

STUDIES OF SOME GIANT CRAB SPIDERS OF THE FAMILY HETEROPODIDAE FROM INDIA. PART II.

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INTRODUCTION

The spiders of the family Heteropodidae are known as Giant Crab spiders, which we had described in our previous paper with the Systematic studies of the Genus *Heteropoda* Latreilly, *Olios* Walckenaer, *Sparielenus* Simon the remaining genera are going to be described in this paper are *Tarania* Simon, *Panaretus* Simon, *polystes* L. Koch. *Thelcticopis* Karsch. All studies have been made on the basis of type or authenticated identified specimens which were described by Simon, Pocock & Gravely are received from Museum National d'Histoire Naturelle, Paris, British Museum (Natural History) London & National collection of Zoological Survey of India, Calcutta.

The validity of family name, and General taxonomic *Characters* of spiders with special reference to the family are discussed in our previous paper. This paper deals key to the genera of the family Heteropodidae with Systematic study of remaining genera.

Family HETEROPODIDAE (Giant Crab-spiders)

- 1873. Heteropodidae, Thorell, *Nova Act. Reg. Soc. Sci. Upsaliae* (3) 7 : 606.
- 1895. Heteropodidae, Thorell, *Descriptive catalogue of the spiders of Burma* : 265.
- 1897. Sparassidae, Simon, *Hist. Nat. Araignees*, 2(1) : 48.
- 1912. Ensparassidae, Jarvi, *Ann. Acad. Sci. Fenn.*, 4(1) : 1-131.
- 1931. Ensparassidae, Gravely, *Rec. Indian Mus.*, 33(3) : 237.
- 1935. Sparassidae, Dyal, *Bull. Zool. Punjab Univ.*, 1 : 204.
- 1942. Heteropodidae, Comstock, *The Spider book*, : 564.
- 1951. Heteropodidae, Bonnet, *Biblio. Araneorum* 2(3) : 2202.
- 1954. Eusparassidae, Roewer, *Kat. der Araneae*, 2(A) : 671.
- 1973. Heteropodidae, Patel and Patel, *Orient. Insects*, 7(1) : 127-132.
- 1973. Heteropodidae, Platnick and Levi, *Bull. Brit. Arach. Soc.* 2(8) : 166-167.
- 1977. Heteropodidae, Tikader, *Rec. zool. Surv. India*, 72 : 177-184.

Characters : Cephalothorax broader than long is general except a few, its convexity and thickness varying with genera, thoracic groove longitudinal. Eyes variable in size in different genera, eight in number and are placed in two rows; medians forming a quadrangle. Cheliceral fang furrow armed with teeth. Sternum heart shaped, pointed behind. Legs laterigrade, powerful, spinny, tarsi and metatarsi with thick scopulae on the ventral side; apex of metatarsus with soft trilobate membrane, tarsi with 2 toothed

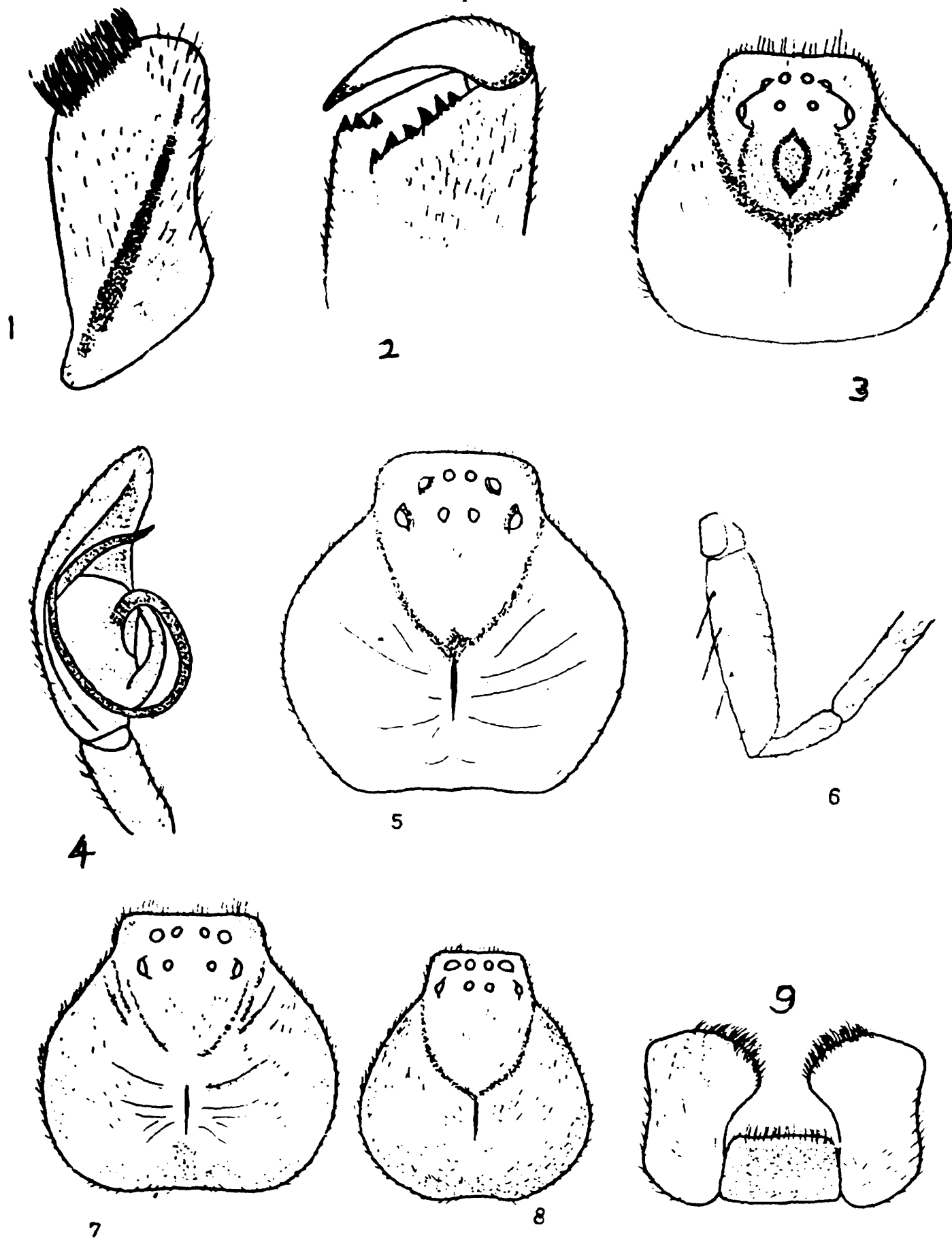
claws. Abdomen variable in size and shape, colulus absent, 3 pairs of spinnerets. Epigynum provide with paired lateral lobes, often these are accompanied with a median piece. Spiders are generally larger in size, do not make webs, female carry large cocoon beneath her body.

