A NEW Plexippus SPIDER FROM THE WESTERN GHATS, KUMBAKARAI FALLS, THENI DISTRICT, TAMIL NADU, SOUTH INDIA (ARACHNIDA: ARANEAE: SALTICIDAE)

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ABSTRACT

Plexippus gajbei sp. nov. Zebra jumping spider of the family Salticidae is described from Southern parts of Western Ghats, Kumbakarai Falls, Theni District, Tamil Nadu, South India. While studying the spiders from Kumbakarai Falls the authors came across a new species which is detailed morphological characteristics with drawing are given which differentiate it from other related species.

Keywords: New species, Plexippus, Salticidae, Taxonomy, Western Ghats, Tamil Nadu, India

INTRODUCTION

The family Salticidae Blackwall, 1841 which numerically dominate both in genera and species globally, are represented by 5,570 species under 591 genera (Platnick, 2013). Salticids are the largest and most diverse family in India with nearly 207 species under 73 genera (Keswani et al., 2012). Even though their number is large, they are one of the least studied families among Indian spiders (Suni, 2013).

The genus Plexippus C.L Koch, 1846 is commonly known as Zebra jumping spider. They are mostly cosmopolitan in distribution. They are renowned for their often fantastic colouration and interesting range of behaviours (Jackson and Macnab, 1989). Ping and Li, (2003) recorded five Plexippus species, including one new species from China. Plexippus genus is represented by four species in India so far (Sebestian and Peter, 2009). The genus Plexippus has been studied by few researchers from India (Tikader, 1967; 1973), (Barrion and Litsinger, 1995), (Majumder, 2004), (Bayani and Trivedi, 2012).

MATERIALS AND METHODS

Spiders were collected from the Kumbakarai Falls which is situated 9 km away from Periyakulam, Theni District, Tamil Nadu, South India (10°10¢48²N, 77°31¢50²E). Kumbakarai Falls is a sub-tropical forest situated at the foot-hills of December, 2013, Indian Journal of Arachnology, 2(2).................................42
A new Plexippus spider from the Western Ghats...........Karthikeyani. and Kannan

Kodaikanal in the Southern parts of Western Ghats of Tamil Nadu. Spiders were collected by adopting the standard sampling procedures of Sutherland (1996). The collected spiders were preserved in Oudemann’s fluid and identified using the key given by Pocock (1900), Tikader (1987; 1967; 1973), Biswas and Raychauhdhuri (1998) Prószyn’ski (2012). The taxonomic diagrams of whole spider body were made using a Stereo zoom microscope and illustrations were prepared with camera lucida. All measurements are in millimeter scale. The type specimen will be deposited in due course at Zoological Survey of India, Chennai, Tamil Nadu.

RESULTS AND DISCUSSION

Plexippus gajbei sp. nov.

Type Specimen: Holotype female on the bark of Tamarindus indica (Tamarind Tree).

Type-locality: India: Tamil Nadu, Western Ghats, Kumbakarai Falls, Coll. R. Karthikeyani, 05.01.2010.

Etymology: The specific name is a patronym in honour of Arachnologist, Dr. U. A. Gajbe.

Diagnosis

The main taxonomical identification of a spider is based on the cephalothorax, abdomen, epigyne and internal genitalia that vary from species to species (Gajbe, 2008). The Zebra jumping spider Plexippus gajbei sp. nov. resembles Plexippus paykulli (Audouin) but can be distinguished from characteristic as (i) Cephalothorax is laterally provided with lateral white patch, but absent in P. paykulli. (ii) The dorsum of abdomen is laterally provided with white patch, but in P. paykulli without white patch. (iii) Epigyne and internal genitalia are also structurally different.

Description

General: The cephalothorax and abdomen are greenish-black in colour. It has the following measurements: Total length 6 mm. Carapace 2.5 mm. long and 2 mm. wide; abdomen 3.5 mm. long and 2.6 mm. wide.

Cephalothorax: Longer than wide, rectangular in shape weakly narrowed posteriorly wider anteriorly, laterally provided with lateral white patch (Fig. 1a). Eyes are pearly white, the anterior rows of eyes are recurved, medians larger than the lateral and separated to each other. Second pair of eyes are very minute, third pair slightly larger than the anterior lateral but smaller than the anterior median. Chelicerae are strong, the inner and outer margin provided with one large tooth each. Maxillae are longer than wide, inner side whitish and scopulated, wider anteriorly but narrowed posteriorly. Labium is wider than long and scopulated anteriorly. Legs are strong, clothed with hairs and spines. Femora I, II, III and IV are brown in colour.

December, 2013, Indian Journal of Arachnology, 2(2).................................43
A new *Plexippus* spider from the Western Ghats...........Karthikeyani. and Kannan

1– Dorsal view
2– Ventral view.
Images 1-2. *Plexippus gajbei* sp. nov. female.

Fig. 1: (a-c) *Plexippus gajbei* sp. nov. (a) Dorsal view of female, legs omitted (b) Epigyne (c) Internal genitalia

A new *Plexippus* spider from the Western Ghats.............Karthikeyani. and Kannan

Abdomen: Longer than wide, nearly oval, narrowing posteriorly. Dorsum of abdomen is laterally provided with white patch (Fig. 1a). Ventral side is laterally provided with pale brown patch and mid ventrally with dark brown band. Spinnerets are situated at the posterior end of the abdomen. Epigyne is situated on the ventral side of the abdomen above the epigastric furrow (Fig. 1b). Internal genitaila as in (Fig. 1c).

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December, 2013, Indian Journal of Arachnology, 2(2).................................45
A new *Plexippus* spider from the Western Ghats...........Karthikeyani. and Kannan


