

AN ADDITION TO THE ARANEID FAUNA (ARANEAE :
ARACHNIDA) OF INDIA

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INTRODUCTION

Most of us know well about the cob-webs and their dwellers in the houses and the precise architectural orb-web, some of which are finely decorated in the hedges, fields and other vegetations made by the spiders. These orb weavers are belonging to the family Araneidae (= Argiopidae). Some informations are available on Indian araneid forms along with other groups of spiders from the works of the previous workers viz., Stoliczka (1869), Simon (1889), Thorell (1895), Pocock (1900), Narayan (1915), Gravely (1921), Sherriffs (1928, 29), Caporiacco (1934, 35) and Dyal (1935). Recently Sinha (1951) and Tikader (1963-82) have described a number of new species of spiders belonging to different families including Araneidae. During recent years Tikadar and Bal (1981) and Patel (1975) have described several new species of spiders of this family.

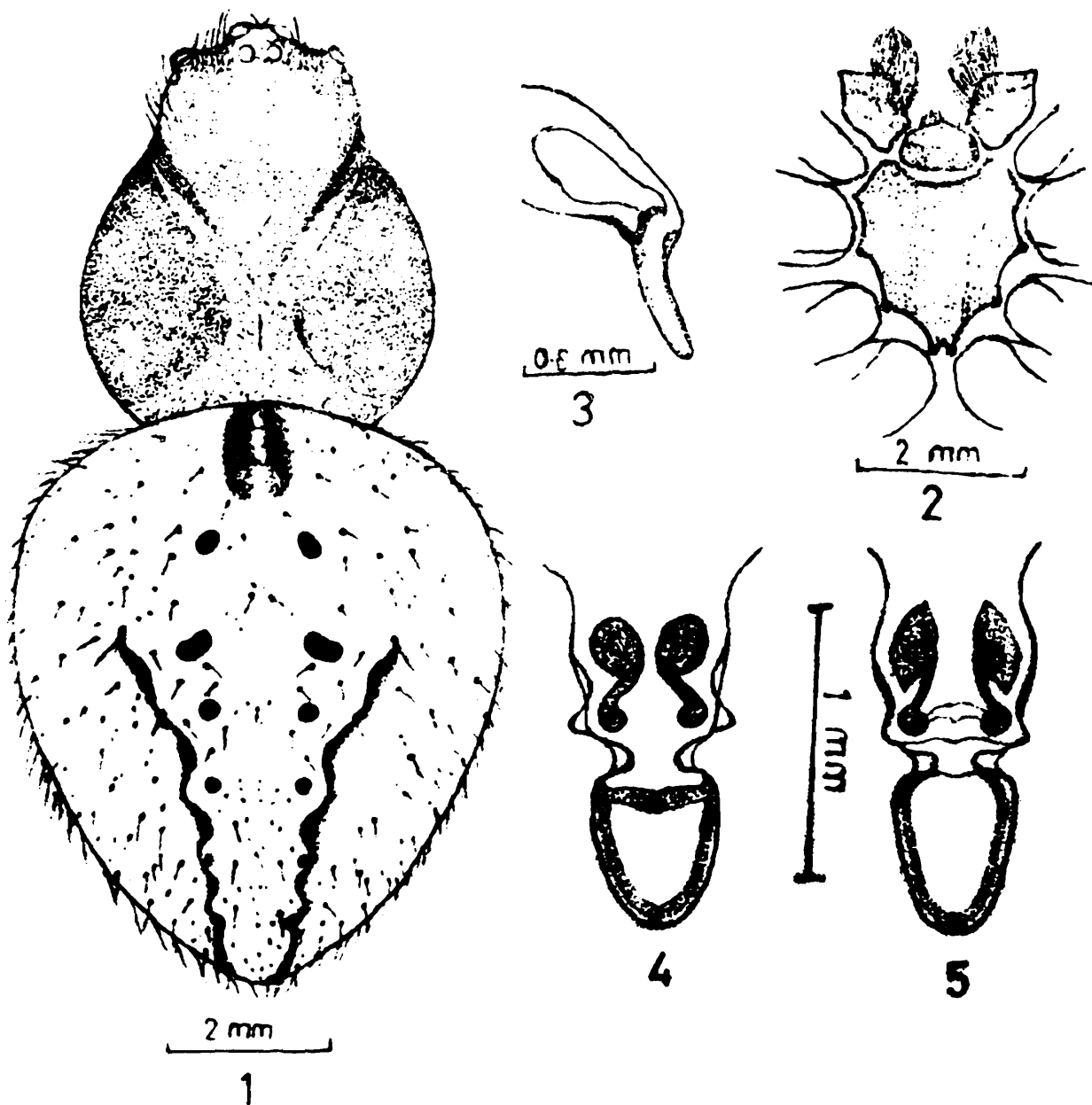
Recently Tikader (1982) have revised the family Araneidae from India and described with illustrations 101 species of spiders including six new species in his creditable work in the Fauna of India, Spiders : Araneae: Vol. II: Part-1. Unfortunately, *Larinia tyloridia* Patel (1975) from Gujarat is skipped off by him in his revisionary work. Caporiacco's collection from Karakorum includes *Araneus cucurbitinus* Clerck, *Meta menardii* (Latr.), *Cyclosa kashmirica* Cap., *A. altitudinum* Cap., *A. angulatus* Clerck, *A. pontii* Cap., *A. redii* Scopoli, *A. obscurissimus* Cap., *A. carbonarius* (C. L. Koch) and *Zygeilla decemnotata* Clerck. Out of ten species only *A. cucurbitinus* is included by Tikader (1982) in his fauna and the redescription and illustrations of it are given based on one specimen collected by him from Shillong, Meghalaya as it is the only species collected by Caporiacco from Karakorum falling within the Indian territory.

