

ON THE JUMPING SPIDER *Portia fimbriata* (Doleschall 1859) (ARANEAE: SALTICIDAE) COLLECTED FROM KERALA, INDIA

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Abstract: Salticid genus *Portia* consists of jumping spiders having cryptic colouration. The species *P. fimbriata* known for its interesting behavioural features was collected from different parts of Kerala, India. This paper provides a detailed description of it along with illustrations and brief note on its natural history.

Keywords: *Portia fimbriata*, salticidae, jumping spider, Kerala, India.

INTRODUCTION

Though one of the members of the genus *Portia* was described as *Salticus fimbriata* by Doleschall in 1859, the genus *Portia* was constituted by Karsch in 1878 by describing *P. schultzei* as the type. Later this genus separated as two genera *Portia* and *Linus* by Simon (1901) and included them in a totally different subgroup. Simon later synonymised the genus *Brettus* Thorell, 1895 with *Portia*. Wanless (1978) critically revised the genus *Portia* and well-defined it. He observed the genus *Brettus* as valid and reestablished it and many of the species of *Brettus* erroneously included in *Portia* were separated. Wanless divided the genus *Portia* into schultzei-group and kenti-group based on difference in male palpal structure. Wanless (1984) established the salticid sub-family Spartaeinae including many genera which are supposed to have some primitive characteristics like the presence of large posterior median eyes (PME) compare to other salticids. According to Wanless the genus *Portia* is a member of the sub-family Spartaeinae. Members of the genus *Portia* are mainly distributed in Ethiopian and Oriental regions.

The genus *Portia* includes small to medium sized spiders generally with cryptic colour pattern. Presence of irregular tufts of hairs on the dorsal surface of the abdomen is a strong diagnostic feature. Characteristic pattern of legs is another distinguishing feature. Legs are

with brush-like fringes of long stiff hairs along the ventral margin of femur, patella and tibia while metatarsus and tarsus are without hairs and appear extremely slender. Cephalothorax high; highest at the level of posterior lateral eyes (PLE); slopes both towards anterior and posterior sides. Ocular quadrangle conspicuous. Compare to other salticids the presence of relatively large posterior median eyes (PME); almost midway between anterior lateral eyes (ALE) and PLE or more close to ALE is another prominent diagnostic feature. Clypeus comparatively high. Female palp is with a terminal claw. Male palp complex in structure with prominent tibial apophysis. Cymbium often with a prolateral flange. Embolus moderately long and slender. Epigyne simple with a pair of large, prominent, round spermathecae.

P. fimbriata is a medium sized salticid with strong cryptic colouration. Cephalothorax high, sloping both towards front and back from the level of PLE. PME large and conspicuous. General body colouration dull brown or grayish-copper. Abdomen with irregular tufts of hairy setae in dull colour pattern. Legs long and slender. Patellae and tibiae with brush-like fringes of long, stiff and hairy setae. Metatarsi and tarsi extremely slender without setae. Basal segments of palps especially in female with long bristles.

Wanless (1978) mentions two reports, Gravely (1921) and Sherriffs (1931) on *Portia* from India in his paper on the revision of the genus *Portia* but did not confirm the presence of *P. fimbriata* in India. Though Sebastian et al (2009) reported it from India, detailed description and illustrations were not provided. Mathew et al (2009) included it in the updated checklist of Indian spiders. Collection of jumping spiders from different parts of Kerala, India yielded specimens of *P. fimbriata* and this paper provides the description along with illustrations.

Distribution of *P. fimbriata* - Australia, **India: Kerala**, New Guinea, Salomon Island, Sri Lanka, Yule Island.

Specimens examined: 2 ♂♂, 3 ♀♀, Kanjoor, 12 – VII – 2007, 2 ♂♂, 20 – IV – 2008, Kanjoor, Ernakulam District, Kerala and 1 ♂♂, 14 – V – 2008, Kadavanthra, Ernakulam District, Kerala. Collected by Samson Davis. Illustrations by Samson Davis. The specimens will be deposited in the collection of Zoological Survey of India, WGRC Kozhikode, Kerala, India.

