Gnaphosid Spiders mainly from the Daisetsuzan Mountains, Hokkaido, Japan

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小野展嗣¹⁾: おもに大雪山から得られた北海道のワシグモ科クモ類

Abstract Ten species of spiders of the family Gnaphosidae of Hokkaido, Japan, collected mainly from the Daisetsuzan Mountains, are reported. Of these, *Drassyllus shaanxiensis* PLATNICK et SONG, 1986, and *D. sasakawai* Kamura, 1987, are newly registered to the fauna of Hokkaido, and *Micaria alpina* L. KOCH, 1872, and *Gnaphosa sticta* KULCZYŃSKI, 1908, are recorded from Japan for the first time. The female genitalia and the male palps of the latter two species are illustrated on the basis of the Japanese materials. *Micaria alpina* are widely distributed in the northernmost part of the Holarctic regions, while *Gnaphosa sticta* is known only from northeastern Siberia and Hokkaido. The specimens of the spiders were collected by bait trapping.

Up to the present, 15 species of spiders of the family Gnaphosidae were recorded from Hokkaido, the northernmost main island of Japan, that is, *Micaria japonica* HAYASHI, 1985 [MATSUDA (1987, 1988), CHIKUNI (1989)], *Micaria pulicaria* (SUNDEVALL, 1831) [YAGINUMA (1986), KAMURA (1992a)], *Zelotes asiaticus* (BÖSENBERG et STRAND, 1906) [ONO *et al.* (1991)], *Zelotes hayashii* KAMURA, 1987 [KAMURA (1987), MATSUDA (1988)], *Zelotes potanini* SCHENKEL, 1963 [MATSUDA (1992)], *Drassyllus sanmenensis* PLATNICK et SONG, 1986 [KAMURA (1987c)], *Drassodes lapidosus* (WALCKENAER, 1802) [YAGINUMA (1977, 1986), MATSUDA (1985), CHIKUNI (1989)], *Drassodes serratidens* SCHENKEL, 1963 [MATSUDA (1985, 1992)], *Gnaphosa kamurai* OVTSHARENKO, PLATNICK et SONG, 1992 [SAITO (1939), KAMURA (1988), MATSUDA (1992)], *Gnaphosa kompirensis* BÖSENBERG et STRAND, 1906 [YAGINUMA (1977, 1986), MATSUDA (1985, 1988), KAMURA (1988), CHIKUNI (1989)], *Callilepis nocturna* (LINNÉ, 1758) [MATSUDA (1986), KAMURA (1987a), CHIKUNI (1989), ONO *et al.* (1991)], *Kishidaia albimaculata* (SAITO, 1934) [SAITO (1934), YAGINUMA (1957, 1960, 1962, 1977, 1986, etc.), YAGINUMA & OHNO (1967), YAGINUMA & NISHIKAWA (1971), KAMURA (1986), CHIKUNI (1989), ONO *et al.* (1991)], *Sernokorba pallidipatellis* (BÖSENBERG et STRAND, 1906) [CHIKUNI (1989); no collection data from Hokkaido was recorded by KAMURA (1992b)], *Haplodrassus pugnans* (SIMON, 1880) [HAYASHI (1984), MATSUDA (1987), CHIKUNI (1989)] and *Poecilochroa hosiziro* YAGINUMA, 1960 [YAGINUMA (1960, 1977)]. However, these may only be a part of the gnaphosid spiders really occurring there.