Type-genus *Heteropoda* Latreille.

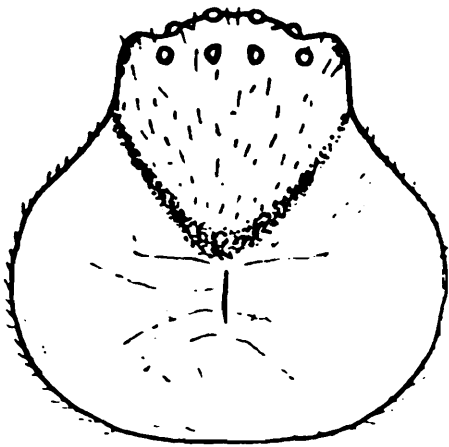
Distribution : Tropical and sub-tropical parts of the world.

Key to the Genera of the Family HETEROPODIDAE

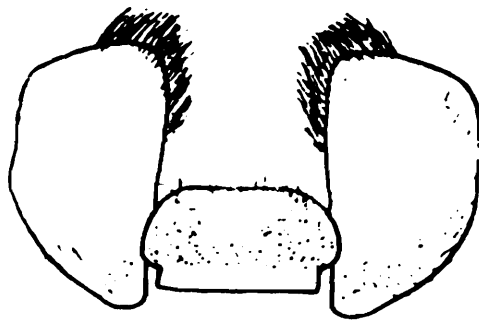
1. Posterior row or eyes recurved; lateral eyes prominent.....2
 Posterior row of eyes straight or procurved; lateral eyes not prominent and may be sessile.....5
2. Maxillae with distinct midlongitudinal crest (Fig. 1); ocular quad squarish; inner margin of fang furrow armed with 5-6 teeth (Fig. 2).....
*Spariolenus*
 Maxilla not crested; ocular quad not squarish; inner margin of fang furrow with less number of teeth.....3
3. Anterior row of eyes slightly procurved and much shorter than the posterior eye row (Fig. 3); cephalic part of carapace much elevated and provided with a median depression (Fig. 3); embolus of male palp encircles wholly the genital bulb (Fig. 4).....*Torania*
 Anterior row of eyes straight or procurved and more or less equally lengthed to the posterior eye row; cephalic part of carapace not elevated and without any median depression; embolus of male palp otherwise ...4
4. Ocular quad twice longer than wide and seems parallel sided; cephalic part separated from thoracic part by a distinct semicircular depression; femra provided with very long fringed bristles underneath.....
*Pandercetes*
 Ocular quad less than twice longer than wide and narrow in front than behind (Fig. 5); cephalic part slightly depressed in front; femora not provided with fringed bristles (Figs. 6)..... *Heteropoda*
5. Cephalothorax larger than broad and much higher posteriorly; eye region smaller; anterior lateral eyes more than twice than anterior medians (Fig. 7); eyes of anterior row close to each other (Fig. 7).....
*Panaretus*
 Cephalothorax otherwise and not much higher posteriorly; eye region not smaller, anterior lateral eyes otherwise; eyes of anterior row not close to each other.....6



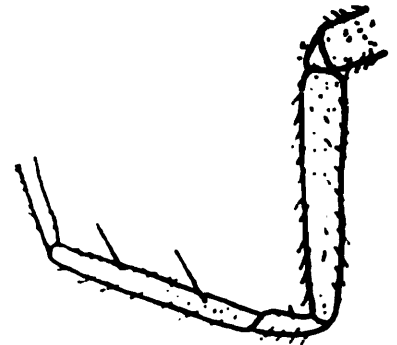
Figs. 1-9. 1. Ventral view of left maxilla of *Spariolenus*. 2. Inner view of left chelicera of *Spariolenus*. 3. Dorsal view of carapace of *Torania*. 4. Ventral view of eight male palp of *Torania*. 5. Dorsal view of carapace of *Heteropoda*. 6. Lateral view of left leg I of *Heteropoda*. 7. Dorsal view of carapace of *Panaretus*. 8. Dorsal view of carapace of *Palystes*. 9. Ventral view of labium and maxillae of *Palystes*.