During the course of our studies on spiders from Bhavnagar, Gujarat, we came across two new species, one each of the genera *Neoscona* Simon and *Zygeilla* F.O.P. Camb. which are described and illustrated herewith. *L. tyloridia* Patel is also redescribed and its internal genitalia and male palp are illustrated.

The type specimens will be deposited in the National Collections of Zoological Survey of India, Calcutta, in due course of time.

Neoscona murthyi sp. nov.
(Figs. 1-5)

General : Cephalothorax and legs yellowish, abdomen dark brown with greyish patches. Total length 11.50 mm. Carapace 5.02 mm long, 4.30 mm wide; abdomen 7.00 mm long, 6.00 wide.



Figs. 1-5. *Neoscona murthyi* sp. nov. 1. Dorsal view, female; 2. Sternum, labium and maxilla; 3. Epigyne, lateral view; 4. Epigyne, ventral view; 5. Internal genitalia.

Cephalothorax : Carapace longer than wide, narrower in front, light brown in colour, clothed with hairs. Cephalic region high separated from the thorax by a distinct cervical groove. Thoracic region dark brown on the margin and lighter in colour in the centre, provided with a depression in the centre. Eyes in two rows; both rows recurved, posterior row more recurved than anterior; anterior medians larger than the posterior medians, lateral eyes close to each other and situated on a tubercle. Ocular quad longer than wide, wider in front than behind. Sternum heart shaped pointed behind, light brown in colour with some silvery spots, clothed with hairs. Labium wider than long, brown with pale distal end and with few hairs on the distal margin. Maxillae broad, brown, with scopulae. Sternum, labium and maxillae as in Fig. 2. Chelicerae strong, dark brown with three teeth on both the margins, provided with distinct boss. Legs long and strong yellowish with distinct bands on distal ends of trochanter, patella, tibia and metatarsus, clothed with numerous spines and hairs. Leg formula 1-2-4-3.

Abdomen : Subtriangular, longer than wide, broadest at anterior end and tapering behind, clothed with long hairs. Dorsum of abdomen with white and greyish brown patches and markings as in Fig. 1. Five pairs of sigilla arranged mid-dorsally on the dorsum, the second being the largest and bean shaped. Ventral side dirty brown. Epigynal scape with constriction at the lower portion as in Figs. 3 and 4. Internal genitalia as in Fig. 5.

Holotype : 1 ♀, in spirit, University Campus, Bhavnagar, Dist. Bhavnagar, Gujarat, 28.xii, 1983, Coll. T. S. Reddy.

