

A New Species of the Genus *Ummeliata* (Araneae, Linyphiidae) from Japan

Mayumi Matsuda¹ and Hirotsugu Ono²

¹25, Kita-ku, Nukabira, Kamishihoro-chô, Katô-gun,
Hokkaido, 080–1403 Japan

²Department of Zoology, National Science Museum, 3–23–1 Hyakunin-chô,
Shinjuku-ku, Tokyo, 169–0073 Japan

Abstract A new species of the spider family Linyphiidae is described from Hokkaido, Japan, under the name of *Ummeliata saitoi* sp. nov. The new species was confused with a close relative, *Ummeliata osakaensis* (Oi, 1960).

Key words: Araneae, Linyphiidae, *Ummeliata*, new species, Hokkaido, Japan

Ummeliata osakaensis (Oi, 1960) is one of widely known species in Japanese linyphiids. It was recorded from Hokkaido and Honshu, Japan (Yaginuma, 1986; Chikuni, 1989; Matsuda, 1997; etc.) as well as from Sakhalin (Eskov, 1994). Saito (1982) pointed out that some individuals of “*Oedothorax osakaensis*” collected from Daisetsuzan Mountains, Hokkaido, were very large and their opening part of epigynum appeared to be different from the typical shape of the species.

In the course of a revisional study of Japanese linyphiid spiders, the authors re-examined specimens which were identified with *Ummeliata osakaensis*. After a careful study of the spiders especially on male palpal tibiae and female genitalia, two separate species were actually recognized in the specimens, that is, *Ummeliata osakaensis* and its relative regarded as new to science. The new species will be described in the present paper based on characteristics of the male palp and female genitalia.

Type specimens of the new species to be described in this paper are deposited in the collection of the Department of Zoology, National Science Museum, Tokyo (NSMT).

The authors wish to express their sincere thanks to Mr. Hiroshi Saito, Yamanashi, for his kind advice and to Mr. Kiminori Miyashita, Hokkaido, Mr. Osamu Watanabe, Hokkaido, and Mr. Kaoru Haga, Saitama for their offering invaluable specimens.

Ummeliata saitoi sp. nov.

[Japanese name: Saito-akamunegumo]

(Figs. 1–3, 7–10)

Oedothorax osakaensis: Saito, 1982, p. 13, fig. 23 [nec *O. osakaensis* Oi, 1960].

Ummeliata osakaensis: Chikuni, 1989, p. 57, fig. 54, p. 199 [nec *U. osakaensis* (Oi, 1960); data of specimens used for illustrations not given].

Type specimens. Holotype: ♂, Nukabira, Kamishihoro-chô, Katô-gun, Hokkaido, Japan, 30-X-1992, M. Matsuda leg. (NSMT-Ar 5181); paratypes: 14 ♀ 10 ♂, same data as for the holotype (NSMT-Ar 5182-5184).

Other specimens examined. 17 ♀ 7 ♂, Ishikari-gawa River, 870 m alt., Kamikawa-chô, Hokkaido, Japan, 6-X-1997, M. Matsuda leg., 4 ♀, Shimizudani, Kamishihoro-chô, Hokkaido, 1-V-1989, M. Matsuda leg., 3 ♀ 1 ♂, Higashioribe, Kamishihoro-chô, Hokkaido, 7-XI-1983, M. Matsuda leg., 1 ♀, Toyooka, Kamishihoro-chô, Hokkaido, 5-VIII-1992, K. Miyashita leg., Mt. Upepesanke-yama, Kamishihoro-chô, Hokkaido, 30-VII-1997, K. Haga leg., 5 ♀ 4 ♂, Yûdô-numa Lake, Toyokoro-chô, Hokkaido, 22-XI-1993, M. Matsuda leg., 1 ♀, Minamifurano-chô, Hokkaido, 8-VII-1993, K. Miyashita leg., 3 ♀, Atsubetsu-ku, Sapporo-shi, Hokkaido, 28-VI-1999, O. Watanabe leg., all in the private collection of M. Matsuda.

