

DESCRIPTION OF SIX NEW SPECIES OF SPIDERS OF THE FAMILIES
CLUBIONIDAE, GNAPHOSIDAE AND SALTICIDAE FROM INDIA

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ABSTRACT

The six new species of spiders, described in this paper, were collected from Calcutta. The new species belong to the genera *Clubiona* Latreille, *Castianeira* Keyserling, *Herpyllus* Hentz, *Phidippus* Koch, *Marpissa* Koch and *Myrmarachne* Mac Leay.

INTRODUCTION

During the tenure of my one year research work I have covered the two areas within Calcutta, The Agri-Horticultural Society of India-garden, Calcutta and Zoological garden, Calcutta and have under taken twelve trips for collection. While examining the collected spider specimens I came across six species which are new to science under the six genera belonging to three families (Clubionidae, Gnaphosidae and Salticidae) described in this paper.

All the type specimens are deposited in the National Zoological Collection of the Zoological Survey of India, Calcutta.

Family CLUBIONIDAE

1. *Clubiona bengalensis* sp. nov. (Figs. 1-3)

General : Cephalothorax and abdomen greyish to cream colour, legs light brown. Total length 6.70 mm. Carapace 2.50 mm. long, 1.80 mm. wide ; abdomen 4.20 mm. long, 2.80 mm. wide.

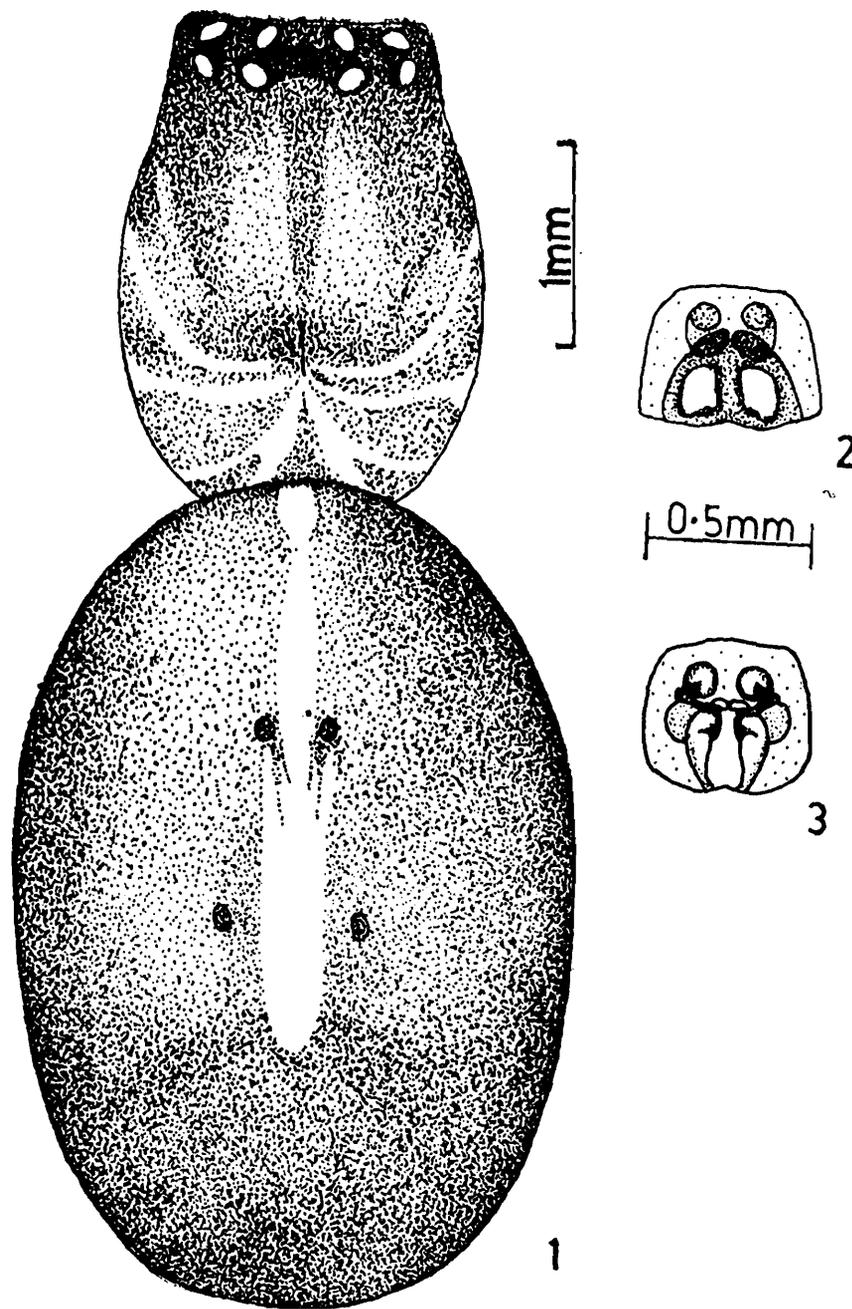
Cephalothorax : Longer than wide, wider in front, clothed with fine hair and some spine-like hair ; convex cephalic region slightly higher than posterior region. Eyes pearly

