

New Species of Crab Spiders (Araneae, Thomisidae) from Japan

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Abstract Four new species of crab spiders are described from Japan under the names, *Xysticus ryukyuensis* sp. nov. (from Okinawajima Island, Ryukyu Islands), *Oxyptila fukushimai* sp. nov. (from Akita and Kanagawa Prefs. and Tokyo, Honshu), *Synaema nangoku* sp. nov. (from Kochi Pref., Shikoku) and *Massuria watari*, sp. nov. (from Aichi and Hyogo Prefs., Honshu). Peculiarity in general and genitalic features and the taxonomic position of the last species are discussed.

Key words: Taxonomy, Araneae, Thomisidae, new species, Japan.

Introduction

Through a revisional study (Ono, 1988), 53 species of 22 genera of crab spiders of the family Thomisidae became known in Japan. After that, two new species of *Tmarus* were described (Ono, 1996b, 1997) and three species of *Oxyptila* were newly recorded (Ono and Yasuda, 1992; Ono, 1996a) from this country. In the present paper, further four new species of the genera, *Xysticus*, *Oxyptila*, *Synaema* and *Massuria*, are reported. All these species are regarded as important components of Japanese thomisid fauna.

Xysticus C. L. Koch, 1835, is the most remarkable thomisid genus in number of species in temperate and cold zones of the Northern Hemisphere, and relatively rare in warmer and tropical regions. Although more than a dozen species of the genus were hitherto recorded in Japan, only few records of one species were presented in subtropical islands of the Ryukyus, that is, *Xysticus ephippiatus* Simon, 1880, from the islands of Taramajima and Iriomotejima (Ono, 1988). This well-known species is widely distributed in Siberia, Mongolia, China, Korea and Japan. Therefore, discovery of another species of the genus in Okinawajima Island was a surprise, because the species seems new and at present endemic to the island.

Spiders of the genus *Oxyptila*, Simon, 1864,

are soil-dwellers and hardly obtained by hand collecting. Specimens of the spiders were recently given more than the past by sifting, extractions with Tullgren funnels, and pit fall trapping. Other than the new species reported in the present paper, some new records of the genus are kept at the author's hand.

The specimen of a new species of the genus *Synaema* to be described herein was included in the material used for the author's previous revision (1988). Although it was quite different from the two known congeners from Japan, the author left it undetermined because no close relative was known to him at that time. However, the spider is after all reported herein based on a resemblance to *Synaema albomaculatum* recently described from Bhutan (Ono, 2001).

The last and most interesting thomisid in the present material has a problem in its taxonomic position. The strange spider has ocular arrangement resembling that of *Runcinia* species, a *Pistius*-like body, and the structure of male palp which rather resembles *Thomisus* than *Runcinia* and *Pistius*. The author tentatively describes it under the scarcely known genus, *Massuria* Thorell, 1887, tracing the old key of thomisids made by Simon (1895a).

The monotypic genus was established on the basis of a female specimen of the type species *Massuria angulata* Thorell, 1887, from Myan-

mar (Burma). However, the species was never recognized up to the present because no illustration was given in the original description.

A second species of the genus, *Massuria javana*, was described by Simon (1895b) from Java. Although the author examined syntypes of the Javanese species deposited in the collection of the National Museum of Natural History, Paris, he could not have any information on its genital organ because the specimens were of immature females.

The genus *Loxoporetetes* established by Kulczyński (1911) from New Guinea with *Loxoporetetes nouhuysii* Kulczyński, 1911, as the type species, may also be a suitable genus for this new species. The original description and illustrations of an adult female spider show some characters in common with a female spider reported by Chikuni (1989) from Japan, which is regarded as the same species as the male of the spider in question (see the "remarks" in the description of *Massuria watari* sp. nov.).

Besides, the male palpal organ of this new species is closer in structure to those of some species in the genus *Thomisus* Walckenaer, 1805, for instance, *Th. onustus* Walckenaer, 1805 (Europe), *Th. hilarulus* Simon, 1875 (Egypt, Tunisia), *Th. schoutedeni* Comellini, 1957 (Belgian Congo), and *Th. machadoi* Comellini, 1959 (Angola). Palpal tibiae of these species are furnished with many strong conical spines between ventral and retrolateral apophyses.

The 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 abbreviations used herein are as follows: ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posterior median eye; MNHN, Muséum National d'Histoire Naturelle, Paris; NMB, Naturhistorisches Museum, Basel.

Before going further, the author wishes to express his sincere thanks to Mr. Yasunosuke Chikuni, Nagano, Mr. Akito Fukushima, Akita, Dr. Ambros Hänggi, Basel, the late Dr. Jaqueline Heurtault, Paris, Mr. Hiroyoshi Ikeda, Kanagawa,

Mr. Mitsuhiro Komine, Tokyo, Mr. Kenichi Kumada, Mie, Dr. Yoshiaki Nishikawa, Osaka, Mr. Kiyoto Ogata, Aichi, Dr. Christine Rollard, Paris, Mr. Takeshi Sasaki, Okinawa, Dr. Akio Tanikawa, Kanagawa, and Dr. Masaaki Tomokuni, Tokyo, for their offering and loaning invaluable specimens.

Descriptions of species

Xysticus ryukyuensis sp. nov.

