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New record of *Hyllus diardi* (Walckenaer 1837) (Araneae: Salticidae) from India

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Abstract — *Hyllus diardi* (Walckenaer 1837) is recorded for the first time from India on the basis of female specimens collected from Assam. Description of the specimen is given with figures of its body and genitalia. This species is distinguished from its congeners by the distinctive large hairy body, unique abdominal patterns and structure of epigyne.

Key words — jumping spider, taxonomy, Assam

Introduction

The genus *Hyllus* C. L. Koch 1846 belonging to the family Salticidae has 71 accepted species according to the World Spider Catalog (2017). From India, four species of this genus are known, i.e. *Hyllus bos* (Sundevall 1833), *H. semicupreus* (Simon 1885), *H. pudicus* Thorell 1895 and *H. manu* Caleb, Christudhas, Laltanpuii & Chitra 2014. After examining the specimens collected from Jharbari forest range of Assam, we found the occurrence of *Hyllus diardi* (Walckenaer 1837) as the fifth addition to Indian fauna. This species has been reported from Myanmar by Thorell (1895); China by Peng and Kim (1998); Vietnam by Żabka (1985), and Java by Doleschall (1857).

Four species described by Koch (1846), i.e. *Plexippus mutillarius*, *P. lacertosus*, *P. janthinus* and *P. succinctus*, are regarded as junior synonyms of *H. diardi*. In this paper, we record this species from India for the first time.

Methods

The specimens were collected during nocturnal survey at 10:00 p.m. in Jharbari forest range of Chirang Reserve Forest under Manas Biosphere Reserve, Kokrajhar, Assam and were preserved in 80% ethanol. The specimens were deposited to Biodiversity Museum Gauhati University, Northeast Region (BMGU) with Museum Accession No. BMGU/A-10/ARA-21. The specimens were dissected under Olympus Magnus stereozoom microscope (MSZ- Bi) and were measured under Leica EZ4 E stereo microscope. Epigyne was dissected, cleared in 96% lactic acid for 24 hours and then again treated with KOH for four to five hours followed by transferring of the epigyne to 80% ethanol. Measurements were taken in millimeters. Abbreviations are used as follows: anterior lateral eye (ALE), anterior median eye (AME), posterior lateral eye (PLE), posterior median eye (PME). Interdistances of eyes are given by hyphen (e.g. AME-AME). Legs measurements are given as total length followed by femur, patella, tibia, metatarsus and tarsus.

