

Rediscovery of the Critically Endangered Tarantula *Poecilotheria metallica* Pocock, 1899 from Seshachalam Biosphere Reserve, Eastern Ghats, Andhra Pradesh, India

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Abstract: The genus *Poecilotheria* is known to occur only in India and Sri Lanka. The genus is represented by 8 species in India and 7 in Sri Lanka. Since August 2011 onwards, we are carrying out a detailed biodiversity inventory of the Seshachalam Biosphere Reserve in Chittoor and Kadapa districts Andhra Pradesh. During one of our biodiversity surveys we sighted a dead specimen of Theraphosid spider in Kapilatheertham, forest complex (13°34'N; 79°21' E) of Seshachalam Biosphere Reserve on 29th January 2013 and we sighted a live same specimen in Mamandur north beat (SVNP Tirupati Range), Sri Venkateswara National Park, part of Seshachalam Biosphere Reserve on 17th August 2013. *Poecilotheria metallica* is ranked by the IUCN as Critically Endangered. Further research with reference to ecology, threats and conservation of biodiversity in the area is in progress. So far many rare species recorded in this area, the present record reveal that the area is very rich in biodiversity and there is an urgent need to adapt conservation policies.

Key words: Andhra Pradesh • Occurrence • *Poecilotheria metallica* • Seshachalam Hills

INTRODUCTION

The genus *Poecilotheria* Simon, 1885 belongs to the family Theraphosidae Thorell, 1869 and is made up of arboreal species, which are known to occur in India and Sri Lanka. The genus is represented by 8 species in India and 7 in Sri Lanka [1]. These theraphosid spiders are medium-sized to very large Mygalomorphae, differing from the Barychelidae in having the apical segment of the posterior spinners cylindrical and at least as long as the second segment and in the absence of the rostellum. Eyes always aggregated on the distinct tubercle. Most species are fossorial. But they never close the aperture of the burrow with the movable lid. Few species live under stones, in tree holes or in a shelter of any natural crevices [2].

Since August 2011 onwards, we are carrying out a detailed biodiversity inventory of the Seshachalam Biosphere Reserve in Chittoor and Kadapa districts of Andhra Pradesh. During one of our biodiversity surveys we sighted a dead specimen of Theraphosid spider in Kapilatheertham, forest complex (13°34'N; 79°21' E) of Seshachalam Biosphere Reserve on 29th January 2013 and another live same specimen of *Poecilotheria metallica* had seen in Mamandur north beat (SVNP Tirupati Range), Sri Venkateswara National Park, part of Seshachalam Biosphere Reserve on 17th August 2013 (13°76'N; 79°41' E). We identified the female specimen as *Poecilotheria metallica* Pocock, 1899. So far very little information is available or published about this species ecology, distribution and breeding biology. Earlier reports stated that this species

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was known only from southwestern India, near Gooty in Andhra Pradesh [3-5]. It is known only from its type locality [6].

Our specimen of *P. metallica* have colour of carapace and abdomen much as in the other species of the genus *Poecilotheria*, but dark bands on the carapace more widely separated mesially and the pale band on the abdomen much less distinct and traversed by a darker stripe. Upper side of legs and palpi tolerably are uniformly coloured and becoming darker towards the extremities, showing faint metallic luster. Tarsi not spotted above; protarsi with a thin brown stripe. Tibia has very indistinct lines of yellow spots. Lower side of palpi is entirely deep brown, with faint metallic blue luster. Lower side of anterior legs is blackish brown, with strong metallic blue luster and a large orange-yellow patch on the under and inner sides of the base of the tibia. Third and fourth legs uniformly coloured below with a similar but smaller tibial spot and much less metallic blue tint. Lower side of abdomen is uniformly dark brown. Carapace is shorter than patella and tibia of first leg, a little longer than those of second and fourth leg. Patella and tibia of fourth legs are little longer than of second legs [7].

Study Area: The collection site of *P. metallica* is located in Seshachalam hill ranges. These hill ranges are part of the Eastern Ghats lie between 13°38' E and 13°55'N latitudes and 79°07' and 79°24'E longitudes spread over Chittoor and Kadapah districts of Andhra Pradesh. The predominant vegetation type is tropical southern dry mixed deciduous forest [8]. The vegetation is a unique mix of the tropical southern area is having as many as 1750 species belonging to 178 families of vascular plants. The elevation ranges from 150 to 1,130 m, the terrain is undulating, with deep forest-covered valleys. The mean maximum temperature ranges from 16°C to 46°C and minimum from 9.7°C to 25°C depending upon the season. Average rainfall in this region is between 800 to 900 mm. It includes three protected areas, namely Sri Venkateswara Wildlife Sanctuary, Sri Venkateswara National Park and Seshachalam Biosphere Reserve. It is the richest floristic hot spot harboring many endemic and rare plants. The entire sanctuary is an uninhabited large chunk of dry deciduous Red Sanders bearing forest.

