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DESCRIPTION OF THREE NEW SPECIES OF CRAB SPIDERS (ARANEAE : THOMISIDAE) FROM MADHYA PRADESH, INDIA

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INTRODUCTION

Crab spiders of the genus *Runcinia* Simon, 1875 are not well known from India. Simon (1895) described the species *Runcinia bifrons* and Reimoser (1934) described *Runcinia escheri* from India. Tikader (1965) described *Runcinia roonwali*; Sen and Basu (1972) described *Runcinia chauhani* and Tikader (1980) *Runcinia ghorpadei*. Recently, Gajbe and Gajbe (2000b) described the species *Runcinia yogeshi* from India.

Unlike other crab spider genera, the genus *Thomisus* Walckenaer, 1805 is well represented from India. Stoliczka (1869) described the species *Thomisus elongatus* and *T. pugilis*; Simon (1906) described *Thomisus granulifrons*, *T. leucaspis* and *T. rigoratus*. Dyal (1935) described two species *Thomisus albens* and *T. tuberculatus*. Tikader (1960) described the species *Thomisus bulani*, *T. dhakuriensis* and *T. projectus*. The species *Thomisus sikkimensis* was described by Tikader (1962) and *Thomisus katrajghatus* by Tikader (1963). Basu (1963) described *Thomisus sorajaii*; Sen (1963) described *Thomisus shillongensis*, and Sen and Basu (1963) *Thomisus memae*. Basu (1965) described one species *Thomisus beautifularis*, while Tikader (1965) described three species *Thomisus lobosus*, *T. pooneus* and *T. shivajiensis*. Tikader (1966, 1970) described *Thomisus cherapunjeus* and *T. rishus*, respectively. Tikader (1980) described *Thomisus andamanensis* from the Andaman Islands, Reddy and Patel (1992) described two species *Thomisus godavariae* and *T. krishnae*. Kumari and Mittal (1997) described two species *Thomisus dyali* and *T. ludhianaensis*. Recently, Gajbe and Gajbe (2000a) described the species *Thomisus sundari* and Bhandari and Gajbe (2001) *Thomisus rajani* from Madhya Pradesh, India.

A new species of the genus *Runcinia* Simon and two new species of the genus *Thomisus* Walckenaer are described herein from Madhya Pradesh. The type specimens will in due course be deposited with the National Zoological Collection, Zoological Survey of India, Kolkata.

SYSTEMATIC ACCOUNT

Family THOMISIDAE SUNDEVALL, 1833

Genus I. *Runcinia* Simon, 18751980. *Runcinia* Tikader, *Fauna of India, Spiders*, 1(1) : 58.

Diagnosis : Cephalic region with prominent ocular tubercles, clothed with hairs and spines. Legs long and stout, I and II remarkably longer than others. Abdomen long, spined, narrower behind. Lateral sides with conspicuous muscular corrugation.

Type species : *Runcinia grammica* (C. L. Koch, 1837)