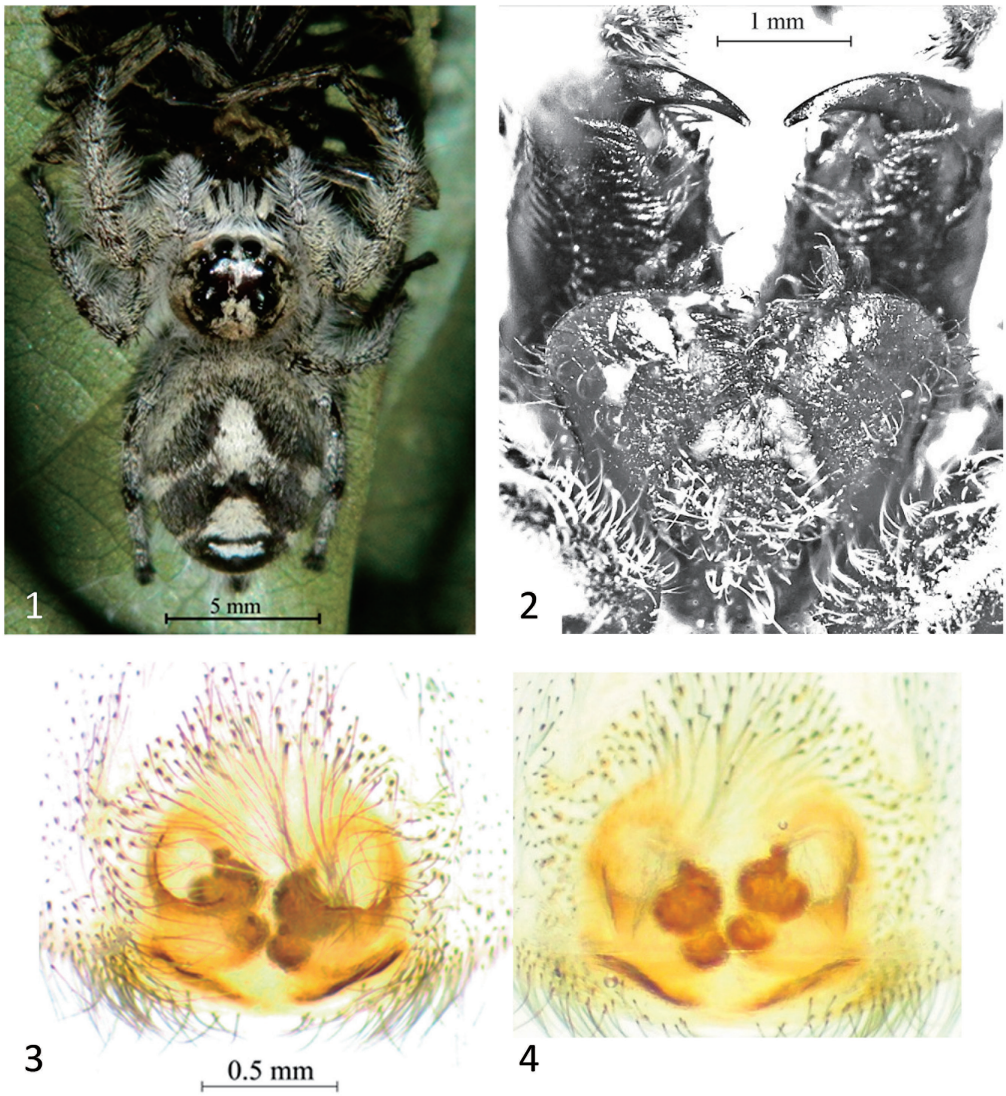
Taxonomic accounts

Hyllus diardi (Walckenaer 1837)
(Figs. 1–5)

Attus diardi Walckenaer 1837, p. 460.
Plexippus mutillarius C. L. Koch 1846, p. 93, figs. 1155–1156. Synonymized by Simon 1886, p. 139.
Plexippus lacertosus C. L. Koch 1846, p. 94, figs. 1157–1158. Synonymized by Xiong et al. 2017, p. 24.
Plexippus janthinus C. L. Koch 1846, p. 97, fig. 1160. Synonymized by Xiong et al. 2017, p. 24.
Plexippus succinctus C. L. Koch 1846, p. 98, fig. 1161. Synonymized with *Plexippus janthinus* by Thorell 1895, p. 376.
Attus succinctus: Doleschall 1857, p. 431.
Phidippa diardi: Simon 1864, p. 327.
Hyllus diardi: Simon 1886, p. 139; Prószyński 1984, p. 62; Żabka 1985, p. 229, figs. 217–220; Żabka 1988, p. 458, figs. 97–98; Peng et al. 1993, p. 96, figs. 310–313; Song et al. 1999, p. 514, figs. 301E, 326L; Xiong et al. 2017, p. 23, fig. 1A–G.
Hyllus mutillarius: Thorell 1892, p. 381.
Hyllus janthinus: Thorell 1895, p. 376; Prószyński 1984, p. 63; Żabka 1988, p. 458, figs. 99–100.
Hyllus lacertosus: Simon 1899, p. 111; Prószyński 1984, p. 63; Żabka 1985, p. 230, figs. 221–226; Peng & Kim 1998, p. 411, fig. 1D–F.

Diagnosis. *H. diardi* is characterized by large body size and distinctive abdominal pattern in females (Fig. 1). It can be distinguished from other Indian congeners by the presence of distinctive two chambered spermatheca in female internal genitalia.

