

## Some interesting theridiid spiders (Araneae: Theridiidae) from Gujarat, India

B. H. Patel

Department of Biology,  
Vithalbhairi Patel Mahavidyalaya,  
Vallabh Vidyanagar, Gujarat State.

### Summary

Out of eight species of theridiid spider listed, one new species is described, one new to India is described, and six are new records for Gujarat. *Theridion tikaderi* is a new species and *Argyrodes projiciens* (O.P.-Cambridge) is recorded for the first time from India. *Latrodectus hasseltii* Thorell was recorded from Western India by Pocock (1900) but he did not give the exact locality, and it is recorded here for the first time from Gujarat. *T. manjithar* Tikader, *A. gazedes* Tikader, *A. dipali* Tikader, *A. cyrtophore* Tikader and *A. jamkhedes* Tikader were described by Tikader (1963 and 1970) as new species from India. I now record them from Gujarat for the first time.

### Introduction

Although spiders are extremely abundant throughout India, present knowledge of Indian species is fragmentary and limited, and our knowledge of the Indian theridiid spiders is very meagre.

Pocock (1900) has reported the occurrence of only two species of the genus *Latrodectus* Walckenaer from India; Gravely (1921) gave a fragmentary and rather incomplete account of this group, and Dyal (1935) reported about 8 species of theridiid spiders belonging to 8 different genera from Lahore. Recently Tikader (1963 and 1970) described 5 new species of the genus *Argyrodes* Simon from India and more recently Patel and Patel (1972) described 2 new species from India, one each belonging to the genera *Cylognatha* Koch and *Thwaitesia* (O.P.-Cambridge). While examining collections made in different parts of Gujarat, I came across some interesting spiders belonging to the family Theridiidae and have described here 2 species, each from different genera, and have listed another 6 species belonging to 3 genera. Synonyms and distribution of the species are also given.

All type specimens will be deposited in the National Collections of the Zoological Survey of India, Calcutta.

### *Theridion manjithar* Tikader

*Theridion manjithar* Tikader, 1970. *Rec. Zool. Survey India*, 44: 1

*Specimens examined.* 5 ♀ Vallabh Vidyanagar, Dist. Kaira, 15.x.1967. 1♀ Ahwa, Dist. Dangs, 17.viii.1970. 2 ♀ Ambaji, Dist. Banaskantha, 21.viii.1970. Coll. B. H. Patel.

*Distribution.* India: Manjithar, West Sikkim, Vallabh Vidyanagar, Ahwa and Ambaji, Gujarat.

### *Theridion tikaderi* sp. nov.\* (Figs. 1-4)

*General description.* Cephalothorax brown, abdomen brownish black to green. Total length 6.38 mm. Carapace 1.85 mm long, 1.80 mm wide; abdomen 4.55 mm long, 4.00 mm wide.

*Cephalothorax.* Brown with dark-brown margin, clothed with fine hairs. Cephalic region high, a U shaped brown marking on the middle of thorax. Clypeus high in front, as long as wide. Eyes of anterior row recurved, posterior row procurved; anterior medians and posterior medians equal in size; laterals contiguous. Sternum brown, covered with hairs, with darker margin and dark patch on posterior end behind, posterior end rounded and projecting in between coxae IV. Sternum, labium and maxillae as in Fig. 4. Chelicerae brown, weak without teeth; covered with fine hairs. Legs brown, relatively long and thin, leg I being the longest.

*Abdomen.* Globular, clothed with fine pubescence, slightly longer than wide, as high as broad. Dorsally and ventrally covered with beautiful irregular chalky-white and chocolate coloured patches as in Figs. 1 and 2. Ventrally a broad longitudinal brown band extending from epigastric fold to spinners. Epigyne simple as in Fig. 3. Spinners on the posterior end well behind the epigyne.

*Holotype.* One female, paratype 25 females in spirit.

*Type-locality.* Ahwa, ca 90 kilometers east of Bilimora, 26.xii.1967. Coll. B. H. Patel.

*Distribution.* Known from the type locality and

\* It is a great pleasure for me to name this species after Dr B. K. Tikader, Superintending Zoologist, Zoological Survey of India, Calcutta, in appreciation of his monumental work on Taxonomy of Indian Spiders.

also from Vallabh Vidyanagar and Napad Dist. Kaira.

