

## A NEW SPECIES OF THE GENUS *HASARIUS* SIMON FROM BANGLADESH (ARANEAE: SALTICIDAE)

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**ABSTRACT:** A new species of the genus *Hasarius* Simon namely- *H. raychaudhurii* sp. nov. is described from Khulna, Bangladesh. Distribution and illustrations of different body-parts are presented herewith.

**KEY WORDS:** New species, *Hasarius*, Araneae, Salticidae, Bangladesh

Salticids, a large group of jumping spiders belong to the order Araneae under the class Arachnida. Genus *Hasarius*, a member of the family Salticidae are commonly found in the garden and forests. The genus was first erected by Simon in 1871 with the type-species *Attus adansoni* Audouin, 1826. Till date, the genus contains 28 species all over the world (Platnick, 2015 ; Proszynski, 2015) of which only one species is recorded from Indian Sub-continent ( Okuma et al., 1993; Keswani et al., 2012). In the world fauna, Peng et al. (1993, 2004), Borowic & Wesolowska (2002), Kim (1996), Jastrzebski (2010), Davies & Zabka (1989) contributed on this spider from different countries. Present paper contains description of *H. raychaudhurii* sp. nov. together with the diagnosis of the genus is provided.

### MATERIALS AND METHODS

Specimens were collected from the bushes and leaves of plants by vialtapping and jarking of branches on the inverted umbrella. Preservation and other necessary techniques were followed by Lincoln and Sheals (1985) and Tikader (1987). Illustrations and studies were made under Stereo-Zoom Binocular Microscope. All the measurements were taken in millimeters (mm) under microscopic observations. Leg measurements are shown as: total length of different parts (viz. – femur, patella, tibia, metatarsus and tarsus).

Types are at present in the 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.

**Abbreviations used:** AH= Abdominal height; AL= Abdominal length; ALE= Anterior lateral eyes; AME= Anterior median eyes; AW= Abdominal width; CH= Cephalic height; CL= Carapace length; CW= Carapace width; PLE= Posterior lateral eyes; PME= Posterior median eyes; TL= Total length.

### TAXONOMIC ACCOUNT

#### Family SALTICIDAE Blackwall, 1841

#### Genus *Hasarius* Simon, 1871

1825. *Attus* Savigny & Audouin, Hist. Nat., 1 (4): 169.

1871. *Hasarius*: Simon, Ann. Soc.ent.Fr., 5 (1): 329.

1922. *Tachyscarthmus*: Hogg, Proc. Zool. Soc. London, 1922: 320.

1948. *Hasarius*: Kaston, Conn. St. Geol. Nat. Hist. Surv., 70:

1985. *Hasarius*: Zabka, Ann. Zool., 39 (11):

1993. *Hasarius*: Peng et al., Salticids in China:

1995. *Hasarius*: Barrion & Litsinger, Riceland spiders of South and Southeast Asia:

2015. *Hasarius*: Proszynski, Catalogue of Salticidae, Araneae. Version 15.0, <http://Salticidae.org/salticid/main.htm>.

2016. *Hasarius*: Platnick, World Spider Catalog. Version 16.0, <http://research.amnh.org/iz/spiders/catalog/INTRO.html>

**Diagnosis:** Genus *Hasarius* is a small jumping spider. Body length ( TL ) 5.0mm – 6.0mm, blackish in colour with pointed hairs on the lateral sides. Cephalothorax anteriorly with black patch covering the ocular area upto the anterior extremity. Ocular quad wider than long. The PLE are fairly large being about the same size as the ALE which with the AME are in a recurved line. The sternum in front is not quite as broad as the labium which is about as broad as long.

Abdomen nearly oval, stout and decorated dorsally. Retromargin of chelicerae with 2 teeth. Leg I is not much stouter than the others and leg IV is little longer than III. Tibia of pedipalp often longer than the tarsus.

**Type-species:** *Attus adansoni* Audouin, 1826.

**Distribution:** Cosmopolitan; tropics of South and Southeast Asia, Australia, New Guinea and Pacific Islands (Zabka & Pollard, 2012).

### *Hasarius raychaudhurii* sp. nov.

(Figs. 1-7)

#### **Description: Female**

**Cephalothorax:** Broad, little longer than wide; covered with hairs and spines; basally wide; black in colour with posterior white markings. TL 7.39 mm, CL 3.32 mm, CW 3.30 mm, CH 1.00 mm, AL 4.07 mm, AW 2.60 mm, AH 0.80mm. Cephalic region elevated, black upto the anterior extremity. Eyes 8, homogeneous, transparent, arranged in 3 rows, each basally ringed with black patch; Posterolaterals (PLE) nearly equal to the anterolaterals (ALE). Anteromedians (AME) largest and posteromedians (PME) the smallest; both PME and PLE set on the slope of a single tubercle and arranged on a same line of the ocular quad. Ocular quad trapezoid, little wide behind, formed by posteromedians (PME) and posterolaterals (PLE). Anterior row of eyes slightly recurved. Eyes sizes are – ALE = PLE and AME >ALE >PLE > PME. Interocular distance: AME–AME= 0.35, ALE–AME= 0.52, ALE–ALE= 1.50, PME–PME= 1.57, PLE–PME= 0.85, PLE–PLE= 1.35; ALE–PLE= 1.22 and AME–PME= 0.50. Clypeus vertical, narrow, with long hairs. Chelicerae broad, strong, longer than wide, brown, promargin with 1 and retromargin with 2 teeth (Fig. 2), fang slightly curved. Maxille brown, longer than wide, anteriorly broad and scopulate, posteriorly constricted (Fig. 3). Sternum light brown, longer than wide, anteriorly slightly concave and posteriorly pointed (Fig. 4), clothed with sharp spines. Legs moderately long and robust, yellow brown, clothed with hairs and spines; tarsal claws 2 with claw-tufts. Leg formula 4132. Leg measurements: **I** (TL) 5.85 mm (femur 2.02 mm, patella 0.61 mm, tibia 1.77 mm, metatarsus 0.75 mm, tarsus 0.70 mm); **II** (TL) 5.75 mm (femur 20.01 mm, patella 0.60 mm, tibia 1.75 mm, metatarsus 0.72 mm, tarsus 0.67 mm); **III** (TL) 5.79 mm (femur 2.02 mm, patella 0.60 mm, tibia 1.76 mm, metatarsus 0.73 mm, tarsus 0.68 mm); **IV** (TL) 5.94 mm (femur 2.07 mm, patella 0.76 mm, tibia 1.35 mm, metatarsus 0.92 mm, tarsus 0.84 mm) (Figs. 1, 7).