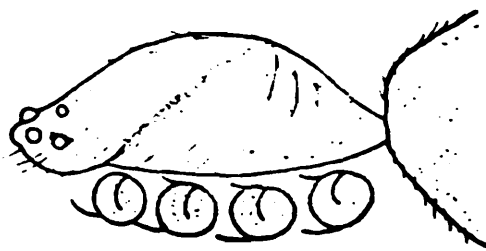
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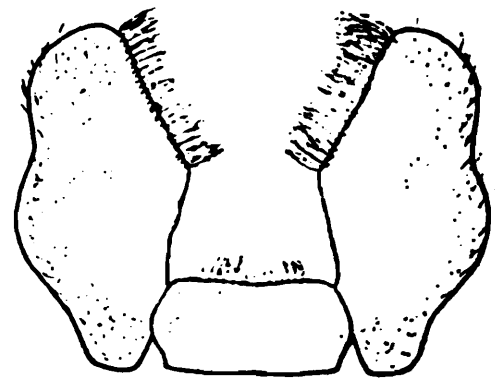
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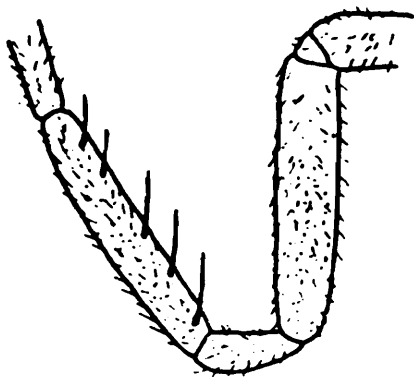
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16

Figs. 10-16. 10. Dorsal view of carapace of *Olios*. 11. Ventral view of labium and maxillae of *Olios*. 12. Lateral view of right leg I of *Olios*. 13. Lateral view of cephalothorax of *Thelcticopis*. 14. Ventral view of labium and maxillae of *Thelcticopis*. 15. Lateral view of left leg I of *Thelcticopis*. 16. Ventral view of spinnerets of *Thelcticopis*.

6. Carapace narrow anteriorly and convex posteriorly but abruptly sloping down; anterior lateral eyes much larger than anterior medians (Fig. 8); labium truncated at the apex (Fig. 10).....*Palyates*
 Carapace not narrow anteriorly and posteriorly otherwise; anterior lateral eyes smaller than anterior medians; labium not truncated at the apex....7
7. Cephalic part of carapace remarkably higher than the thoracic part (Fig. 10); labium rounded at the apex (Fig. 11); tibia 1 armed with 2 pairs of inferior spines (Fig. 12); spinnerets without any membranous stalk and without chitinous ring*Olios*
 Cephalothorax longitudinally convex (Fig. 13); labium truncated at the apex (Fig. 14); tibia I armed with 5-7 pairs of inferior spines (Fig. 15); spinnerets supported on a membranous stalk and strengthened by a hairy chitinous ring (Fig. 16).....*Thalcticopis*

Genus *Torania* Simon

1886. *Torania*, Simon, *Act. Soc. Linn. Bord.*, 40 : 143.
 1897. *Torania*, Simon, *Hist. Nat. Araign.*, 2 : 33.
 1899. *Torania*, Pocock, *Proc. zool. Soc. Lonc.*, : 874.
 1902. *Torania*, Waterhouse, *Index zoolgicus, London, 1902* : 421.
 1928. *Torania*, Petrunkevitch, *Trans. Connect. Acad. Arts Sci.*, 29 : 159.
 1931. *Torania*, Gravely, *Rec. Indian Mus.*, 33(3) : 246.
 1938. *Torania*, Gerhardt & Kastner, *Echte Spinner* : 629.

Characters : Cephalothorax slightly longer than wide; cephalic part much elevated than the thoracic part and may be provided with distinct mid longitudinal depression. Both anterior and posterior rows of eyes slightly recurved; anterior row of eyes much shorter than the posterior row; posterior lateral eyes much on prominent stalks; ocular quad narrow in front than behind. Second pair of legs robust and largest of all. Epigynum consists of three piece of sclerites united in front. Palpal organ furnished with slender embolus encircled the posterior part of the genital bulb.

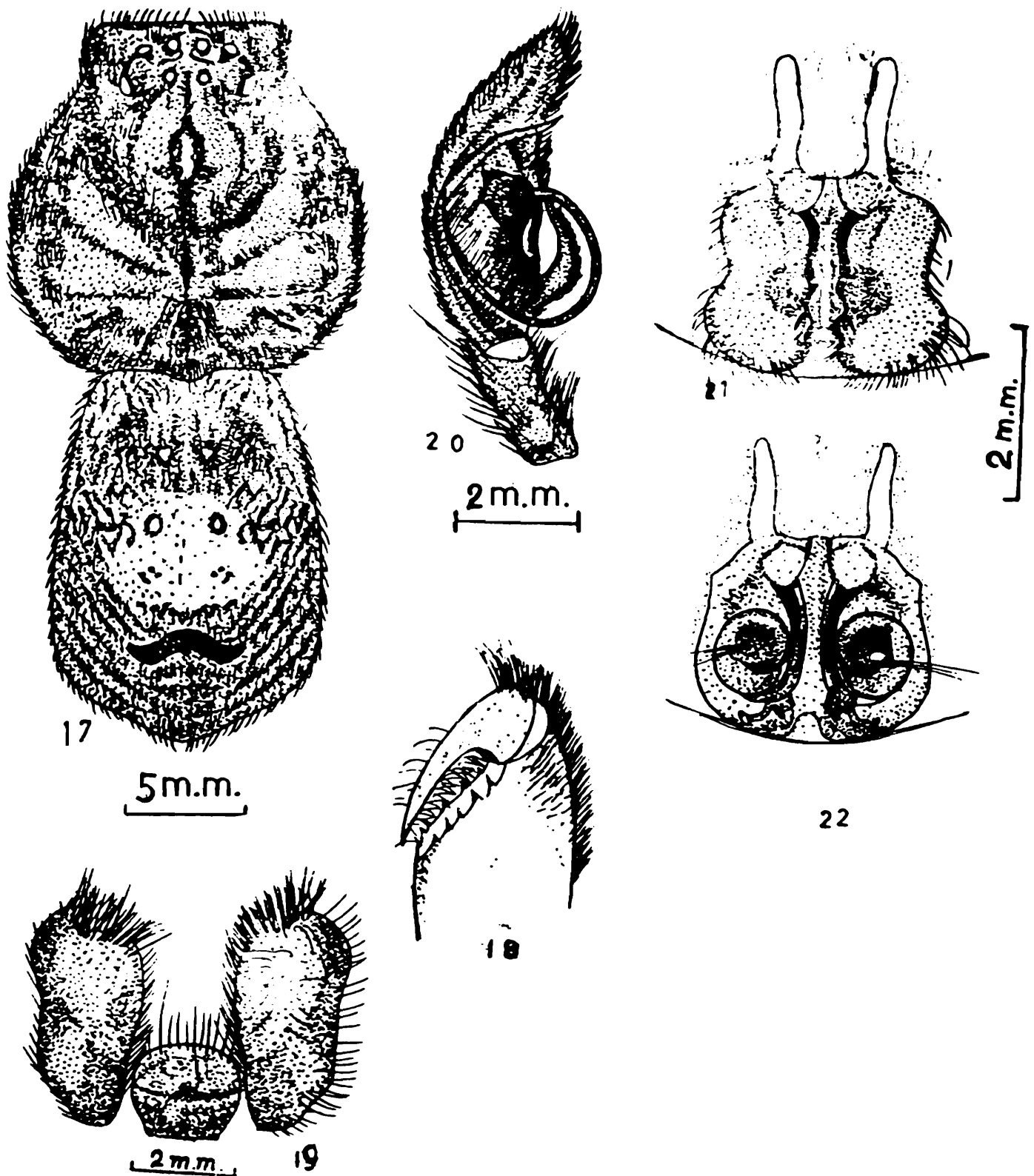
Type-species : *Torania gloriosa* Simon.

