

A new crab spider (Araneae; Thomisidae) from Korea

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Abstract: Two species of the genus *Oxytate* L. Koch, 1878 have been recorded in Korea to date. The spider fauna was surveyed in the mountainous terrain of Mt. Hallasan National Park in 2019. A female of *Oxytate lobia* sp. nov. was collected with a sweep net between shrubs in mixed forests during a seasonal spider survey and is described with measurements, morphological illustrations, and a diagnosis. The new species can be easily distinguished from similar species within the genus by the long copulatory duct conjugated with a spermatheca, a pair of triangular pits at the bottom, and no ditches.

Keywords: description, Korea, *Oxytate lobia* sp. nov., taxonomy, Thomisidae

INTRODUCTION

Thomisidae Sundevall, 1833 is one of the most diverse and largest family comprising 2,156 species in 170 genera within the order Araneae Clerck, 1757 (World Spider Catalog 2021). To date, 48 species of crab spiders in 19 genera of the family have been described from various ecosystems in Korea (Kim 2019; World Spider Catalog 2021). Twenty-eight species of the genus *Oxytate* L. Koch, 1878 have been described worldwide and two species, *O. striatipes* L. Koch, 1878 and *O. parallela* (Simon 1880), have been recorded in Korea. The females of *Oxytate* species have a long abdomen with long bristles, small epigynum with a pair of oval spermathecae and a short copulatory duct (Ono 1988). A female of *Oxytate lobia* sp. nov. was collected with a sweep net between shrubs in mixed forests from Mt. Hallasan National Park during a seasonal spider survey in 2019 and is described with measurements, morphological illustrations, and a diagnosis.

MATERIALS AND METHODS

External morphology was examined and illustrated using a stereoscopic dissecting microscope (S8APO; LEICA, Singapore). Images of habitus were taken with a CANON 650D digital camera with 60 mm macro-lens. Measurements of body parts were made with an ocular micrometer and are recorded in millimeters. Leg and palp (left) measurements are given as leg number, total length (femur, patella, tibia, metatarsus, tarsus). The internal genitalia of female was prepared with 10% of KOH solution for six hours, and after examination, tissue pieces around it were removed with brushes and needles. Abbreviations used are as follows: ALE = anterior lateral eye, AME = anterior median eye, PLE = posterior lateral eye, PME = posterior median eye, AER = anterior eye row, PER = posterior eye row. The examined specimens of this study were deposited in the collection of the National Institute of Biological Resources (NIBR), Korea.