This species resembles *Theridion studiosum* Hentz, but differs as follows: (i) Cephalothorax brown with a U shaped brown marking on thoracic region and with lateral margins dark-brown but in *T. studiosum* cephalothorax reddish-yellow with a distinct central band and lateral margins brown. (ii) Eyes of anterior row recurved and posterior row procurved but in *T. studiosum* anterior row recurved and posterior row nearly straight. (iii) Abdomen globular, dorsal and ventral sides with irregular chalky-white and chocolate coloured patches but in *T. studiosum* abdomen oblong, a dorsal median band bounded on each side by a white wavy stripe present. (iv) Structure of epigyne also differs.

***Latrodectus hasseltii* Thorell (Figs. 5 and 6)**

*Latrodectus hasseltii* Thorell, 1870. *Oefv.k.sv.vet.Akad. Forh.*, 27: 369

*Latrodectus hasseltii indicus* Simon, 1897. *Hist.Nat.des. Araign.*, 2: 97

*Latrodectus hasseltii elegens* Thorell, 1898. *Ann.Mus.Genova*, 39: 293

*Latrodectus hasseltii* Pocock, 1900. *Fauna Brit.India Arach.* : 237

*Latrodectus hasseltii* Dyal, 1935. *Bull.Zool.Punjab Univ.*, 1: 165

*Specimens examined.* 1 ♀ Vartej, Dist. Bhavnagar, 28.vii.1970. Coll. D. C. Bhatt.

*Distribution.* Pakistan: Karanchi, Lahore; India: Western India, Vartej (Bhavnagar).

This is the only species belonging to the genus *Latrodectus* from the Indian spider fauna, believed to be poisonous. Data on the bite of this spider are not available from India, but the effect of the bite on man and other vertebrates has been studied in other countries during recent years. Chemically the venom is an albumen, strongly neurotoxic. Pocock (1900) reported the occurrence of this spider from Western India but did not specify the exact location. Dyal (1935) reported it from Lahore. This is the first record for Gujarat.

**Key to species of *Argyrodus***

- |   |     |     |     |     |     |   |
|---|-----|-----|-----|-----|-----|---|
| 1 Cephalic region high with two horns in male | ... | ... | ... | ... | ... | 2 |
| Cephalic region high with one horn in male    | ... | ... | ... | ... | ... | 3 |

- |  |     |     |     |     |                   |
|--|-----|-----|-----|-----|-------------------|
| 2 Anterior median eyes larger than posterior medians   | ... | ... | ... | ... | 4                 |
| Anterior median eyes smaller than posterior medians  | ... | ... | ... | ... | <i>jamkhedes</i>  |
| 3 Abdomen triangular with silvery patches and not extending more beyond the spinners   | ... | ... | ... | ... | <i>cyrtophore</i> |
| Abdomen tapering behind with silvery patches and extending more beyond the spinners, a spiny projection at the posterior end | ... | ... | ... | ... | <i>projiciens</i> |
| Abdomen tapering behind without silvery patches and extending more beyond the spinners                                       | ... | ... | ... | ... | <i>dipali</i>     |
| 4 Abdomen with a conspicuous black mark on posterior end   | ... | ... | ... | ... | <i>gazedes</i>    |

***Argyrodus gazedes* Tikader**

*Argyrodus gazedes* Tikader, 1970. *Rec.Zool.Survey India*, 44: 1

*Specimens examined.* 1 ♂ Navli, Dist. Kaira, 17.ix.1967. Coll. B. H. Patel.

*Distribution.* India: Ligship, West Sikkim; Navli, Gujarat.

***Argyrodus dipali* Tikader (Fig. 11)**

*Argyrodus dipali* Tikader, 1963. *Proc.Indian Acad.Sci.*, 57: 103

*Specimens examined.* 4 ♀ Vallabh Vidyanagar, Dist. Kaira, 15.vii.1970. 3 ♀ Napad, Dist. Kaira, 2.viii.1970. 2 ♀ Anand, Dist. Kaira, 9.viii.1970. Coll. B. H. Patel.

Figure of the epigyne (Fig. 11) is appended here as it has not been illustrated by Tikader (1963).

*Distribution.* India: Mundhva village, Poona; Vallabh Vidyanagar, Anand, Napad, Gujarat.

