

First record of the genus *Bassaniodes* Pocock, 1903 (Araneae, Thomisidae) from India

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TRIPATHI, R., JANGID, A. K., BHAGIRATHAN, U. & SUDHIKUMAR A. V.: *First record of the genus Bassaniodes Pocock, 1903 (Araneae, Thomisidae) from India.*

Abstract: The thomisid genus *Bassaniodes* Pocock, 1903 is recorded for the first time from India. The species *Bassaniodes tristrami* (O. Pickard-Cambridge, 1872) is redescribed based on specimens collected from the Thar desert, India and information on the species' natural history is presented.

Keywords: crab spider, Desert National Park, distribution, Rajasthan

Introduction

The genus *Bassaniodes* Pocock, 1903 was first described from Socotra island, Yemen with a new species, *Bassaniodes socotrensis* Pocock, 1903 under the family Thomisidae Sundevall, 1833. To date, the genus includes 40 nominal species globally (World Spider Catalog, 2023).

The species *Bassaniodes tristrami* (O. Pickard-Cambridge, 1872) was originally described under genus *Thomisus* Walckenaer, 1805. It was later transferred to *Xysticus* C. L. Koch, 1835 (SIMON 1889), *Psammitis* Menge, 1876 (WUNDERLICH 1987) and finally to *Bassaniodes* (Breitling, 2019). It is found to be distributed in Greece, Turkey, Caucasus, Russia to Central Asia and the Middle East (World Spider Catalog, 2023).

Here, we report the occurrence of the species *B. tristrami* in the Indian subcontinent, thereby recording the genus for the first time from the country.

Material and methods

All measurements are in millimeters (mm). Lengths of palp/pedipalp and leg segments are given as: total (femur, patella, tibia, metatarsus (except for palp/pedipalp), tarsus). The micrographic images were taken with a Leica DMC4500 digital camera attached to a Leica M205A stereomicroscope with the software package Leica Application Suite

(LAS, version 3.8) for stacking images taken at different focal planes. Terminology of male and female genitalia mostly follows MARUSIK & LOGUNOV (1995). The specimens examined are deposited at the National Centre for Biological Sciences Research Collections (NRC), Bengaluru, India.

Illustrations of this species given in O. P. CAMBRIDGE (1872; plate 14, fig. 16) and LEVY (1976: figs 9–10) are diagnostic and were used for comparison.

Abbreviations:

Morphology: ALE – anterior lateral eyes; AME – anterior median eyes; do – dorsal; IMA – intermediate apophysis; pl – prolateral; pld – prolateral dorsal; PLE – posterior lateral eyes; plv – prolateral ventral; PME – posterior median eyes; rl – retrolateral; rld – retrolateral dorsal; rlv – retrolateral ventral; RTA – retrolateral tibial apophysis; VTA – ventral tibial apophysis; I–IV – 1st to 4th leg.

Institution: NRC – National Centre for Biological Sciences Research Collections, Bengaluru, India.



Figs. 1-6: Field photographs of *Bassaniodes tristrami* (O. Pickard-Cambridge, 1872), 1. - male habitus, dorsal; 2. - same, lateral; 3. - same, frontal; 4. - female habitus, frontal; 5. - same, dorsal; 6. - same, lateral (Photo: R. Tripathi)