***Portia fimbriata* - Male** (Description based on live specimen)

Measurements: (all in millimeter)

Total length – 7.45

Cephalothorax - maximum length – 3.24, maximum width – 2.46

Abdomen – maximum length – 4.21, maximum width – 2.36

Diameter of eyes – Anterior Median Eye (AME) – 0.60, Anterior Lateral Eye (ALE) – 0.24, Posterior Median Eye (PME) – 0.24, Posterior Lateral Eye (PLE) – 0.24

Mutual distance between eyes – AME: AME – 0.02, ALE: ALE – 1.86, PME: PME – 1.64, PLE: PLE – 1.82, AME: ALE – 0.05, ALE: PME – 0.07, PME: PLE – 0.07

Cephalothorax: longer than wide, conspicuously high with highest point at the level of PLE. Slopes both anteriorly and posteriorly. Anterior eye row consists of a pair of very large AME and a pair of ALE about half the size of AME as situated one on either side. Anterior eye row highly procurved. PME very prominent and as large as ALE; situated midway between ALE and PLE. Margin of eyes lined with dull orange setae. Ocular quadrangle well-marked, covered uniformly with setae.

Entire surface of the cephalothorax uniformly clothed with dull sand-coloured or grayish-orange setae. Clypeus wide, covered with dull setae in wavy pattern. Sternum narrow, covered with pale yellow setae. Maxillae and labium orange brown with apical scopulae. Chelicerae cylindrical covered with dull setae. Promargin with three teeth and retromargin with five. Fang narrow having slightly curved tip. As mentioned above legs are very characteristic. Patellae and tibiae with thick brush-like fringes of long stiff hairy setae along ventral side. Tibiae also bear lateral and dorsal fringes. Scanty hairs on femerae. Metatarsi and tarsi extremely narrow and without hairs. Moderate number of spines present on legs.

Palp hairy with complex features. Cymbium broad with both ends truncated. A broad flap-like cymbial flange present on the dorsal side at lower margin. Narrow, slightly curved prolateral, broad, blunt ventral apophyses on the tibia. Embolus long and narrow.

Abdomen: Pedicel not visible from above in live specimens. Abdomen roughly ovoid, dull sandy brown in general background colouration. Irregular tufts of dull light brown stiff hairs intermingled with dull white ones present on the dorsal side. Spinnerets small, hairy, dull brown in colour.

***Portia fimbriata* - Female** (Description based on live specimen)

Measurements: (all in millimeter)

Total length – 9.87

Cephalothorax - maximum length – 4.32, maximum width – 2.45

Abdomen – maximum length – 5.55, maximum width – 3.54

Diameter of eyes - Anterior Median Eye (AME) – 0.60, Anterior Lateral Eye (ALE) – 0.28, Posterior Median Eye (PME) – 0.24, Posterior Lateral Eye (PLE) – 0.24

Mutual distance between eyes – AME : AME – 0.02, ALE : ALE – 1.92, PME : PME – 1.72, PLE : PLE – 1.86, AME : ALE – 0.05, ALE: PME – 0.08, PME : PLE – 0.08

Female like male in colouration and appearance but little larger in size. Epigyne hairy, highly sclerotized with a pair of large spherical spermathecae having a median ridge.

Natural History: Cryptic colouration with tufts of intermingled grey and dull white hairs on the dorsum gives *P. fimbriata* the appearance of bits of dry twigs and helps in camouflage. Jackson (1982), Jackson and Blest (1982), Jackson and Hallas (1986) provide detailed descriptions on its interesting behavioural features. Habit of encroaching webs of other spiders is emphasized by them. In the present study *P. fimbriata* specimens were collected from the webs of a pisaurid spider and the araneid spider *Cyrtophora sp.* Bristow (1941) also reports the same behavioural pattern. Another specimen was observed within a rolled dry leaf hanging at the centre of the web of a theridiid spider.

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PLATE – I: *Portia fimbriata*

Male: a – dorsal view, b – lateral view, c – frontal view

d – sternum with maxillae & labium, e – chelicera

Male palp: f – dorsal view, g – ventral view, h & i – lateral view

Female: j - epigyne