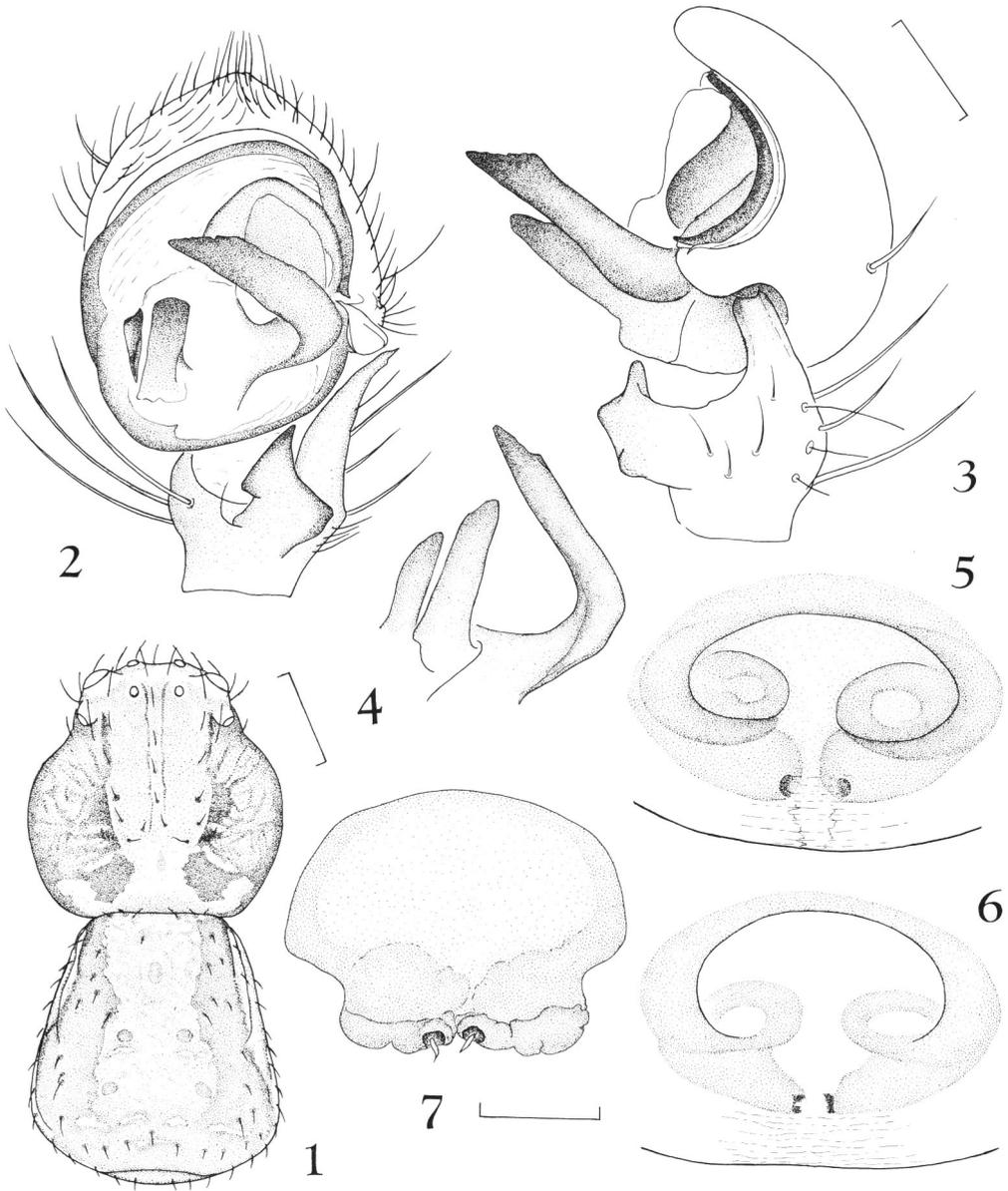
[Japanese name: Ryukyu-kanigumo]

(Figs. 1–7)

Diagnosis. This new species belongs to the species-group of *Xysticus luctans*, and is especially close to *Xysticus chui* Ono, 1992, described from Taiwan. Both the species have a large opening (vestibulum) on epigynum and three tegular apophyses of male palp, but are different from each other in details of these organs. The vestibulum of this new species is much wider than that of *Xysticus chui* (cf. Figs. 5–6 and Ono, 1992, p. 36, figs. 1–3), and the basal tegular apophysis of male palp is not heeled and much longer than that of the latter species (cf. Figs. 2–4 and Ono, 1992, p. 38, figs. 6–9).

Type series. Holotype male from Yona, Kunigami-son, Okinawajima Island, Ryukyu Islands, Okinawa Pref., Southwest Japan, 31–III–2000, A. Tanikawa leg. (NSMT-Ar 5256); paratypes: 2 females, same locality as for the holotype, 26/27–VI–1997, T. Sasaki/M. Komine leg. (NSMT-Ar 5261/5278), 1 female, Oku, Kunigami-son, 1–IV–2000, T. Tanikawa leg. (NSMT-Ar 5259), 1 male, Oku, 30–III–1997, T. Sasaki leg. (NSMT-Ar 5262), 1 female, Takazato, Ogimi-son, 31–III–1997, H. Ikeda leg. (NSMT-Ar 5277), 1 female, Kushi, Nago-shi, 26–VI–1997, T. Sasaki leg. (NSMT-Ar 5260), 2 females, Mt. Katsu-u-dake, Motobu Peninsula, 1–VII–1984, M. Tomokuni leg. (NSMT-Ar 5257–5258), all from the northern part of Okinawajima Island.

