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日本からの *Ero aphana* (クモ目: センシヨウグモ科) の新記録

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New records of the pirate spider *Ero aphana* (Araneae: Mimetidae) from Japan

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Abstract. *Ero aphana* (Walckenaer, 1802) (Mimetidae) is recorded for the first time from Japan on the basis of specimens collected on Okinawa and Iriomote Islands, Okinawa Prefecture. Description of the specimens is provided with figures of their body and genital organs. This species can be easily distinguished from other Japanese congeners by the unique shape of abdomen and by the structure of genitalia.

Introduction

The spider genus *Ero* C. L. Koch, 1836 (Araneae: Mimetidae) is well known for its spider-eating behavior and currently comprises 36 species worldwide (World Spider Catalog 2016). In addition to the five species known from Japan (Tanikawa 2016), i.e. *E. cambridgei* Kulczyński, 1911, *E. furcata* (Villers, 1789), *E. japonica* Bösenberg & Strand, 1906, *E. kompirensis* Strand, 1918 and *E. koreana* Paik, 1967, we recently recognized the occurrence of a sixth species, *E. aphana* (Walckenaer, 1802), from material collected on Okinawa and Iriomote Islands, Okinawa Prefecture. Here we report the first records of this Palearctic species (World Spider Catalog 2016) from Japan and describe the morphological characteristics of the specimens.

Material and methods.

All specimens used in this study were obtained by visual searching and preserved in 75% ethanol. The morphological features were observed under a stereomicroscope (SMZ1000, Nikon Corp. Tokyo Japan) or M3Z (Wild Heerbrugg AG, Heerbrugg, Switzerland). All measurements were taken with a micrometric ocular on the stereomicroscope. Photographs were taken with an EOS Kiss X7 with MP-E65mm f/2.8 macro photo lens and MT-24EX macro twin flash (Canon Inc., Tokyo, Japan). The specimens collected were deposited in the collections of the National Museum of Nature and Science, Tokyo (NSMT) and the Institute for Agro-Environmental Sciences, NARO.

The following abbreviations are used: AER, anterior eye row; ALE, anterior lateral eye; AME, anterior median eye; PER, posterior eye row; PLE, posterior lateral eye; PME, posterior median eye; MOA, median ocular area. The distances between eyes are expressed as, e.g., “ALE–AME”.

Species account

Ero aphana (Walckenaer, 1802)

[Japanese name: Yotsutoge-sensho-gumo] (Figs. 1–5)

For synonym list, see World Spider Catalog 2016.

Materials examined. Okinawa Island: 1♂, Yaka, Kin-cho, Kunigami-gun, 27-V-2016, Y. G. Baba & N. Katayama leg. (NSMT-Ar14726); 1♂, same collection data as NSMT-Ar14726; 1♀ Yaka, Kin-cho, Kunigami-gun, 28-IX-2016, Y. G. Baba leg. (NSMT-Ar14727); 1♀, same collection data as NSMT-Ar14727; 1♀, Yaka, Kin-cho, Kunigami-gun, 29-IX-2016, Y. G. Baba leg. Iriomote Island: 1♂, Urauchi, 1-IV-1987, A. Tanikawa leg.; 1♂, Komi, 27-XII-1989, A. Tanikawa leg.