Description. Male (holotype): Body length 2.80 mm, prosoma length 1.37 mm, width 1.02 mm; lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 4.04 mm (1.16+0.35+1.02+0.91+0.60), II 3.83 mm (1.09+0.35+0.93+0.88+0.58), III 3.36 mm (0.95+0.32+0.77+0.81+0.51), IV 4.28 mm (1.19+0.32+1.09+1.07+0.61).

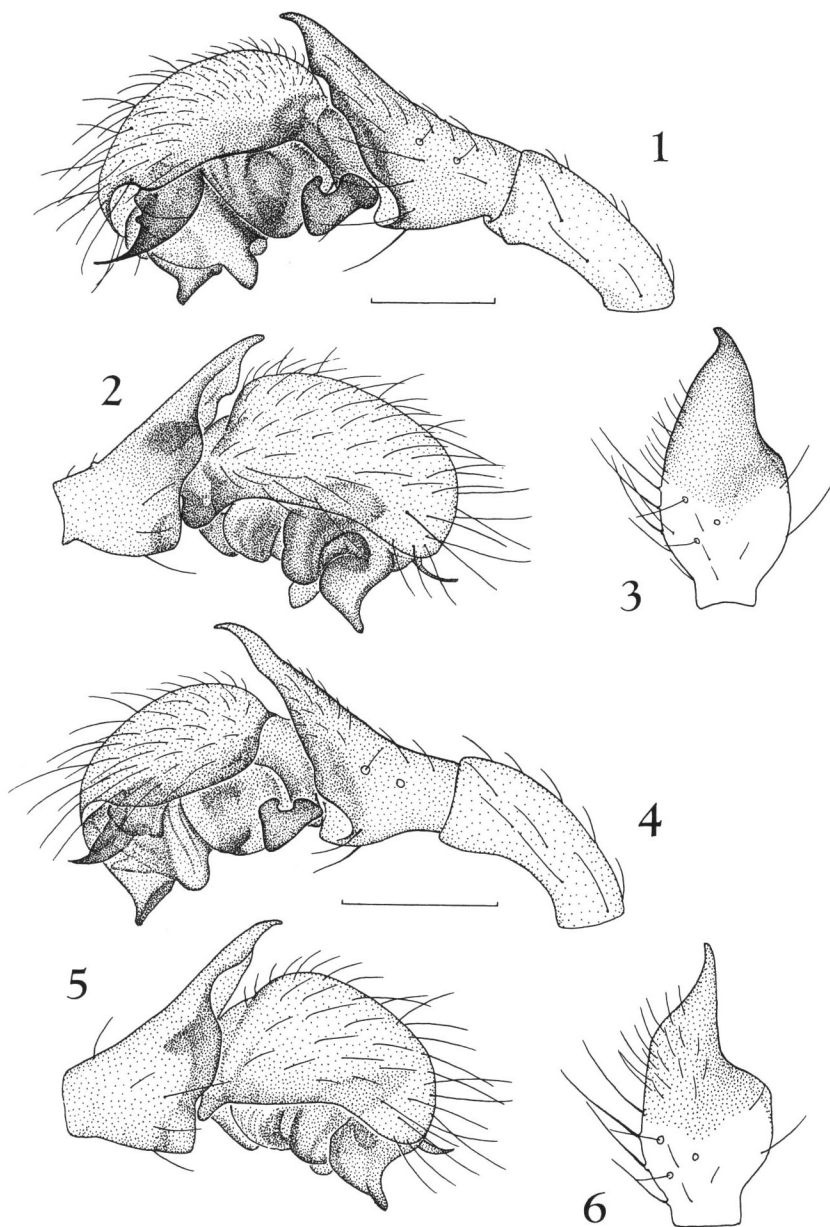
Prosoma: Carapace dark yellowish brown, with darker cervical grooves and radial striae, head posteriorly with a yellowish, large hump (Figs. 7–8); eyes with black ring, anterior eye-row recurved, eyes separated from each other by about the radius of median eye; posterior eye-row straight, median eyes separated from each other by a distance a little longer than the diameter of median eye and from lateral ones by about the radius; clypeus slightly longer than the length of median ocular area. Sternum similar in color to carapace, heart-shaped, as long as wide. Chelicera dark yellowish brown, with a boss rather large, promargin of fang furrow with 5 teeth, retro-marginal with 4 teeth; legs yellowish brown, tibiae I–II with two dorsal spines and III–IV with one dorsal spine, metatarsus IV with a trichobothrium, Tm I ca. 0.77.