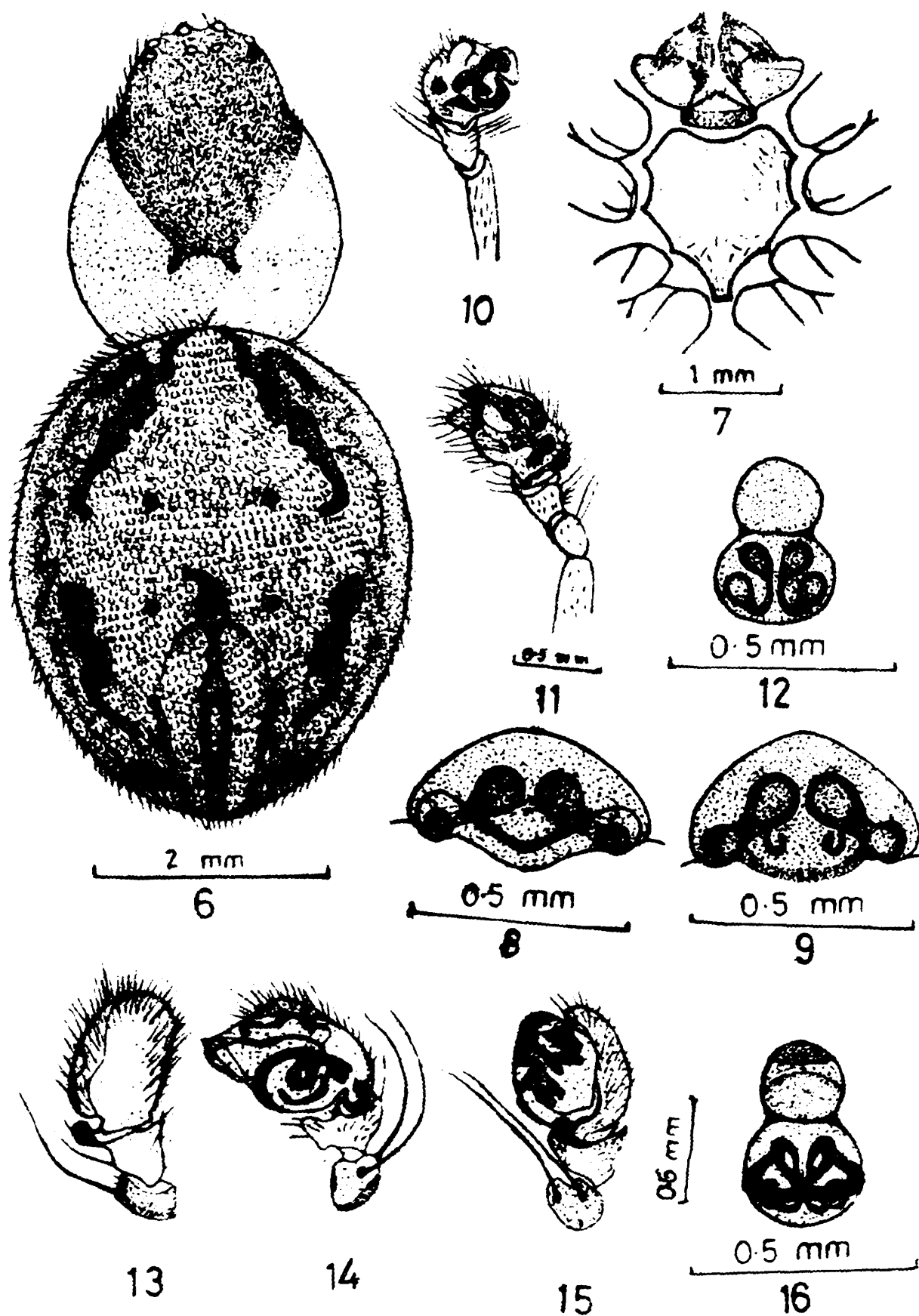
Distribution : Known from type-locality only.

Remarks : This species resembles to *Neoscona mukerjei* Tikader but it differs as follows : (i) Cephalic region is not provided with conspicuous 'V' shaped dark brown patch as in *N. mukerjei*. (ii) Structures of epigyne and internal genitalia are also different.

It also resembles to *N. rumpfi* Thorell but differs as follows : (i) Only five pairs of sigilla are present instead of six pairs as in *N. rumpfi*. (ii) Structures of epigyne and internal genitalia also differs.

***Zygeilla shivui* sp. nov.**
(Figs. 6-11)

General : Cephalic region blackish brown, thoracic region yellow, legs yellowish with some black patches, abdomen whitish with light brown and some black markings forming a folium. Total length 7.37 mm. Carapace 2.95 mm long, 2.54 mm wide; abdomen 4.67 mm long, 3.77 mm wide.



Figs. 6-11. *Zygeilla shivui* sp. nov. 6. Dorsal view, female; 7. Sternum, labium and maxilla; 8. Epigyne; 9. Internal genitalia; 10. Left male palp, ventral view; 11. Left male palp, outer view. Fig. 12-16. *Larinia tyloridia* Patel; 12. Internal genitalia; 13. Left male palp, dorsal view; 14. Left male palp, ventral view; 15. Left male palp, outer view; 16. Epigyne.

Cephalothorax : Carapace longer than wide, narrowing in front, cephalic region more darker than thoracic region with few hairs. Thoracic region wider in the middle with a depression in the centre and outer margin bordered with a reddish line. Eyes in two rows, both rows recurved; anterior medians larger than the posterior medians, posterior medians pearly white, laterals contiguous and situated on a tubercle, posterior laterals slightly smaller than anterior laterals. Ocular quad wider in front than behind (Fig. 6). Sternum heart shaped, pointed behind, yellowish brown without markings, clothed with fine long hairs. Labium wider than long. Maxillae broad, pale brownish yellow, provided with distinct scopulae at the distal end. Sternum, labium and maxillae as in Fig. 7. Chelicerae strong, blackish, three retromarginal and four promarginal teeth, second being the largest of promargin. Legs long, strong, clothed with hairs and spines. Tibia I and II with 4 to 5 prolateral spines, femora I and II with nine dorsal spines, distal end of all femora and tibia with dark brown patches on dorsal side. Leg formula 1-2-4-3.