Comparative material. *Xysticus chui* Ono, 1992, many females and males including holo-



Figs. 1–7. *Xysticus ryukyuensis* Ono, sp. nov.: 1–4, male holotype (NSMT-Ar 5256); 5, female paratype from Yona (NSMT-Ar 5261); 6–7, female paratype from Katsu-u-dake (NSMT-Ar 5257).—1, Pro- and opisthosoma, dorsal view; 2, palpal organ, ventral view; 3, palpal organ, retrolateral view; 4, tegular apophyses, proximal view; 5–6, epigynum, ventral view; 7, female genitalia, dorsal view. [Scales: 1, 1 mm; 2–7, 0.25 mm.]

type and paratypes from Taiwan (NSMT-Ar 2258–2281); data as given in Ono (1992).

Description (based on the male holotype and a female paratype from Mt. Katsu-u-dake). Measurement: Female (NSMT-Ar 5257): Body length 5.33 mm; prosoma length 2.59 mm, width 2.37

mm; opisthosoma length 2.81 mm, width 2.96 mm; lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 7.11 mm (2.22+1.11+1.63+1.41+0.74), II 7.15 mm (2.15+1.11+1.63+1.41+0.85), III 4.58 mm (1.41+0.81+0.96+0.81+0.59), IV 5.11 mm (1.63+

0.74+1.19+0.96+0.59). Male (NSMT-Ar 5256): Body length 4.74 mm; prosoma length 2.59 mm, width 2.37 mm; opisthosoma length 2.33 mm, width 2.30 mm; lengths of legs: I 8.14 mm (2.44+1.04+1.85+1.85+0.96), II 8.10 mm (2.48+1.04+1.92+1.70+0.96), III 5.36 mm (1.74+0.74+1.30+0.88+0.70), IV 6.07 mm (1.93+0.81+1.41+1.11+0.81).

Prosoma. Carapace longer than wide (length/width female and male 1.09), with blunt setae. Eyes: ALE>PLE>PME>AME (female 8.5:6:4:4, male 7:6:4:3.5 in size), ALE/AME female 2.12, male 2.00, PLE/PME both 1.50, AME-AME/AME-ALE both 1.88, PME-PME/PME-PLE female 0.81, male 0.82, median ocular area wider than long (length/width female 0.92, male 0.91), wider behind than in front (anterior width/posterior width female 0.96, male 0.95), clypeus/AME-AME female 2.50, male 2.86, lateral eyes on a large tubercle, respectively. Labium longer than wide (length/width female 1.13, male 1.36), sternum longer than wide (length/width female 1.15, male 1.24).

Legs. Spiniformation (terminology see Ono, 1988, p. 13): Female: Femur: I–IV dorsal 0-1-0-1, I prolateral 1-1-1-0; patella: I–IV dorsal 1-0-1 (weak), III–IV retrolateral 1 (weak); tibia: I–IV dorsal 1-1-0, I prolateral 0-1, III–IV prolateral 1-1, I–IV ventral 2-2-2-2 (III–IV weak); metatarsus: I–II prolateral 1-1-0-2ap, retrolateral 0-1-0-1 ap, ventral 2-2, III–IV prolateral 1-1-0-1ap, retrolateral none, ventral 2. Male: Femur: I–IV dorsal 0-1-1-1-1, prolateral 0-1-2-1-2; patella: I–IV dorsal 1-0-1 (weak), I–IV retrolateral 1, respectively; tibia: I–IV dorsal 1-1-0 (I–II weak), I–II pro- and retrolateral 1-1-1, ventral 2-2-2-2 ap, III–IV pro- and retrolateral 1-1, III ventral 2-2-0-2ap; metatarsus I prolateral 0-1-0-2ap, retrolateral 0-1-0-1ap, ventral 2-2, II prolateral 1-1-0-2ap, retrolateral 1-1-0-1ap, ventral 2-2, III–IV prolateral 1-1-0-2ap, retrolateral 1-1-1ap, ventral 2. Tarsal claws of legs I–IV each with 3–4 long teeth.

Male palp (Figs. 2–4). Tibia with a large and developed ventral apophysis and a rostrated retrolateral apophysis. Tegulum with three devel-

oped apophyses: basal apophysis very large and curved but not heeled, apically truncated; the apical and median apophyses smaller and digitiform; embolus wide filiform.

Opisthosoma nearly as long as wide (length/width female 0.95, male 1.01), with typical markings of *Xysticus* (Fig. 1).

Female genitalia (Figs. 5–7). Epigynum without median septum, vestibulum very wide, its margin sclerotized. Intromittent orifices large, oval and strongly sclerotized, intromittent canal winding, spermathecae reniform.