Male palp (Figs. 1–3); Length of femur and patella 9:5 in ratio; tibia longer than patella, anterior margin rippled in retrolateral view; embolus not long.

Opisthosoma ovate and gray, with a pale longitudinal median line.

Female (a topotypical paratype; NSMT-Ar 5182): Body length 3.40 mm, prosoma length 1.40 mm, width 1.05 mm; length of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 4.11 mm (1.19+0.37+1.02+0.93+0.60), II 3.84 mm (1.12+0.35+0.91+0.88+0.58), III 3.42 mm (0.98+0.35+0.79+0.81+0.49), IV 4.43 mm (1.26+0.35+1.12+1.09+0.61).

Head without hump, opisthosoma dull white, with a pair of irregular gray bands (Fig. 9), other characteristics in general appearance and coloration as same as those in male.



Figs. 1–6. 1–3, *Ummeliata saitoi* sp. nov., male holotype (NSMT-Ar 5181); 4–6, *Ummeliata osakaensis* (Oi, 1960) from Nukabira, Hokkaido (Coll. M. Matsuda). 1, 4, Male palp, retrolateral view; 2, 5, male palp, prolateral view; 3, 6, tibia of male palp, dorsal view. [Scales: 0.2 mm.]

Female genitalia (Fig. 10): Opening part wider than long, anterior margin corrugated.

Variation. Body length: ♀ 2.8–3.6 mm, ♂ 2.6–3.1 mm.

Etymology. This species is dedicated to Mr. Hiroshi Saito, Yamanashi, a specialist of the linyphiid spiders in Japan.

Distribution. Japan (Hokkaido).

Remarks. This species is very closely related to *Ummeliata osakaensis* (Oi, 1960), but can be distinguished from the latter not only by the body size but also by the shape of male palpal tibia and female genitalia. The new species is much larger than the latter (cf. body size of both the species). The distal part of male palpal tibia of *U. saitoi* sp. nov. is wider than that of *U. osakaensis* (cf. Figs. 3 and 6) and the anterior margin of opening part of female genitalia is wavelike in new species, but straight in *U. osakaensis* (cf. Figs. 10 and 14). Spiders of *Ummeliata saitoi* sp. nov. were collected from leaf litter on the forest floor, while those of *U. osakaensis* mainly occurred in meadows.

Ummeliata osakaensis (Oi, 1960)

[Japanese name: Osaka-akamunegumo]

(Figs. 4–6, 11–14)

Oedothorax tokyoensis: Yaginuma, 1960, p. 44, pl. 13, fig. 82 [nec *Oedothorax tokyoensis* Uyemura, 1941 = *Ummeliata feminea* (Bösenberg et Strand, 1906)].

