

Two new species of the family Sparassidae from Taiwan, with description of the female of *Olios scalptor* (Arachnida: Araneae)

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Summary

In this paper, we describe two new species of the family Sparassidae from Taiwan: *Heteropoda pingtungensis* sp. n. and *Gnathopalystes taiwanensis* sp. n. The genus *Gnathopalystes* is recorded from Taiwan for the first time. A description of the female of *Olios scalptor* Jäger & Ono, 2001 is also given.

Introduction

Hitherto, six species of the spider family Sparassidae have been reported from Taiwan, namely *Heteropoda venatoria* (Linnaeus, 1767), *Thelcticopis severa* (L. Koch, 1875), *Pseudopoda recta* Jäger & Ono, 2001, *P. serrata* Jäger & Ono, 2001, *Sinopoda expectata* Jäger & Ono, 2001 and *Olios scalptor* Jäger & Ono, 2001 (Jäger & Ono, 2001). In the original description, Jäger & Ono (2001) described only the male of *Olios scalptor*, and in this paper, we give a description of the female for the first time. Also, two new species are described from Taiwan, namely *Heteropoda pingtungensis* sp. n. and *Gnathopalystes taiwanensis* sp. n.

Material and methods

Type specimens are deposited in the National Museum of Natural Science, Taichung, Taiwan (NMNS, I.-M. Tso). All measurements are in mm. Leg measurements are given as: total length (femur, patella, tibia, metatarsus, tarsus). Leg spination formula follows that given in Davies (1994). Abbreviations used: AME=anterior median eye, ALE=anterior lateral eye, PME=posterior median eye, PLE=posterior lateral eye, MOA=median ocular area.

Gnathopalystes taiwanensis sp. n. (Figs. 1–6)

Type: Female holotype from Kaohsiung County (22°36'N, 120°18'E), Taiwan, 18 August 1999, Lin Meixing leg. (NMNS-THU-Ar-01-0048).

Etymology: The specific name refers to the type locality.

Diagnosis: The new species resembles *Gnathopalystes kochi* (Simon, 1880), known from India, Myanmar, Malaysia, Java, Sumatra and Borneo (Jäger, 1998; 56,

57, figs. 2d, 3g; Tikader & Sethi, 1990; 176, figs. 33–37), in eye arrangement, cheliceral teeth and shape of the epigynum, but differs from the latter by the epigynum having a narrower anchor-shaped septum and lacking a transverse cavity. In *G. kochi*, the epigynum has a transverse cavity, the lateral lobes are conterminous, and the copulatory duct is not coiled near the intromittent orifice.

Female: Total length 10.62. Cephalothorax 5.22 long, 4.50 wide; abdomen 5.49 long, 4.05 wide. Carapace light orange, with a few short brownish hairs anteriorly, thoracic part covered with many yellowish fine small hairs. Fovea a deep, longitudinal, brown groove. Anterior eye row recurved, posterior eye row almost straight (Fig. 2). Eye diameters and interdistances: AME 0.24, ALE 0.34, PME 0.20, PLE 0.20; AME-AME 0.24, AME-ALE 0.05, PME-PME 0.44, PME-PLE 0.27. MOA 0.88 long, front width 0.65, back width 0.88. Clypeus height at AME 0.24. Chelicerae brownish, with 2 promarginal and 3 retromarginal teeth, and some denticles between margins (Fig. 3). Labium and endites orange, labium wider than long. Legs yellowish brown. Tarsi and distal half of metatarsi with scopulae. Leg measurements: I 24.75 (7.11, 2.52, 6.93, 6.48, 1.71), II 24.93 (7.38, 2.61, 6.75, 6.48, 1.71), III 17.19 (5.40, 1.89, 4.41, 4.05, 1.44), IV 21.87 (6.75, 1.98, 5.49, 6.03, 1.62). Leg formula: 2143. Leg spination: Fe I 0230, Fe II 2230, Fe III 3220, Fe IV 0120; Pa I-IV 0010; Ti I-IV 2024; Mt I-III 2024, Mt IV 2014. Abdomen white-yellow, without markings, covered with light thin hairs, dense laterally. Epigynum (Fig. 5): lightly sclerotised, with a narrow median septum between lateral lobes. Spermathecae (Fig. 6): swollen near posterior end, copulatory duct coiled near intromittent orifice.

