

A NEW SPECIES OF SPITTING SPIDER GENUS *SCYTODES* Latreille, 1804 (ARANEAE : SCYTODIDAE) FROM BAGERHAT, BANGLADESH

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ABSTRACT

A new species of spitting spider genus *Scytodes* Latreille namely – *Scytodes tikaderi* n. sp. is described and illustrated. Generic diagnosis together with the distribution of the species also provided herewith.

Keywords : New species, Spitting spiders, *Scytodes*, Araneae, Scytodidae, Bangladesh.

INTRODUCTION

Scytodidae, commonly known as ‘spitting spiders’, a very small family comprising only with five genera and 229 species worldwide (Platnick 2014, World Spider Catalog 2021) of which only 9 species of 1 genus are known from Indian Sub-continent (Stoliczka 1869, Dyal 1935, Tikader 1963, 1966, 1968, 1977, Patel 1975, Gajbe 2004, Keswani *et al.* 2012). Scytodids are small, six-eyed spiders. Chelicerae bears no boss and the fang-furrow bears a hard lamella. Labium is fused to sternum and maxillae coverage apically. Female pedipalps without true claws. Legs are long and slender without heavy spines. Members of the family are usually found in the garden and forests and distributed in the tropical and sub-tropical parts of the world.

Scytodes is the largest genus of the family Scytodidae but are totally unknown to the fauna of Bangladesh. The genus was first established by Latreille in 1804 with the type-species *Aranea thoracica*. The genus at present comprises 229 species in the world fauna of which very few species are recorded in the Asian countries like – China (Chen & Zhang 1991, Song *et al.* 1999), The Philippines (Barrion & Litsinger 1995), Japan (Yaginuma 1986) and Singapore (Koh 1989). In Indian Sub-continent, the genus was first reported by Stoliczka (1869) with only two species. Later Dyal (1935), Tikader (1963, 1966, 1968, 1977), Patel (1975) and Gajbe (2004) contributed to increase the number. Contributors to the the world fauna are– Valerio (1981), Rheims & Brescovit (2000, 2001a,b, 2004, 2006, 2009), Rheims *et*

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al. (2006a,b), Brescovit & Rheims (2000, 2001), Brescovit *et al.* (2004), Ozkutuk *et al.* (2013), Sestakova *et al.* (2014) and Zamani (2014) are well documented.

Present paper contains description of a new species *Scytodes tikaderi* n. sp. collected from Bagerhat, Bangladesh. Materials were studied in the laboratory following Levi & Levi (1968) and Tikader (1987). The species was identified following relevant literatures /books of home and abroad and the identity of the species were later confirmed from the Zoological Survey of India, Kolkata.

MATERIALS AND METHODS

Collection and Preservation : The spider specimens were collected from the garden of village Betaga, district Bagerhat by hand vials with beating and jarking the branches of shrubs. Collected specimens were then paralysed with chloroform in large glass jars and transferred to 70% ethyl alcohol in a Petri dishes for relaxation of body muscles. The specimens were then preserved in 70% alcohol in separate glass vials for identification.

Identification : The preserved specimens were identified upto the genus on the basis of various morphometric characters of different body-parts following Kaston (1972) & Tikader (1987). A detailed taxonomic study and identification upto species level were done based on various relevant literatures of the world. After identification, the specimens were preserved permanently in Audmans' preservatives (90 parts 70% alcohol + 5 parts Glycerine + 5 parts Acetic acid).

Illustrations : Measurements and illustrations of different body parts were made under Stereo Binocular Microscope. All the measurements were taken in millimeters. Illustrations were made with Camera lucida fitted with the microscope (SV8, Zeiss, Germany) after dissected out from the body.

Type deposition : After completion of necessary drawings of different body-parts, with Camera lucida fitted with Stereo Binocular Microscope, the specimens were deposited separately (Single specimen in single vial) in large glass jar full of 70% alcohol. The types were preserved with the collection of the Department of Zoology, Khulna Government Womens' College, Khulna and will be deposited to the Museum of the Department of Zoology, University of Dhaka, Bangladesh, in due course of time.

