

Rec. zool. Surv. India, **106** (Part-1) : 49-54, 2006

**DESCRIPTION OF TWO NEW SPECIES OF SPIDERS OF THE
GENUS *POECILOTHERIA* SIMON (ARANEAE : THERAPHOSIDAE)
AND *TMARUS* SIMON (ARANEAE : THOMISIDAE) FROM
NALLAMALAI HILLS, EASTERN GHATS, ANDHRA PRADESH, INDIA**

K. THULSI RAO, D.B. BASTAWADE*, S.M. MAQSOOD JAVED AND I. SIVA RAMA KRISHNA

*Ecological Research & Monitoring Laboratories, Nallamalai Hill Ranges, Eastern Ghats,
Project Tiger Circle, Srisaïlam-518 102, Kurnool Dist., Andhra Pradesh*

1. *Poecilotheria nallamalaiensis* sp. nov.

(Plate-I, figs. 1-8)

General : Body large, fully covered with thick hairs and setae throughout, carapace longer than wide with truncate anterior margin, narrowed posteriorly, all eyes clubbed on median portion of anterior sub-marginal area. Body colour greyish brown to blackish except dorsal median longitudinal greyish band on abdomen, legs striped with whitish-grey to brownish transverse bands. Chelicerae and ventral portion of body completely black.

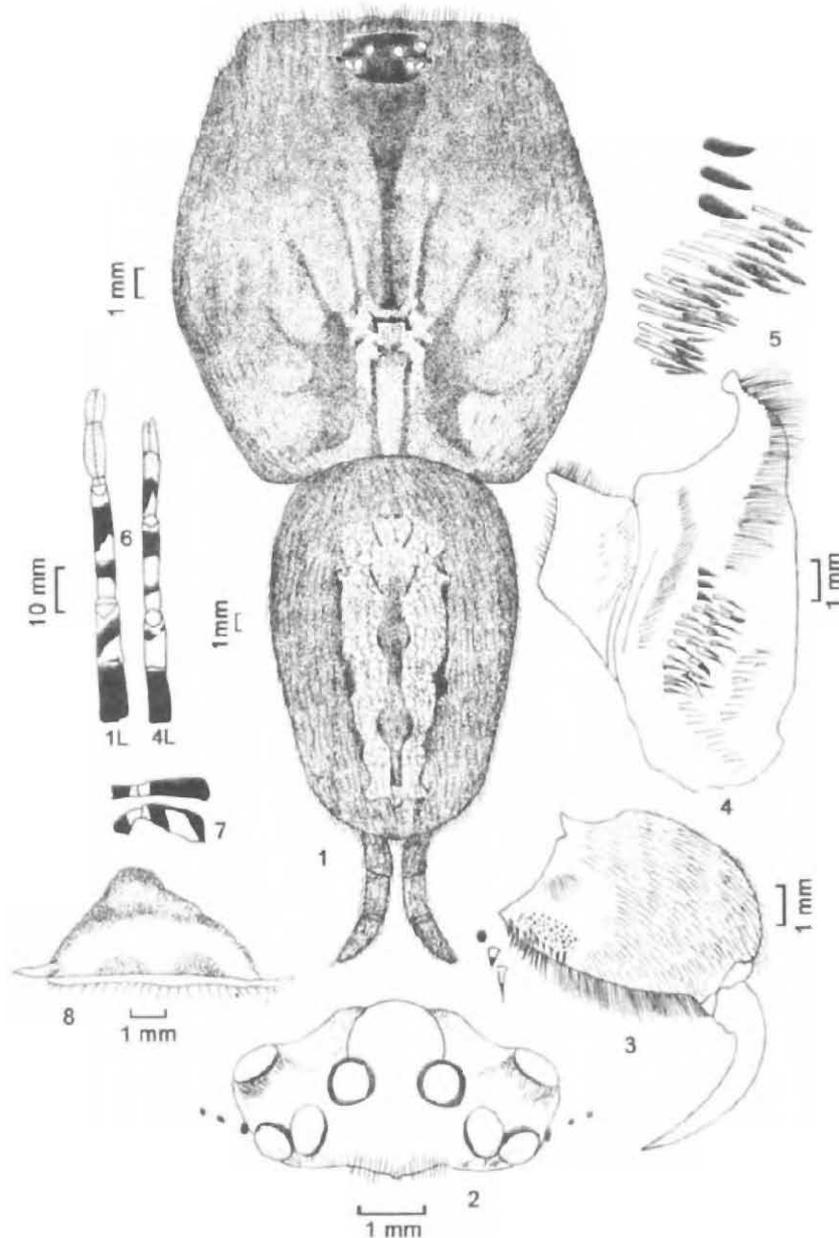
Measurements (in mm) : Total length 38.50. Carapace 21.50 long and 18.25 wide; abdomen 17.00 long and 10.75 wide.