Male: Unknown.

Distribution: Taiwan (Kaohsiung County).

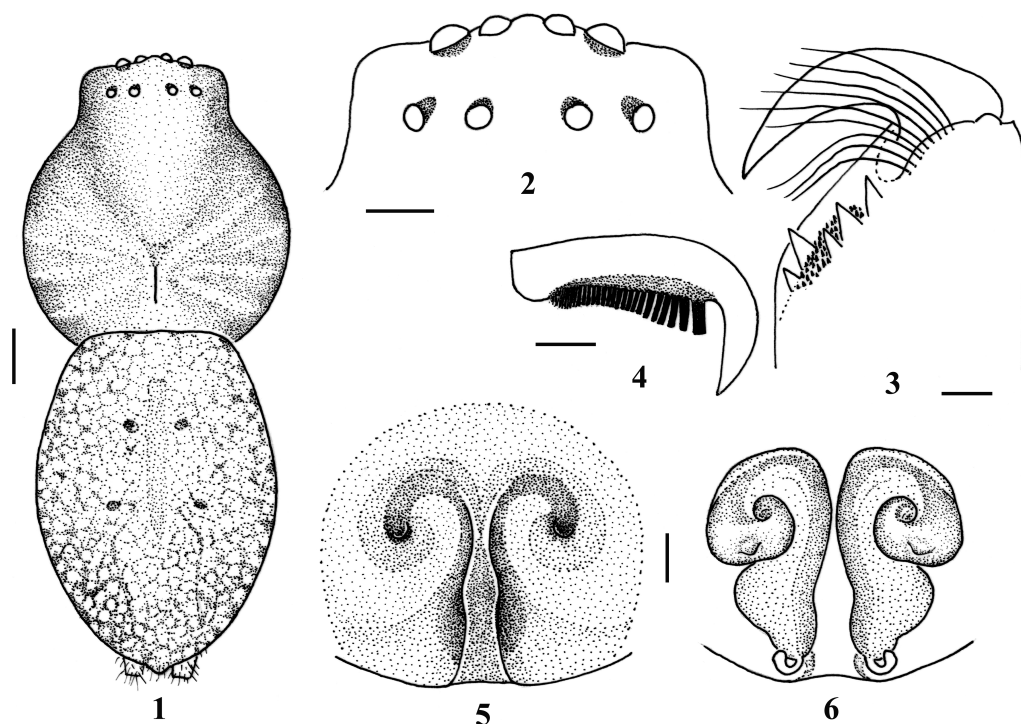
Note: The genus *Gnathopalystes* is a small genus of the family Sparassidae, with only seven species reported from Sumatra, New Guinea, Java, Malaysia, Sulawesi, Vanuatu, New Ireland, India and Myanmar (Platnick, 2004). The genus is recorded here for the first time from Taiwan.

Heteropoda pingtungensis sp. n. (Figs. 7–12)

Types: Male holotype from Keng-Ting National Park, Pingtung County, Taiwan, September 2000, Y. L. Hsieh leg. (NMNS-THU-Ar-01-0112); 1♀ paratype, same locality, June 2000, Y. L. Hsieh leg. (NMNS-THU-Ar-01-0114).

Etymology: The specific name refers to the type locality.

Diagnosis: The new species is closely related to *Heteropoda javana* (Simon, 1880) (Jäger, 2002: 45, figs. 61–69) in the male palpal organ, but differs from the latter by the male palp having a mound-shaped process between the conductor and the basal excrescence, and the outer branch of the tibial apophysis is clavate; whereas the male palp of *H. javana* lacks a process between the conductor and the basal excrescence, and the outer branch of the tibial apophysis is triangular.



