

**SAC SPIDERS OF BANGLADESH-II : GENERA *CASTIANEIRA*
KEYSERLING, *SPHINGIUS* THORELL AND *TRACHELAS* KOCH
(ARANEAE : CLUBIONIDAE)**

V. BISWAS¹ and D. RAYCHAUDHURI

*Entomology Laboratory, Department of Zoology, University of Calcutta,
35, Ballygunge Circular Road, Calcutta - 700 019, India.*

INTRODUCTION

'Sac spiders' (Family Clubionidae) are one of the common predators of pest insects in agricultural crops. In Bangladesh, very few works (Chowdhury & Nagari 1981; Chowdhury & Pal, 1984; Biswas, *et al.*, 1993; Okuma, *et al.*, 1993; Begum & Biswas, 1997; Biswas & Raychaudhuri, 1994) are available on these arthropods, although a number of works are found in different parts of the world (Pocock, 1900; Patel & Patel, 1973; Dyal, 1935; Tikader, 1975 '81; Tikader & Biswas, 1981; Majumder & Tikader, 1991; Dondale & Redner, 1982; Ono, 1989; Chen & Zhang, 1989; Platnick, 1987, '92; Platnick & Shadab, 1974; Reiskind, 1969; Locket & Millidge, 1951; Roberts, 1985; Koh, 1989; Shinkai & Takano, 1984; Yaginuma, 1986).

In India, Majumder and Tikader (1991) carried out a thorough study on these spiders. Their report contains a detailed description of 84 species belonging to 15 genera under 4 subfamilies. The present paper deals with a study of 3 (three) species on the genera *Castianeira* Keyserling, *Sphingius* Thorell and *Trachelas* Koch of which *Trachelas devi* is described as new to science. The 2 (two) species of the genera *Castianeira* and *Sphingius* are new records for the country.

SYSTEMATICS

Genus : *Castianeira* Keyserling

1879. *Castianeira* Keyserling, Verh. Zool. Bot. Ges. Win., 29: 334.

1932. *Castianeira* : Mello-Leitao, Arach. Mus. Nac. Rio de Janeiro, 2: 12.

1981. *Castianeira* : Tikader, Bull. Zool. Surv. India, 4(3): 257.

1991. *Castianeira* : Majumder & Tikader, Rec. Zool. Surv. India, Occ. Pap. no. 102: 130.

Type-species : *Castianeira rubicunda* Keyserling, 1879

Distribution : AFRICA; ASIA; EUROPE; CANADA; NORTH AMERICA; SOUTH AMERICA.

1. *Castianeira zetes* Simon

(Figs. 1-7)

1897. *Castianeira zetes* Simon, Bull. Mus. Hist. nat. Paris, 3(7) : 294.

1991. *Castianeira zetes* : Majumder & Tikader, Rec. Zool. Surv. India, Occ. Pap. no. 102 : 132.

Material examined : 1 ♀, P. C. College, Dist. Bagerhat, 8.ix.1990, coll. V. Biswas; 1 ♀, 1 ♂ Gaurnadi, Dist. Barisal, 18.ii.1992, coll. V. Biswas; 2 ♀, 1 ♂, BRRI, Joydevpur, Dhaka, 18.xii.1992, coll. V. Biswas; 2 ♀, ADI, Faridpur, 2.ix.1992, coll. V. Biswas; 2 ♀, Bagharpara, Dist. Jessore, 12.iv.1992, coll. V. Biswas; 1 ♀, Shikerpur, Dist. Jhenidah, 2.vii.1993, coll. V. Biswas; 1 ♀, Lakmipur, Dist. Kustia, 12.iv.1993, Coll. V. Biswas; 1 ♀, BAU campus, Mymensingh, 15.v.1992, Coll. V. Biswas.

Distribution : BANGLADESH : Bagerhat, Barisal, Dhaka, Faridpur, Jessore, Jhenidah, Kustia, Mymensingh; INDIA (Majumder & Tikader, 1991).

Genus: *Sphingius* Thorell

1890. *Sphingius* Thorell, Ann. Mus. Civ. Stor. nat. Genova, 30: 285.

1897. *Thampilus*: Simon, Hist, nat. des Araign., 2(1): 154.

1931. *Sphingius*: Gravely, Rec. Indian Mus., 33: 269.

1991. *Sphingius*: Majumder & Tikader, Rec. Zool. Surv. India, Occ. Pap. no. 102 : 147.

Type-species : *Sphingius thecatus* Thorell, 1890

Distribution : ASIA.