white, posterior row slightly longer and procurved, anterior row nearly straight. Ocular quad wider than long and wider in behind, all eyes nearly of same size. Middle of cephalothorax provided with prominent fovea. Chelicerae strong, vertical and dark brown in colour, inner margin provided with two teeth and outer margin with one. Maxillae and labium provided with deep brown colour, anterior margin with conspicuous scopulae. Sternum nearly heart-shaped, longer than wide clothed with fine hair. Legs strong, stout, clothed with hair. Posterior legs longer than anterior legs. Tibiae I and II provided with two pairs of ventral spines and metatarsi and tarsi also provided with ventral scopulae.

Abdomen : Longer than wide, oval in shape, clothed with pubescence. Two pairs of sigilla present on the dorsum. Ventral side uniform pale colour. Epigyne and internal genitalia as in figs. 2-3.

Holotype : Female in spirit, deposited at Z.S.I., Calcutta, Regd. Nos. 5113-14/18.

Paratype : Five females, from paddy field, Assam, India, August, 1983, Coll. *N. Krishnasamy*.



Figs. 1-3. 1. Dorsal view of female, legs omitted. 2. Epigyne. 3. Internal genitalia.

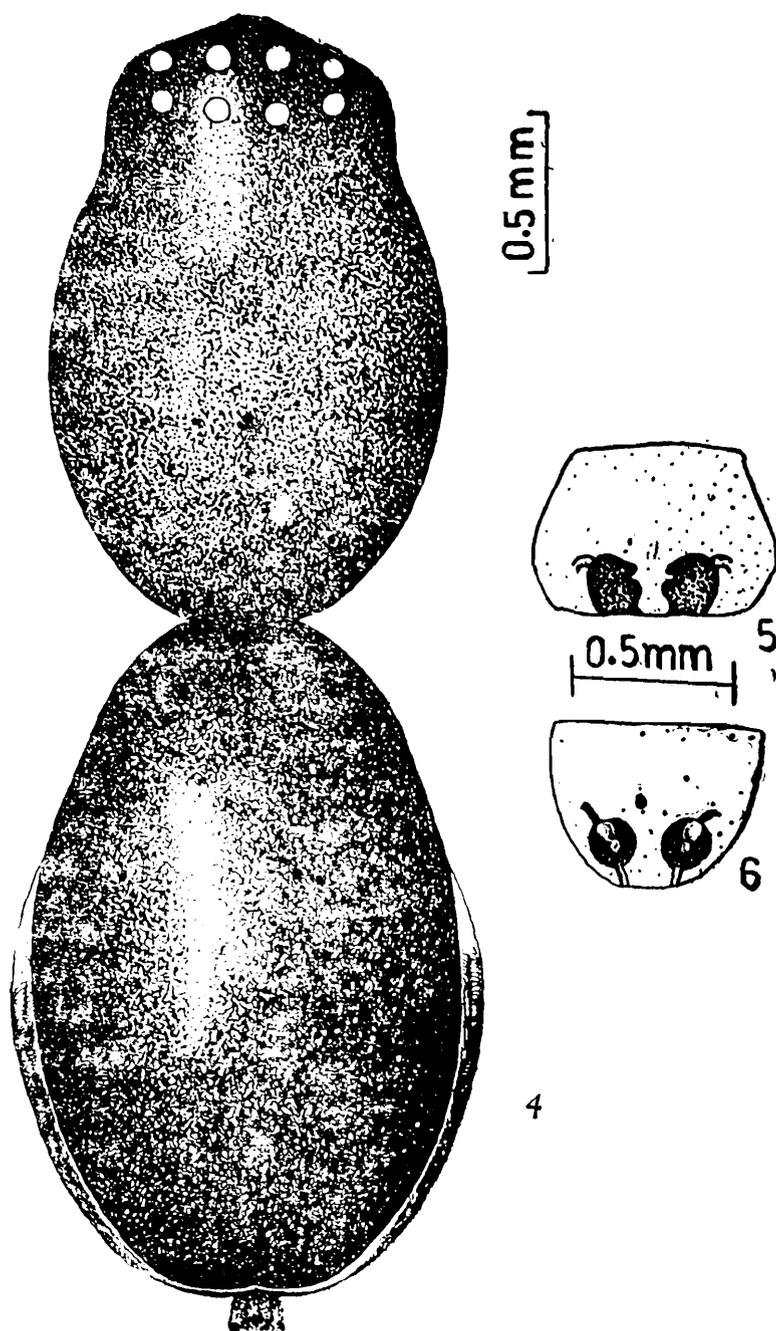
Type-locality: The Agri-Horticultural Society of India-garden, 1, Alipore Road, Calcutta, India, 15-9-1981, Coll. *Bijan Biswas*.