Coloration and markings. Female: Carapace chestnut brown, lighter at the middle, with darker markings at the sides and posterior declivity, tubercles of lateral eyes white, chelicerae, maxillae and labium brown, sternum blackish brown mottled with yellowish brown, palps and legs yellowish brown, distal segments of legs I–II reddish brown. Opisthosomal dorsum yellowish brown, black at the sides, laterally white, venter greyish brown. Male: Body much darker than the female but with same markings, femora of legs I–II dark brown.

Variation. Body length: females 5.33–7.56 mm, males 3.90–4.74 mm. Coloration of body variable in greyish, reddish and blackish brown.

Distribution. Japan (Okinawajima Island).

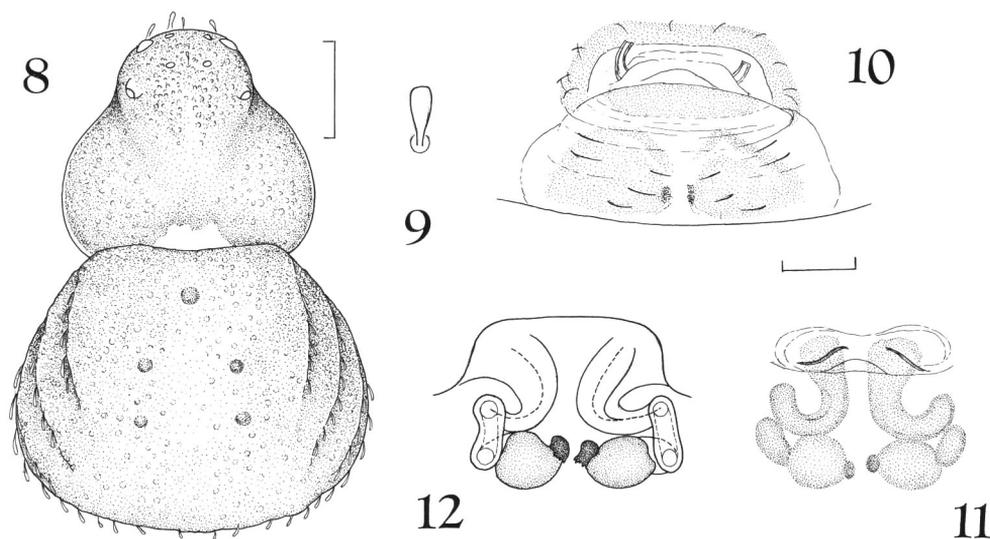
Remarks. Although the close relative, *Xysticus chui*, is distributed widely in mountainous areas between 1500–3300 m in elevation in Taiwan (Ono, 1992), this new species has been found at lower places between 50–390 m on Okinawajima. Named after the type area.

Oxyptila fukushimai sp. nov.

[Japanese name: Maru-ochiba-kanigumo]

(Figs. 8–12)

Diagnosis. This new species resembles *Oxyptila sanctuaria* (O. Pickard-Cambridge, 1871) known from Europe in having opisthosoma covered by fewer spatulate hairs and the posterior swelling in epigynum. However, the sclerotized anterior margin of swelling draws an arc in the new species (Fig. 10), while that is situated in



Figs. 8–12. *Oxyptila fukushimai* Ono, sp. nov., female holotype (NSMT-Ar 5263).—8, Pro- and opisthosoma, dorsal view; 9, spatulate hair of opisthosoma; 10, epigynum, ventral view; 11, female genitalia, ventral view; 12, female genitalia, dorsal view. [Scales: 8, 0.5 mm; 10–12, 0.1 mm.]

the European one (Roberts, 1995, p. 166, figs). Besides, the Japanese spider has scabrous prosomal surface and much darker body without any distinct markings.

Type specimen. Holotype female from Misaki Park, Kisakata-cho, Yuri-gun, Akita Pref., Tohoku, Japan, 2–IX–1995, A. Fukushima leg. (NSMT-Ar 5263).

Other specimens examined. 1 female Tanashi-shi, Tokyo, 9–VII–1995, A. Tanikawa leg. (NSMT-Ar 5279), 1 female, Sarushima Is. near Yokosuka, Kanagawa Pref., 20–X–1987, K. Kumada leg. (NSMT-Ar 5280).

Description (based on the female holotype). Measurement: Body length 2.77 mm; prosoma length 1.27 mm, width 1.35 mm; opisthosoma length 1.57 mm, width 1.90 mm; lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 3.22 mm (0.98+0.52+0.65+0.67+0.40), II 3.00 mm (1.00+0.47+0.50+0.63+0.40), III 2.14 mm (0.70+0.40+0.43+0.33+0.28), IV 2.33 mm (0.77+0.37+0.47+0.42+0.30).

Prosoma. Carapace scabrous and hairless except for the head and frontal margin with spatulate setae, wider than long (length/width 0.94).

Eyes: ALE>PLE>PME=AME (4:3:2:2 in size), ALE/AME 2.00, PLE/PME 1.50, AME-AME/AME-ALE 1.67, PME-PME/PME-PLE 0.44, median ocular area longer than wide (length/width 1.11), wider in front than behind (anterior width/posterior width 1.13), clypeus/AME-AME 2.00. Labium longer than wide (length/width 1.14), sternum longer than wide (length/width 1.08).