2. *Sphingius barkudaensis* Gravely

(Figs. 8-14)

1931. *Sphingius barkudaensis* Gravely, Rec. Indian Mus., 33 : 271.

1991. *Sphingius barkudaensis* : Majumder & Tikader, Rec. Zool. Surv. India, Occ. Pap. no. 102 : 152.

Material examined : 1 ♀, Karapara, Dist. Bagerhat, 3.vii.1991, coll. V. Biswas; 1 ♀, Jhalokathi, Dist. Barisal, 5.ix.1994, coll. V. Biswas; 1 ♀, Pirojpur, Dist. Barisal, 11.v.1992, coll. V. Biswas; 2 ♀, Brahmanbaria, Dist. Comilla, 12.vii.1992, coll. V. Biswas; 2 ♀, Keshobpur, Dist. Jessore, 9.viii.1991, coll. V. Biswas; 1 ♀, 1 ♂, Harishankarpur, Dist. Jhenidah, 9.ix.1990, coll. V. Biswas; 2 ♀, Batiaghata, Dist. Khulna, 11.v. 1993, Coll. V. Biswas; 2 ♀, Alamdanga, Dist. Kustia, 28.v.1992, coll. V. Biswas; 1 ♀, BAU campus, Mymensingh, 8.ix.1992, Coll. V. Biswas.

Distribution : BANGLADESH : Bagerhat, Barisal, Comilla, Jessore, Jhendah, Kustia, Khulna, Mymensingh; INDIA (Majumder and Tikader, 1991).

Genus : *Trachelas* Koch

1866. *Trachelas* Koch, Die. Arach. Fam. Drassiden, : 346.

1991. *Trachelas* : Majumder & Tikader, Rec. Zool. Surv. India, Occ. Pap. no. 102 : 109.

Type-species : *Trachelas minor* Cambridge, 1872

Distribution : AFRICA; ASIA; AUSTRALIA; EUROPE; NORTH AMERICA; SOUTH AMERICA.

3. *Trachelas devi* n. sp.

(Figs. 15-21)

General : Cephalothorax brown ; legs yellow; abdomen black. Total body length 3.00 mm. Carapace length 1.10 mm. Carapace width 1.00 mm; abdominal length 1.90 mm; abdominal width 1.20 mm. Legs as in Table-1.

Cephalothorax : Longer than wide, anteriorly narrowing, posteriorly overlapped by abdomen; cephalic region raised; cervical furrows weakly distinct; posteromedially with a fovea; radial furrows deeply distinct. Eyes pearly-white, based with black band, unequal in size, anterolaterals largest; anterior row of eyes strongly recurved and posterior row nearly straight; anteromedian eyes close while posteromedians distantly placed; laterals closely placed; ocular quad longer than wide. Chelicerae brown, strong, both inner and outer margins with 2 teeth (Figs. 17). Maxillae and labium brown, maxillae broad, longer than wide (Figs. 18); labium broad, as long as wide (Figs. 18); both maxillae and labium anteriorly scopulate. Sternum dark brown, broad, nearly heart-shaped (Figs. 19). Legs long and slender, each of tibia and metatarsi I and II with 3 ventral spines; tarsi with 2 claws; leg formula 4132 and the measurements (in mm) as in Table-1.

Table-1 : Measurements (in mm) of different parts of legs of *Trachelas devi* n. sp.