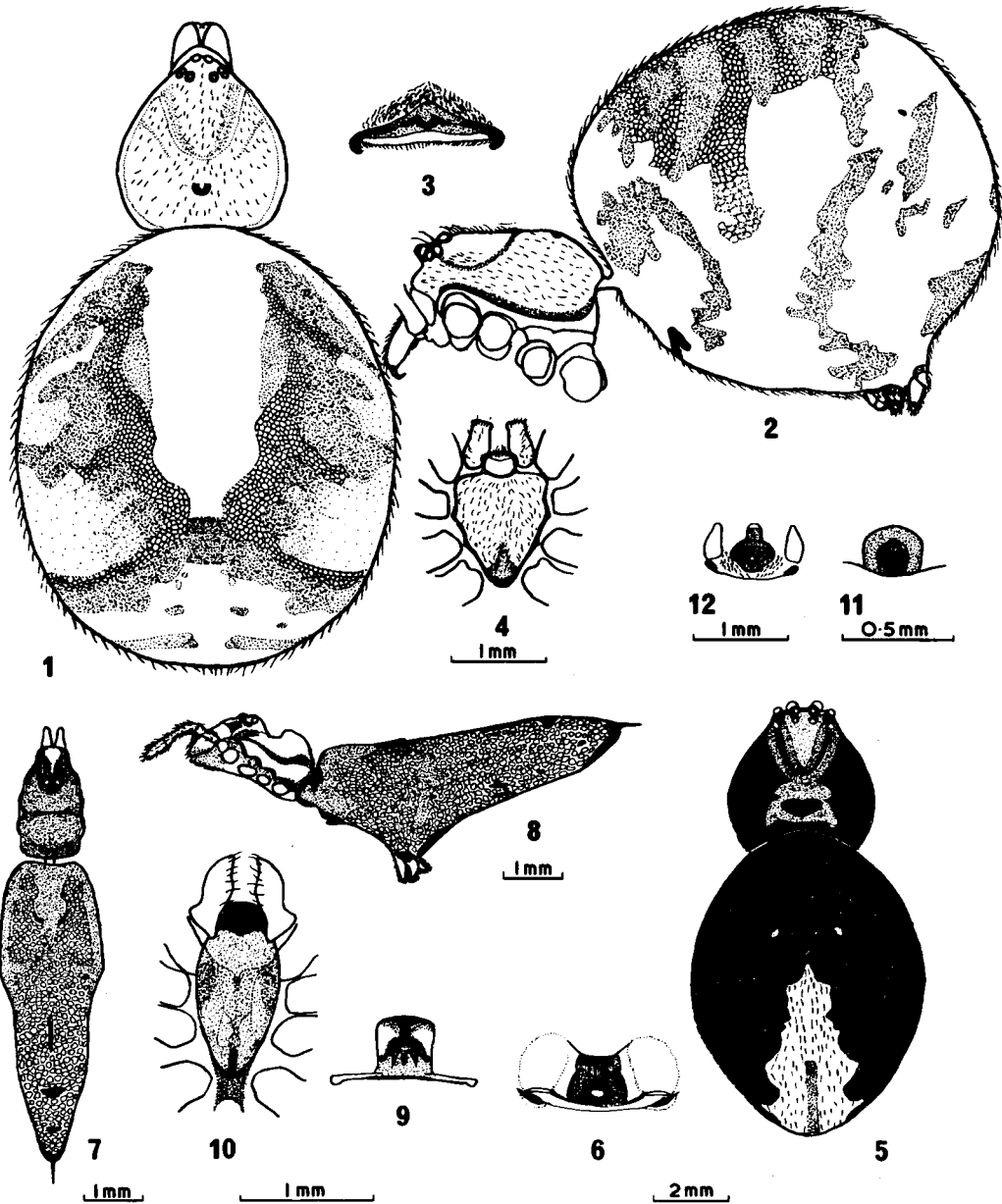
***Argyrodus cyrtophore* Tikader (Fig. 12)**

*Argyrodus cyrtophore* Tikader, 1963. *Proc.Indian Acad.Sci.*, 57: 99

*Specimens examined.* 5 ♀ Ahwa, Dist. Dangs, 2.xii.1968. Coll. B. H. Patel.

The figure of the epigyne (Fig. 12) is appended here as it has not been illustrated by Tikader (1963).