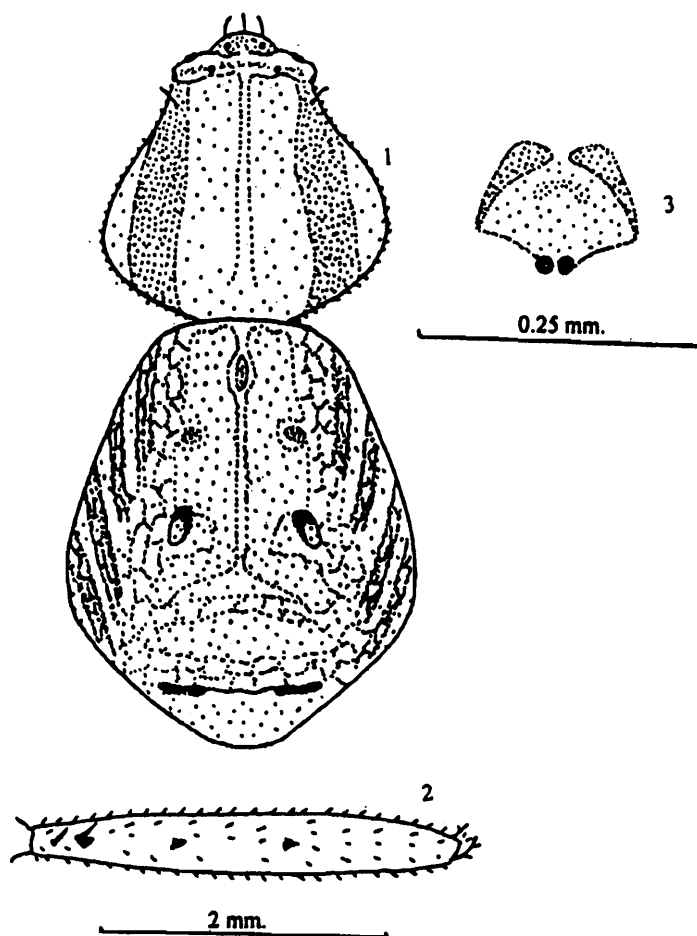
Distribution : Europe, Africa, Asia and Australia.

1. *Runcinia sitadongri* sp. nov.

(Figs. 1-3)

General : Cephalothorax, legs and abdomen brownish in colour. Total length 5.0 mm. Carapace 2.0 mm. long, 2.0 mm. wide; abdomen 3.0 mm. long, 2.5 mm. wide.

Cephalothorax : As long as wide, laterally with two longitudinal broad dark brown stripes, middle region with a longitudinal narrow chalk white stripe as in fig. 1. Eyes eight, black, arranged



Figs. 1-3. *Runcinia sitadongri* sp. nov. 1. Dorsal view of female, legs omitted. 2. Dorsal view of femur. 3. Epigyne.

in two rows; lateral eyes located on protuberance with greenish tinge, antero-lateral eyes largest. Cephalic region and clypeus with few spine-like hair, a spine-like hair present below each postero-lateral eye as in fig. 1. Maxillae dumbbell-shaped; labium slightly darker, as long as wide. Sternum heart-shaped, light brown, clothed with few hair. Legs I and II much longer than III and IV; femur I with two dorsal spines and three tiny dark brown spots as in fig. 2, femur II with one dorsal spine; tibiae and metatarsi I and II with a few long and prominent ventral spines.

Abdomen : Longer than wide, broadest just behind the middle, laterally with dark brown stripes; dorsum with three light brown spots in the anterior region, two oval blackish-brown spots in the middle region and two small black spots in the posterior region as in fig. 1. Ventral side lighter in colour, laterally with brownish stripes, the area between epigynal furrow and spinnerets with a light brown patch. Spinnerets clothed with hair, anterior- and posterior spinnerets equal in size. Epigyne present just above the epigynal furrow, appears as in fig. 3. Male unknown.

Type specimen : Holotype female, in spirit, other details as above.

Type locality : Sitadongri, Delakhari, Pachmarhi Biosphere Reserve, Chhindwara district, Madhya Pradesh, India; coll. Y N. Gupta, 18.x.2002.

Etymology : The specific name is a noun taken in appropriation from the type locality.

This species resembles *Runcinia chauhani* Sen & Basu but can be distinguished from it as follows : (i) A longitudinal narrow chalk white stripe present in the middle region of cephalothorax but absent in *R. chauhani*. (ii) A spine-like hair present below each postero-lateral eye but absent in *R. chauhani*. (iii) Two small black spots present in the posterior region of abdomen but absent in *R. chauhani*. (iv) Femur I with two dorsal spines and three tiny dark brown spots but in *R. chauhani* with four dorsal spines only. (v) Structure of epigyne different in both species.

Genus II. *Thomisus* Walckenaer, 1805

1980. *Thomisus* Tikadar, *Fauna of India, Spiders*, 1(1) : 30.