Distribution : India, Indo-China, Java, Sumatra, Africa.

Torania gloriosa Simon
 (Figs. 17 - 22)

1880. *Torania gloriosa*, Simon, *Act. Soc. Idnn. Bord.*, 34 : 257.
 1904. *Torania gloriosa*, Simon, *Miss. Pavia Indochina, Arachn.*, 3 : 285.
 1931. *Torania gloriosa*, Gravely, *Rec. Indian Mus.*, 33(3) : 246.
 1954. *Torania gloriosa*, Roewer, *Kat. der Araneae*, 2(A) : 725.

General : Cephalothorax and legs dark brown, abdomen yellowish. Total length 30.20 mm.; carapace 15.20 mm. long, 15.00 mm. wide, abdomen 15.10 mm. long, 11.00 mm. wide.



Figs. 17-22. *Torania gloriosa* Simon 17. Dorsal view of female, legs omitted. 18. Inner view of left chelicera showing arrangements of teeth. 19. Ventral view of labium and maxillae. 20. Ventral view of right male palp. 21. Epigynum, ventral view. 22. Internal genitalia, dorsal view.

Cephalothorax : Nearly as long as wide, robust in structure, covered with large hairs, cephalic part much elevated with a circular ridge like appearance and a cephalic depression at the centre as in text-fig. 17; thoracic part distinctly lower than cephalic part and provided with a mid-longitudinal fovea as in text-fig.17. Anterior row of eyes smaller than the posterior row as in text-fig. 17; anterior row nearly straight and eyes are subequal; posterior row of eyes distinctly recurved, posterior medians are much smaller than posterior laterals; posterior lateral eyes are placed on prominent stalks as in text-fig. 17. Ocular quad narrow anteriorly. Clypeus very broad. Chelicera robust and strong, dark brownish, outer and inner margins of fang furrow armed with 6 and 5 small teeth respectively as in text-fig. 18. Labium brownish, nearly as long as wide. Sternum oval shaped, dark brown. Legs very powerful and long, 2nd pairs of leg longest nearly 60 mm. in length, metatarsi and tarsi provided with thick ventral scopulae. Male palp with long slender embolus encircling the posterior part of the genital bulb as in text-fig. 20.

Abdomen : Roughly pentagonal, comparatively smaller than cephalothorax, clothed with large hair. Dorsum of abdomen provided with 2 pairs of sigilla and at the posterior 2/3rd end dark brown mark present as in text-fig. 17. Epigynum with a pair of lateral lobes and median piece, lateral lobes united at the anterior end as in text-fig.21. Internal genitalia as in text-fig. 22.

Distribution : India : Silcuri, Cachar, Assam, Indochina, Malaysia, Indonesia.

Remarks : Description and illustrations are based on the basis of one paratype female and a male received from the B.M.(N.H.), London, Regd. No. 1860.15. One female specimen received from the M.N.H.S., Paris, Regd. No. 7849 was also studied.

Genus *Pandercetes* L. Koch

- 1875. *Pandercetes* Koch, L. *Arachn. Austral.*, : 739.
- 1880. *Pandercetes*, Simon, *Act. Soc. linn. Bord.*, 34 : 227.
- 1897 *Pandercetes*, Simon, *Hist. nat. Araign.*, 2 : 56.
- 1900. *Pandercetes*, Pocock, *Fauna Brit. India, Arachn.*, : 254.
- 1903. *Pandercetes*, Hogg, *Proc. Zool. Soc. Lond.*, 1902 (2) : 419
- 1912. *Pandercetes* : Jarvi, *Ann. Acad. Sci. Fenn.*, (A) 4(1) : 72.
- 1931 *Pandercetes* : Gravely, *Rec. Indian Mus.*, 33(3) : 221-222.
- 1928. *Pandercetes* : Petrunkevitch, *Trans. Connect. Acad. arts Sci.*, 29 : 158.
- 1954. *Pandercetes* : Roewer, *Kat. der Araneae*, 2(a) : 722.