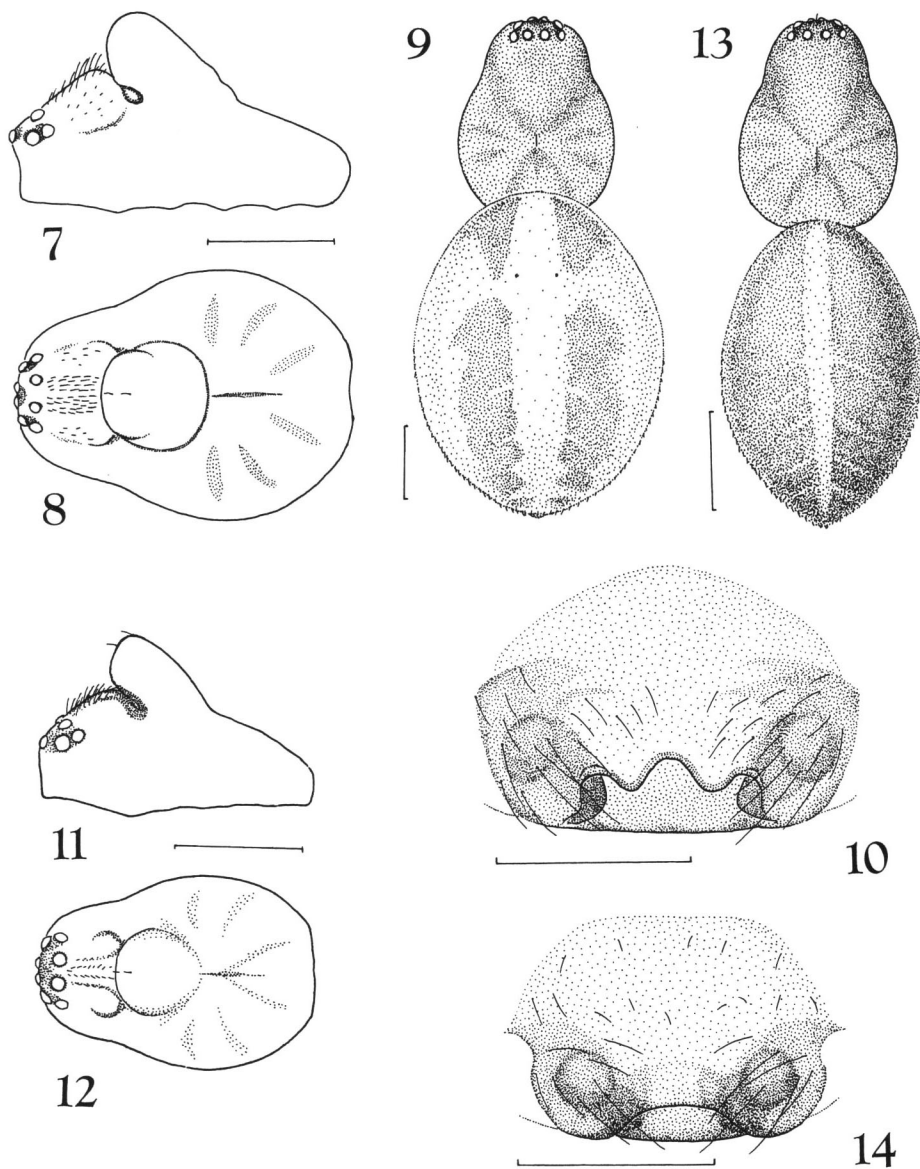
Oedothorax osakaensis Oi, 1960, p. 160, pl. VI, figs. 84–88 (male holotype and female allotype from Naruo-chô, Nishinomiya-shi, Hyogo Pref., Honshu, Japan, missing).—Yaginuma, 1968, p. 44, pl. 13, fig. 82.

Hummelia osakaensis: Eskov, 1980, p. 1743.

Ummeliata osakaensis: Brignoli, 1983, p. 695.—Yaginuma, 1986, p. 79, pl. 18, fig. 3.—Ono *et al.*, 1991, p. 95, figs. 18–19.