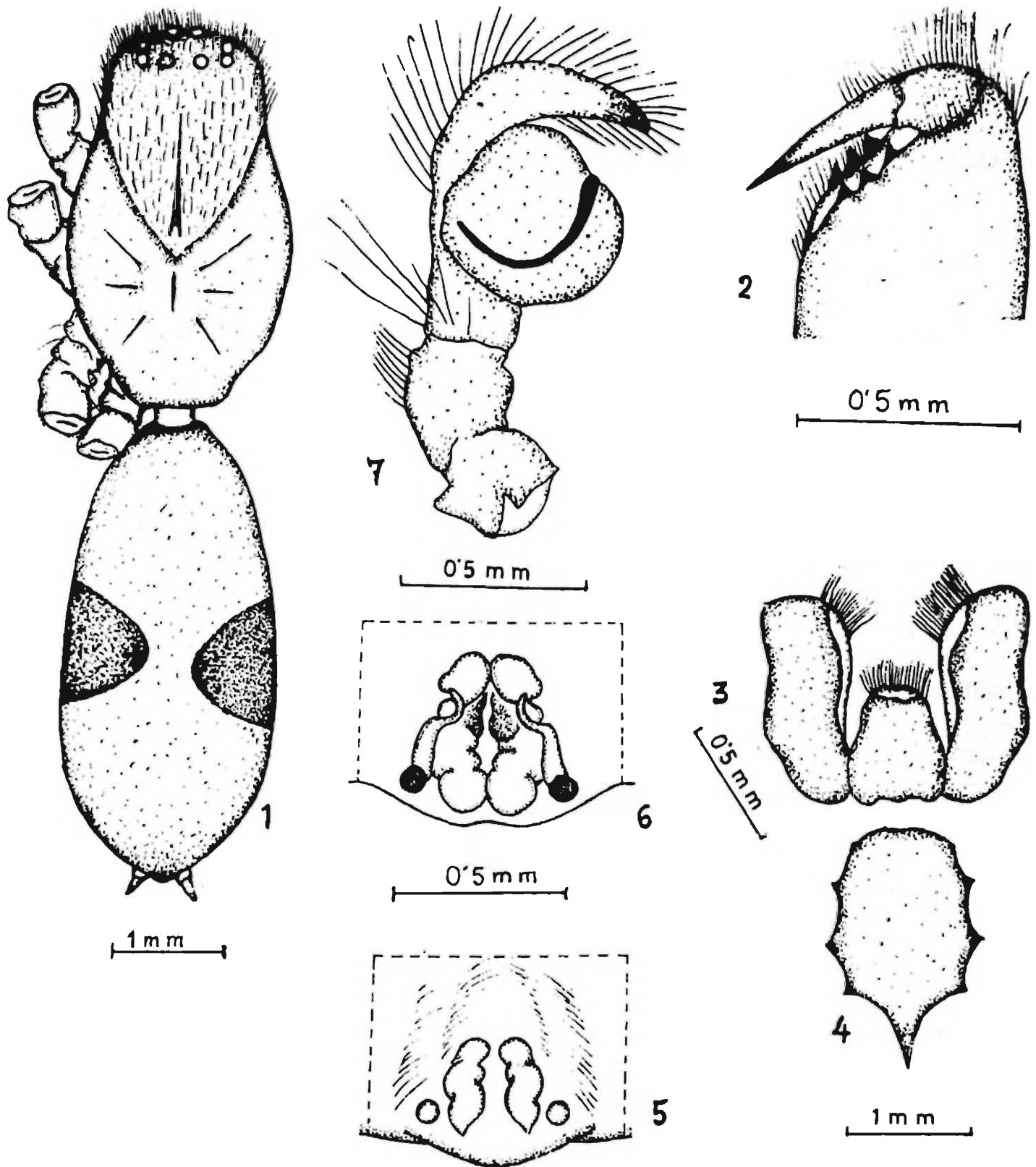
Leg	Femur	Patella	Tibia	Metatarsi	Tarsus	Total
I	0.7/0.7	0.2/0.2	0.3/0.3	0.9/0.9	0.3/0.3	3.0/3.0
II	0.6/0.6	0.3/0.3	0.5/0.5	1.0/1.0	0.4/0.4	1.18/1.18
III	0.5/0.5	0.8/0.8	0.7/0.7	0.2/0.2	0.6/0.6	2.8/2.8
IV	0.7/0.7	0.3/0.3	1.1/1.1	1.1/1.1	0.7/0.7	3.9/3.9

Abdomen : Oval, dorsum submarginally with serially arranged black patches leaving the white longitudinal mid-dorsal area (Figs. 15) Epigyne and internal genitalia as in figs. 20 and 21.