Diagnosis : Cephalothorax truncated in front, with the upper fore-corners strongly and conically protuberant and divergent, bearing the lateral eyes. Eyes small, black, antero-laterals largest. Abdomen narrow and truncated in front, enlarging to a considerable width behind, where at either corner of the dorsal side is a short blunt conical protuberance. Legs long, I and II much longer than III and IV.

Type species : *Thomisus onustus* Walckenaer, 1805.

Distribution : Europe, Africa, Asia, Australia and America.

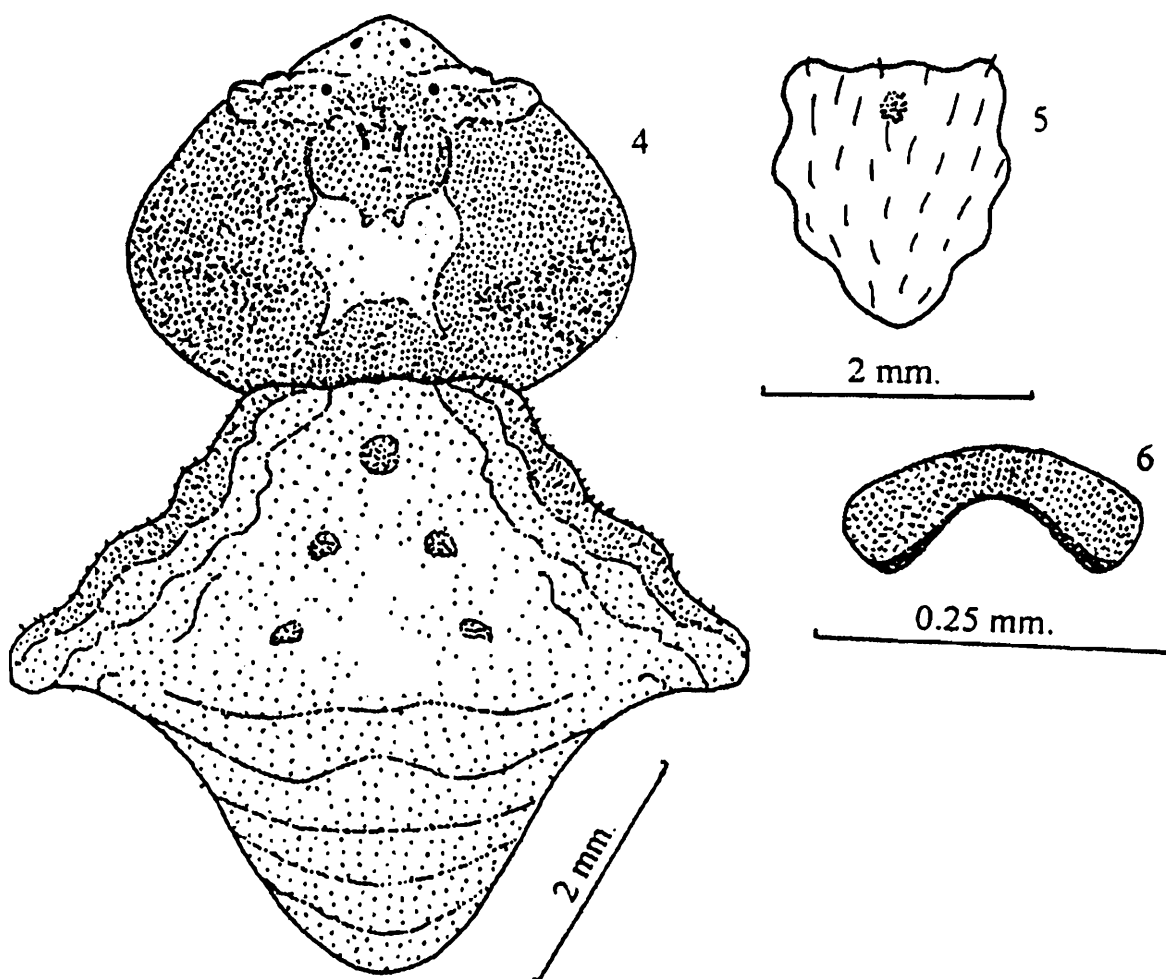
2. *Thomisus baghdeoi* sp. nov.