Figs. 1–6: *Gnathopalystes taiwanensis* sp. n., female holotype. **1** Habitus, dorsal view; **2** Eye arrangement, dorsal view; **3** Left chelicera, posterior view; **4** Tarsal claw of leg I, retrolateral view; **5** Epigynum, ventral view; **6** Vulva, dorsal view. Scale lines=1.0 mm (1), 0.5 mm (2), 0.2 mm (3, 5, 6), 0.1 mm (4).

The new species also resembles *H. ignichelis* (Simon, 1880) (Jäger, 2002: 45, figs. 74–76), known from Vietnam, Java and Borneo, in the shape of the epigynum, but can be distinguished from the latter by the middle part of the median septum being unexpanded and by the spermathecae being swollen, while in *H. ignichelis* the median septum is expanded in the middle, and the spermathecae are not swollen.

Male: Total length 13.14. Cephalothorax 6.75 long, 6.39 wide; abdomen 6.84 long, 4.05 wide. Carapace reddish brown, cephalic part covered with some short dark hairs, thoracic part covered with many thin light hairs. Fovea distinct, dark brown. Both eye rows recurved. Eye diameters and interdistances: AME 0.31, ALE 0.51, PME 0.37, PLE 0.48; AME-AME 0.24, AME-ALE 0.07, PME-PME 0.37, PME-PLE 0.48. MOA 1.19 long, front width 0.85, back width 1.09. Clypeus height at AME 0.37. Chelicerae dark brown, median area of anterior surface light-coloured and with many white hairs; with 3 teeth on promargin, 4 teeth on retromargin, and some denticles between them. Labium, endites and sternum blackish brown. Labium wider than long. Legs yellowish brown and spinose. Femora with dark spots. Leg measurements: I 30.51 (8.19, 3.42, 8.10, 8.19, 2.61), II 35.01, (9.90, 3.60, 9.90, 8.82, 2.79), III 25.71 (7.65, 3.06, 6.39, 6.72, 1.89), IV 26.91 (8.10, 2.70, 6.75, 7.20, 2.16). Leg formula: 2143. Leg spination: Fe I-II 3230, Fe III 3220, Fe IV 3310; Pa I-III 1010, Pa IV 0010; Ti I-II 1218, Ti III-IV 2126; Mt I 1014, Mt II 1013, Mt III 2014, Mt IV 2034. Abdomen earthy yellow, dorsum covered with many short dark and thin white hairs, median part posteriorly with a few relatively thick, long white-yellow hairs; venter with wide dark brown band medially. Palp (Figs. 11–12): conductor with basal

excrescence, and mound-shaped process between conductor and basal excrescence, embolus arising from a 5-o'clock-position on tegulum, tibial apophysis branched, with outer branch clavate.

