

NEW DESCRIPTIONS

A NEW SPECIES OF WOLF SPIDER (ARANEAE: LYCOSIDAE) FROM CROP FIELDS OF THE SUNDARBAN ESTUARY, WEST BENGAL, INDIA¹S.C. MAJUMDER²¹Accepted July, 2001²Sundarban Field Research Station, Zoological Survey of India, Canning Town, South 24 Parganas, Pin 743 329, West Bengal, India.

One new species of wolf spider *Arctosa sandeshkhaliensis* sp. nov. from the crop fields of Sundarban estuary has been described and illustrated.

Key words: Spiders, Lycosidae, *Arctosa sandeshkhaliensis* sp. nov., Sundarban

INTRODUCTION

The unique and fascinating Sundarban is the largest natural mangrove block in the world. Various workers, including Tikader and Malhotra (1980), Majumder and Tikader (1991), Biswas and Biswas (1992) have studied the taxonomy of spiders from Sundarban. Tikader and Malhotra (1980) described one new species and reported four species of wolf spider from the Sundarban estuarine region. Majumder and Tikader (1991) described one and reported 3 species of sac spiders from this area. Biswas and Biswas (1992) reported only one species of wolf spider from Sundarban area. In the present study, a new species *Arctosa sandeshkhaliensis* has been identified. The types of the new species are deposited in the National Collection of Zoological Survey of India, Kolkata.

MATERIAL AND METHODS

Spiders were collected from different crop fields of the Sundarban estuarine ecosystem, namely Hasnabad, Hengalgunj, Sandeshkhali and Gosaba. The spiders were collected by hand and placed in vials which were brought to the laboratory. The specimens were transferred to 70% alcohol in a petri dish for 6-12 hours for relaxation of body parts. All specimens were preserved in 70% alcohol (single specimen in each vial) for further studies as in Tikader (1987).

Arctosa sandeshkhaliensis sp. nov.
(Figs 1-6)

General Description: Holotype: FEMALE: Cephalothorax and legs yellowish-brown, abdomen blackish (in preserved specimens).

Measurements (in mm): Total length 6.30, carapace length 3.50, width 3.20, abdominal length 2.80, width 2.50, legs as in Table 1.

Cephalothorax: Carapace slightly longer than wide, narrowed anteriorly and wider at the middle; cephalic region slightly raised. Anterior margin of the cephalothorax straight with the anterolateral corner raised and conical with a few long yellowish-brown hairs. Thoracic region provided with a deeply distinct longitudinal fovea. Eyes pearly white encircled by black patches. Anterior row of eyes straight, smaller in structure. The eyes of the second and third rows similar in structure and larger than those of the first row (Fig. 1). Ocular quadrate longer than wide; wider posteriorly and narrowed anteriorly. Sternum oval, pointed behind. Chelicerae longer than wide, inner margin with 4 teeth, outer margin with 2 teeth (Fig. 2). Maxillae longer than wide, reddish-brown, anterior end wider and scopulated, posterior end narrowed, labium wider than long (Fig. 3). Legs long, not so strong, covered with hair and spines. Tibia with ventral spines; tarsal scopulae distinct. Leg formula 4 2 1 3.

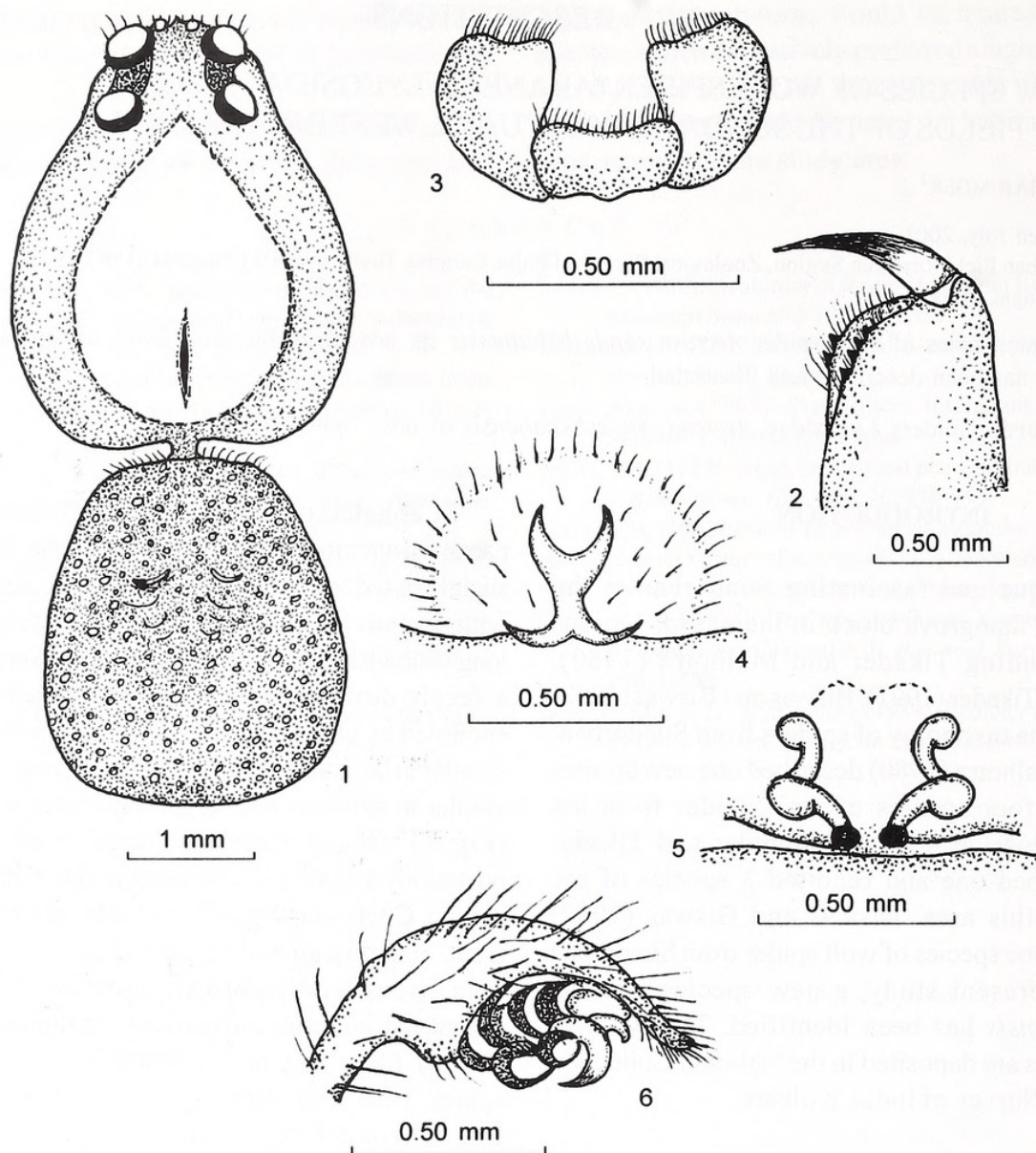
Abdomen: Longer than wide, oval, dorsum covered with fine pubescence, blunt posteriorly. Venter yellow with brown longitudinal band. Epigyne bifurcated into anterior and posterior plates (Fig. 4). Internal genitalia provided with coiled copulatory sac and copulatory openings divided into two parts (Fig. 5).