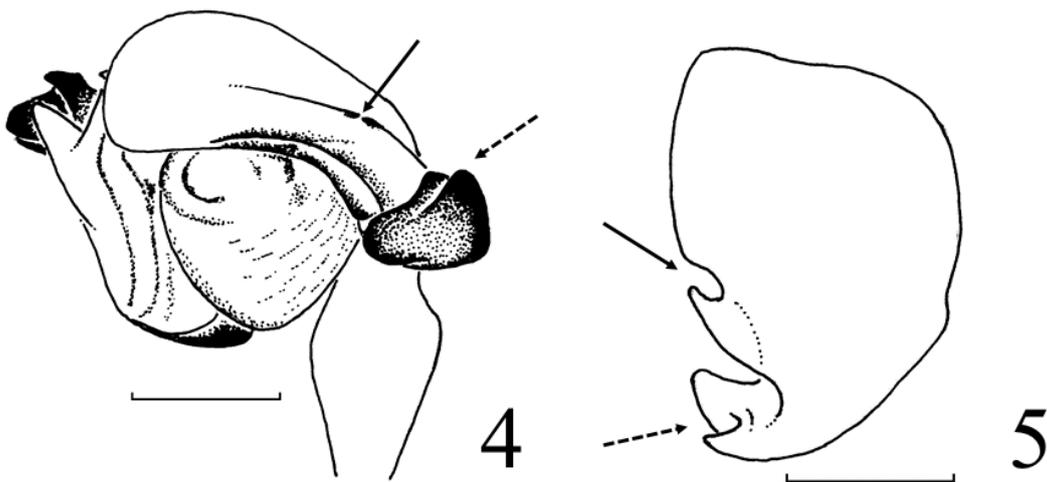
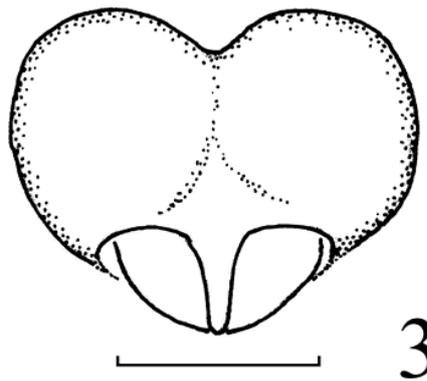
Diagnosis. *Ero aphana* can be easily distinguished from Japanese congeners by the following morphological characteristics: 1) the presence of two paired projections on dorsum of abdomen (Fig. 2, arrows), 2) the presence of distinct septum on female epigynum (Fig. 3), and 3) the unique shape of cymbium of male palp having a hook-shaped incision (Figs. 4–5, solid arrow).

Description. Measurements (mm). The ranges among specimens used in this study are shown. Body length: ♂ 1.88–2.13, ♀ 2.31–2.56. Carapace length: ♂ 0.88–1.13, ♀ 1.00–1.06. Carapace width: ♂ 0.81–0.94, ♀ 0.81–0.94. Carapace and abdomen oval. AER and PER almost straight. Eye sizes and inter-distances. AME ♂ 0.09–0.12, ♀ 0.09; ALE ♂ 0.06–0.09, ♀ 0.09; PME ♂ 0.09, ♀ 0.09–0.12; PLE ♂ 0.09, ♀ 0.06–0.09; AME–AME ♂ 0.06–0.09, ♀ 0.06; AME–ALE ♂ 0.06, ♀ 0.06; PME–PME ♂ 0.06, ♀ 0.06; PME–PLE ♂ 0.09, ♀ 0.09–0.12. MOA back width ♂ 0.24–0.27, ♀ 0.24; front width ♂ 0.24–0.27, ♀ 0.24; clypeus height ♂ 0.24–0.30, ♀ 0.21–0.27.



Figs. 1–2. *Ero aphana*, female (NSMT-Ar 14727). 1, habitus, frontal view; 2, habitus, posterior view. Arrows indicate projections. Scales=1 mm

図 1–2. ヨツトゲセンシヨウグモ *Ero aphana*, メス (NSMT-Ar 14727). 1, 全体 (正面図); 2, 全体 (背面図). 矢印は突起を示す. スケール=1 mm.



Figs. 3–5. Genital organs of *Ero aphana* (3, NSMT-Ar 14727; 4, 5, NSMT-Ar 14726). 3, female epigynum; 4, male left palp, retrolateral view; 5, cymbium, dorsal view. Solid arrow and dotted arrow indicate a hook-shaped incision and a paracymbium, respectively. Scales=0.1 mm.