Specimens examined. 1 ♀ 1 ♂, Kôshien-chô, Nishinomiya-shi, Hyogo Pref., Honshu, Japan, 22–VIII–1950, R. Oi leg. (NSMT-Ar 2733); 4 ♀ 1 ♂, Kaida-mura, Kiso-gun, Nagano Pref., 27–VII–1957, R. Oi leg. (NSMT-Ar 2735); 3 ♀, Towada-ko Lake between Aomori and Akita Prefs., 29–VIII–1958, R. Oi leg. (NSMT-Ar 2736); 1 ♂, Maruyama, Sapporo-shi, Hokkaido, 29–VIII–1957, T. Katayama leg., (NSMT-Ar 2734); 1 ♀, Shibeche-chô to Teshikaga-chô, Kawakami-gun, Hokkaido, 24–VIII–1958, R. Oi leg. (NSMT-Ar 2737), all det. R. Oi; 1 ♀, Nukabira, Kamishihoro-chô, Katô-gun, Hokkaido, 30–X–1992, M. Matsuda leg. (Coll. M. Matsuda); 1 ♂, Nukabira, Kamishihoro-chô, Katô-gun, Hokkaido, 23–IX–1993, M. Matsuda leg. (Coll. M. Matsuda); many ♀♂ specimens from Hokkaido and Honshu (Coll. M. Matsuda; NSMT).

Notes. Some original specimens used for the description by Oi (1960) were examined for identification (NSMT-Ar 2733–2737). The body and epigynum of a fe-



Figs. 7–14. 7–10, *Ummeliata saitoi* sp. nov., male holotype (NSMT-Ar 5181) and a female paratype (NSMT-Ar 5182); 11–14, *Ummeliata osakaensis* (Oi, 1960) from Nukabira, Hokkaido (Coll. M. Matsuda). 7, 11, Male carapace, lateral view; 8, 12, male carapace, dorsal view; 9, 13, female body, dorsal view; 10, 14, epigynum, ventral view. [Scales: 7–9, 11–13, 0.5 mm; 10, 14, 0.2 mm.]

male and the prosoma and palp of a male were illustrated (Figs. 4–6 and 11–14) based on fresh specimens from Nukabira, Hokkaido. Body length: ♀ 1.8–2.2 mm, ♂ 1.9–2.7 mm.

Distribution. Japan (Hokkaido, Honshu). Specimens from Sakhalin have not been examined by the present authors.

References

- Bösenberg, W., & E. Strand, 1906. Japanische Spinnen. *Abh. senckenb. Naturf. Ges.*, **30**: 93–373, 400–422, pls. 3–16.
- Chikuni, Y., 1989. Pictorial Encyclopedia of Spiders in Japan. 309 pp. Kaisei-sha, Tokyo. (In Japanese.)
- Eskov, K. Y., 1980. Taxonomic notes on spiders of the genus *Hummelia* (Aranei, Linyphiidae) with a description of a new species. *Zool. Zhurn.*, **59**: 1743–1746. (In Russian, with English summary.)
- Eskov, K. Y., 1994. Catalogue of the Linyphiid Spiders of Northern Asia (Arachnida, Araneae, Linyphiidae). 144 pp. Pensoft Publ., Sofia and Moscow.
- Matsuda, M., 1997. A check-list of the spiders from Hokkaido, Japan. *Bull. Higashi Taisetsu Mus. nat. Hist.*, (19): 1–46. (In Japanese, with English summary.)
- Oi, R., 1960. Linyphiid spiders of Japan. *J. Inst. Polytechn., Osaka City Univ.*, Ser. D, **11**: 137–244, pls. 1–26.
- Ono, H., K. Kumada, M. Sadamoto & E. Shinkai, 1991. Spiders from the northernmost areas of Hokkaido, Japan. *Mem. natn. Sci. Mus., Tokyo*, (24): 81–103.
- Saito, H., 1982. Notes on linyphiine and erigonine spiders from Hokkaido, Japan. *Kishidaia*, (49): 8–21. (In Japanese.)
- Yaginuma, T., 1960. Spiders of Japan in Colour. vi+186+8 pp., 56 pls. Hoikusha, Osaka. (In Japanese.)
- Yaginuma, T., 1968. Spiders of Japan in Colour, Enlarged and Revised Edition. vi+197 pp., 56 pls. Hoikusha, Osaka. (In Japanese.)
- Yaginuma, T., 1986. Spiders of Japan in Color (New Edition). 305 pp., 64 pls. Hoikusha, Osaka. (In Japanese.)