Cephalothorax : Slightly longer than wide, widest in middle portion, narrowing anteriorly as well as posteriorly but more narrowed on posterior portion, anterior margin truncated and fringed with longer and shorter setae, eyes clubbed on sub-median portion of anterior margin, ocular tubercle wider than long, slightly raised, smooth, and with few erect setae on posterior portion, anterior row of eyes procurved and medians larger and directed upwards while laterals directed anterio-lateral wards; posterior row slightly recurved, medians shifted near to laterals, medians directed upwards while laterals to postrio-lateral directions (Fig. 2); ocular tubercle continued posteriorly into a median smooth and obsolete stripe and ending into a median transverse fovea; median

E-mail : ermlabs_srisaïlam@yahoo.co.in

*Zoological Survey of India, Western Regional Station, Pune-411 044, Maharashtra

PLATE I



Figs. 1-8 : *Poecilotheria nallamalaiensis* sp. nov. 1. Female dorsal view (legs omitted). 2. Median ocular area, dorsal view. 3. Chelicera, inner view showing arrangement of teeth. 4. Prolateral face of the maxillae (Coxa of pedipalp) showing arrangements of stridulating organ. 5. Stridulating organ, close view. 6. First and fourth leg, ventral view. 7. Femur, lateral and dorsal view. 8. Internal genitalia, dorsal view.

portion slightly raised and sloping down to lateral margins with few moderate radial furrows. Labium small, almost as long as wide, rounded anteriorly and thickly scopulate; maxillae (coxae of palps) smooth ventrally, profusely scopulate on prolateral margin, prolateral face with irregularly placed bacilliform as well as pointed setae and also with 3 distally placed black, blunt peg like tubercles (Fig. 4 & 5) (placed closer to each other than in any known species of *Poecilotheria*). Cephalothoracic sternum longer than wide, narrowed posteriorly and with a pair of elongated brownish sigillae on posterior portion. Chelicerae totally black, profusely hairy and hairs longer and tougher on dorsal portion, outer face clear, smooth on 1/3 proximal lower portion except a bunch of delicate and elongated whitish setae on upper portion (Fig. 3), stridulating organ situated at lower basal portion with few (5-6) short, stout pointed tubercles and group of granules forming rough portion unlike in any other *Poecilotheria* species. Palpal coloration : Trochanter whitish on dorsal portion while black on ventral, femur whitish on dorsal and outer portions with elongated smooth brown hairless streak mark, but ventral portion darker; patellae whitish with a black patch on ventral anterior portion; tibiae whitish dorsally but darker ventrally; tarsi black with thick Peacock greenish blue pad ventrally. Legs I-IV : I & IV coloration as on {Figs. 6 (1L & 4L) & 7} II & III almost similar to I in coloration, but short, metatarsi and tarsi fully scopulate, poorly divided in middle with sparsely placed longer setae, scopulae with shining Peacock-greenish-blue color to source of light, legs IV scopulate 2/3 distally, medially divided; tarsi fully scopulate weakly divided medially with longer setae placed sparsely; tarsi I-IV provided mid dorsally with longer brownish setae directed outwards and distally.

Abdomen : Longer than wide with a typical light greyish to black foliage on mid-dorsal portion but without transverse darker lines (Fig.1), with longer brownish setae on lateral portion, totally black on ventral portion. Spermathecae single undivided roughly dome shaped, unlike in other *Poecilotheria* species, 1/3 anterior portion thickened and with pair of half spherical structures at base (Fig. 8).

Type-Specimen : *Holotype* : 1E in spirit, genitalia dissected and kept in separate vial, Coll. K. Thulsi Rao & S.M. Maqsood Javed, 26.7.2003.

Type-Locality : Nallamalai Hills, Eastern Ghats, Nagarjunasagar Srisailem Tiger Reserve, Prakasam Dist., Andhra Pradesh, INDIA.

Discussion : *Poecilotheria nallamalaiensis* sp. nov. shows close resemblance to *Poecilotheria formosa*, *P. fasciata* and *P. miranda* but differs from these as :

1. It resembles with *P. formosa* in color pattern on Legs I & IV but it differs in having 3 black, blunt tubercles on prolateral face of maxillae instead of 1 and also the stridulating organ on outer face of chelicerae with few short pointed tubercles and remaining with granular beaded structure unlike in *formosa*.