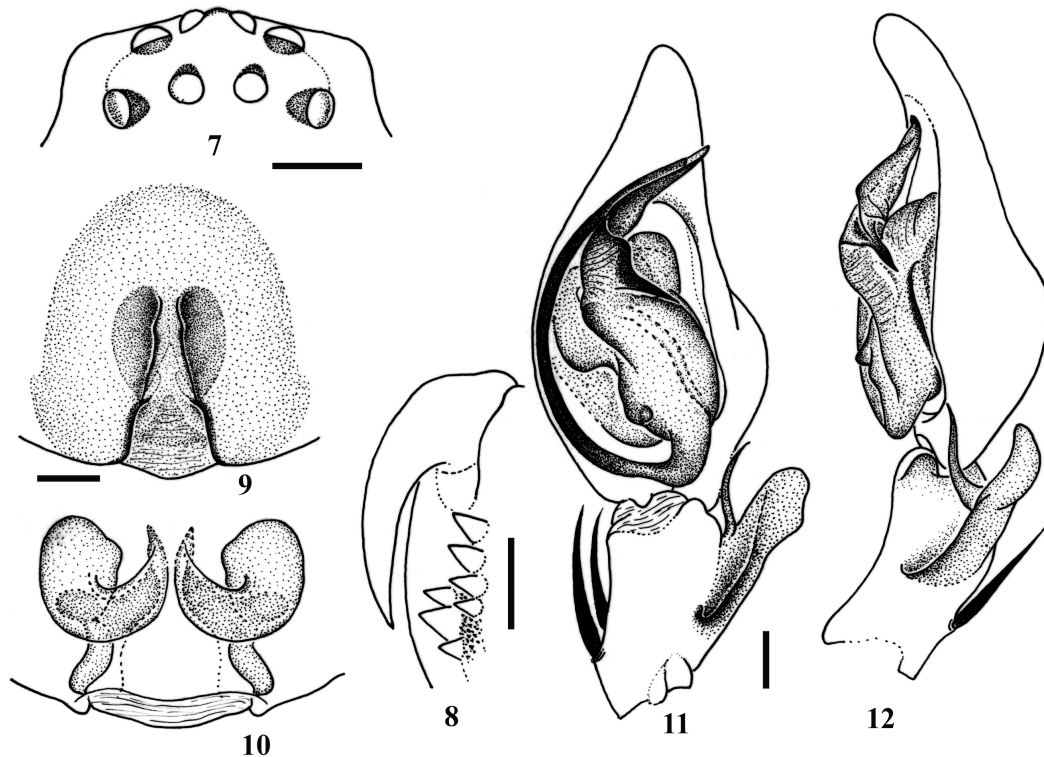
Female: Total length 18.90. Cephalothorax 9.00 long, 8.82 wide; abdomen 9.90 long, 7.65 wide. Carapace reddish brown, densely covered with dark and yellow-white short hairs, margins and posterior thoracic part with long light hairs. Both eye rows recurved (Fig. 7). Eye sizes and interdistances: AME 0.37, ALE 0.65, PME 0.48, PLE 0.54; AME-AME 0.44, AME-ALE 0.11, PME-PME 0.54, PME-PLE 0.68. MOA 1.46 long, front width 1.12, back width 1.50. Promargin of chelicerae with 3 teeth, retromargin with 4 teeth (Fig. 8). Labium, endites and sternum blackish brown. Legs reddish brown. Leg measurements: I 31.68 (8.91, 4.68, 7.83, 7.83, 2.43), II 32.74 (9.70, 4.50, 8.10, 7.92, 2.52), III 27.63 (8.55, 3.87, 6.75, 6.30, 2.16), IV 29.43 (9.00, 3.60, 7.20, 7.20, 2.43). Leg formula: 2143. Leg spination: Fe I-II 3230, Fe III 3210; Pa I-III 1010, Pa IV 1000; Ti I 2027, Ti II 3126, Ti III-IV 2026; Mt I-II 1014, Mt III 1024, Mt IV 3036. Abdomen similar to that of male in shape, colour and hair pattern. Epigynum (Fig. 9) with anchor-shaped median septum, spermathecae (Fig. 10) swollen.

Distribution: Taiwan (Pingtung County).

Olios scalptor Jäger & Ono, 2001 (Figs. 13–16)

Olios scalptor Jäger & Ono, 2001: 28, figs. 26–28 (D♂).

Diagnosis of female: This species is similar to *Olios nanningensis* Hu & Ru, 1988 (Hu & Ru, 1988: 92, figs. 1–7), but differs from the latter by the epigynum having an inverted Y-shaped depression, and by the spermathecae lacking a dark longitudinal band near the



Figs. 7–12: *Heteropoda pingtungensis* sp. n. **7** Female, eye arrangement, dorsal view; **8** Female, left chelicera, posterior view; **9** Epigynum, ventral view; **10** Vulva, dorsal view; **11** Left male palp, ventral view; **12** Left male palp, retrolateral view. Scale lines=1.0 mm (7), 0.5 mm (8), 0.4 mm (9–12).

inner margin; in *O. nanningensis* the epigynum has a \wedge -shaped depression, and the spermathecae have a dark longitudinal band near the inner margin.