Legs. Spiniformation (terminology see Ono, 1988, p. 13): Tibia: I–IV dorsal 1-1-0 (weak), I–II ventral 2-2; metatarsus I–II pro- and retrolateral 0-0-1ap respectively, ventral 2-2; other segments without spines. Tarsal claws of legs I–IV each with 3 short teeth.

Opisthosoma wider than long (length/width female 0.83), rounded and with spatulate hairs (Fig. 9).

Female genitalia (Figs. 10–12). Epigynum with posterior swelling and its anterior margin widely sclerotized; opening part wide. Intromittent canal curved laterad and winding, spermathecae relatively small and ovate.

Coloration and markings (Fig. 8). Carapace chestnut brown without marking except for white posterior declivity, chelicerae, maxillae and labi-

um light brown, sternum yellowish brown mottled with dark brown, palps and legs chestnut brown. Opisthosomal dorsum blackish brown without any marking, ventrally lighter.

Variation. Body length of 2 non-type females: 2.95 and 3.35 mm; their opisthosomal dorsum with some black spots.

Distribution. Japan (Honshu).

Remarks. This species is dedicated to Mr. Akito Fukushima, an excellent arachnologist, who has studied spiders of Akita Prefecture.

***Synaema nangoku* sp. nov.**

[Japanese name: Nangoku-funojigumo]

(Figs. 13–18)

Diagnosis. This new species resembles *Synaema albomaculatum* Ono, 2001 recently described from Bhutan in coloration and markings of the body, but is distinguished from the latter by the shape of epigynal plate and the structure of internal female genitalia. The intromittent canal of the new species is remarkably short and not visible in dorsal view (Figs. 16–18).

Type specimen. Holotype female from Kochishi, Kochi Pref., Shikoku, Japan, 10–VIII–1972, Y. Chikuni leg. (NSMT-Ar 5276).

Comparative material. *Synaema albomaculatum* Ono, 2001, female and male specimens including male holotype from Thimphu, Bhutan, 23–IV–1972, W. Wittmer Coll. (NMB 2672a–c).

Description (based on the female holotype). Measurement: Body length 4.27 mm; prosoma length 1.96 mm, width 1.80 mm; opisthosoma length 2.52 mm, width 2.40 mm; lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 8.64 mm (2.60+0.96+2.20+2.08+0.80), II 8.40 mm (2.56+0.92+2.12+2.00+0.80), III 4.32 mm (1.36+0.56+1.08+0.88+0.44), IV 4.68 mm (1.52+0.56+1.06+0.96+0.48).

Prosoma. Carapace (Fig. 14) longer than wide (length/width 1.09), with long setae (Fig. 14). Eyes: ALE>PLE>PME=AME (6:5:3:3 in size), ALE/AME 2.00, PLE/PME 1.67, AME-AME/AME-ALE 1.00, PME-PME/PME-PLE

0.67, median ocular area longer than wide (length/width 1.07), wider behind than in front (anterior width/posterior width 0.93), clypeus/AME-AME 1.00. Labium longer than wide (length/width 1.29), sternum longer than wide (length/width 1.20).

Legs. Spiniformation (terminology see Ono, 1988, p. 13): Femur: I–II dorsal 0-1-1, I prolateral 0-0-1-1-1, retrolateral 0-0-0-0-1, II pro- and retrolateral respectively 0-0-0-0-1, III–IV dorsal 1-1; patella: I–IV dorsal 1-1 (weak), I–II pro- and retrolateral respectively 1, III–IV retrolateral 1; tibia: I–IV dorsal 1-1, I–II pro- and retrolateral 1-1-1, ventral 2-2-2-2-2ap, III–IV prolateral 1-1, III retrolateral 0-1, ventral 2, IV retrolateral 1-1, ventral 1; metatarsus: I–II pro- and retrolateral 1-1-1ap, ventral 2-2-2-2, III–IV pro- and retrolateral 1-1, ventral 2. Tarsal claws of legs I–IV with 5, 4, 3, and 3 teeth, respectively.