This species in general resembles *Clubiona ludhianaensis* Tikader, but it is separated as follows: (i) Inner margin of chelicerae provided with two teeth and outer margin with one but in *C. ludhianaensis* inner margin of chelicerae provided with two and outer

margin with three. (ii) Presence of two pairs of sigilla but in *C. ludhianaensis* no such sigilla. (iii) Epigyne and internal genitalia also structurally different.

2. *Castianeira bengalensis* sp. nov.
(Figs 4-6)

General: Cephalothorax and abdomen with shiny deep brown to chocolate colour,

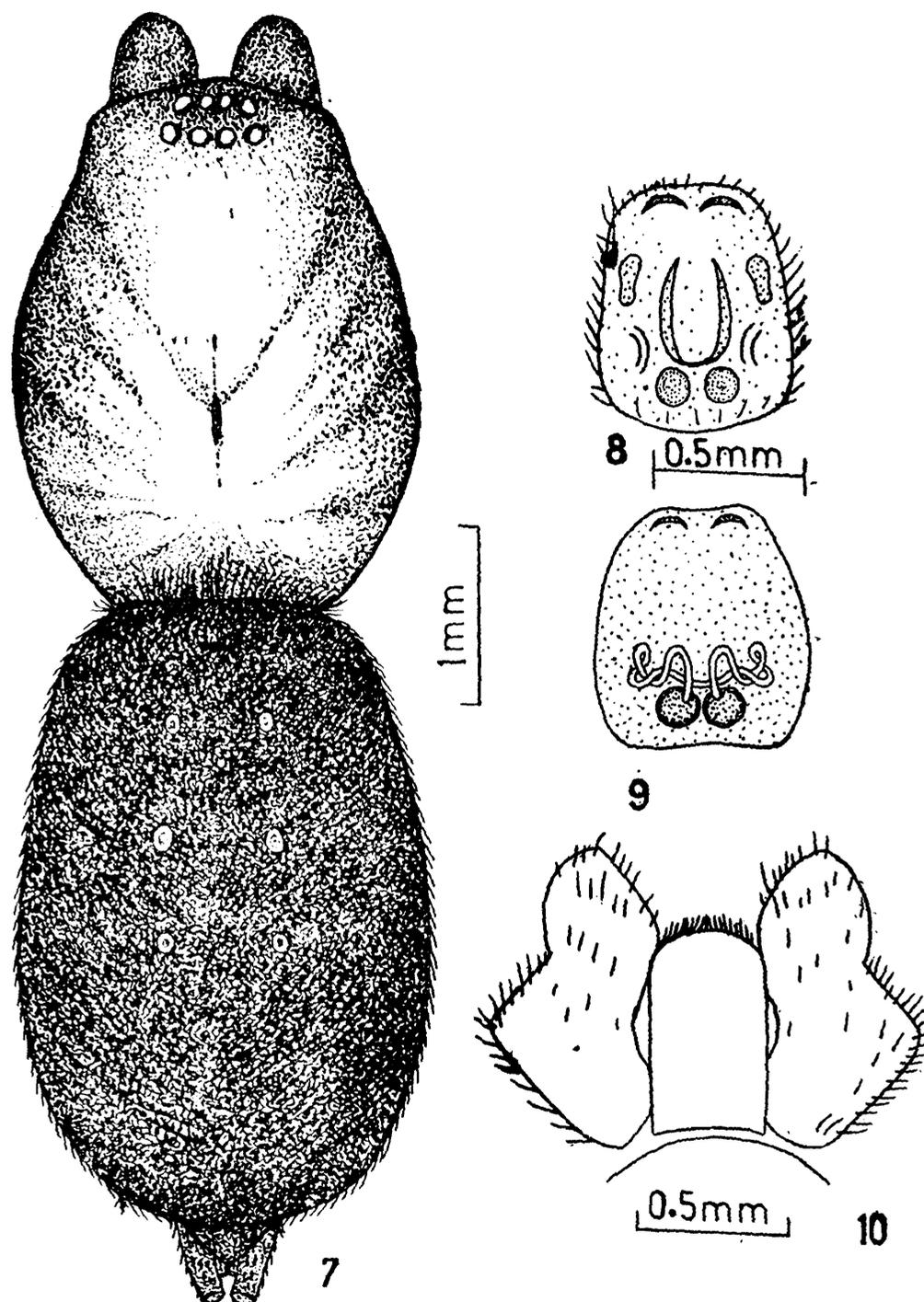


Figs. 4-6. 4. Dorsal view of female, legs omitted. 5. Epigyne. 6. Internal genitalia.

legs are brown. Total length 3.90 mm. Carapace 1.80 mm. long, 1.30 mm. wide; abdomen 2.10 mm. long, 1.50 mm. wide.

Cephalothorax: Nearly oval, longer than wide and wider in front, cephalic region slightly high, clothed with fine pubescence. Posterior of cephalo thorax provided with a fovea. Eyes round and silvery white. Anterior

row slightly recurved and medians larger than laterals and pearly white. Posterior row procurved and all eyes nearly same size. Ocular quad slightly longer than wide and wider behind. Chelicerae strong, inner margin with five teeth and outer margin with three. Maxillae and labium longer than wide, anterior end of maxillae provided with



Figs. 7-10. 7. Dorsal view of female, legs omitted. 8. Epigyna.