Characters Cephalothorax not much longer than wide, cephalic part differs from thoracic part by a semicircular depression and distinct thoracic furrow present. Anterior row of eyes straight and eyes narrowly and equally separated from each other; posterior row of eyes recurved; lateral eyes larger than medians; ocular quad twice longer than wide and slightly narrow in front than behind; anterior median eyes slightly bigger than posterior median eyes slightly bigger than posterior medians. Inner margin of fang furrow armed with four teeth of equal size, may be the last one smaller. Legs are in very great length: femora provided with very long fringed bristles underneath.

Distribution : India, Sri Lanka, Burma, Malacca, New Guinea, Malayasia, Australia.

Remarks : This genus is only recorded by a single species *Pandercetes calatus* Pocock from India description of which is given in the *Fauna of British India*, Arachnida, P. 265 by Pocock. But since we have not got any Type of identified specimen we could not included it in this work.

Genus *Panaretus* Simon

1880. *Panaretus* Simon, *Act. Soc. linn. Bord.*, 34 : 259.

1902. *Panaretus* : Waterhouse, *Index Zoologicus*, London. 1902 : 264.

1928. *Panaretus* : Petrunkevitch, *Trans. Connect. Acad. arts Sci.*, 29 : 158.

1931. *Panaretus* : Gravely, *Rec. Indian Mus.*, 33(3) : 247.

1935. *Panaretus* : Gitlay, *Mus. roy. hist. nat. Belg.*, 11(20) : 14.

Characters : Cephalothorax more longer than broad and much higher posteriorly. Eye region is smaller; anterior row of eyes in a straight line and eyes close to each other; anterior median eyes more than twice smaller than anterior laterals; posterior row of eyes slightly procurved and eyes are equidistinct from one another; four median eyes subequally; ocular quad longer than broad and narrower anteriorly. Legs more slender.

Type-species : *Panaretus ignichelis* Simon.

Distribution : Java, Sumatra, Indo-China.

Key to the species of the genus *Panaretus* Simon

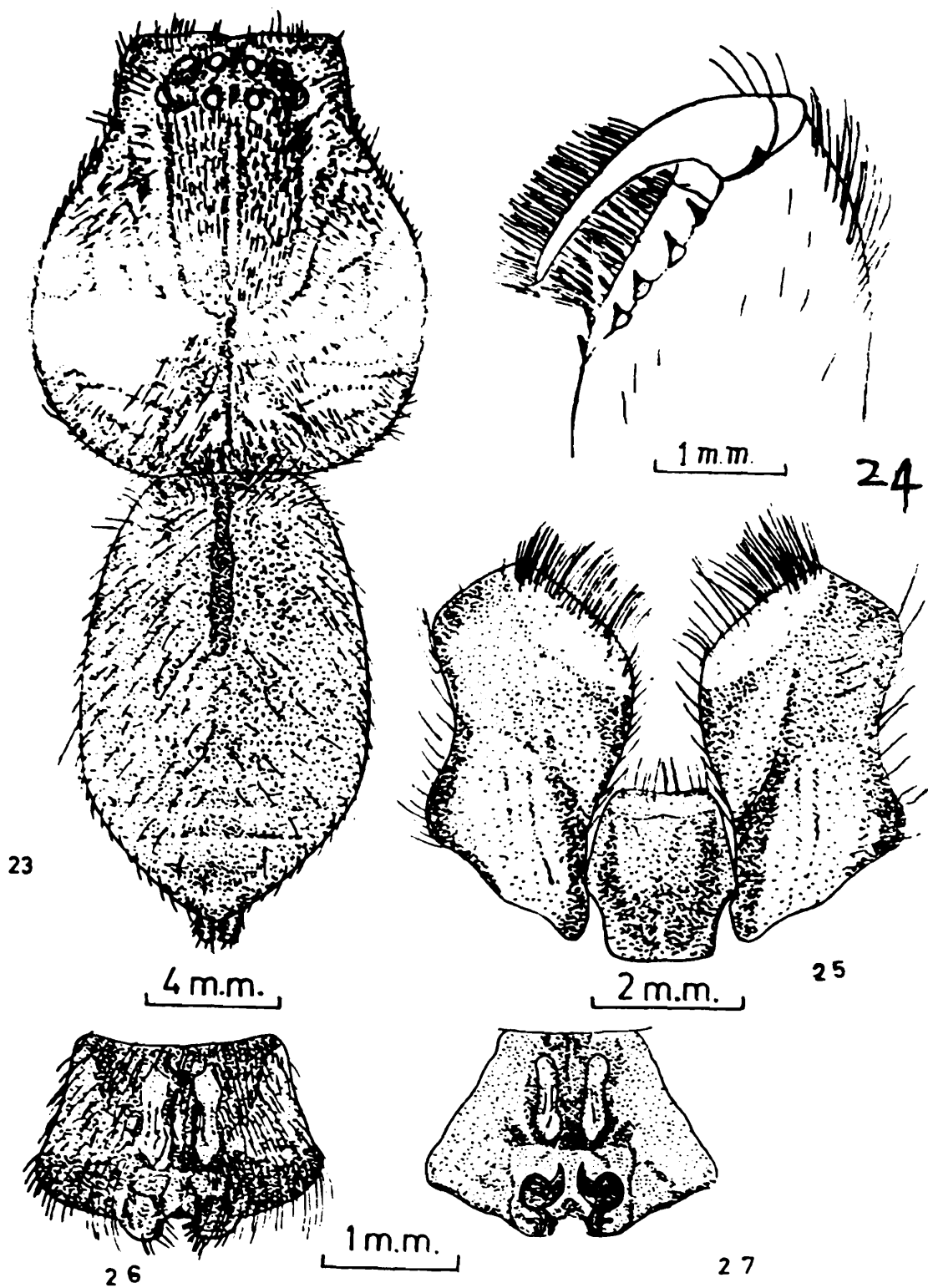
1. Cephalic region of carapace elevated than thoracic region and covered with large hairs (Fig. 23); ocular region subterminal on the carapace (Fig. 23); anterior row of eyes slightly recurved; sternum heart shaped; inner margin of fang furrow armed with 4 teeth (Fig. 24); labium longer than wide (Fig. 25); posterior pair of spinnerets enormously longer than the anterior pair; lateral lobes of epigynum short and not distinctly separated along their length (Fig. 26).....*nirounensis*
 Cephalic region of carapace distinctly more elevated than thoracic region and not covered with large hairs (Fig. 28); ocular region terminal on the carapace (Fig. 28); anterior row of eyes straight; sternum oval in shape; inner margin of fang furrow armed with 5 teeth (Fig. 29); labium wider than long (Fig. 30); posterior pair of spinnerets normal in size and slightly longer than the anterior pair; lateral lobes of epigynum much longer and distinctly separated along their length (Fig. 31).....
*ignichelis*