Opisthosoma (Fig. 13) pyriform, longer than

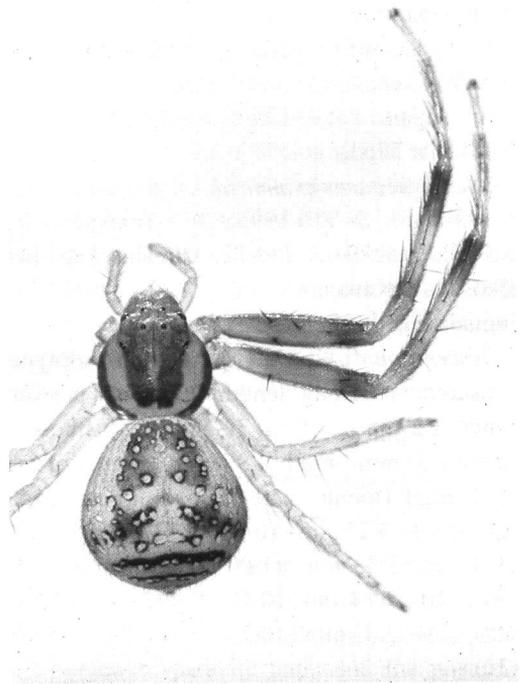
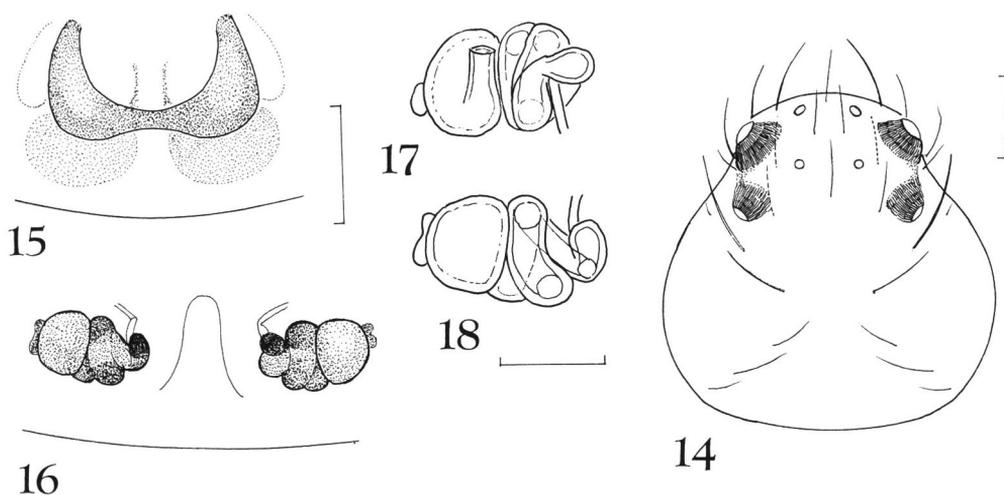


Fig. 13. *Synaema nangoku* Ono, sp. nov., female holotype (NSMT-Ar 5276). [Body length: 4.27 mm; photograph: Y. Chikuni.]



Figs. 14–18. *Synaema nangoku* Ono, sp. nov., female holotype (NSMT-Ar 5276).—14, Carapace, dorsal view; 15, epigynum, ventral view; 16, female genitalia, dorsal view; 17, female genitalia (right side) cleared, anterior view; 18, same, dorsal view. [Scales: 14, 0.5 mm; 15–16, 0.1 mm; 17–18, 0.05 mm.]

wide (length/width 1.05).

Female genitalia (Figs. 15–18). Epigynum with a sclerotized plate large and horseshoe-shaped, a central hood present under the plate. Intromittent canal very short, not visible in dorsal view, atrium present, large, globular and with a gland, spermathecae tubular and winding.

Coloration and markings (Fig. 13). Carapace yellowish brown, darker marginated, with a pair of black longitudinal stripes, head white, chelicerae and maxillae yellowish brown, labium brown, sternum yellow, legs I–II yellowish brown, femur, tibia and metatarsus distally dark, respectively, palp and legs III–IV yellow. Opisthosomal dorsum yellowish white, with brown markings, many white spots marginated with black, and a black latitudinal stripe in posterior part, dorsal folds black with white spots, venter light beige, darker at the middle.

Distribution. Japan (at present known only from the type locality).

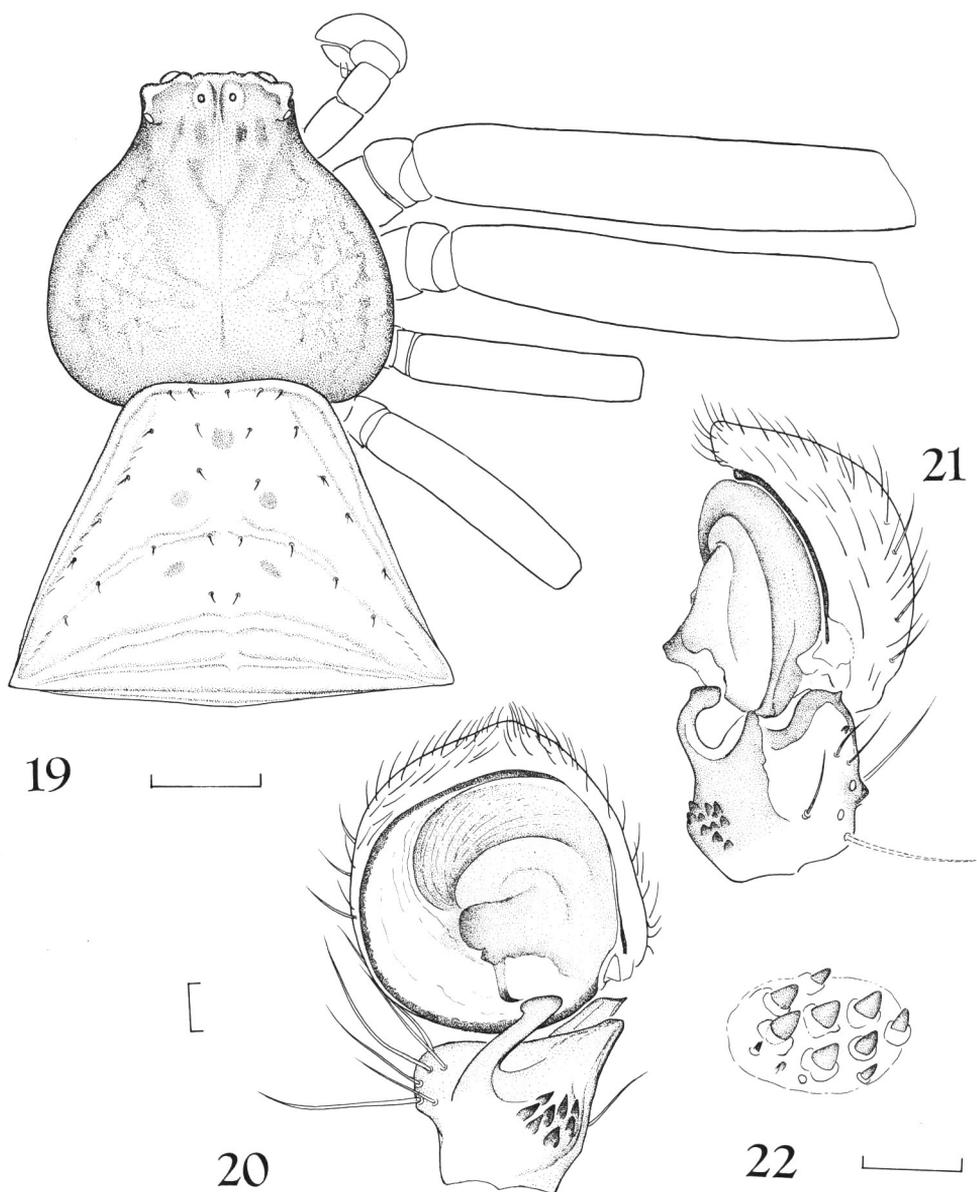
Remarks. This species is named after a Japanese word “nangoku” meaning southern places in Japan.