2. It resembles with *P. miranda* in having 3 black blunt tubercles on prolateral face of maxillae but differs in not having same color pattern on Legs I & IV and also a different shape of spermathecae.
3. It resembles with *P. fasciata* in having undivided spermathecae but it differs in having different type of stridulating organ and different number and placement of peg like bacilliform setae.

Poecilotheria nallamalaiensis sp. nov. in general differs in having different pattern of abdominal color and Peacock-greenish-blue color tarsal scopulae on legs I & IV and posterior median eyes larger than posterior laterals.

All these characters show distinction from all known *Poecilotheria* species known from India.

Etymology : The new species has been named after the type locality noun Nallamalai adding *ensis* as suffixe i.e., *Nallamalaiensis*.

2. *Tmarus srisailamensis* sp. nov.

(Plate-II, figs. 1-5)

General : Female, Cephalothorax brownish black with sub lateral black band, legs yellowish-black, abdomen greyish with few black stripes.

Measurements (in mm) : Total length 8.5, Cephalothorax 3.5 long, 2 wide, Abdomen 5 long, 3 wide, 2 high.

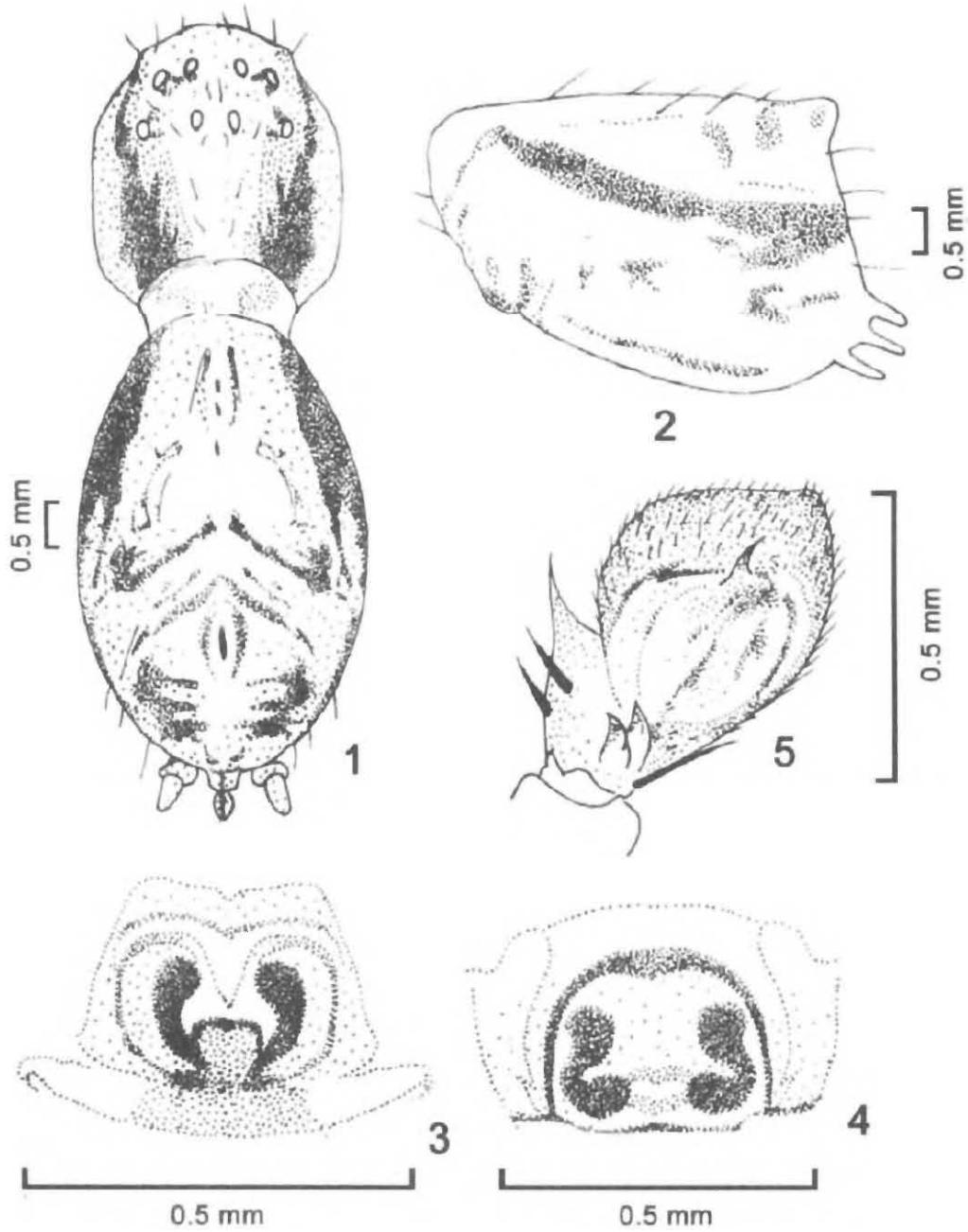
Cephalothorax : Longer than wide, clypeus narrowed and slightly high and margin armed with 7 spines, median portion upward, directed, others forwardly, Cephalic region moderately raised, both rows recurved, lateral eyes larger and situated on stalk, ocular quadrangle longer than wide, anterior medians smaller than posterior, median ocular area, wider anteriorly than behind (Fig. 1), legs formula 2143 tibiae I and II armed with 4 and 3 pairs of ventral spines.