Specimens examined. Two adult ♀, 1 juvenile ♀ (26˚37’10.9”N, 90˚16’53.8”E, elevation 79 m) from Jharbari



Figs. 1–4. *Hyllus diardi* (Walckenaer 1837). 1, habitus; 2, mouth parts, ventral view; 3, epigyne, ventral view; 4, female internal genitalia, dorsal view.

forest range, Chirang Reserve Forest, Assam, India; collected by P. Basumatary on 26 June 2017.

Description. Based on 1♀ (BMGU/A-10/ARA- 21) from Assam, India.

Measurements. Body length 17.28; carapace length 6.96, width 5.93; opisthosoma length 10.32, width 7.00; sternum length 3.14, width 1.89; chelicera length 2.59, width 1.56; maxilla length 1.86, width 1.10; labium length 1.35, width 1.34. AME 1.02, PME 0.16, ALE 0.48, PLE 0.56, AME-AME 0.13, PME-PME 3.01, AME-ALE 0.22, PME-PLE 0.66, AME-PME 0.44, ALE-ALE 2.47, ALE-PME 0.45, PLE-PLE 3.04. Lengths of legs: I 11.01 (3.37 + 2.33 + 2.80 + 1.41 + 1.10), II 10.67 (3.23 + 2.48 + 2.38 + 1.74 + 0.84), III 10.45 (3.33 + 2.32 + 1.75 + 2.19 + 0.86), IV 10.90 (3.41 + 2.23 + 1.95 + 2.21 + 1.10). Leg formula: I > IV > II > III.

Body shape and coloration. Carapace brown with a black rim, covered with dense white hairs, narrow anteriorly, cephalic region with very sparsely distributed hairs; distinct long hair tuft horns present near PMEs. Sternum longer than broad. Chelicerae dark brown and covered with long white hairs; promargin of fang furrow with two teeth and retromargin with one tooth (Fig. 2). Pedipalp brown and covered with dense white hairs. Legs brown with white and black hairs and bristles. Opisthosoma oval, tapering posteriorly and broad at mid region, brown with dense patches of white hairs and black hairs; venter brown with a longitudinal black patch arising near epigastric furrow up to the base of spinnerets. Spinnerets dark brown and are covered with hairs.

Epigyne and internal genitalia. A pair of large oval shaped copulatory orifices separated by a median ridge (Fig. 3). Spermatheca divided into two chambers, 0.30 mm long and 0.26 mm wide (Figs. 4–5).

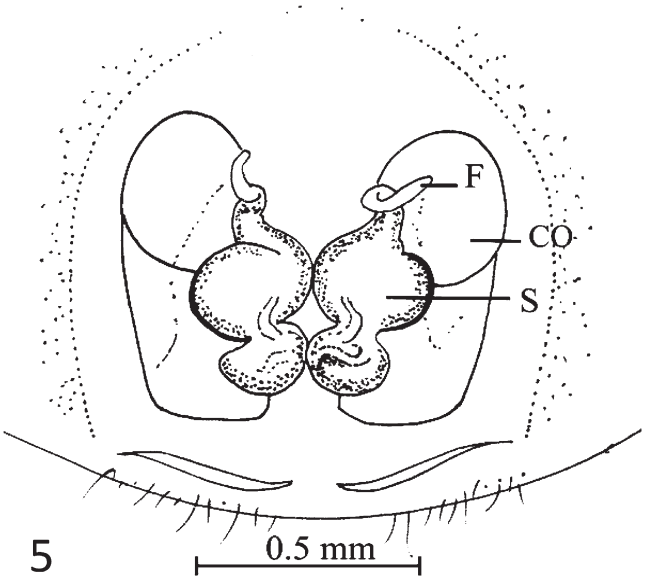


Fig. 5. Female internal genitalia of *Hyllus diardi* (Walckenaer 1837), dorsal view. CO: copulatory opening (opposite side), F: fertilization duct, S: spermatheca.

Distribution. Myanmar, Thailand, Laos, China, Java, and India (new record).

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