Male: See description and figures in Jäger & Ono (2001).

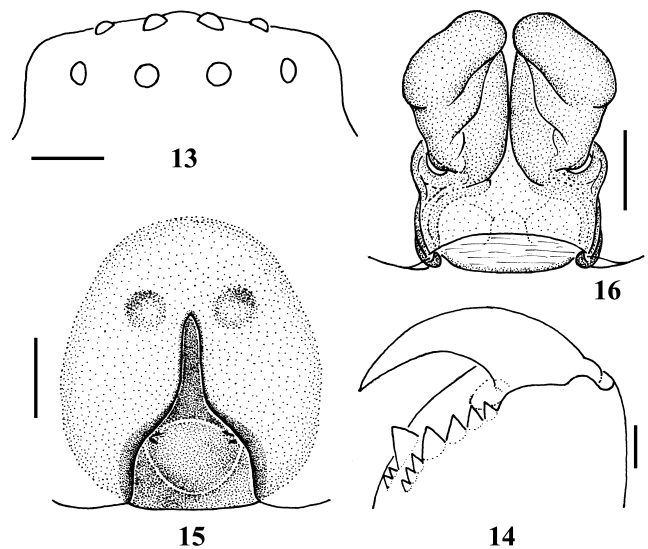
Female: Total length 12.33. Cephalothorax 5.04 long, 5.04 wide; abdomen 7.74 long, 4.05 wide. Carapace white-orange, with only a few short thin hairs. Fovea distinct, red brown. Anterior eye row slightly procurved, posterior eye row procurved (Fig. 13). Eye sizes and interdistances: AME 0.31, ALE 0.27, PME 0.24, PLE 0.24; AME-AME 0.27, AME-ALE 0.27, PME-PME 0.54, PME-PL 0.54. MOA 0.92 long, front width 0.92, back width 1.02. Clypeus height at AME 0.14. Chelicerae dark brown, promargin with 1 large tooth and 2 small teeth (left) or only 2 teeth (right); retromargin with 6 or 7 teeth (Fig. 14). Labium and endites red-brown. Labium longer than wide. Sternum yellowish brown, nearly triangular. Legs yellow-brown, femora yellowish brown, with a few short dark setae and short thin hairs. Leg measurements: I 18.54 (5.49, 2.34, 4.68, 4.50, 1.53), II 20.07 (6.03, 2.43, 5.13, 4.95, 1.53), III 14.31 (4.59, 1.89, 3.33, 3.15, 1.35), IV 16.11 (5.13, 1.89, 3.78, 3.87, 1.44). Leg formula: 2143. Leg spination: Fe I 2230, Fe II-III 3230, Fe IV 3210; Pa I-IV 0000; Ti I 2034, Ti II 3024, Ti III-IV 2024; Mt I-III 2024, Mt IV 2023. Abdomen oval, earthy yellow, covered with many short thin hairs, without markings. Epigynum and spermathecae as in Figs. 15–16.

Remarks: Jäger & Ono (2001) first reported *Olios scalptor* from Taiwan, but only the male was found and described. When examining the specimens we collected from Keng-Ting National Park, Pingtung County,

Taiwan, the type locality of *Olios scalptor*, a female sparsid was found and matched with the male of *Olios scalptor*, because their body colorations are both pale yellow and lack markings, which is different from other species of this genus distributed in South-East Asia.

Material examined: 1♀, Keng-Ting National Park, Pingtung County, Taiwan, June 2000, Y. L. Hsieh leg. (NMNS-THU-Ar-01-0113).

Distribution: Taiwan.



Figs. 13–16: *Olios scalptor* Jäger & Ono, female. **13** Eye arrangement, dorsal view; **14** Left chelicera, posterior view; **15** Epigynum, ventral view; **16** Vulva, dorsal view. Scale lines=1.0 mm (13), 0.2 mm (14), 0.5 mm (15, 16).

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