Mr. Nobuki YASUDA, Sôunkyô Museum, Kamikawa-chô, Hokkaido, collected

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insects and spiders by bait trapping in Hokkaido, mainly in the Daisetsuzan Mountains, Central Hokkaido, for many years, and entrusted the spider specimens to the present author. The Daisetsuzan Mountains are composed of some mountains of 1,900–2,300 m alt., showing peculiar natural features with extremely cold climate in Japan, and many alpine insects and other animals are known from the area. Some studies of the families Thomisidae, Clubionidae and Cybaeidae based on the collection of Mr. YASUDA were already published (ONO, 1988, 1991, 1994; ONO & NISHIKAWA, 1992; ONO & YASUDA, 1992). In the present paper 10 species of the spiders of the family Gnaphosidae are reported. Of these, two species of the genera *Micaria* and *Gnaphosa* are newly recorded from Japan. All the materials examined in this paper are preserved in the collection of the Department of Zoology, National Science Museum, Tokyo (NSMT).

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Family Gnaphosidae

Genus *Micaria* WESTRING

Micaria pulicaria (SUNDEVALL, 1831)

Specimen examined. 1♂, Daisetsu-genseirin, 900 m alt., Mts. Daisetsuzan, Hokkaido, Japan, 26–VIII–1982, N. YASUDA leg. (NSMT–Ar 3190).

Distribution. Japan (Hokkaido); Holarctic.

Micaria alpina L. KOCH, 1872

(Figs. 5–8)

Micaria alpina L. KOCH, 1872, p. 313 (female holotype from Tirol, Austria, ?deposition, not examined).—LOCKET & MILLIDGE, 1951, p. 123, fig. 63.—WUNDERLICH, 1979, p. 281, figs. 31, 54.—ROBERTS, 1985, p. 78, fig. 29(c).—ZHANG, 1987, p. 181, fig. 152 (?identification).—PLATNICK & SHADAB, 1988, p. 18, figs. 30–33.—HEIMER & NENTWIG, 1991, p. 434, fig. 1141.—PLATNICK & DONDALE, 1992, p. 64, figs. 92–95. For other literature see WUNDERLICH, 1979.

Specimens examined. 1♂, Mt. Kurodake, 1,980 m alt., Mts. Daisetsuzan, 17–IX–1989, N. YASUDA leg. (NSMT–Ar 3191); 1♀, same mountain, 1,900 m alt., 27–VII–1981, N. YASUDA leg. (NSMT–Ar 3204).

Notes. This species is widely distributed in northernmost part of the Holarctic regions, from Europe to Alaska and Canada. It was recorded also from China (ZHANG, 1987). Therefore, it was accountable that this species occurs in the coldest region of Japan.

The carapace is chestnut brown in female and male; the abdomen of female is grey with two pairs of indistinct white bars, while that of the male is black and polished. Measurement based on the Japanese specimens: Body length ♀ 4.25 mm, ♂ 3.60 mm.

Distribution. Japan (Hokkaido)—new records—; Holarctic.

Genus *Zelotes* GISTEL*Zelotes asiaticus* (BÖSENBERG et STRAND, 1906)

Specimens examined. 1♂, Mt. Teshiodake, 1,000 m alt., Asahi-chô, Hokkaido, Japan, 28–VII–1988, N. YASUDA leg. (NSMT–Ar 3187); 1♀, Mt. Shokanbetsudake, 450 m alt., Mashike-gun, Hokkaido, 14–VI–1987, N. YASUDA leg. (NSMT–Ar 3188).

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu); Korea, China.

Zelotes hayashii KAMURA, 1987

Zelotes hayashii KAMURA, 1987, p. 5, figs. 6–7 (male holotype from Nukabira, Kamishihoro-chô, Katô-gun, Hokkaido, Japan, 8–VII–1985, M. MATSUDA leg., in Arachnological Society of Japan, Osaka, not examined.); 1994, p. 135, figs. 1–2.——MATSUDA, 1988, p. 15, figs. 12–13.

Specimen examined. 1♀, Mt. Teshiodake, 1,000 m alt., Asahi-chô, Hokkaido, 28–VII–1988, N. YASUDA leg. (NSMT–Ar 3189).

Distribution. Japan (Hokkaido).