9. Internal genitalia. 10. Labium and maxillae.

scopulae. Sternum heart-shaped, pointed behind deep brown and clothed with hair. Legs long and slender, clothed with hair and spines. Tibiae and metatarsi of I and II provided with seven and five pairs of ventral spines respectively.

Abdomen: Longer than wide, narrowing in front, clothed with pubescence. Nearly total area of the dorsal side provided with large sclerotized scutum as in fig. 4. Ventral side, light brown to whitish, white and brown lines extending from epigastric fold

to near the base of spinnerets. Epigyne and internal genitalia as in figs. 5-6.

Holotype : Female in spirit, deposited at Z. S. I., Calcutta, Regd. Nos. 5115/18 and 5142/18.

Paratype : Two females, from Zoological garden, Alipore, Calcutta, India, 12.3.1984, Coll. Bijan Biswas.

Type-locality : Zoological garden, Alipore, Calcutta, India, 1-9-1982, Coll. Bijan Biswas.

This species in general resembles *Castianeira indica* Tikader, but it is separated as follows : (i) Chelicerae strong, outer margin provided with three and inner margin with five teeth but in *C. indica* outer three and inner margin with six. (ii) Nearly whole area of the dorsum covered with sclerotized scutum but in *C. indica* dorsum sclerotize scutum covered with small area. (iii) Epigyne and internal genitalia also structurally different.

Family GNAPHOSIDAE

3. *Herpyllus calcuttaensis* sp. nov.