RESULTS AND DISCUSSION

Systematics

Family : SCYTODIDAE Blackwall, 1864

Genus : *Scytodes* Latreille, 1804

Species : *Aranea thoracica* (Latreille 1804)

1804. *Scytodes* Latreille, *Nouv. Dict. Hist. Nat.* **24**, 134.
1869. *Scytodes* : Stoliczka, *J. Asiat. Soc. Bengal.* **38**, 231.
1873. *Scytodes* : Koch, *Arach. Austral.* 294.
1892. *Scytodes* : Simon, *Hist. Nat. des Araign.* **1**, 276
1940. *Scytodes* : Comstock, *The spider book*, New York. 316.
1942. *Scytodes* : Roewer, *Katalog der Araneae.* **1**, 323.
1948. *Scytodes* : Kaston, *Bull. St. Geol. nat. Hist. Surv.* **70**, 65.
1951. *Scytodes* : Locket & Millidge, *British Spiders*, London. **1**, 89.
1963. *Scytodes* : Tikader, *J. Univ. Poona Sci. & Tech.* **24**, 30.
1975. *Scytodes* : Patel, *Oriental Insects.* **9**(4), 425.
1986. *Scytodes* : Yaginuma, *Spiders of Japan in colour*, Osaka. 18.
1989. *Scytodes* : Koh, *A guide to common Singapore spiders.* 82.
1990. *Scytodes* : Maurer & Hanggi, *Cat. des Araines de Suisse.* 10.
1991. *Scytodes* : Chen & Zhang, *Fauna of Zhejiang*, Araneida. 69.
1995. *Scytodes* : Barrion & Litsinger, *Riceland spiders of South & S. east Asia.* 37.
1997. *Scytodes* : Platnick, *Advances in Spider Taxonomy*, New York. 177.
1997. *Scytodes* : Mikhailov, *Cat. of spiders of former Soviet Union*, Moscow. 21.
1999. *Scytodes* : Song *et al.*, *The Spiders of China*, Hebei. 49.
2002. *Scytodes* : Buchar & Ruzicka, *Cat. Spiders of Czech Republic.* 25.
2004. *Scytodes* : Gajbe, *Rec. zool. Surv. India*, occ. Pap. No. **227**, 20.
2009. *Scytodes* : Rheims & Brescovit, *Zootaxa.* **2116**, 1.
2013. *Scytodes* : Ozkutuket *al.*, *Hacettepe J. Biol. & Chem.* **41**(1), 9.

2014. *Scytodes* : Zamani, *Arach. Mitteilungen*. **47**, 41.
2016. *Scytodes* : Platnick, *World Spider Catalog, Version 16.0*, <http://www.research.amnh.org/entomology/spider/catalog/index.html>.
2021. *Scytodes* : World Spider Catalog, Version 20.0, Natural History Museum, Bern., <http://www.wsc.nmbe.ch>.

[All synonyms and references are listed in the World Spider Catalog. 2021]

Diagnosis : Members of the genus *Scytodes* are light coloured, small to medium in size. Cephalothorax high, sub-globose behind and slopes forward. Eyes typical, light coloured, arranged in three wide

diads. Anterior row of eyes strongly recurved. Chelicerae weak, with small fang, lack of boss. Labium fused with sternum. Maxillae long and narrow with pointed apex. Sternum ovoid, pale yellow, some with black spots. Legs long and slender.

Abdomen ovoid or sub-globular. Spinnerets small and preceded by aq projecting slightly conical colulus. Epigynum absent, represented by oblique sclerotized pits. The female carries eggs with the chelicerae held against the sternum.

Distribution : Temperate and tropical regions of the world.

***Scytodes tikaderi* n. sp.**

(Figs. 1 – 7)

General : Cephalothorax, abdomen and legs yellowish in colour.

Female (allotype) : Total body length 5.20 mm . Carapace 2.20 mm long, 1.90 mm wide, 1.00 mm height ; abdomen 3.00 mm long , 2.10 mm wide and 2.00 mm height.

Male (holotype) : Total body length 5.00 mm, carapace 2.10 mm long, 1.50 mm wide, 1.10 mm height ; abdomen 2.00 mm long, 1.70 mm wide and 1.10 mm height.