Taxonomy

Thomisidae Sundevall, 1833

Bassaniodes Pocock, 1903

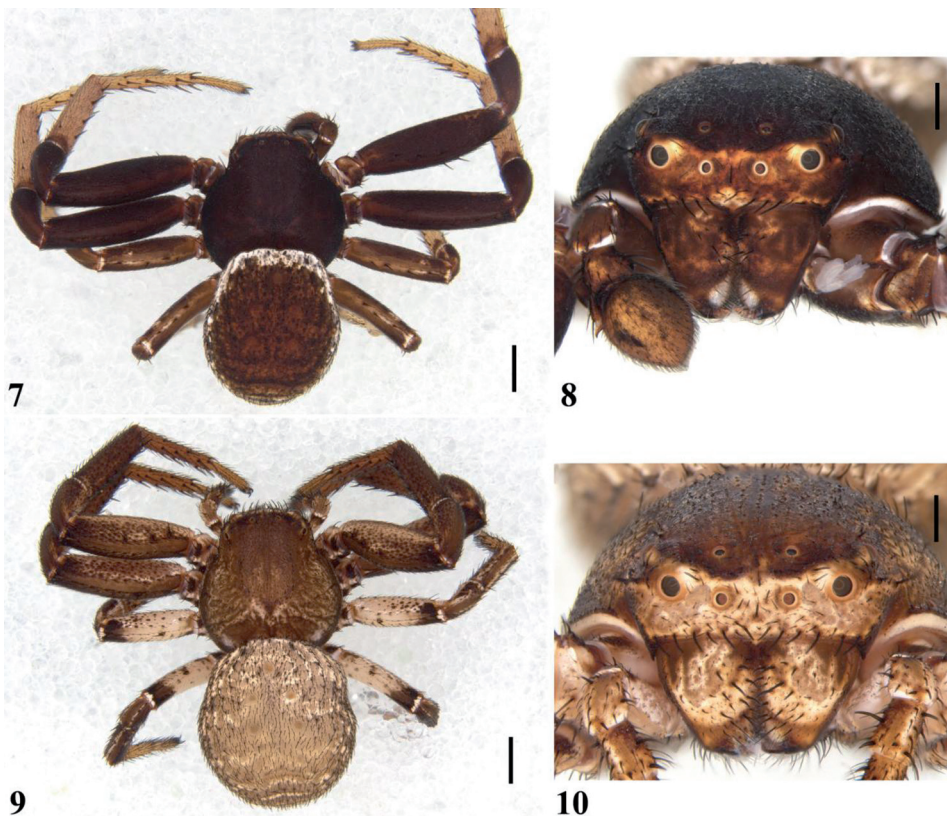
Bassaniodes tristrami (O. Pickard-Cambridge, 1872) Figs: 1-16.

Thomisus tristrami O. Pickard-Cambridge, 1872: 304, plate XIV, fig. 16 (♂ ♀).

Xysticus tristrami Simon, 1889: 380. Kulczyński, 1911: 32, plate I, figs 31, 34–35 (♂ ♀) (for complete list of references, see World Spider Catalog 2023).

Material examined. 1 ♂, 1 ♀ (NRC-AA-4158 & NRC-AA-4159) INDIA: Rajasthan: Jaisalmer: Thar Desert: Desert National Park Wildlife Sanctuary: Myajlar area (26°17'10.8"N 70°24'25.7"E; 275 m asl.), 20 Aug 2022, R. Tripathi leg., from the grass clump, by hand.

Diagnosis. For description and diagnosis of the species, see LEVY (1976) and KIANY et al. (2017).



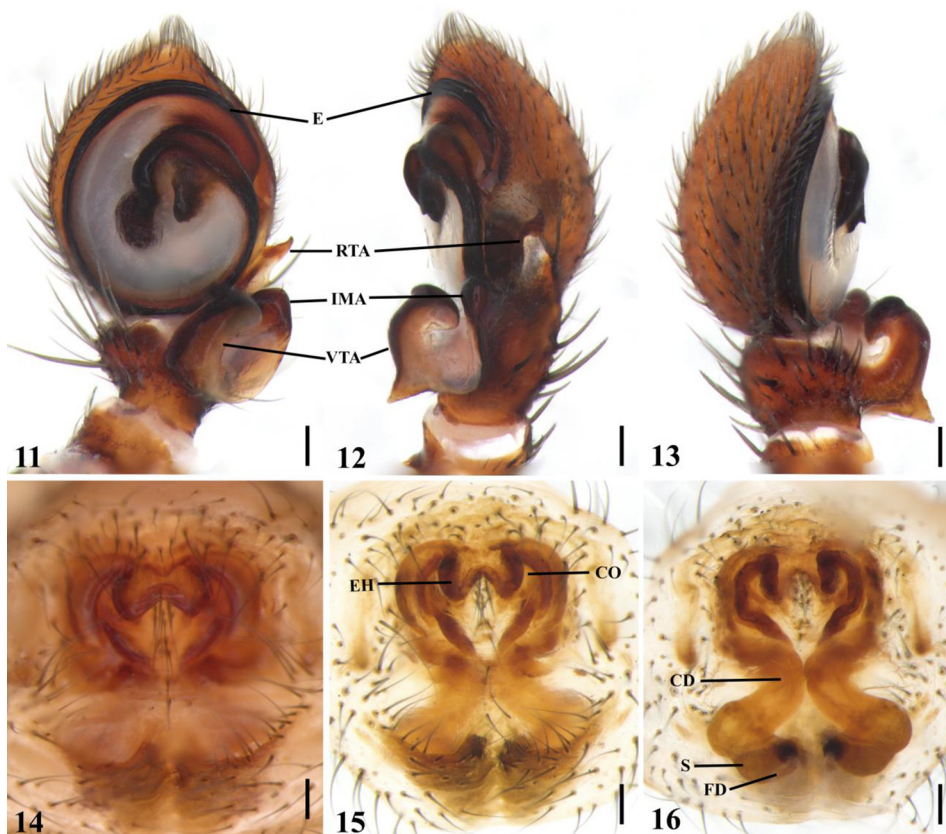
Figs 7–10: *Bassaniodes tristrami* (O. Pickard-Cambridge, 1872). 7. - male habitus, dorsal view; 8 - same, front view; 9. - female habitus, dorsal view; 10. - same, front view
Scale bar: 7 and 9. - 1 mm, 8 and 10. - 0.5 mm.