(Figs. 7-10)

General : Cephalothorax and legs redish brown, abdomen black-velvate in colour covered with mousy hair. Total length 4.20mm. Carapace 1.40 mm. long, 1.50mm. wide ; abdomen 2.60 mm. long, 1.65 mm. wide.

Cephalothorax : Longer than wide, oval, slightly narrowing in front, slightly convex, clothed with pubescence and some long hair, posterior middle provided with a conspicuous short fovea. Eyes pearly white, separated, posterior row slightly longer than the anterior row. Anterior row of eyes nearly straight, laterals larger than the medians and close to adjacent medians than to each other. Posterior row of eyes nearly straight, medians

nearly rounded, smaller than the laterals and slightly closer to each other to the adjacent laterals. Median ocular quadrangle longer than wide and wider behind than in front. Chelicerae moderate, vertical inner margin provided with one small tooth and outer margin with three teeth. Maxillae and labium longer than wide, provided with long hair, and anterior end provided with scopulae, shape as in text fig. 10. Sternum deep brown, nearly elliptical, clothed with fine and long hair. Legs relatively long and strong, clothed with hair and spines. Legs formula 4123.

Abdomen : Longer than wide, widest behind the middle clothed with black-velvately mousy hair. Presence of three pairs of sigilla on the dorsum. Ventral side lighter than the dorsal. Epigyne and internal genitalia as in figs. 8-9.

Holotype ; Female in spirit, deposited at the Z. S. I., Calcutta, Regd. No. 5116/18.

Type-locality : Zoological garden, Alipore, Calcutta, India, 1-9-1982 Coll. Bijan Biswas.

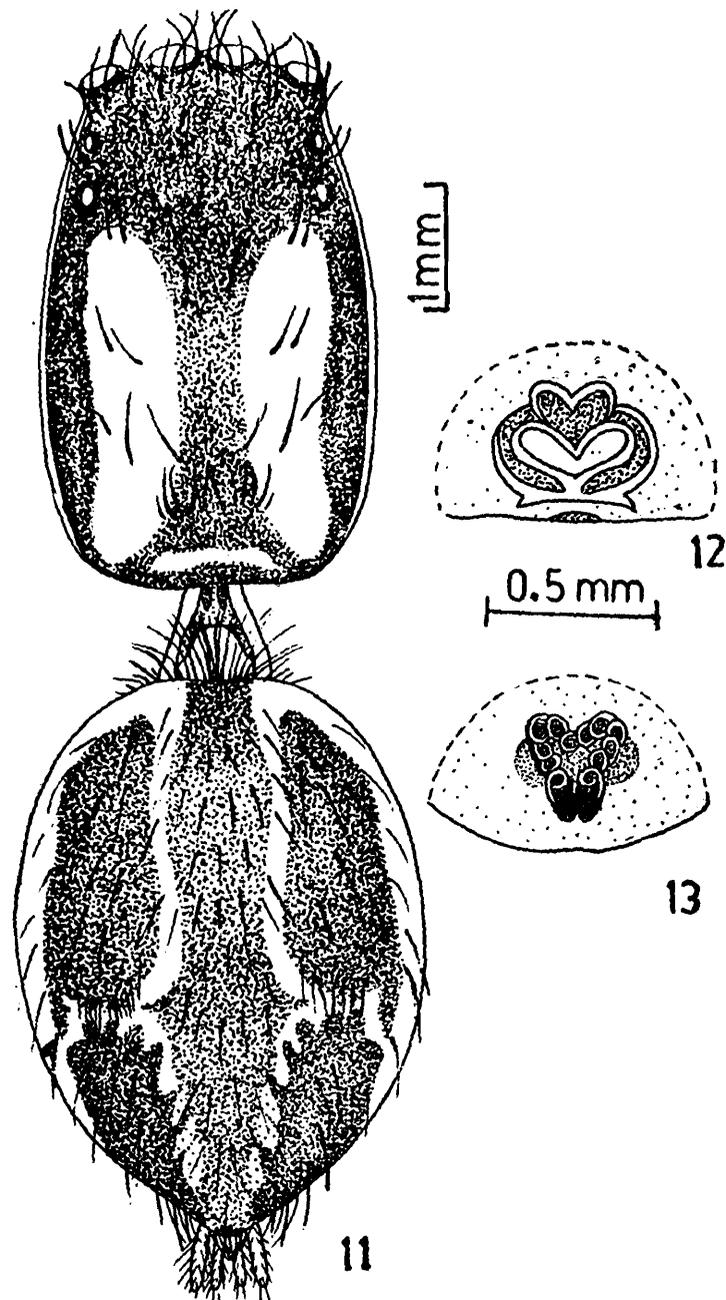
This species resembles *Herpyllus goaensis* Tikader, but differs from it as follows : (i) Abdomen black-velvate, covered with mousy hair but in *H. goaensis* grey and no such mousy hair. (ii) Presence of three pairs of sigilla but in *H. goaensis* no such sigilla. (iii) Epigyne and internal genitalia also structurally different.

