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## First report of cobweb spider *Phycosoma altum* (Keyserling, 1886) from Asia

**Shubhi Malik, Sanjay Keshari Das and Manju Siliwal**

### Abstract

The cobweb spider *Phycosoma altum* was previously reported from Mexico to Brazil and Hawaii. In this paper, we report male of *P. altum* from India and with this report the distribution range of this species extends from America to Asia. Taxonomic description of the male is provided here along with the natural history information.

**Keywords:** First report, taxonomy, *Phycosoma altum*, Asia

### 1. Introduction

The cobweb spider family Theridiidae Sundevall, 1833 is represented by 121 genera and 2425 species in the world, of which, 27 genera with 77 species have been reported from India<sup>[1]</sup>. The genus *Phycosoma* (O. Pickard-Cambridge, 1879) includes 26 species from all over the world and of which only one species, *P. martinae* (Roberts, 1983) is reported from India<sup>[1, 2]</sup>. Here, we report *Phycosoma altum* (Keyserling, 1886) for the first time from India based on male description. This species was previously reported from Mexico to Brazil and Hawaii<sup>[3-5]</sup>. Hence, the present report extends the distribution range of this species from America to Asia<sup>[1, 6]</sup>.

### 2. Materials and Methods

The specimen was collected by hand picking method and preserved in 70% ethyl alcohol with little glycerine. Measurements of body parts were taken with a Mitutoyo™ Vernier Caliper. Leg measurements were taken dorsally for the left side. All measurements are in millimetres. Genitalia were dissected and cleared in concentrated lactic acid in 100 °C water bath for 15-20 minutes. All illustrations were prepared with the help of a drawing attachment attached to an Olympus SZX10 stereomicroscope. The specimen was deposited at Indraprastha University Museum (IPUM), New Delhi, India.

### 3. Results and Discussion

#### Taxonomy

#### *Phycosoma altum* (Keyserling, 1886)

(Figure 1; Table 1)

*Dipoena alta* Keyserling, 1886: 45.

*Euryopsis lutea* Keyserling, 1891: 227.

*Dipoena pallida* Chickering, 1943: 364.

*Dipoena furtiva* Chickering in Roewer, 1951: 455.

**Material Examined:** 1 ♂, India: Delhi, Asola-Bhatti Wildlife Sanctuary (28°28'34"N and 77°13'48"E), 24.08.2014, Coll. Somanath. Sahoo (IPU-Arach-105).

**Description:** Total length 1mm; Carapace length 0.50; Carapace width 0.45; Abdomen length 0.50; Abdomen Width 0.35.

Carapace: Oval, light brown, cephalic region high, with deep 'U' shaped dark radiating groove on dorsum (Figure 1 A). Carapace when viewed laterally, clypeus almost straight and parallel to posterior slope. Eye region slightly projecting above clypeus. Anterior median eyes larger than others; all eyes with black rim. Sternum heart-shaped, pale darker towards margins. Labium slightly wider than long; maxillae longer than wide and apically scopulated.

Legs: Light yellow in colour, Leg formula 4123 (Table 1).

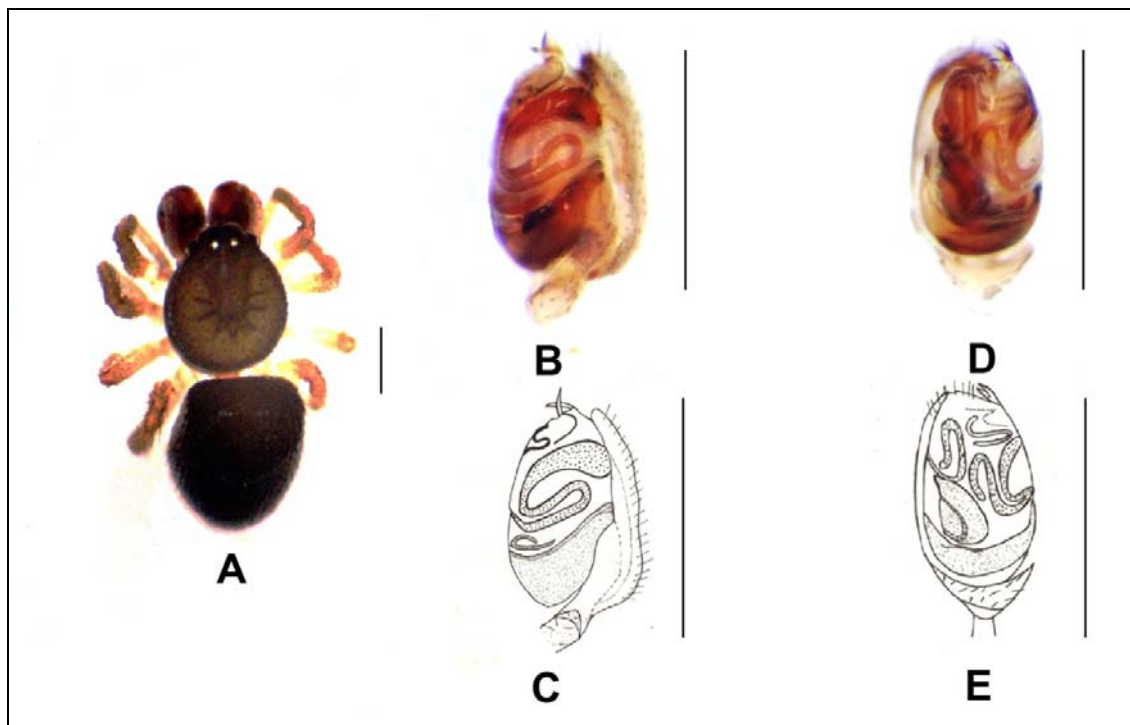
**Table 1:** Morphometry of legs of male *P. altum* (IPU Arach-105)

	Leg I	Leg II	Leg III	Leg IV
Femur	0.65	0.50	0.45	0.75
Patella	0.35	0.15	0.05	0.25
Tibia	0.45	0.50	0.35	0.50
Metatarsus	0.35	0.25	0.35	0.50
Tarsus	0.25	0.25	0.15	0.25
Total	2.05	1.65	1.35	2.25

Abdomen: Oval, longer than wide, dorsally dark brown, with three pairs of sigilla and flat scutum on anterior half clothed with few fine hairs (Figure 1 A). Ventrally lighter and with dusty white scutum that extends between pedicel and epigastric furrow covering book lungs on either side.

Spinnerets: Three pairs, posterior median spinnerets smallest and hidden by anterior and posterior lateral spinnerets.

Palp: Conductor small and small embolus at the apex. Tegular membrane twisted very closely above subtegulum (Figures 1 B-E).



**Fig 1:** A. Carapace and abdomen dorsal view (scale= 0.2 mm); B-C. Palp retrolateral view (scale= 0.05 mm); D-E. Palp ventral view (scale= 0.05 mm).

**Natural History:** The specimen was collected from xerophytic bushes of a semiarid forest habitat that lies at the foot hills of Aravalli hills.

**Distribution:** India (present record), Mexico to Brazil, Hawaii.

#### 4. Acknowledgements

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