Panaretus nirounensis Simon (Figs. 23-27)

1903. *Panaretus nirounensis* Simon, *Ann. Soc. Ent. France*, 72 : 304.

1931. *Panaretus nirounensis*, Gravely, *Rec. Indian Mus.*, 33(3) : 247.

1954. *Panaretus nirounensis*, Roewer, *Kat. der Araneae*, 2(A) : 721.



Figs. 23-27. *Panaretus nirouensis* Simon 23. Dorsal view of female, legs omitted. 24. Inner view of left chelicera showing arrangements of legs. 25. Ventral view of labium and maxillae. 26. Epigynum, ventral view. 27. Internal genitalia, dorsal view.

General Cephalothorax dark brownish, legs brownish and abdomen dark brown. Total length 26.50. Carapace 12.40 mm. long, 11.20 mm. wide; abdomen 12.80 mm. long, 8.35 mm. wide.

Cephalothorax : Longer than wide, cephalic region covered with large hairs and more elevated than thoracic region, thoracic furrow longitudinal as in text-fig. 23. Anterior row of eyes shorter than the posterior row; both anterior and posterior rows of eyes are slightly recurved as in text-fig. 23. Posterior laterals are placed on prominent stalks. Ocular quad slightly narrow anteriorly. Labium longer than wide, dark brown as in text-fig. 25. Sternum heart shaped. Chelicerae very strong, stout, dark brown, outer margin with 2 and inner margin with 4 teeth on the fang furrow as in text-fig. 24. Legs long, less spiny, with thin scopulae on the ventral side.

Abdomen : Oval, dorsum having with a mid-longitudinal strip like mark on the anterior half of the abdomen as in text-fig. 23. Ventral side with or pair of white U-shaped mark. Posterior pair of spinnerets much longer. Epigynum provided with a pair of short lateral lobes, leaving a cavity in between at the centre as in text-fig. 26. Internal genitalia show coma shaped spermathecae as in text-fig. 27.

Distribution : India : Darjeeling, West Bengal, Sumatra.

Remarks : Description and illustrations have been prepared on the basis of an identified female specimen, received from the M.N.H.N., Paris, Regd. No. 22179.

Panaretus ignichelis Simon

(Figs. 28-32)

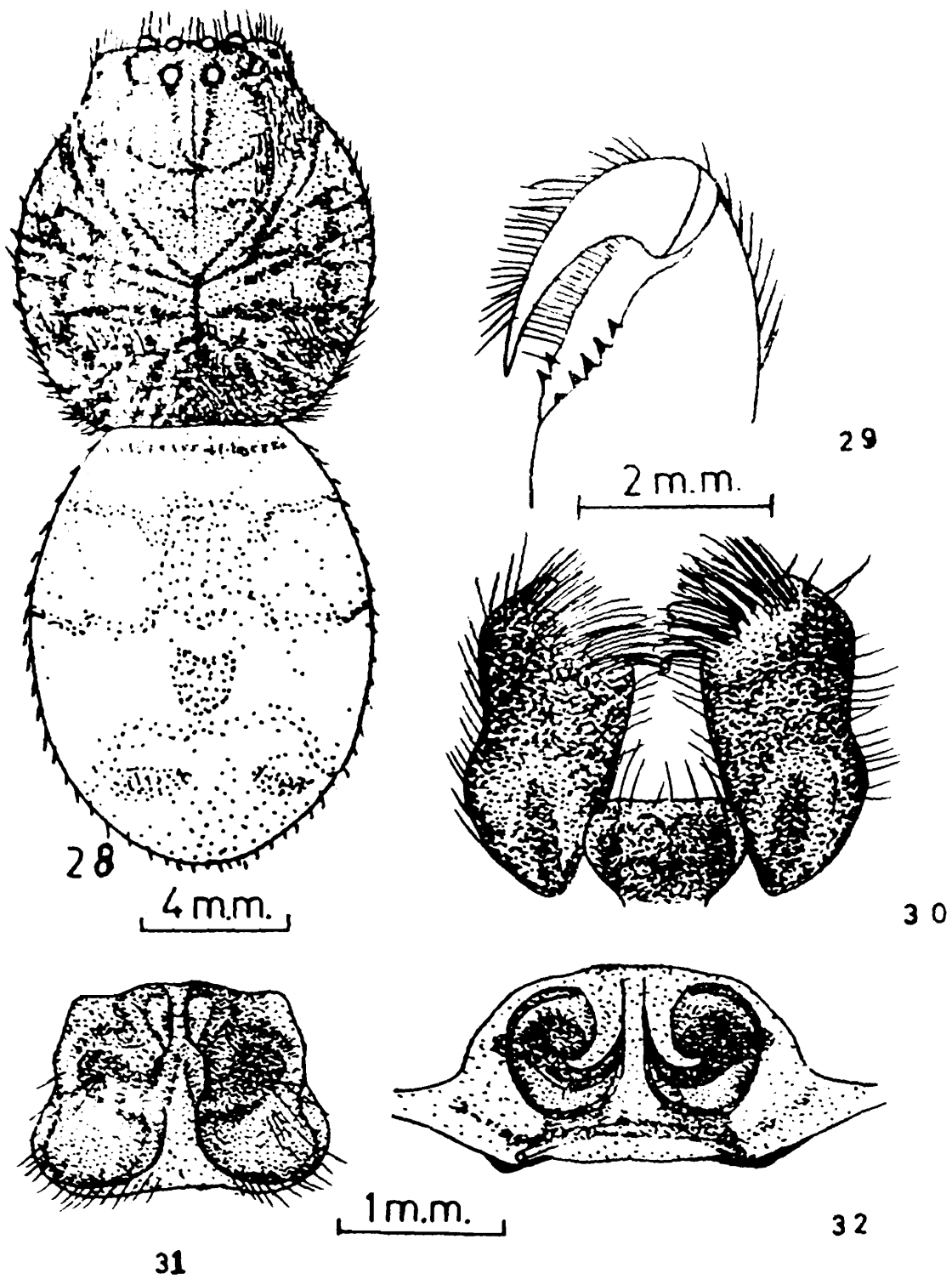
1880. *Panaretus ignichelis* Simon, *Act. Soc. Linn. Bord.*, 34 : 201.