Supplementary description

Male (Figs 1–3, 7–8, colouration in alcohol): Carapace, labium, endites, sternum, leg and pedipalp segments, spinnerets deep red-brown; chelicerae, eye field, clypeus rusty brown; opisthosoma yellow brown. Carapace nearly disc-shaped, with very few hairs. Fovea indistinct. Legs I–II long and robust, all the joints articulation except of tarsi and metatarsi with narrow yellow-white bands. Opisthosoma oval, flat, hirsute; mottled and marked with deep red-brown, white border on sides, covered with six sigillae (five large, two small), three arranged in pair, and one anteriorly. Body length 5.89. Carapace 2.65 long, 3.11 wide. Opisthosoma 3.01 long, 2.90 wide. Eye sizes and interdistances: ALE 0.16, AME 0.08, PLE 0.14, PME 0.07; ALE–ALE 1.12, AME–ALE 0.30, AME–AME 0.37, PLE–PLE 1.53, PME–PLE 0.52, PME–PME 0.42. Clypeus height at AMEs 0.25, at ALEs 0.30. Length of chelicerae 1.04. Length of pedipalp and legs: pedipalp 2.31 [0.77, 0.34, 0.28, 0.92], I 10.14 [3.18, 1.29, 2.37, 2.09, 1.21], II 10.12 [3.26, 1.33, 2.31, 2.06, 1.16], III 6.28 [1.98, 0.70, 1.52, 1.33, 0.75], IV 6.39 [2.19, 0.81, 1.50, 1.12, 0.77]. Leg formula: 1243. Spination of pedipalp: femur pld 1 do 1 rl 1, patella pl 1 pld 2 do 2, tibia pl 2 pld 3 do 2 rl 1 rld 2, tarsus/cymbium pld 2 do 2 rld 1; legs: femur I pl 3 do 4, II do 5, III do 4, IV do 3; patellae I–IV 0; tibia I pl 1 plv 4 rl 2 rlv 4, II pl 2 plv 4 rl 2 rlv 4, III–IV pl 2 plv 3 rl 2 rlv 3; metatarsus I pl 3 plv 5 rl 2 rlv 5, II pl 3 plv 4 rl 2 rlv 4, III–IV pl 3 plv 2 rl 2 rlv 3; tarsi I–IV 0. Pedipalp (Figs 11–13): tibia with ventral, intermediate and retrolateral apophyses (Fig. 12). VTA slightly translucent, inclined sideways, and bent at tip, with big, straight, and pointed thorn-shaped basal projection (Figs 11–12); IMA thumb-shaped, short, with round apex (Fig. 12); RTA long, broad, with angular apex having slight prolateral curvature (Fig. 12). Tegulum slightly longer than wide, without distinct apophyses, with a ridge marking the embolus base (Fig. 11). Embolus long, with oval embolic base, thickest between 12-o'clock to 2-o'clock at start, narrowed at the end, apically curved and hook-like (Fig. 11).

