1990; IKEDA, 1991). However, no record of this genus has been reported from Okinawa Prefecture with the exception of an undescribed species recorded by IKEHARA and SHIMOJANA (1971) from Senkaku Islands. In this paper, I describe two new species of the genus based on the specimens collected from Iriomotejima Island, Okinawa Prefecture.

All the type specimens of the new species described in this paper will be deposited in the collection of the Arachnological Society of Japan, Otomon Gakuin University, Ibaraki, Osaka.

The abbreviations used in this paper are as follows: ALE, anterior lateral eye; AME, anterior median eye; d, dorsal; MOA, median ocular area; pl, pro-lateral; PLE, posterior lateral eye; PME, posterior median eye; pv, proventral; rv, retroventral. Eye size means the length of long axis of an eye, but the measurement of posterior median eye was made at the horizontal level.

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Phrurolithus luna sp. nov.

(Figs. 1–7)

Measurements of holotype and allotype (♂/♀; in mm). Body length 2.25/3.75. Carapace length 1.28/1.45, width 1.10/1.23. Abdomen length 1.05/2.08, width 0.70/1.35. Length of legs as shown in Table 1. Eye sizes: AME 0.09/0.10, ALE 0.10/0.12, PME 0.06/0.07, PLE 0.12/0.10. Distances between eyes: AME–AME 0.04/0.04, AME–ALE 0.00/0.01, PME–PME 0.08/0.08, PME–PLE 0.04/0.05, ALE–PLE

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Figs. 1-7. *Phrurolithus luna* sp. nov.—1. Left femur I, showing two dorsal and three prolateral spines, prolateral view. 2. Left male palp, ventral view. 3. Same, retro-lateral view. 4. Femur of left male palp, ventral view. 5. Epigynum, ventral view. 6. Female genitalia, dorsal view. 7. Female body, dorsal view. (Scales: 1 & 7, 0.5 mm; 2-6, 0.1 mm.)

Table 1. Measurements of legs of *Phrurolithus luna* sp. nov. (♂/♀: in mm).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.63/1.50	0.55/0.59	1.71/1.63	1.53/1.44	0.68/0.68	6.10/5.84
II	1.30/1.28	0.49/0.53	1.25/1.23	1.18/1.15	0.65/0.68	4.87/4.87
III	1.04/1.06	0.40/0.45	0.85/0.85	1.05/1.05	0.64/0.68	3.98/4.09
VI	1.50/1.54	0.46/0.51	1.33/1.35	1.54/1.61	0.85/0.86	5.68/5.87

0.04/0.06. MOA anterior width 0.19/0.21, posterior width 0.20/0.22, length 0.24/0.24. Clypeus height 0.10/0.11.

Variation (in mm). Body length ♀ 3.45–4.10. Carapace length ♀ 1.30–1.53; width ♀ 1.05–1.23.

Spines on legs. Femora I–IV each with one or more dorsal spines; femora I–II each with a series of long spines on prolateral side (Fig. 1). Tibiae I–II and metatarsi I–II each with series of pro- and retroventral long spines. Number of spines: ♂: Femur I d 2, pl 4; femora II–IV d 1; femur II pl 2; tibia I pv 6 or 7, rv 7; tibia II pv 6, rv 5 or 6; metatarsus I pv 4, rv 4; metatarsus II pv 4, rv 3 or 4; ♀: femur I d 1, 2 or 3, pl variable from 2 to 7; femur II d 1 or 2, pl 2 or 3; femora III–IV d 1; tibia I pv 7 or 8, rv 7, 8 or 9; tibia II pv 7 or 8, rv 6, 7 or 8; metatarsus I pv 4 or 5, rv 3, 4 or 5; metatarsus II pv 3, 4 or 5, rv 3 or 4.

Chelicera with two spines on anterior side; promargin of fang furrow with well separated three teeth and retromargin with two teeth close to each other. Male abdomen with a dorsal scutum covering almost whole abdomen. Female abdomen with a small dorsal scutum on anterior part. Male palp (Figs. 2–4); embolus twisted; tegulum with a small pointed projection on retrolateral part; retrolateral tibial apophysis rather small; femur swollen ventrally and the swelling with a small hump on prolateral side. Epigynum with a pair of well sclerotized ridges on anterior part (Fig. 5). Female genitalia as shown in Fig. 6.

Color. Cephalothorax and appendages reddish brown; sternum paler; legs with coxae and trochanters yellowish brown. Abdomen dark grayish brown, with a round white marking on posterior part (Fig. 7). Spinnerets whitish yellow.

Type series. Holotype (♂), allotype (♀) and paratypes (3♀): NW of Mariudodaki Falls, Iriomotejima Island, Okinawa Pref., Japan, 23. II. 1993 (Takahide & Takae KAMURA).

Other specimens examined. Locality and collectors of all specimens are same as those of holotype. 1♀, 26. II. 1992; 9♀, 23. II. 1993; 1♀, 9. III. 1994.

Remarks. This new species is distinguished from the other Japanese species of the genus by the twisted embolus and the small retrolateral tibial apophysis in male palp, and the well sclerotized ridges in epigynum.

Etymology. The specific name is a noun in apposition, and is due to the round white marking on abdomen.