1897 *Panaretus ignichelis*, Simon, *Hist. Nat. Araisn.*, 2(1) : 54.

1954. *Panaretus ignichelis*, Roewer, *Kat. der Araneae*, 1(A) : 721.

General : Cephalothorax and legs brownish, abdomen yellowish with brown dots. Total length 22.00 mm. Carapace 10.60 mm. long, 9.50 mm. wide; abdomen 11.80 mm long, 9.40 mm. wide.

Cephalothorax : Longer than wide much thick, covered with large and small hairs, cephalic part much elevated than thoracic part, thoracic furrow longitudinal and distincts as in text-fig. 28. Ocular region at the apex of cephalic part. Anterior row of eyes nearly straight; posterior row slightly recurved and eyes are equidistinct from one another; median eyes are subequal in size, ocular quad slightly narrow in front than behind, posterior lateral eyes are on prominent stalks as in text-fig. 28. Clypeus wider than the anterior medians. Chelicerae moderately strong, dark brown, outer and inner margins of fang furrow armed with 2 and 5 teeth as in text-fig. 29. Labium wider than long as in text-fig. 30. Sternum oval shaped, dark brownish in colour. Legs are slightly more slender and laterigrade, thick white scopulae on the ventral side of metatarsi and tarsi.



Figs. 28-32. *Panaretus ignichelis* Simon 28. Dorsal view of female, legs omitted. 29. Inner view of left chelicera showing arrangements of teeth. 30. Ventral view of labium and maxillae. 31. Epigynum, ventral view. 32. Internal genitalia, dorsal view.

Abdomen : Oval with anteriorly truncated, dorsum with brown dots at over as in text-fig. 28. Epigynum with paired lateral lobes separated along the length with a median cavity at the middle as in text-fig. 31. Internal genitalia shows semicircular ducts as in text-fig. 32.

Distribution : Indochina, Java, Borneo. Gravely recorded and described 2 known species collected from Darjeeling and Harmutti, India. Though *Panaretus ignichelis* not reported from India but it may be available in this subcontinent. As we had received the Type female specimen from the M.N.H.N., Paris, we have described it in this work.

Remarks : Illustrations and descriptions are prepared on the female Type specimen received from M.N.H.N., Paris, Regd. No. 1568.

Genus *Palystes* L. Koch

- 1875 *Palystes* Koch, L. *Arachn. Austral.*, : 701.
 1880. *Palystes*, Simon, *Act. Soc. Linn. Bord.*, 34 : 262.
 1882. *Palystes*, Scudder, *Bull. U. S. Nat. Mus.*, 19 : 231.
 1897. *Palystes*, Simon, *Hist. Nat. Araign.*, 2 : 65.
 1900. *Palystes*, Pocock, *Fauna Brit. India, Arachn.*, : 265.
 1935. *Palystes*, Dyal, *Bull. Zool. Panjab Univ.*, 1 : 210.

Characters : Carapace narrow anteriorly and longer and posteriorly convex and abruptly sloping down. Anterior row of eyes straight or a bit procurved, anterior lateral eyes much larger than medians; posterior row of eyes also straight and subequal, posterior laterals not prominent. Labium broader than long and truncated at the apex. Clypeus low. First leg longer than second.

Type-species : *Palystes castaneus* (Latreille)