Abdomen : Oval, longer than wide, without humps, clothed with hairs. Dorsum with a distinct folium with four pairs of sigillae as in Fig. 6. Ventral side with white pigmentation in between epigastric furrow and spinnerets and provided with four pairs of reddish spots. Transverse dark lines are present across the ventral side. Epigyne without scape, having semicircular openings as in Fig. 8. Internal genitalia as in Fig. 9.

Male : Male is same in resemblance but little smaller than the female. Total length 6.72 mm. Carapace 3.11 mm long, 2.62 wide; abdomen 3.85 mm long, 2.78 mm wide.

Holotype : 1 ♀, in spirit, Gaurishankar lake, Bhavnagar, Dist. Bhavnagar, Gujarat, 23.ix. 1983. Coll. T. S. Reddy; *allotype* 5 ♂♂, and *paratype* 9 ♀♀, in spirit, data same as holotype.

Remarks : This species resembles to *Zygeilla melanocrania* (Thorell) and *Z. indica* Tikader and Bal (1980) but differs from both of them in the colouration of cephalothorax and the pattern of folium on the dorsum. It also differs from them in the structures of epigyne and internal genitalia. Male palp also differs from that of the male palp of *Z. indica*.

***Larinia tyloridia* Patel**
(Figs. 12-16)

Material examined : 1 ♂, Gaurishankar lake, Bhavnagar, 28. ix. 1983. 2 ♀♀, Victoria Park, Bhavnagar, Dist. Bhavnagar, 4.ix.1983. Coll. T. S. Reddy.

General : Body yellowish brown. Total length 7.87 mm. Carapace 3.33 mm long, 1.62 mm wide; abdomen 4.55 mm long, 2.15 mm wide.

Cephalothorax : Longer than wide, narrower anteriorly, clothed with fine hairs. Cephalic region high with a median brown longitudinal band from the posterior median eyes just up to the fovea. Eyes pearly white, both rows of eyes slightly recurved,

laterals contiguous, laterals and posterior medians encircled in black markings. Ocular quad longer than wide, narrowing posteriorly. Sternum oblong, pointed behind and truncated anteriorly, brown with a dark margin and light coloured longitudinal band in the middle. Lambium as long as wide. Maxillae scopulate with dark margin. Cheliceras with strong curved fange, fang groove with three teeth each on both margins. Legs yellow, long, clothed with hairs and spines. Femora I with two dorsal, two apical and two prolateral spines; patella I and II with two dorsal and two lateral spines on both sides but no ventral spines; metatarsi I and II longer than that of the III and IV; tarsi of all legs with two claws; femora I with 12 to 13 and II with 11 ventral black spots. Leg formula 1-2-4-3.

Abdomen Yellowish with white patches, acuminate, clothed with white pubescence and few spines. Anterior end projecting into a tubercle like prominence and posterior end pointed behind. Spinnerets just below the posterior end. Anterior end of abdomen overlapping the posterior region of cephalothorax in front. A mid-dorsal longitudinal white band from anterior end to posterior end and four lateral dark striations on each side extending upto the ventral side. Ventral side with a broad, brown, longitudinal band from epigastric fold to spinnerets, interrupted by white patches in the anterior half and two small circular yellow dots posteriorly. Structure of internal genitalia and epigyne as in Figs. 12 and 16 respectively.

Male : Little smaller and similar in colour to the female, but the cephalothorax seems to be darker in colour. Total length 5.63 mm. Carapace 2.43 mm long, 1.71 mm wide; abdomen 3.21 mm long 1.54 mm wide. The palps are also dark in colour as that of cephalothorax. Patella of male with two long spines on apical region; paracymbium having a hook like structure. Chelicerae with four promarginal and three retromarginal teeth. Structure of male palp as in Figs. 13 to 15 is illustrated herewith as it is described for the first time.

Distribution : Mogari, Dist. Kheda; Bhavnagar, Dist. Bhavnagar, Gujarat.

SUMMARY

Two new species of spiders *Neoscona murthyi* and *Zygeilla shivui* are described and illustrated, another spider *Larinia tyloridia* Patel is redescribed with its illustrated internal genitalia and male palp in this paper from Gujarat, India.

ACKNOWLEDGEMENTS

The authors gratefully acknowledge the laboratory facilities and encouragement from Prof. K. B. Tipnis, Principal, Sir P. P. Institute of Science, Bhavnagar. They are also thankful to Dr. B. K. Tikader, Director, Zoological Survey of India, Calcutta for confirmation of the specimens and his valuable inspiration.

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