Family SALTICIDAE

4. *Phidippus calcuttaensis* sp. nov.

(Figs. 11-13)

General : Cephalothorax and legs brownish red in colour. Total length 7.75 mm. Carapace 3.75 mm. long, 2.75 mm. wide ; abdomen 4.00 mm. long, 2.70 mm. wide.



Figs. 11-13. 11. Dorsal view of female, legs omitted. 12. Epigyne. 13. Internal genitalia.

Cephalothorax : Longer than wide, high in front, posterior and lateral sides sloping. Cephalic region flat, clothed with fine white hair. Anterior medians are milky white and laterals are pearly white. Anterior row of eyes recurved. Bases of all eyes encircled by blackish rim. Anterior and posterior lateral eyes nearly same size. Second pair of eyes

very small and situated near the anterior lateral eyes. Middle of cephalothorax provided with a small deep fovea. Chelicerae with one moderate tooth on inner margin and two small teeth on outer margin. Sternum nearly oval, longer than wide, narrowing in front. Legs clothed with hair and spines, I and II more robust than III and IV.

Tibiae and metatarsi I and II provided with three and two pairs of ventral spines respectively.

Abdomen : Longer than wide and pointed behind, clothed with spine-like hair. White and brownish black decorated patches on the dorsum. Anteriorly presence of two pairs of sigilla. Ventral side creamy-white. Epigyne and internal genitalia as in figs. 12-13.

Holotype : Female in spirit, deposited at Z.S.I., Calcutta, Regd. No. 5117/18.

Type-locality : Zoological garden, Alipore, Calcutta, 4-1-1982. Coll. Bijan Biswas.

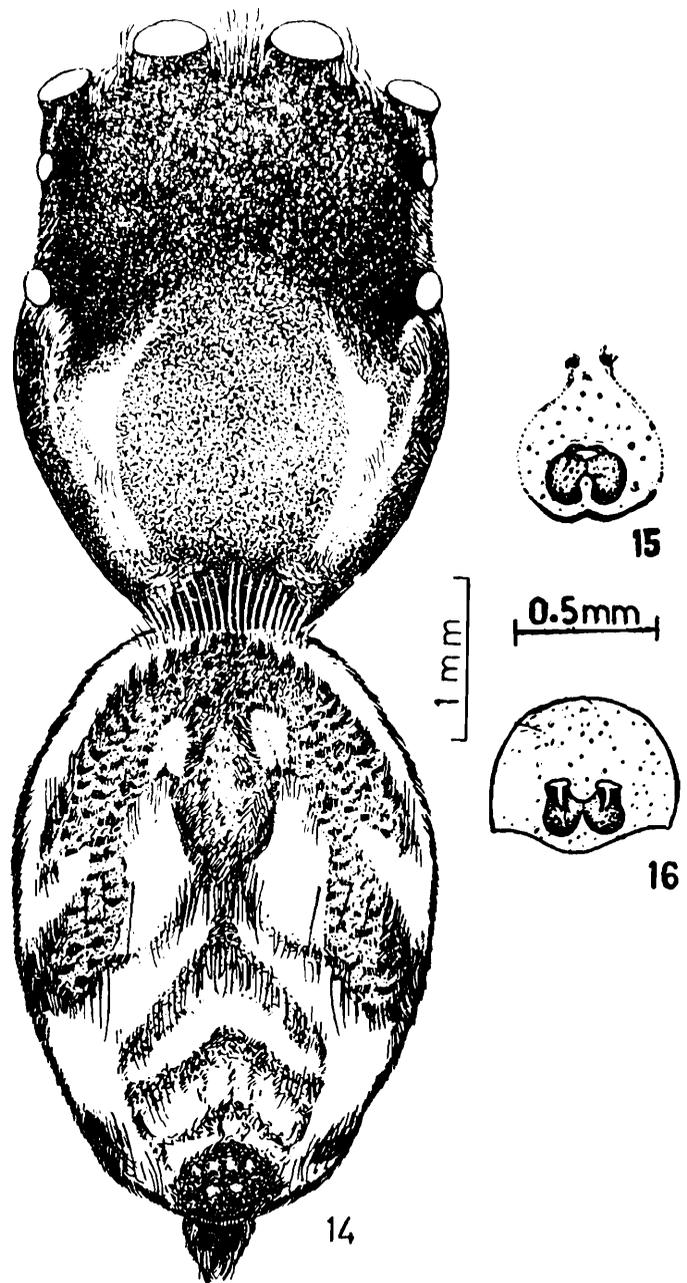
This species resembles *Phidippus bengalensis* Tikader but can be separated as follows : (i) Colour pattern of abdomen different. (ii) Presence of two pairs of sigilla but in *P. bengalensis* with one pair of sigilla. (iii) Epigyne and internal genitalia also structurally different.