(Figs. 4-6)

General : Cephalothorax dark brown, legs and abdomen dark brown. Total length 7.5 mm. Cephalothorax 2.5 mm. long, 4.0 mm, wide; abdomen 5.0 mm. long, 6.0 mm. wide.

Cephalothorax : Wider than long, middle region with a heart-shaped light brown patch, postero-lateral region slightly darker as in fig. 4. Ocular protuberance light brown. Maxilla and labium light brown, clothed with hair, labium longer than wide. Sternum light brown, heart-shaped, clothed with hair, a small brownish spot present in the anterior region as in fig. 5. Chelicera light brown, clothed with hair. Legs clothed with hair, provided with some whitish patches, metatarsus I with five pairs of ventral spines.

Abdomen : Pentagonal, wider than long, strongly overlapping cephalothorax, ending in two raised tubercles, antero-lateral region blackish-brown, anterior end and antero-lateral border covered with light brown setae as in fig. 4. Dorsum depressed, with muscular corrugations laterally and posteriorly, provided with five dark brown spots as in fig. 4. Ventral region with transverse muscular corrugations. Spinnerets dark brown, anterior spinnerets thicker than others. Epigyne consisting of a sclerotised plate with an inverted U-shaped dark brown marking as in fig. 6. Male unknown.



Figs. 4-6. *Thomisus baghdeoi* sp. nov. 4. Dorsal view of female, legs omitted. 5. Sternum. 6. Epigyne.

Type specimen : Holotype female, in spirit, other details as above.

Type locality : Baghdeo, Pench Tiger Reserve, Seoni district, Madhya Pradesh, India; coll. M. L. Koshta, 27.vii.2001.

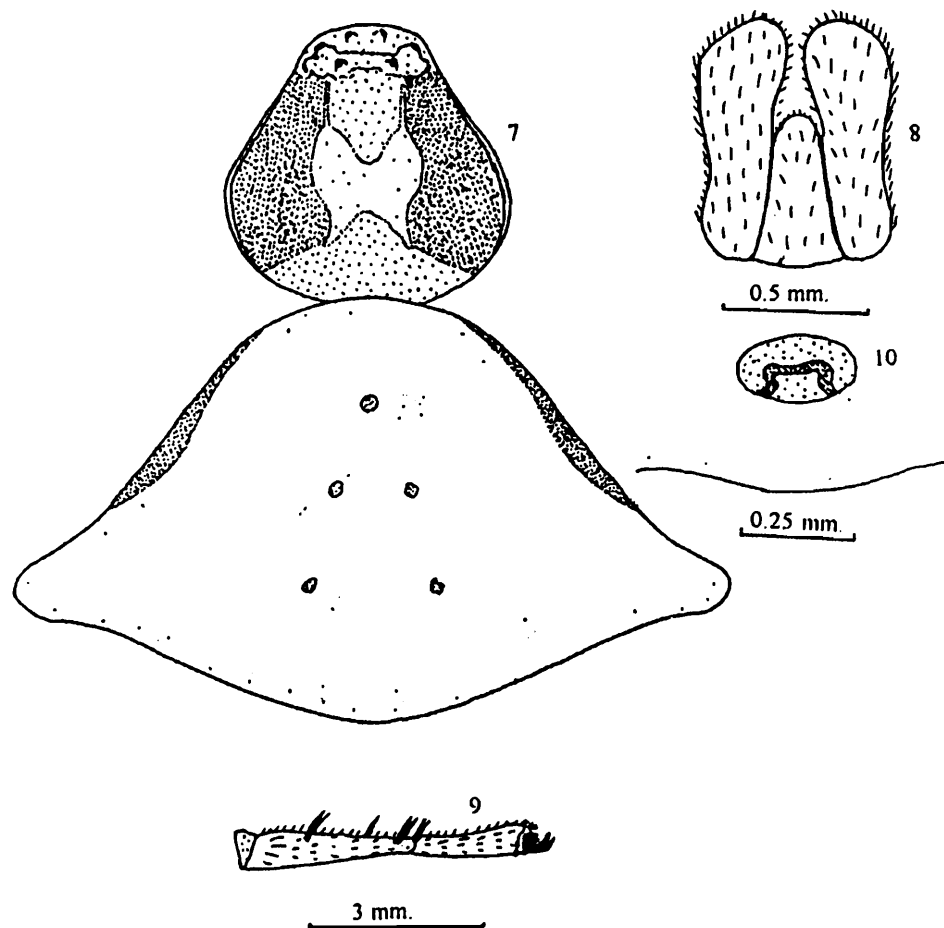
Etymology : The specific name refers to the type locality.