**Abdomen:** Elongately oval, blackish, anteriorly wide, dorsum decorated with white patch and with brown, erect, hairs, ventrally pale black; spinnerets elongate (Fig. 1). **Epigynum-Internal genitalia:** Epigynum blunt with two lateral pockets; spermathecae sac-like, fertilization tube laterally coiled and opened on a same position.

**Etymology:** The species is named in honour of my respected teacher Professor Dinendra Raychaudhuri, Department of Zoology, Calcutta University, India.

**Type-material: Holotype** - 1 female, Srimongal Tea Estate, Dist. Moulovi bazar (Sylhet), date- 12.VII.2008, Coll. V. Biswas; **Paratypes** – 2 females, Maijdi, Dist. Noakhali, date- 18.V.2007, Coll. V. Biswas, Bangladesh.

**Type-locality:** Srimongal (Dist. Moulovi bazar) and Noakhali, Bangladesh.

**Distribution:** BANGLADESH: Srimongal (Moulovi bazar, Sylhet); Noakhali (only from the type-localities).

**Diagnosis :** The present species *H. raychaudhurii* sp. nov. appears close to *H. adansoni* (Audouin, 1826) but stands distinct with the followings –

1. Both the species have distinct white markings on the carapace and abdomen but the number and structure of those are quite different.
2. Cheliceral structure and dentition are different (Fig. 2).
3. Structure of maxillae, labium and sternum different (Figs. 3-5) and
4. Structure of epigynum and internal genitalia differ with *H. adansoni* and any of its Indian congeners and species known from elsewhere (Zabka, 1985; Yaginuma, 1986; Davies & Zabka, 1989; Peng et al., 1993; Okuma et al., 1993; Barrion & Litsinger, 1995; Proszynski, 2003).

Therefore, the species is described as new to science.

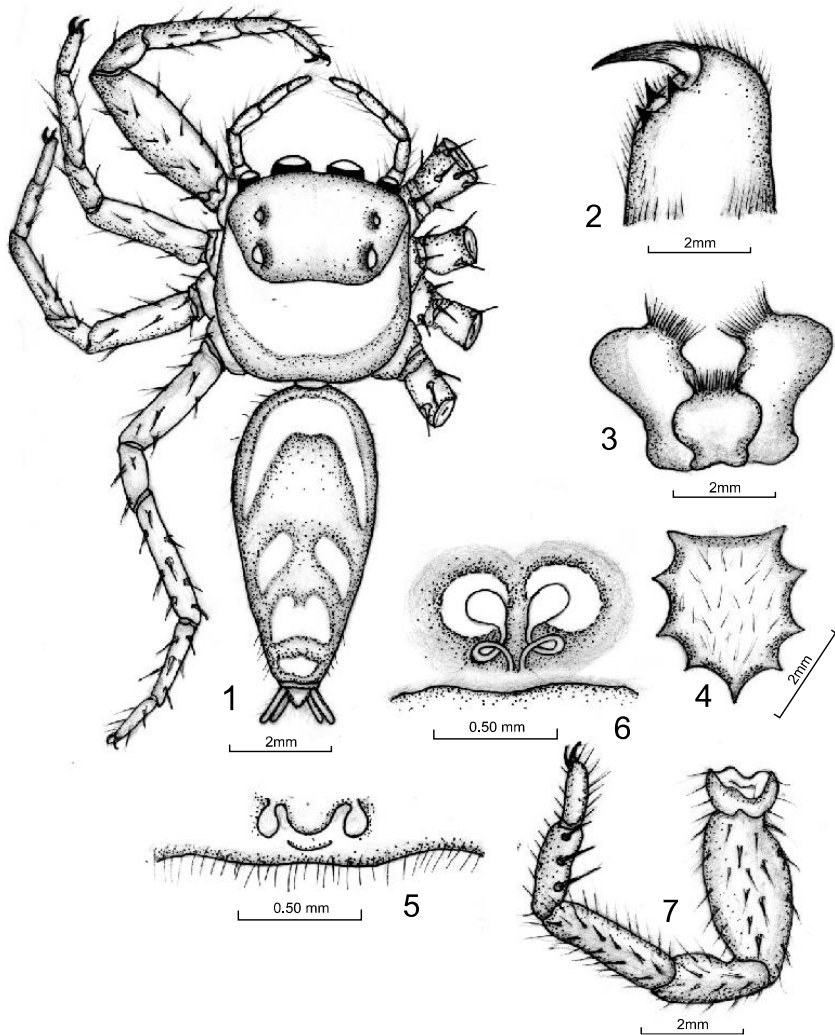
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Figures 1-7: *Hasarius raychaudhurii* sp. nov. 1. Whole body; 2. Chelicerae; 3. Maxillae & Labium; 4. Sternum; 5. Epigynum; 6. Internal genitalia; 7. 1<sup>st</sup> leg (lateral view).