Genus *Drassyllus* CHAMBERLIN*Drassyllus shaanxiensis* PLATNICK et SONG, 1986

Drassyllus shaanxiensis PLATNICK et SONG, 1986, p. 17.——KAMURA, 1990, p. 34, figs. 3–6.

Zelotes shaanxiensis: CHIKUNI, 1989, p. 121, fig. 15, p. 251.

Specimens examined. 1♀, Rubeshinai, 830 m alt., Kamikawa-chô, 26–VI–1980, N. YASUDA leg. (NSMT–Ar 3192); 1♂, Lake Daisetsu, 800 m alt., Mts. Daisetsuzan, 3–VII–1983, N. YASUDA leg. (NSMT–Ar 3193); 1♀, Numanohara, 1,460 m alt., Mts. Daisetsuzan, 29–VII–1986, N. YASUDA leg. (NSMT–Ar 3194).

Distribution. Japan (Hokkaido—new records—, Honshu); China.

Drassyllus sasakawai KAMURA, 1987

Drassyllus sasakawai KAMURA, 1987, p. 82, figs. 6–9 (male holotype from Ashû, 380 m alt., Miyama-chô, Kitakuwata-gun, Kyoto Pref., Japan, 26–28–V–1984, T. KAMURA leg., female allotype from Mt. Taiko-yama, 620 m alt., Yasaka-chô, Yosa-gun, Kyoto Pref., 8–VII–1982, T. KAMURA leg., and many paratypes from Kyoto Pref.; all the types in Arachnological Society of Japan, Osaka, not examined).

Specimens examined. 1♀, Arashiyama, 240 m alt., Asahikawa-shi, 5–VII–1988, N. YASUDA leg. (NSMT–Ar 3195); 2♂, Esaushiyama, 330 m alt., Kamikawa-chô, 6–VI–1985, N. YASUDA leg. (NSMT–Ar 3196).

Distribution. Japan (Hokkaido—new records—, Honshu, Kyushu).

Genus *Drassodes* WESTRING*Drassodes lapidosus* (WALCKENAER, 1802)

(Figs. 9–11)

Specimens examined. 2♀1♂, Mt. Kurodake, 1,980 m alt., Mts. Daisetsuzan,

Figs. 1-4. *Gnaphosa sticta* KULCZYŃSKI, 1908 (NSMT-Ar 3201-3202).—1, Male palp, ventral view; 2, same, retrolateral view; 3, epigynum; 4, female genitalia, dorsal view. (Scales: 0.1 mm.)

29-VI-1985, N. YASUDA leg. (NSMT-Ar 3197).

Notes. Minute differences in male tibial apophysis and in the width of

Figs. 5–8. *Micaria alpina* L. KOCH, 1872 (NSMT–Ar 3191, 3204).—1, Male palp, ventral view; 2, same, retrolateral view; 3, epigynum; 4, female genitalia, dorsal view. (Scales: 0.1 mm.)

epigynum were recognized between the specimens from Hokkaido (Figs. 9–11) and Europe (GRIMM, 1985, p. 108, fig. 17, p. 119, fig. 134). However, these may stand in a range of variation.

Distribution. Japan (Hokkaido, Honshu); Palearctic.

Figs. 9-11. *Drassodes lapidosus* (WALCKENAER, 1802) (NSMT-Ar 3197).—9, Male Palp, ventral view; 10, same, retrolateral view; 11, epigynum. (Scales: 0.1 mm.)

Genus *Gnaphosa* LATREILLE

Gnaphosa kompirensis BÖSENBERG et STRAND, 1906

Specimen examined. 1♂, Shirakawa, 400 m alt., Kamikawa-chô, 8-VII-1983, N. YASUDA leg. (NSMT-Ar 3198).

Distribution. Japan (Hokkaido, Honshu, Shikoku, Kyushu); Russia, Korea, China, Vietnam (OVTSHARENKO, PLATNICK & SONG, 1992).