Massuria watari sp. nov.

[Japanese name: Watari-kanigumo]

(Figs. 19–22)

Diagnosis. This new species shows unique structure of male palp with a complex of conical spines on ventral surface of tibia (Fig. 22), resembling some species of the genus *Thomisus*, namely, well-known Eurasian *Thomisus onustus* Walckenaer, 1805, *Th. hilarulus* Simon, 1875, known in Egypt and Tunisia, *Th. schoutedeni* Comellini, 1957, described from Belgian Congo, and *Th. machadoi* Comellini, 1959, from Angola (Comellini, 1957, 1959; Roberts, 1995 and many other literatures). However, the spider seems not dwarfish as in *Thomisus* and its general appearance is quite different from that of the genus. The ocular arrangement is closest to that of *Runcinia* with a narrow ocular area and the protuberance between both lateral eyes short and not developed. The body is not long as in *Runcinia* but resembles that of *Pistius* species, although the structure of male palpal organ is different from those of the two genera. Based on non-genitalic characteristics, especially on the wide trapezoidal opisthosoma, this strange species was supposed to belong either *Massuria* Thorell, 1887 (known



Figs. 19–22. *Massuria watari* Ono, sp. nov., male holotype (NSMT-Ar 5264).—19, Pro- and opisthosomata with right palp and femora of legs, dorsal view; 20, palpal organ, ventral view; 21, palpal organ, retrolateral view; 22, conical spines on ventral side of palpal tibia. [Scales: 19, 0.67 mm; 20–22, 0.1 mm.]

from Myanmar and Java), or *Loxoporetetes* Kulczyński, 1911 (known from New Guinea), both known only with females and immatures, and tentatively placed in the former genus.

Type specimen. Holotype male from Ochime, 650 m in elevation, Shitara-cho, Kita-shitara-gun, Aichi Pref., Honshu, Japan, 6–V–2002, K. Ogata

leg. (NSMT-Ar 5264); paratype: 1 male, Okawachi-machi, 800 m in elevation, Kanzaki-gun, Hyogo Pref., Honshu, 5–VI–1982, Y. Nishikawa leg. (NSMT-Ar 5281).

Comparative material. *Massuria javana* Simon, 1895, 2 immature female syntypes, from Java, V. Gedá leg. (MNHN 17618).

Description (based on the male holotype). Measurement: Body length 3.85 mm; prosoma length 2.00 mm, width 1.96 mm; opisthosoma length 1.96 mm, width 2.44 mm; lengths of legs [total length (femur+patella+tibia+metatarsus+tarsus)]: I 9.36 mm (2.81+1.15+2.07+2.22+1.11), II 8.48 mm (2.59+1.00+1.85 +2.00+1.04), III 4.40 mm (1.41+0.67+0.88+0.88+0.56), IV 4.55 mm (1.52+0.59+1.04+0.88+0.52).

Prosoma. Carapace longer than wide (length/width 1.02), with very short setae on head and without strong hairs. Eyes: ALE>PLE>PME=AME (8:6:5:5 in size), ALE/AME 1.60, PLE/PME 1.20, AME-AME/AME-ALE 1.60, PME-PME/PME-PLE 0.62, median ocular area longer than wide (length/width 1.12), wider in front than behind (anterior width/posterior width 1.14), clypeus/AME-AME 2.40, a small protuberance present between anterior and posterior lateral eyes. Labium longer than wide (length/width 1.30), sternum wider than long (length/width 0.95).