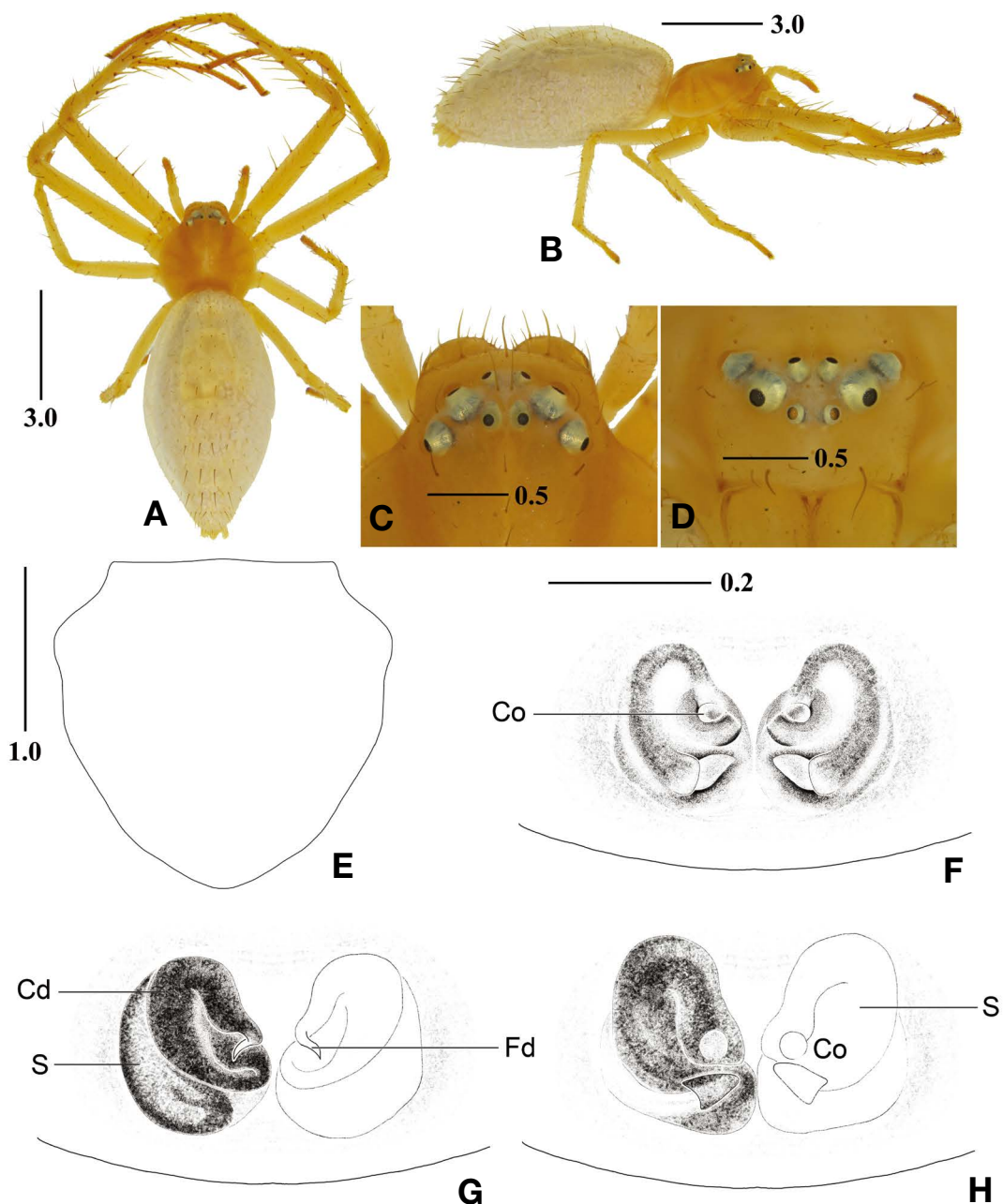


Fig. 1. *Oxytate lobia* sp. nov., holotype female. A. habitus in the dorsal view, B. habitus in the lateral view, C. eye area from above, D. eye area in frontal view, E. sternum, F. epigyne in the ventral view, G. internal genitalia in the dorsal view, and H. ditto in the ventral view (Cd, copulatory duct; Co, copulatory opening; Fd, fertilization duct; S, spermatheca). Scale bars are in mm.

TAXONOMIC ACCOUNT

Family Thomisidae Sundevall, 1833
 Genus *Oxytate* L. Koch, 1878

***Oxytate lobia* sp. nov.**
 콩팍연두게거미 (신칭) (Fig. 1)

Type material. Holotype: female, 19 May 2019, Eorimok Valley, Mt. Hallasan National Park, Haean-dong, Jeju-si,

Jeju-do (33°23'22.7"N, 126°29'27.4"E, alt. 542 m), leg. S.T. Kim; NIBR MQQHIV0000000192.

Etymology. The species name is derived from the Latin noun 'lobia' meaning kidney, referring to the shape of spermatheca in internal genitalia.

Diagnosis. The new species is most similar to *Oxytate hoshizuna* Ono, 1978, but can be easily distinguished from the latter by the shape of internal genitalia. The new species has a long copulatory duct conjugated with a spermatheca, a pair of triangular pits at the bottom, and no ditches (Fig. 1F–H); *versus* a short copulatory duct separated with a spermatheca, no pits at the bottom, and a lateral slanting ditch in *O. hoshizuna* (Ono 1978; 248, Figs. 9–11).

Description. Holotype female. Total length 8.70 (habitus). Carapace: 2.35 long/2.45 wide, dark yellowish brown, round, slightly longer than wide, cervical and radial furrows distinct, fovea indistinct (Fig. 1A). Eyes: ALE 0.10, AME 0.06, PLE 0.12, PME 0.07, ALE-AME 0.13, AME-AME 0.17, PLE-PME 0.34, PME-PME 0.14, ALE-PLE 0.26, AME-PME 0.29, AER 0.68, PER 0.98, all eyes on the silvery white eye tubercle, eight eyes in two rows, AER strongly recurved and PER recurved from above, PER longer than AER (Fig. 1C, D). Chelicera: 0.85 long/0.40 wide, yellowish white, no cheliceral teeth, fang robust and very short. Endite: 0.70 long/0.25 wide, pale yellowish white. Labium: 0.43 long/0.30 wide, pale yellowish white. Sternum; 1.15 long/0.90 wide, pale yellowish white, subcordate, longer than wide, anteromedial margin truncated and posterior end blunt, not protrudent between coxae of leg IV (Fig. 1E). Legs: I 10.88 (3.28, 1.30, 2.90, 2.20, 1.20), II 10.00 (3.30, 1.15, 2.35, 2.05, 1.15), III 6.10 (1.95, 0.60, 1.50, 1.20, 0.83), IV 6.23 (2.35, 0.45, 1.40, 1.20, 0.83), yellowish brown, stout and strongly developed, tarsus darker, all leg segments with long spines (Fig. 1A, B), leg formula I-II-IV-III. Abdomen: 6.10 long/3.30 wide, pale yellowish white, faint cardiac pattern present, posterior part clothed sparsely with short and long bristles in 5 layers (Fig. 1A, B).

Palp; 2.77 (0.60, 0.34, 0.35, -, 0.65). Epigyne and internal genitalia: spermatheca kidney-shaped, copulatory duct long and conjugated with a spermatheca, a pair of copulatory openings at the middle, a pair of triangular pits at the bottom (Fig. 1F–H).

Male. Unknown.

Distribution. Korea (Mt. Hallasan National Park, Jeju-do).

Remarks. The species was collected with a sweep net between shrubs in mixed forest of mountainous valley.

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