Allotype: MALE: Similar to female except that the male palp is without retrolateral apophysis, cymbium long and semilunar in shape with narrower anteriorly without basal spur, tegulum rounded and convex with flower-like regular apophysis, embolus narrowed and elongated, abdomen with whitish patches on dorsum (Fig. 6).

Measurements (in mm): Total length 5.60, Carapace length 3.40, width 2.20, abdomen length 3.15, width 2.10, legs as in Table 2, palp as in Table 3.

Material examined: Holotype: ♀, Allotype: 1 ♂, in 70% Alcohol in separate vials, genitalia in microvial with holotype. Coll. S.C. Majumder, 16 & 17.i.1994, N.C., ZSI (H.Q.), Regn. No. 5472/18 & 5473/18.

Type Locality: Durgamandap, Sandeshkhali, North 24 Parganas, West Bengal.



Figs 1-6: *Arctosa sandeshkhaliensis* sp. nov., 1. Dorsal view of female, legs omitted, 2. Chelicera showing arrangement of teeth, 3. Maxillae and labium, ventral aspect, 4. Epigyne, ventral aspect, 5. Internal genitalia, dorsal aspect, 6. Male palp, lateral aspect

Table 1: Measurements (in mm) of leg segments of *Arctosa sandeshkhaliensis* sp. nov. (Female)

Leg	Femur	Patella & Tibia	Metatarsus	Tarsus	Total
I	2.10/2.10	2.80/2.80	2.00/2.00	1.10/1.10	8.00
II	2.80/2.80	3.10/3.10	1.20/1.20	1.15/1.15	8.25
III	1.80/1.80	2.50/2.50	1.90/1.90	1.05/1.05	7.25
IV	3.10/3.10	3.50/3.50	2.30/2.30	1.30/1.30	10.20

Distribution: Sundarban areas (Sandeshkhali, North 24 Parganas), West Bengal, India.

Discussion: This species resembles *Arctosa khudiensis* Tikader & Malhotra in general appearance, but differs from it in the following particulars.

1. Cephalothorax not parallel sided, wider at the middle, abdomen blunt posteriorly, whereas in

A. khudiensis Tikader and Malhotra cephalothorax more or less parallel sided and not wider at the middle, abdomen not blunt posteriorly.

2. The eyes of the second row similar in structure with those of the third row, whereas in *A. khudiensis* eyes of the second row larger than those of the third row.

3. Epigyne structurally different.

Table 2: Measurements (in mm) of leg segments of *Arctosa sandeshkhaliensis* sp. nov. (Male)

Leg	Femur	Patella & Tibia	Metatarsus	Tarsus	Total
I	2.20/2.20	2.40/2.40	2.05/2.05	1.05/1.05	7.70
II	2.40/2.40	2.60/2.60	2.10/2.10	1.05/1.05	8.15
III	2.10/2.10	2.30/2.30	2.05/2.05	1.05/1.05	7.5
IV	2.60/2.60	2.90/2.90	2.30/2.30	1.10/1.10	8.90

Table 3: Measurements (in mm) of male palp of *Arctosa sandeshkhaliensis* sp. nov.

Femur	Patella	Cymbium & tegulum	Embolus	Total
1.70/1.70	1.20/1.20	2.50/2.50	1.50/1.50	6.90/6.90

Etymology: The species is named after the type locality Sandeshkhali.

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