Cephalothorax :

Female : broad, ovoid, anteriorly sloping, posteriorly broad and high, medially wide, dorsum with a black median stripe and some curved lines, others are arranged around this (Fig. 1). Eyes light yellow, six in number and arranged in three diads;

each pair of eyes enclosed basally with black band; anteromedians slightly larger than others, anterior row of eyes strongly recurved. Chelicerae light brown, strong, longer than wide, retromargin with one tooth (Fig. 2). Maxillae brown, longer than wide, curved dorsally, anteriorly scopulate (Fig. 3). Labium small, yellowish, fused with sternum (Fig. 3). Sternum light brown, longer than wide, medially broad, anterior margin inwardly curved, posterior margin blunt (Fig. 3). legs yellowish, long and slender with few small spines ; leg formula 1423 and the measurements (in mm) are as shown in Table 1.

Table 1. Measurements (in mm) of leg segments of *Scytodes tikaderi* n. sp. (Female)

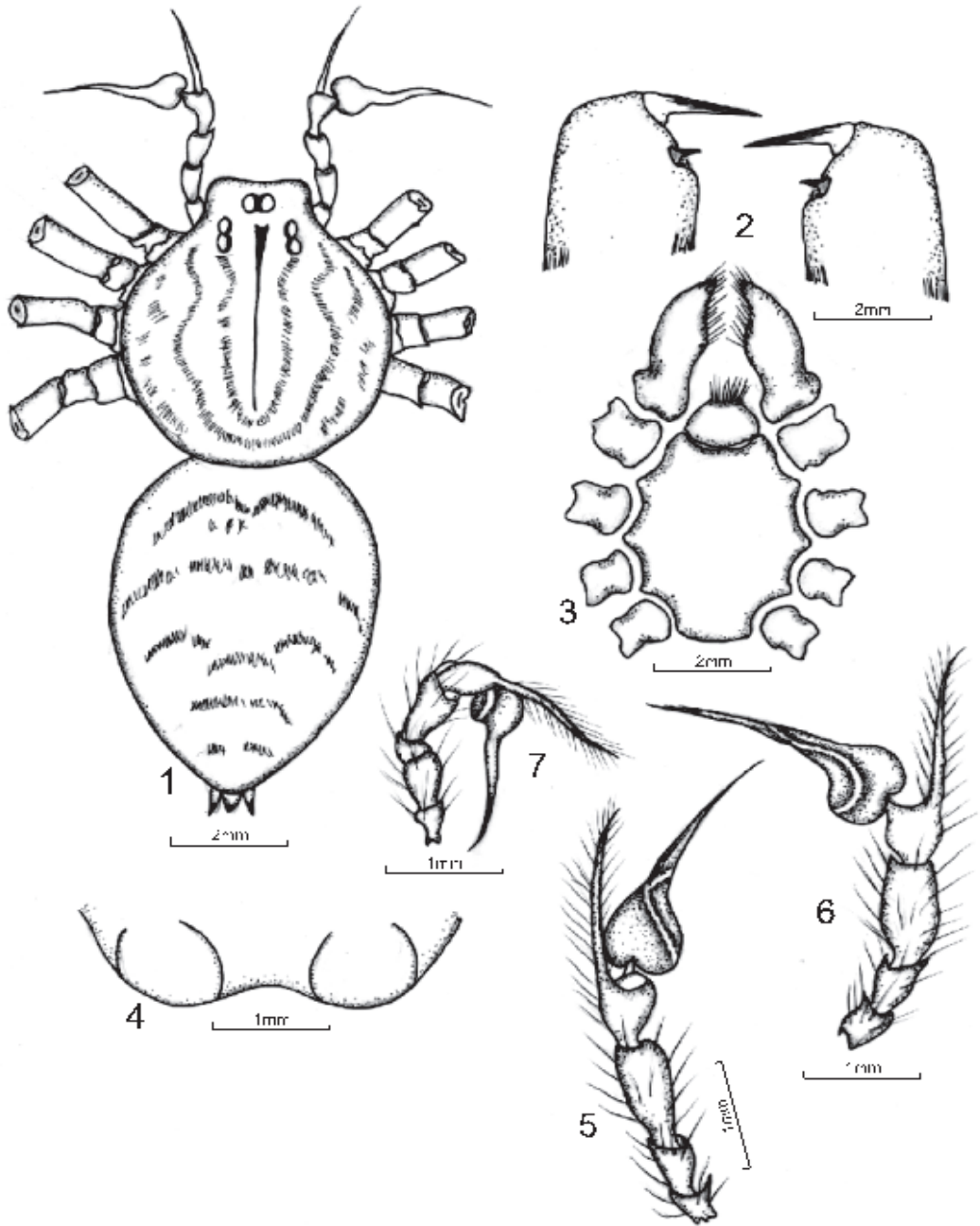
Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	3.20/3.20	0.40/0.40	3.30/3.30	3.50/3.50	0.90/0.90	11.30/11.30
II	2.10/2.10	0.30/0.30	2.00/2.00	2.40/2.40	0.80/0.80	7.60/7.60
III	2.00/2.00	0.30/0.30	1.80/1.80	1.70/1.70	0.80/0.80	6.60/6.60
IV	2.20/2.20	0.30/0.30	2.10/2.10	2.50/2.50	0.90/0.90	8.00/8.00
Palp	0.80/0.80	0.15/0.15	0.50/0.50	-	0.40/0.40	1.85/1.85