Legs. Spiniformation (terminology see Ono, 1988, p.13). Femur: I–II dorsal 1-1-1-1-1, I pro-lateral 1-1-1-0-0-0, III–IV dorsal 1-1-0-1; patella without spines; tibia: I–IV dorsal 1-0, I ventral 2-2-2-2, II ventral 1-2-1-1 (left) or 1-2-2-2 (right), III ventral 1-2-1-2, IV ventral 1-2-2-2; metatarsus I–II pro- and retro- lateral 1ap, ventral 2-2-2-2, III–IV pro- and retrolateral 2ap, ventral 2. Tarsal claws of legs I–II with 4 teeth, III–IV with three teeth.

Male palp (Figs. 20–22). Tibia with three apophyses; the ventral one slender and long, with a globular tip, the intermediate one digitiform with thick base, and the retrolateral one short and strongly sclerotized, and with a small teeth; unique complex of nine conical spines present between ventral and intermediate apophyses (Fig. 22). Tegulum with indistinct rounded apophysis at the basal part; embolus filiform.

Opisthosoma trapezoidal, much wider than long (length/width 0.80), with strong short hairs.

Coloration and markings (Fig. 19). Carapace blackish brown, lighter at the middle, with indis-

tinct black markings, head white, chelicerae, maxillae and labium blackish brown, sternum brown mottled with black, legs I–II blackish brown, femora of legs III–IV blackish brown with white lines, tibiae, metatarsi and tarsi III–IV yellow. Opisthosomal dorsum white, with indistinct transverse lines, venter white with black spinnerets.

Variation. Body length of the paratype: 3.56 mm; tibia of the palp is furnished with 6 large and 6 small conical spines.

Distribution. Japan (Honshu).

Remarks. Chikuni (1989) reported on an undescribed species of the genus *Pistius* based on female and male immature specimens collected by him from Horigane-mura, Nagano Pref., and an adult female specimen collected by Mr. K. Ogata from Yahagi-cho in Gifu Pref. [Toyota-shi, Aich Pref., as was recorded by Chikuni, 1989, p. 1, is incorrect (personal communication from Ogata, 2002)]. On the basis of views through the photographs made by Mr. Chikuni in his paper, the spider is without doubt a member of the genus in question, and not of *Pistius*. Although the present author could not examine these specimens, the spider reported by Chikuni is supposed to be the same species as this new one.

The specific name is a Japanese word “watari” meaning migration or migrants.

References

- Chikuni, Y., 1989. [Mr. Kiyoto Ogata and a species closely similar to *Pistius undulatus*.] *Shinobigumo*, Yokkaichi-shi, Japan, (17): 1–2, figs 1–10. (In Japanese.)
- Comellini, A., 1957. Notes sur les Thomisidae d’Afrique. 2. Le genre *Thomisus*. *Rev. Zool. Bot. afr., Bruxelles*, **55**(1–2): 1–32.
- Comellini, A., 1959. Notes sur les Thomisidae d’Afrique. 3. Complement du genre *Thomisus*. *Rev. Zool. Bot. afr., Bruxelles*, **60**(1–2): 110–119.
- Kulczyński, W., 1911. Spinnen aus Süd-Neu-Guinea. *Nova Guinea*, **5**(4): 109–148, pl. 4.
- Ono, H., 1988. A revisional study of the spider family Thomisidae (Arachnida, Aeneae) of Japan. *Natn. Sci. Mus. Mon., Tokyo*, (5): i–ii, 1–252, 1 col. pl.
- Ono, H., 1992. Occurrence of the genus *Xysticus* (Araneae, Thomisidae) in Taiwan. *Bull. natn. Sci. Mus., Tokyo*, Ser. A, **18**: 35–40.
- Ono, H., 1996a. New records of two Korean species of the spider families Mimetidae and Thomisidae (Araneae)

- from Japan. *Acta arachnol.*, **45**: 19–24.
- Ono, H., 1996b. Two new species of the families Liphistiidae and Thomisidae (Araneae) from the Ryukyu Islands, Southwest Japan. *Acta arachnol.*, **45**: 157–162.
- Ono, H., 1997. New species of the genera *Rhythela* and *Tmarus* (Araneae, Liphistiidae and Thomisidae) from the Ryukyu Islands, Southwest Japan. *Bull. natn. Sci. Mus., Tokyo*, Ser. A, **23**: 149–163.
- Ono, H., 2001. Crab spiders of the family Thomisidae from the Kingdom of Bhutan (Arachnida, Araneae). *Entomologica Basiliensia*, **23**: 203–236.
- Ono, H., & N. Yasuda, 1992. Records of thomisid spiders (Arachnida, Araneae) from Hokkaido, Japan. *Bull. Sounkyo Mus. nat. Hist.*, (12): 1–13.
- Roberts, M. J., 1995. Spiders of Britain & Northern Europe. 383 pp., 32 pls. Harper Collins, London.
- Simon, E., 1895a. Famille Thomisidae. *Histoire Naturelle des Araignées, Deuxième édition*, **1**(4): 947–1066.
- Simon, E., 1895b. Description d'Arachnides nouveaux de la famille des Thomisidae. *Ann. Soc. ent. Belg.*, **39**: 432–443.
- Thorell, T., 1887. Viaggio di L. Fea in Birmania e regione vicini. II. Primo saggio sui ragni birmani. *Ann. Mus. civ. Stor. nat., Genova*, (2), **5**: 5–417.