Gnaphosa kamurai OVTSHARENKO, PLATNICK et SONG, 1992

Gnaphosa compirensis: SAITO, 1939 [misidentification; see KAMURA (1988)].

Gnaphosa alberti: KAMURA, 1988, p. 7 (nec *Gnaphosa alberti* SCHENKEL, 1963).

Gnaphosa kamurai OVTSHARENKO, PLATNICK et SONG, 1992, p. 33, figs. 115–118 (male holotype and female allotype from Machi, 290 m alt., Ōtsu-shi, Shiga Pref., Japan, 16–VII–1976, Y. NISHIKAWA leg., in Arachnological Society of Japan, Osaka, not examined).

Specimen examined. 1♀, Esaushiyama, 380 m alt., Kamikawa-chô, 19–VII–1986, N. YASUDA leg. (NSMT–Ar 3199).

Distribution. Japan (Hokkaido, Honshu).

Gnaphosa sticta KULCZYŃSKI, 1908

(Figs. 1–4)

Gnaphosa sticta KULCZYŃSKI, 1908, p. 7, fig. 4 (female holotype from Yakutiya, Russia, in Academy of Sciences, St. Petersburg, not examined).—OVTSHARENKO & MARUSIK, 1988, p. 208, figs. 16–17, 20.—OVTSHARENKO, PLATNICK & SONG, 1992, p. 48, figs. 163–168.

Gnaphosa intermedia HOLM, 1939, p. 11, fig. 5 [described from Lapland; synonymized by OVTSHARENKO & MARUSIK (1988)].

Gnaphosa microps: HOLM, 1950, p. 136, fig. 8.

Specimens examined. 3♀, Mt. Hirayama, 1,740 m alt., Mts. Daisetsuzan, 8–VIII–1980, N. YASUDA leg. (NSMT–Ar 3200); 1♂, Mt. Nipesotsu, 2,010 m alt., Mts. Daisetsuzan, 3–VII–1988, N. YASUDA leg. (NSMT–Ar 3201); 2♀, Mt. Tottabetsu, 1,960 m alt. Mts. Hidaka, 21–VII–1988, N. YASUDA leg. (NSMT–Ar 3202).

Notes. This species was hitherto known only from the northeastern part of Siberia (OVTSHARENKO, PLATNICK & SONG, 1992). On the basis of the comparison between the copulatory organs of both the sexes of the present materials from Japan (Figs. 1–4) and the figures made by OVTSHARENKO, PLATNICK & SONG (1992, figs. 163–166) I determined the Japanese spider to be same species as the Russian one. It is new to the Japanese fauna.

The females of the Japanese specimens have brown prosoma and blackish brown opisthosoma, while the only male collected is much darker than the females. Measurement based on the Japanese materials: Body length ♀ 6.70–7.55 mm, ♂ 6.65 mm.

Distribution. Japan (Hokkaido)—new records—; Russia (Siberia).

Genus *Callilepis* WESTRING

Callilepis nocturna (LINNÉ, 1758)

Specimen examined. 1♀, Shirakawa, 400 m alt., Kamikawa-chô, 31–V–1983, N. YASUDA leg. (NSMT–Ar 3203).

Distribution. Japan (Hokkaido); Palearctic.

摘 要

おもに大雪山からベートトラップ法により得られた北海道のワングモ科クモ類 10 種を記録した。このうち *Drassyllus shaanxiensis* PLATNICK et SONG, 1986 チクニヨリメケムリグモおよび *D. sasakawai* KAMURA, 1987 ヤマヨリメケムリグモを北海道から新たに記録した。また *Micaria alpina* L. KOCH, 1872 タカネツヤグモ (新称) と *Gnaphosa sticta* KULCZYŃSKI, 1908 シベリアメキリグモ (新称) の 2 種を日本から初めて記録した。前種は全北区の北部に広く分布し、後種はシベリアの東北部と北海道からのみ知られる。

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