5. *Marpissa tikaderi* sp. nov. (Figs. 14-16)

General : Cephalothorax, legs and abdomen are deep brown to light brown in colour. Total length 10.30 mm. Carapace 4.40 mm. long, 2.90 mm. wide ; abdomen 5.00 mm. long, 3.40 mm. wide.

Cephalothorax : Longer than wide, deep brown. clothed with black and spine-like hair. Cephalic region flat with a conspicuous pale, nearly two longitudinal bars extending from posterior row of eyes to end of the cephalothorax and with a small fovea. Eyes of anterior row recurved and anterior median eyes nearly four times longer than the lateral eyes. Middle row of eyes small and situated nearly equidistant from anterior and posterior laterals. Base of the eyes encircled by white mousy hair. Posterior lateral eyes slightly smaller than the anterior lateral eyes. Cheli-

cerae moderately strong and with one tooth on outer margin. Labium longer than wide, maxillae broad in front and provided with scopulae. Sternum elliptical, clothed with fine hair and spines. Legs formula 4312. Tibiae and metatarsi of I and II provided with three and two pairs of ventral spines respectively.



Figs. 14-16. 14. Dorsal view of female, legs omitted. 15. Epigyne. 16. Internal genitalia.

Abdomen : Longer than wide, narrowing behind, clothed with fine and few coarse hair. Dorsum provided with two longitudinal conspicuous deep brown bands extending from base to the end of abdomen and middle of it divided transversely by white band. Presence of two pairs of sigilla on the

dorsum. Ventral side pale colour. Epigyne and internal genitalia as in figs. 15-16.

Holotype : Female in spirit, deposited at Z.S.I., Calcutta, Regd. No. 5118/18.

Type-locality : Zoological garden, Alipore, Calcutta, 4-1-1982. Coll. *Bijan Biswas*.

This species resembles *Marpissa anusuae* Tikader & Biswas but differs from it as follows : (i) Presence of two longitudinal bars extending from posterior row of eyes to end of the cephalothorax but in *M. anusuae* there is a square-shaped conspicuous pale patch on the middle of thorax. (ii) Tibiae and metatarsi of I and II provided with three and two pairs of ventral spines but in *M. anusuae* with four and two pairs of ventral spines. (iii) Epigyne and internal genitalia also structurally different.