***Phrurolithus lynx* sp. nov.**

(Figs. 8–13)

Measurements of holotype and allotype (♂/♀; in mm). Body length 2.85/3.90.

Table 2. Measurements of legs of *Phrurolithus lynx* sp. nov. (♂/♀; in mm).

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	1.39/1.48	0.45/0.50	1.49/1.68	1.38/1.43	0.78/0.78	5.49/5.87
II	1.13/1.21	0.43/0.46	1.09/1.25	1.05/1.09	0.66/0.70	4.36/4.71
III	0.95/1.04	0.38/0.41	0.76/0.83	0.99/1.06	0.58/0.60	3.66/3.94
IV	1.50/1.61	0.43/0.49	1.28/1.44	1.58/1.78	0.78/0.83	5.57/6.15

Carapace length 1.30/1.45, width 1.10/1.20. Abdomen length 1.50/2.28, width 0.90/1.58. Length of legs as shown in Table 2. Eye sizes: AME 0.12/0.12, ALE 0.09/0.10, PME 0.08/0.09, PLE 0.09/0.10. Distances between eyes: AME-AME 0.04/0.04, AME-ALE 0.01/0.01, PME-PME 0.08/0.09, PME-PL 0.04/0.05, ALE-PL 0.07/0.08. MOA anterior width 0.24/0.26, posterior width 0.24/0.27, length 0.25/0.28. Clypeus height 0.08/0.11.

Variation (in mm). Body length ♂ 2.40–3.95, ♀ 3.20–4.35. Carapace length ♂ 1.10–1.90, ♀ 1.33–1.68; width ♂ 0.95–1.58, ♀ 1.10–1.35.

Spines on legs. Femora I–IV each with no or one dorsal spine; femora I–II each with a series of long spines on prolateral side. Tibiae I–II and metatarsi I–II each with series of pro- and retroventral long spines. Number of spines: ♂: Femora I–IV d 0 or 1; femur I pl 3 or 4; femur II pl 1 or 2; tibia I pv 6 or 7, rv 6, 7 or 8; tibia II pv 6 or 7, rv 5 or 6; metatarsus I pv 4, rv 3 or 4; metatarsus II pv 4, rv 2 or 3; ♀: femur I d 0 or 1, pl 3, 4 or 5; femora II–IV d 1; femur II pl 2 or 3; tibia I pv 7 or 8, rv 7, 8 or 9; tibia II pv 7, rv 6, 7 or 8; metatarsus I pv 4, rv 4; metatarsus II pv 4, rv 3.

Chelicera with two spines on anterior side; promargin of fang furrow with well separated three teeth and retromargin with two teeth close to each other. Abdomen with short stiff bristles on postero-ventral part. Male abdomen with a dorsal scutum about a half of abdomen in length. Female abdomen without a dorsal scutum. Male palp (Figs. 8–9): embolus roundly curved; conductor absent; retrolateral tibial apophysis bent apically; femur swollen at ventro-distal part and the swelling with a concavity on retrolateral side. Epigynum with copulatory openings situated on anterior part (Fig. 10). Female genitalia with spermathecae bacilliform (Fig. 11).

Color. ♂: Cephalothorax and appendages dark yellowish brown; carapace with dark brown flecks along radial furrows; sternum paler; legs with coxae and trochanters whitish yellow; femora I and II each with brown flecks on both sides of distal half (the flecks indistinct in small sized specimens). Abdomen dark brown, with whitish yellow markings on dorsum as shown in Fig. 12. Spinnerets whitish yellow. ♀: Similar to male, but wholly darker; femora I and II without flecks; abdomen dark grayish brown, with whitish yellow chevrons on dorsum (Fig. 13).

Type series. Holotype (♂), allotype (♀) and paratypes (1♂ 1♀): Urauchi, Iriomotejima Island, Okinawa Pref., Japan, 11. III. 1994 (T. & T. KAMURA).

Other specimens examined. All specimens were collected from Iriomotejima Island by T. & T. KAMURA. NW of Mariudo-daki Falls: 1♂, 26. II. 1992. Urauchi: 1♂ 2♀, 25. II. 1993; 2♂ 11♀, 6. III. 1994; 8♀, 11. III. 1994.

Remarks. This new species seems to be related to *Phrurolithus komurai* YAGI-

Figs. 8–13. *Phrurolithus lynx* sp. nov. — 8. Left male palp, ventral view. 9. Same, retro-lateral view. 10. Epigynum, ventral view. 11. Female genitalia, dorsal view. 12. Male body, dorsal view. 13. Female abdomen, dorsal view. (Scales: 8–11, 0.1 mm; 12–13, 0.5 mm.)

NUMA, 1952 and *Phrurolithus taiwanicus* HAYASHI et YOSHIDA, 1993. It is easily distinguished from *P. komurai* by the markings on carapace and abdomen, and is separated from *P. taiwanicus* by the structure of epigynum and female genitalia (cf. HAYASHI and YOSHIDA, 1993, figs. 10–11).

Etymology. The specific name is a noun in apposition. The markings on carapace and abdomen of this species is associated with a lynx.

摘 要

沖縄県西表島産のウラシマグモ属の2新種を *Phrurolithus luna* sp. nov. ツキミノウラシマグモ (新称) 及び *Phrurolithus lynx* sp. nov. ヤマネコウラシマグモ (新称) と命名して記載した。

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