図 3–5. ヨツトゲセンシヨウグモ *Ero aphana* の生殖器 (3, NSMT-Ar 14727; 4-5, NSMT-Ar 14726). 3, 外雌器; 4, オス左触肢, 後側面図; 5, 杯葉, 背面図. 実線の矢印と破線の矢印はそれぞれ鉤型の切れ込みと側杯葉を示す. スケール=0.1 mm.



Fig. 6. An agricultural ditch in which *Ero aphanus* was found; Yaka, Kin-cho, Kunigami-gun, Okinawa Island.
 図 6. ヨツトゲセンショウグモ *Ero aphanus* が見つかった沖縄島国頭郡金武町屋嘉の農業用水路。

Leg lengths based on 1♂ (NSMT-Ar14726), 1♀ (NSMT-Ar14727), (tarsus + metatarsus + tibia + patella + femur = total): Leg I ♂ 1.06 + 1.06 + 1.88 + 0.44 + 1.81 = 6.25 / ♀ 0.75 + 0.94 + 1.50 + 0.38 + 1.63 = 5.19; Leg II ♂ 0.75 + 0.81 + 1.38 + 0.38 + 1.44 = 4.75 / ♀ 0.75 + 0.94 + 1.19 + 0.38 + 1.44 = 4.69; Leg III ♂ 0.56 + 0.44 + 0.69 + 0.31 + 0.88 = 2.88 / ♀ 0.50 + 0.44 + 0.63 + 0.31 + 1.00 = 2.88; Leg IV ♂ 0.50 + 0.63 + 0.88 + 0.38 + 1.25 = 3.63 / ♀ 0.50 + 0.63 + 0.81 + 0.31 + 1.31 = 3.56.

Coloration and markings. Male: carapace pale brown with a brown midline and a pair of short lateral brown stripes; sternum pale brown; chelicera brown; dorsum of abdomen brown with darker brownish markings, with two paired projections. The legs hairy and pale colored with dark bands. Tibia and metatarsus I and II prolaterally with a row of long spines, between these regularly spaced shorter curved spines.

Female: coloration and markings almost similar to those of male (Figs. 1–2). Leg I: ventral side of femur dark brown; the other legs pale colored with dark bands. Tibia and metatarsus I and II prolaterally with

a conspicuous row of spines as in males.

Male palp (Figs. 4–5). Cymbium well-developed with a hook-shaped incision (Fig. 5, solid arrow) and a paracymbium having two dorsal humps (Fig. 5, dotted arrow).

Female genitalia (Fig. 3). Epigynum heart-shaped; copulatory opening circular, separated by septum.

Notes on habitat. All individuals examined were found in agricultural environments such as rice paddy fields, fallow fields and agricultural ditches (Fig. 6).

Distribution. This species has a Palearctic distribution, but it is also seen in Saint Helena, Queensland, Western Australia, and in the Ryukyus (Okinawa Island), which may be the result of artificial introduction (e.g. Todd Davies 1985; Harms & Harvey 2009).

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References

- Harms, D. & M.S. Harvey, 2009. Australian pirates: systematics and phylogeny of the Australasian pirate spiders (Araneae: Mimetidae), with a description of the Western Australian fauna. *Invertebrate Systematics*, 23; 231–280.
- Tanikawa, A. 2016. A Check List of Japanese Spiders ver. 2016R1 Available from: <http://www.asahi-net.or.jp/~dp7a-tnkw/japan.pdf> (Accessed 31 Oct. 2016)
- Todd Davies, V. 1985. Arachnida: Araneomorphae (in part). —*Zoological Catalogue of Australia*, 3: 49–125. Canberra.
- World Spider Catalog 2016. World Spider Catalog. version 16. Bern, Natural History Museum. Available from: <http://wsc.nmbe.ch> (Accessed 31 Oct. 2016).

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要旨. 旧北区に広く分布する *Ero aphana* (Walckenaer, 1802) ヨツトゲセンシヨウグモ (新称) を、沖縄県の沖縄島と西表島で採集された雌雄の標本に基づいて日本から初めて記録し、その形態的特徴を記載した。本種は特異な腹部と生殖器の形状により、日本に生息する同属他種と容易に区別することができる。

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