*Distribution.* India: Poona; Ahwa, Gujarat.



Figs. 1-4: *Theridion tikaderi* sp. nov.

1. Dorsal view of female, 2. Lateral view of female, 3. Epigyne, 4. Sternum, labium and maxillae.

Figs. 5-6: *Latrodectus hasseltii*

5. Dorsal view of female, 6. Epigyne.

Figs. 7-10: *Argyrodes projiciens*

7. Dorsal view of female, 8. Lateral view of female, 9. Epigyne, 10. Sternum, labium and maxillae.

Fig. 11: *A. dipali*, Epigyne.

Fig. 12: *A. cyrtophore*, Epigyne.

***Argyrodes jamkhedes* Tikader**

*Argyrodes jamkhedes* Tikader, 1963. *Proc. Indian Acad. Sci.*, 57: 101

*Specimens examined.* 1 ♂ Ahwa, Dist. Dangs, 2.xii.1968. 1 ♂ and 2 ♀ Ahwa, Dist. Dangs, 17.viii.1970. Coll. B. H. Patel.

*Distribution.* India: Sarola, Maharashtra; Ahwa, Gujarat.

***Argyrodes projiciens* (O.P.-Cambridge) (Figs. 7-10)**

*Rhomphaea projiciens* (O.P.-Cambridge), 1896. *Bio. Cent. Africana Arach.*, 1: 186

*Rhomphaea spinosa* Badcock, 1932. *J. Linn. Soc.*, 33: 8

*Rhomphaea martiniae* Exline, 1950. *Studies Honoring Trevor Kincaid*: 116

*Argyrodes projiciens* Levi, 1962. *Bull. Mus. Comp. Zool.*, 127 (2): 106

*Specimens examined.* 4 ♀ Ahwa, Dist. Dangs, 2.xii.1968. 1 ♀ Vallabh Vidyanagar, Dist. Kaira, 12.vii.1970. 1 ♂ Napad, Dist. Kaira, 18.x.1970. Coll. B. H. Patel.

*General description.* Cephalothorax and legs yellowish-brown, abdomen with small silver-white patches. Total length 6.50 mm. Carapace 1.80 mm long, 1.00 mm wide; abdomen 4.55 mm long, 1.75 mm wide.

*Cephalothorax.* Yellowish-brown, oblong, longer than wide. Cephalic region high, a transverse cephalic depression in the middle, well separating the cephalic and thoracic regions, lateral margins brown. Ocular area situated on elevated region of cephalothorax, ocular quad broader than long. Eyes of anterior row recurved, posterior row slightly procurved, laterals small and contiguous; anterior medians dark in colour, rest white, space between the posterior medians is more than the space between the anterior medians. Clypeus high. Sternum egg-shaped, brownish with light coloured patches, tapering posteriorly into a blunt end which is darker in colour and projecting between coxae IV. Sternum, labium and maxillae as in Fig. 10. Legs long and slender, yellowish-brown, clothed with fine hairs. A dark band at the end of femora I and IV, at the base of tarsus I and at the base and apex of tarsus IV. Legs formula 1 4 2 3.

*Abdomen.* Yellowish-brown, covered with silver-white, long and filiform, extending beyond the spinners with projecting spine at the posterior tip (Figs. 7-8). A mid-dorsal wedge-shaped brown patch on the anterior end and two lateral brown patches extend

downwards laterally just after the mid-dorsal patch. Vertical and transverse mid-dorsal black patches on the dorsum, posterior ventral tip of abdomen black. Epigyne as in Fig. 9.

One juvenile male was collected and studied, the head with an elevated cephalic region provided with one horn, on the lateral sides of which are the anterior median eyes.

*Distribution.* India: Ahwa, Vallabh Vidyanagar and Napad, Gujarat. These records are the first for India.

**Acknowledgements**

My grateful thanks are due to Dr B. K. Tikader, Superintending Zoologist, Zoological Survey of India, Calcutta, for confirmation of the species. I also thank Principal J. G. Chohan, Vithalbhairi Patel Mahavidyalaya, Vallabh Vidyanagar for the facilities provided to carry out this work, and to Dr H. K. Patel, Professor and Head of the Department of Entomology, B.A. College of Agriculture, Anand, for his inspiration and valuable suggestions.

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