Female (Figs 4–6, 9–10, colouration in ethanol): General aspects essentially as in male except for the followings: body colour lighter; carapace with black blotches; dorsal opisthosoma with numerous grey-brown spots. Body length 7.24. Carapace 3.28 long, 3.45 wide. Opisthosoma 3.96 long, 3.81 wide. Eye sizes and interdistances: ALE 0.17, AME 0.09, PLE 0.15, PME 0.08; ALE–ALE 1.33, AME–ALE 0.34, AME–AME 0.48, PLE–PLE 1.78, PME–PLE 0.62, PME–PME 0.51. Clypeus height at AMEs 0.30, at ALEs 0.40. Length of chelicerae 1.07. Length of palp and legs: palp 2.50 [0.80, 0.51, 0.56, 0.63], I 9.60 [3.05, 1.39, 2.23, 1.85, 1.08], II 9.51 [3.01, 1.34, 2.31, 1.84, 1.01], III 5.96 [2.05, 0.76, 1.42, 1.01, 0.72], IV 6.50 [2.10, 0.71, 1.57, 1.32, 0.80]. Leg formula: 1243. Spination of palp: femur pld 1 do 2 rl 1, patella pl 1 do 2, tibia pl 1 pld 2 do 2 rl 1 rld 2, tarsus/cymbium pld 1 do 2 rld 1; legs: femur I pl 2 do 4, II do 5, III do 4, IV do 3; patellae I–IV 0; tibia I pl 2 plv 3 rl 1 rlv 2, II pl 1 plv 4 rl 2 rlv 4, III–IV pl 1 plv 3 rl 2 rlv 2; metatarsus I pl 2 plv 5 rl 2 rlv 5, II pl 3 plv 4 rl 2 rlv 4, III–IV pl 2 plv 2 rl 2 rlv 2; tarsi I–IV 0. Genitalia (Figs 14–16): epigynum hirsute, with widely oval posterior epigynal atrium having W-shaped posterior margin (Figs. 14–15), with anteromedian, bow-tie shaped hood, laterally with two large sclerotized caps (Figs. 14–16). Copulatory ducts S-shaped, anteriorly narrow, broad at middle, with medially contiguous posterior parts (Fig. 13). Spermathecae small, oval, slightly separated from each other (Fig. 13). Fertilization ducts narrow, diverging (Fig. 13).

Distribution. Caucasus, Greece, Middle East, Russia (Europe) to Central Asia, Turkey (LEVY 1976; WSC, 2023) and India (new record).



Figs 11–16: Copulatory organs of *Bassaniodes tristrami* (O. Pickard-Cambridge, 1872).
 11. – male palp, ventral view; 12. – same, retrolateral view; 13. – same, prolateral view; 14. – epigynum, ventral view; 15. – epigyne, same cleared in KOH; 16. – vulva, dorsal view.
 Abbreviations: CD – copulatory duct; CO – copulatory opening; E – embolus; EH – epigynal hood; FD – fertilization duct; IMA – intermediate apophysis; RTA – retrolateral tibial apophysis; S – spermatheca; SD – sperm duct; VTA – ventral tibial apophysis.
 Scale bar: 11–16. – 0.1 mm.

Natural history. In Thar desert, most of the time species, was observed near the root of perennial grass species (*Lasiurus scindicus*), presumably to avoid desert excessive heat or to hide from predator. Only during monsoon, mature individuals were observed from July–September.

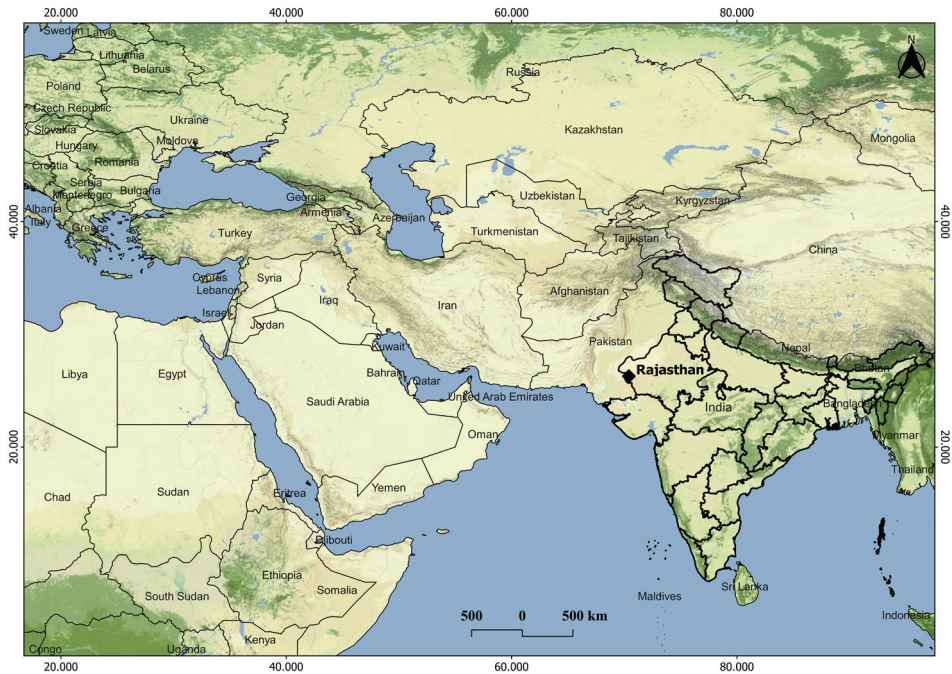


Fig. 18: Map showing the new record of *Bassaniodes tristrami* from Thar Desert, Rajasthan, India.

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