This species resembles *Thomisus projectus* Tikader but can be distinguished from it as follows : (i) Cephalothorax and abdomen dark brown but in *T. projectus* cephalothorax greenish and abdomen chalk white. (ii) Middle region of cephalothorax with a heart-shaped light brown patch, which is absent in *T. projectus*. (iii) Anterior region of sternum with a small brownish spot. (iv) Anterior end and antero-lateral border of abdomen covered with light brown setae. (v) Raised tubercles of abdomen without any spots but in *T. projectus* each tubercle with a black spot. (vi) Structure of epigyne different in both species.

3. *Thomisus kokiwadai* sp. nov.

(Figs. 7-10)

General : Cephalothorax dark brown, legs light brown and abdomen chalk white. Total length 12.0 mm. Carapace 4.5 mm. long, 4.5 mm. wide; abdomen 7.5 mm. long, 12.0 mm. wide.



Figs. 7-10. *Thomisus kokiwadai* sp. nov. 7. Dorsal view of female, legs omitted. 8. Labium and maxillae. 9. Ventral view of I metatarsus. 10. Epigyne.

Cephalothorax : As long as wide, lateral half with a broad dark brown patch and a chalk white patch in the middle region; area below the ocular region and the chalk white patch lighter in colour as in fig. 7. Eyes eight, black, in two recurved rows, lateral eyes on chalk white conical protuberance, antero-lateral eyes largest, ocular quad narrowing in front. Pedipalp clothed with hair and some spines, with one claw. Sternum heart-shaped, clothed with hair, light brown in colour. Maxilla and labium light brown, clothed with hair, labium one and half times longer than wide as in fig. 8. Legs I and II much longer than III and IV, all the legs clothed with hair and provided with some chalk white patches, metatarsi I and II with seven ventral spines each as in fig. 9.

Abdomen : As wide as the entire length of body, pentagonal, globular, widest and sloping in the posterior region, antero-lateral region with narrow dark brown patch, five small dark brown spots on the dorsum as in fig. 7. Ventral region chalk white, area between the epigynal furrow and spinnerets light brown with four pairs of small brownish spots. Spinnerets dark brown, posterior spinnerets longest. Epigyne oval, dark brown, surrounded with hairs, as in fig. 10. Male unknown.

Type specimen : Holotype female, in spirit, other details as above.

Type locality : Kokiwada, Pench Tiger Reserve, Madhya Pradesh, India; coll. K. Chandra, 25.xi.2001.

Etymology : The specific name refers to the type locality.

This species resembles *Thomisus lobosus* Tikader but can be distinguished from it as follows : (i) Lateral half of cephalothorax with a broad dark brown patch but in *T. lobosus* with longitudinal light brown to deep brown patches. (ii) Metatarsi I and II with seven ventral spines but in *T. lobosus* with four pairs of ventral spines. (iii) Anterolateral region of abdomen with narrow dark brown patch but in *T. lobosus* with some black spots. (iv) Structure of epigyne different in both species.

SUMMARY

Three new species of crab spiders, viz., *Runcinia sitadongri* sp. nov., *Thomisus baghdeoi* sp. nov. and *Thomisus kokiwadai* sp. nov. have been described from Madhya Pradesh.

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