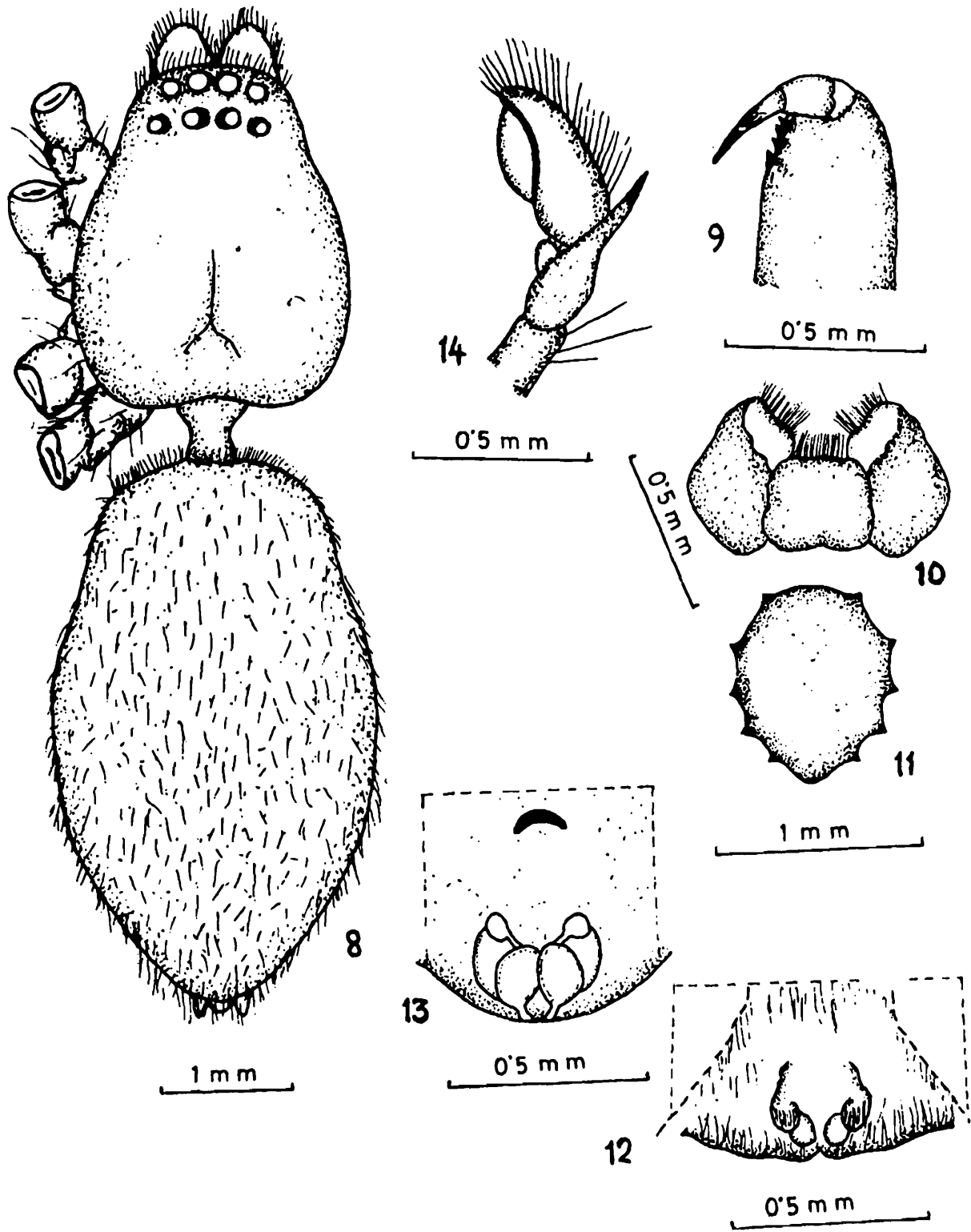
Male Unknown.

Holotype : Female in spirit.