Observation: The specimen was collected from the habitat close to forest complex road, surrounding bamboo mixed forest. During the time of collection,



Images 1 and 2: Dorsal and Ventral aspect of *Poecilotheria metallica*

Table 1: Morphometry of *Poecilotheria metallica* from Seshachalam Biosphere Reserve

Particulars	Measurements (in mm)
Cephalothorax	
Length	15.0
Width	11.0
Sternum	
Length	18.0
Width	15.0
Leg I Length	55.0
Leg II Length	52.0
Leg III Length	42.0
Leg IV Length	43.0
Palp Length	31.0
Abdomen	
Length	17.0
Width	13.0
Total Body Length	46.0

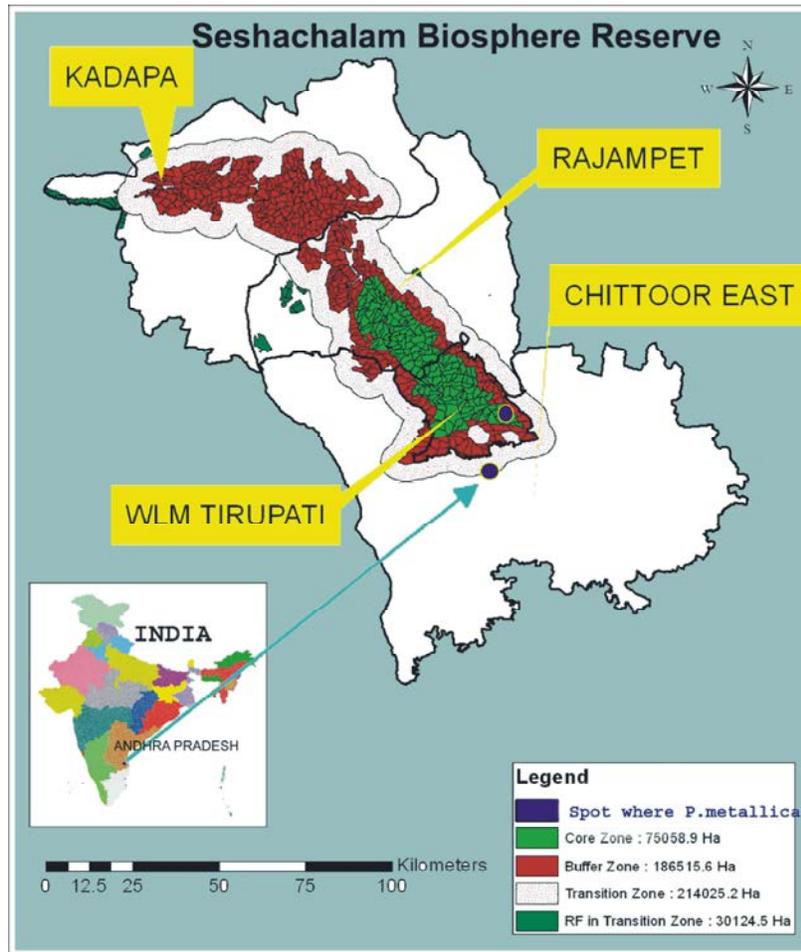


Fig. 1: Spot where *Poecilotheria metallica* = Forest complex Kapilatheertham, Seshachalam Biosphere Reserve Andhra Pradesh



Image 3: Live specimen of *Poecilotheria metallica*

it was slightly drizzling and area was little wet. Subsequently, the specimen was photographed

(Images 1 and 2) and detail morphometry of the species was taken with vernier caliper. All measurements are in mm (Table 1). The dead specimen, fixed and preserved in 70 % ethyl alcohol and deposited at the Biodiversity Laboratory, Wildlife Management circle, Tirupati (BLT 017). We also sighted same species a live specimen of *Poecilotheria metallica* in Mamandur north beat (SVNP Tirupati Range), Sri Venkateswara National Park, part of Seshachalam Biosphere Reserve on 17th August 2013 (Image 3). During the time of sighting; we took live specimen photograph after few minutes escaped inside the tree whole. The current record considerably extends dry mixed deciduous types. The known distribution range (Fig.1).

Conservation Status: *Poecilotheria metallica* is ranked by the IUCN as Critically Endangered [9].

CONCLUSION RECOMMENDATION

Further research with reference to ecology, threats and conservation of biodiversity in the area is in progress. So far many rare species recorded in this area, the present record reveal that the area is very rich in biodiversity and there is an urgent need to adapt conservation policies. Everyone should realize that the protection of habitat is an important aspect in the conservation of such species.

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