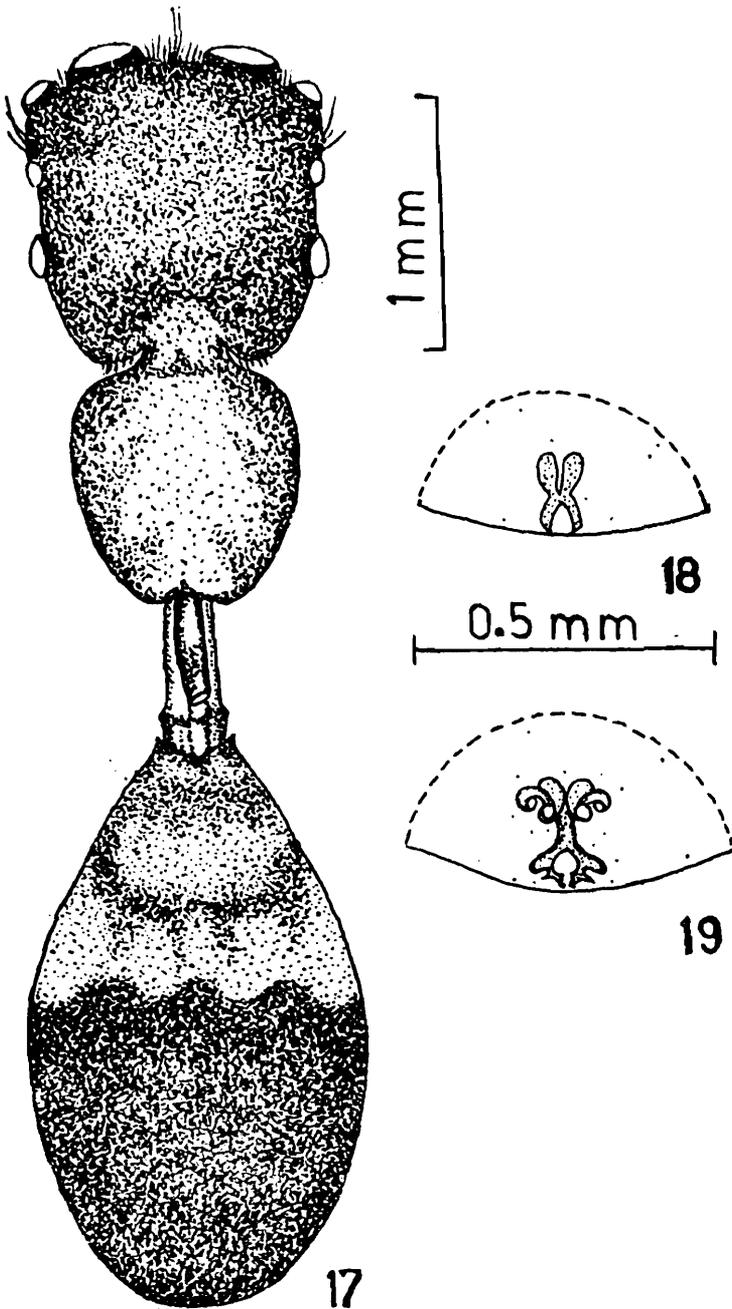
6. *Myrmarachne calcuttaensis* sp. nov.

(Figs. 17-19)

General : Cephalothorax deep brown to light brown in colour, legs and abdomen blackish grey. Total length 5.10 mm. Carapace 2.20 mm. long, 1.10 mm. wide ; abdomen 2.30 mm. long, 1.30 mm. wide.

Cephalothorax : Longer than wide clothed with fine grey hair. Cephalic region high and flat. Cephalic and thoracic junction very much constricted and thoracic region sloping behind as in Fig. (17). Anterior row of eyes slightly procurved. Ocular trapezium wider than long. Sternum long and narrow. Legs thin and long clothed with fine hair. I and II pairs of legs pale in colour and provided with conspicuous blackish markings, III and IV pairs of legs blackish brown colour, legs formula 4312.

Abdomen : Longer than wide and posterior end wider than anterior end and clothed



Figs. 17-19. 17. Dorsal view of female, legs omitted.
18. Epigyne.
19. Internal genitalia.

with fine pubescence. Ventral side slightly pale colour than the dorsal side. Pedicel not very long. Epigyne and internal genitalia as in figs. 18-19.

Holotype : Female in spirit, deposited at Z. S. I., Calcutta, Regd. No. 5119/18.

Type-locality : Zoological garden, Alipore, Calcutta, 4-1-1982. Coll. *Bijan Biswas*.

This species resembles *Myrmarachne bengalensis* Tikader but separated as follows : (i) Body colour is different. (ii) Markings and colour pattern of the legs are different from *M. bengalensis* (iii) Epigyne and internal genitalia also structurally different.

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