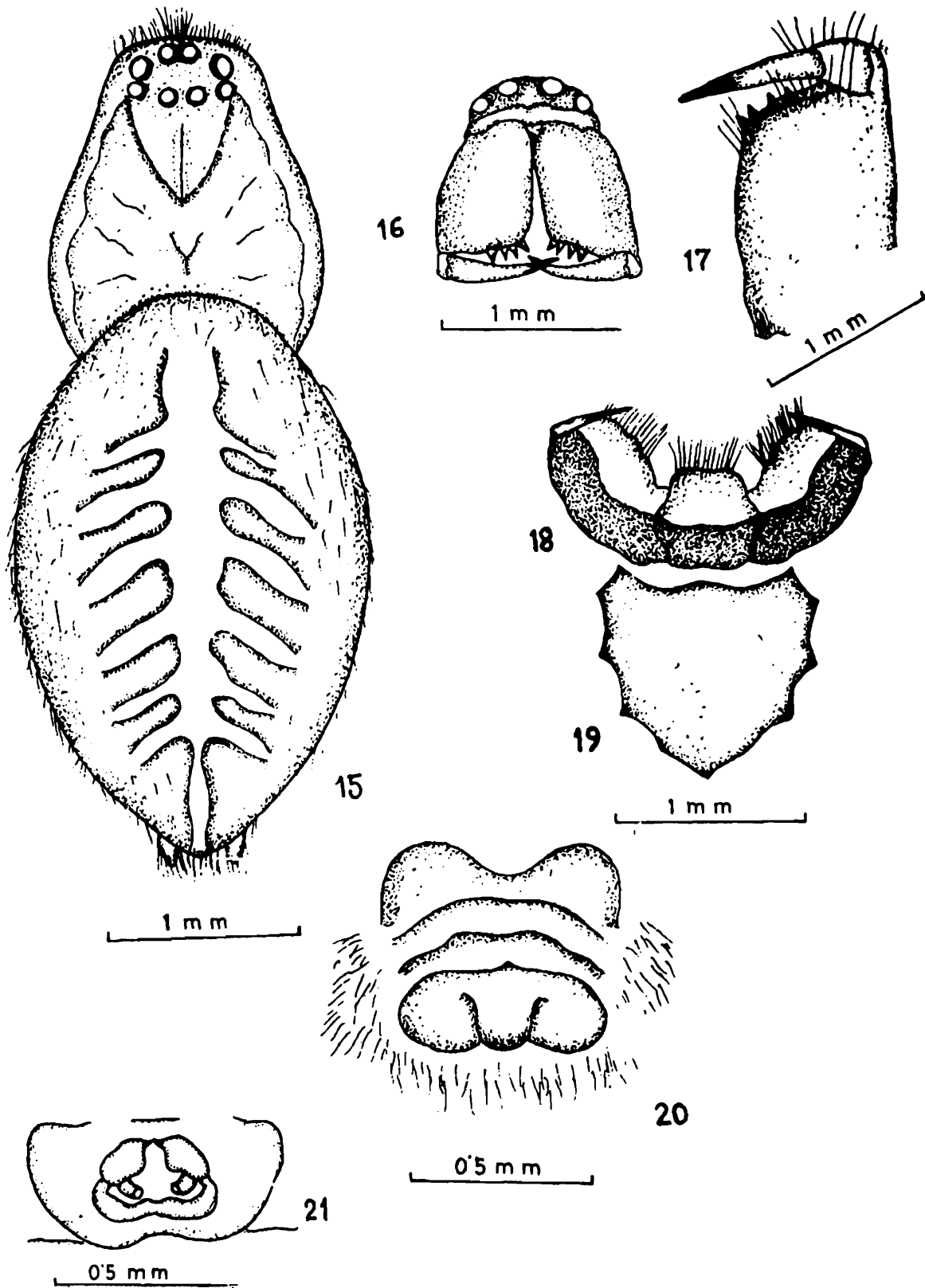
Types are at present in the Department of Zoology, Government P. C. College, Bagerhat and will be deposited to the Museum of the Department of Zoology, University of Dhaka, Bangladesh, in due course of time.



Figs. 1-7 : *Castianeira zetes* Simon Fig. 1 : Whole body (Dorsal view); Fig. 2 : Chelicera; Fig. 3 : Maxillae and Labium; Fig. 4 : Sternum; Fig. 5 : Epigynum; Fig. 6 : Internal genitalia; Fig. 7 : Male palp (retrolateral view)



Figs. 8-14 : *Spingius barkudaensis* Gravelly Fig. 8 : Whole body (Dorsal view); Fig. 9 : Chelicera; Fig. 10 : Maxillae and Labium; Fig. 11 : Sternum; Fig. 12 : Epigynum; Fig. 13 : Internal genitalia; Fig. 14 : Male palp (lateral view)



Figs. 15-21 : *Trachelas devi* n. sp. - Fig. 15 : Whole body (Dorsal view); Fig. 16 : Clypeus showing chelicerae and frontal eyes; Fig. 17 : Chelicera; Fig. 18 : Maxillae and Labium; Fig. 19 : Sternum; Fig. 20 : Epigynum; Fig. 21 : Internal genitalia

Etymology : The species is named after the famous Philosopher Dr. G.C. Dev of Dhaka University, Bangladesh.

Type-locality : BANGLADESH : Dhaka, date 24.ii.1992, Coll. Biswas.

Diagnosis : The Indian *Trachelas* species (Majumder & Tikader, 1991) do not seem to be related to the present species *T. devi* n. sp. because the latter is with abdomen broad at anterior 1/3rd region, without any sigilla, cephalic region not constricted, contiguous anteromedian and lateral eyes and typical epigynum. These sufficiently justify the erection of the new species. Abdominal shape of the present species even though may be related to the *T. taiwanicus* (Hayashi & Yoshida, 1993) but stands distinct because of the characters indicated above. The species even show too many structural differences, though it has a similarity in the general appearance with that of *T. japonicus* (Shinkai & Takano, 1984).

Therefore, the species is described as new to science.

SUMMARY

The sac spiders of the genera *Castianeira* Keyserling, *Sphingius* Thorell and *Trachelas* Koch, Bangladesh, is represented by each of single species *C. zetes* Simon, *S. barkudaensis* Gravely and *T. devi* n. sp.

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