Male: slightly smaller than female, dull yellow in colour and decorated with black band. Legs long and slender ; leg formula 1243 and measurements (in mm) are as shown in Table-2.

Table 2. Measurements (mm) of leg segments of *Scytodes tikaderi* n. sp. (Male)

Leg	Femur	Patella	Tibia	Metatarsus	Tarsus	Total
I	4.00/4.00	0.70/0.70	4.70/4.70	4.80/4.80	1.10/1.10	15.30/15.30
II	3.00/3.00	0.70/0.70	3.20/3.20	3.30/3.30	0.70/0.70	10.90/10.90
III	2.20/2.20	0.60/0.60	2.00/2.00	2.10/2.10	0.60/0.60	7.50/7.50
IV	3.40/3.40	0.60/0.60	3.00/3.00	2.70/2.70	0.60/0.60	10.50/10.50
Palp	0.80/0.80	0.20/0.20	0.45/0.45	-	0.50/0.50	1.95/1.95

Male: palp yellowish-brown, strong, tarsal epiphysis long and pointed, hairy, embolus pointed, long; cymbium not very sharp ; sperm duct coiled (Figs. 5-7).



Figs. 1-7 : *Scytodes tikaderi* n. sp. 1. Whole body; 2. Chelicerae; 3. Maxillae, Labium & Sternum; 4. Epigynum; 5. Male palp (ventral view); 6. Male palp (retrolateral view); 7. Male palp (lateral view)

Abdomen : both of male and female broadly oval, medially wide, posteriorly narrowing; dorsum with some light black markings; spinnerets small, narrow. Ventrally with light brown longitudinal band. Female epigynum as in Fig. 4.

Type-specimen : **Holotype** - male in spirit; **Allotype** - one female in spirit.

Type-locality : BANGLADESH, district- Bagerhat, southern part of the country near Sunderban.

Etymology : The species is named in honour of late Dr. B.K. Tikader, famous Indian Arachno-logist and former Director, Zoological Survey of India, Kolkata.

Remarks : The present species *S. tikaderi* n. sp. slightly similar to *S. kinsukus* Patel (Patel, 1975) in appearance but it differs from this as follows - (i) position of lateral eyes, (ii) abdominal decoration and structure of female genitalia or epigynum and male genitalia or pedipalps. Also, none of the other world *Scytodes* species (Tikader 1963, 1966, Barrion & Litsinger 1995, Chen & Zhang 1991, Dyal 1935, Song *et al.* 1999, Valerio 1981, Rheims & Brescovit 2009, Brescovit & Rheims 2001, Ozkutuk *et al.* 2013, Zamani 2014) resemble with the present one.

The species, is therefore, described as new to science.

Type deposition : The types are at present in collection of the Department of Zoology, Khulna Govt. Womens' College and will be deposited to the Museum of the Department of Zoology, University of Dhaka, Bangladesh, in due course of time.

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