Abdomen : High, pointed behind (Fig. 2), almost pentagonal viewed dorsally, broadest behind the middle, not much narrowed posteriorly; armed with backwardly directed spines; anterior lateral black patch prominent, two pairs of lateral transverse blackish bands faint. Epigyne (Fig. 3) different than from known Indian species as in text (fig. 4).

Male : Much smaller than female total length 5 mm, Cephalothorax 2 mm long, abdomen 3 mm long, male palp with a pair of inner apophysis and strong apophysis, cymbium rounded with a spine at anterior portion (Fig. 5).

Type Specimen : *Holotype* : 1E, *Allo-paratype* : 1Γ in sprit, female genitalia has been dissected and kept in separate vial., *Paratypes* 12EE, 18IT. All specimens have been collected from nest of dauber wasp.

PLATE II



Figs. 1-5 : *Tmarus srisailamensis* sp. nov. 1. Female dorsal view (legs omitted). 2. Abdomen, lateral view. 3. Epigyne, dorsal view. 4. Internal genitalia, dorsal view. 5. Dorso-lateral view of palpal organ of male.

Type locality : Sundipenta and Srisailam, Nagarjunasagar Srisailam Tiger Reserve, Kurnool Dist., Andhra Pradesh, India.

Discussion : Only five species of *Tmarus* Simon known from India. *Tmarus srisailamensis* sp. nov. resembles with *Tmarus kotigeharus* Tikader but it differs from it as :

1. In having the less raised posterior portion of abdomen and raised portion ends into a blunt tubercular form instead of plain hump.
2. Lateral portion of abdomen with a continuous black stripe which is almost faint and broken in the case of *Tmarus kotigeharus*.
3. Genitalia provided with a pair of dark “comma” marks joining on posterior portion where as it is an inverted “E” shape in *Tmarus kotigeharus*.

Etymology : The specific name of species has been derived from the type locality Srisailam adding ensis as suffixed i.e., *Srisailamensis*.

ACKNOWLEDGMENTS

The authors are very much thankful to Sri S.K. Das IFS, Prl. Chief Conservator of Forests (Admt.), Sri, K.S. Rao, IFS, Prl. Chief Conservator of Forests (WL) & Chief Wildlife Warden, Sri Hitesh Malhotra, IFS, Addl. Prl. Chief Conservator of Forests (WL), Sri A.V. Joseph IFS, Chief Conservator of Forests (WL), Andhra Pradesh and K.N. Benarji, IFS, Conservator of Forests & Field Director, Project Tiger for constant encouragement and sustained support. We are also grateful to Dr. Rajesh Gopal, IFS, Inspector General of Forests and Director Project Tiger and the MoEF, New Delhi, for their consistent funding support and encouragement. We gratefully acknowledge our thanks to Dr. J.R.B. Alfred, Director, ZSI, Kolkata and Dr. Anil S. Mahabal, Scientist-E and Officer-in-Charge, Z.S.I, WRS, Pune for extending facilities. We like to acknowledge our thanks to V. Madhusudhan Reddy, Computer operator, E.R.M. Labs, Project Tiger, Srisailam, A.P.

REFERENCES

- Pocock, R.I. 1900. *Fauna of British India, Arachnida* : 1-279.
- Smith, A. and Kirk, P. 2001. *A Field Guide on the Theraphosid Spiders of India & Sri Lanka, particularly the genus Poecilotheria* (unpublished data, presented for *Poecilotheria* workshops).
- Tikader, B.K. 1982. *Fauna of India, Spiders (Araneae : Thomisidae and Lycosidae)* 2(1 & 2) : 1-536.