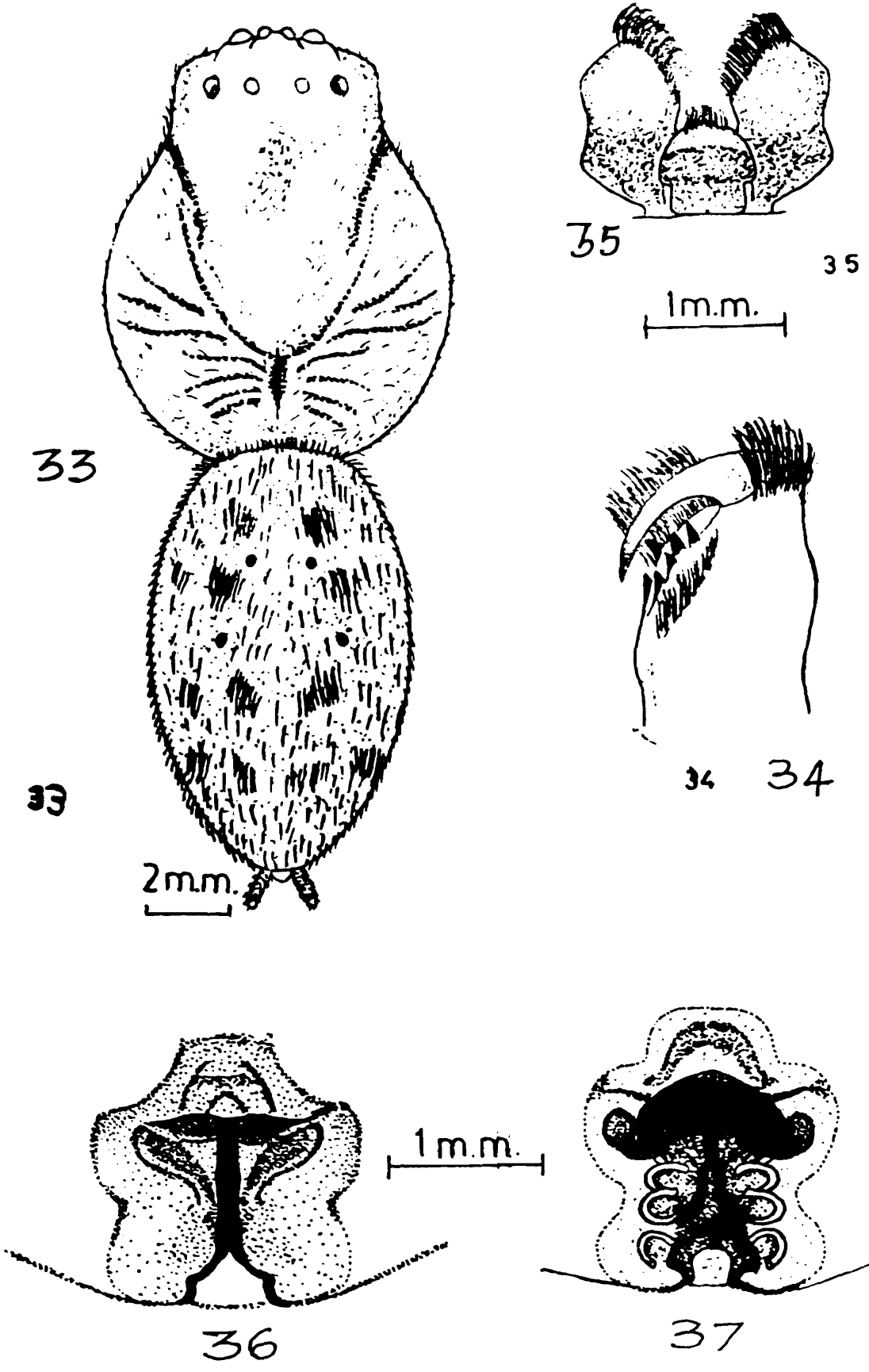
Distribution : Tropical Africa, India to Australia.

Key to the species of the genus *Palystes* L. Koch

1. Anterior lateral eyes nearly twice larger than anterior medians (Fig. 33); dorsum of abdomen provided with patches of long erected hairs (Fig. 33); epigynum with lateral lobes contracted midlongitudinally throughout their length (Fig. 36)*kochi*
- Anterior lateral eyes one and half times larger than anterior medians (Fig. 38); posterior row of eyes slightly procurved (Fig. 38); posterior row of eyes slightly procurved (Fig. 38); dorsum of abdomen not provided with patches of long erected hairs (Fig. 38); epigynum having with a V-shaped sclerite in between the lateral lobes (Fig. 42)*flavidus*

Palystes kochi Simon (Figs. 33-37)

1880. *Palystes kochi* Simon, *Act. Soc. Linn. Bord.*, 34 : 265.
 1887. *Palystes kochi* : Simon, *J. Asiat. Soc. Bengal*, 56(2) : 103.



Figs. 33-37. *Palystes kochi* Simon 33. Dorsal view of female, legs omitted. 34. Inner view of left chelicera showing arrangements of teeth. 35. Ventral view of labium and maxillae. 36. Epigynum, ventral view. 37. Internal genitalia, dorsal view.

1890. *Palystes melamychins* : Thorell, *Ann. Mus. Civ. Genova*, **30** : 53.
 1895. *Palystes kochi* : Thorell, *Descript. catal. Spid. Burma*, : 268.
 1900. *Palystes kochi* : Pocock, *Fauna Brit. India, Arachn.*, : 265.
 1931. *Palystes kochi* : Gravely, *Rec. Indian Mus.*, **33(3)** : 259.
 1954. *Palystes kochi* : Roewer, *Kat. der Araneae*, **2(A)** : 728.

General : Cephalothorax reddish brown, legs dark brownish, abdomen yellow in colour. Total length 20.30 mm; carapace 10.35 mm. long, 8.45 mm. wide; abdomen 9.90 mm. long, 6.20 mm. wide.

Cephalothorax : Longer than wide, carapace convex and covered with fine hairs; cephalic part elevated than thoracic part but not separated by grooves; cephalic part lighter in colour than thoracic part; longitudinal thoracic fovea as in text-fig. 33. Anterior row of eyes slightly procurved as seen from in front; anterior lateral eyes nearly twice the anterior medians; posterior row of eyes straight as seen from above as in text-fig. 33; eyes of posterior row equally spaced; ocular quad longer than wide and narrow in front than behind. Clypeus narrow. Sternum heart shaped, flat, brownish, antero-median ridge present at the edge. Maxilla thick and convex, provided with dense scopulae. Labium nearly as long as wide, brownish, apex thick and obtuse, lateral notch on each side as in text-fig. 35. Chelicera strong and stout, dark brownish in colour, armed with 2 and 4 teeth on outer and inner margin of fang furrow respectively as in text-fig. 34. Legs long and strong, spiny, dark brownish in colour.

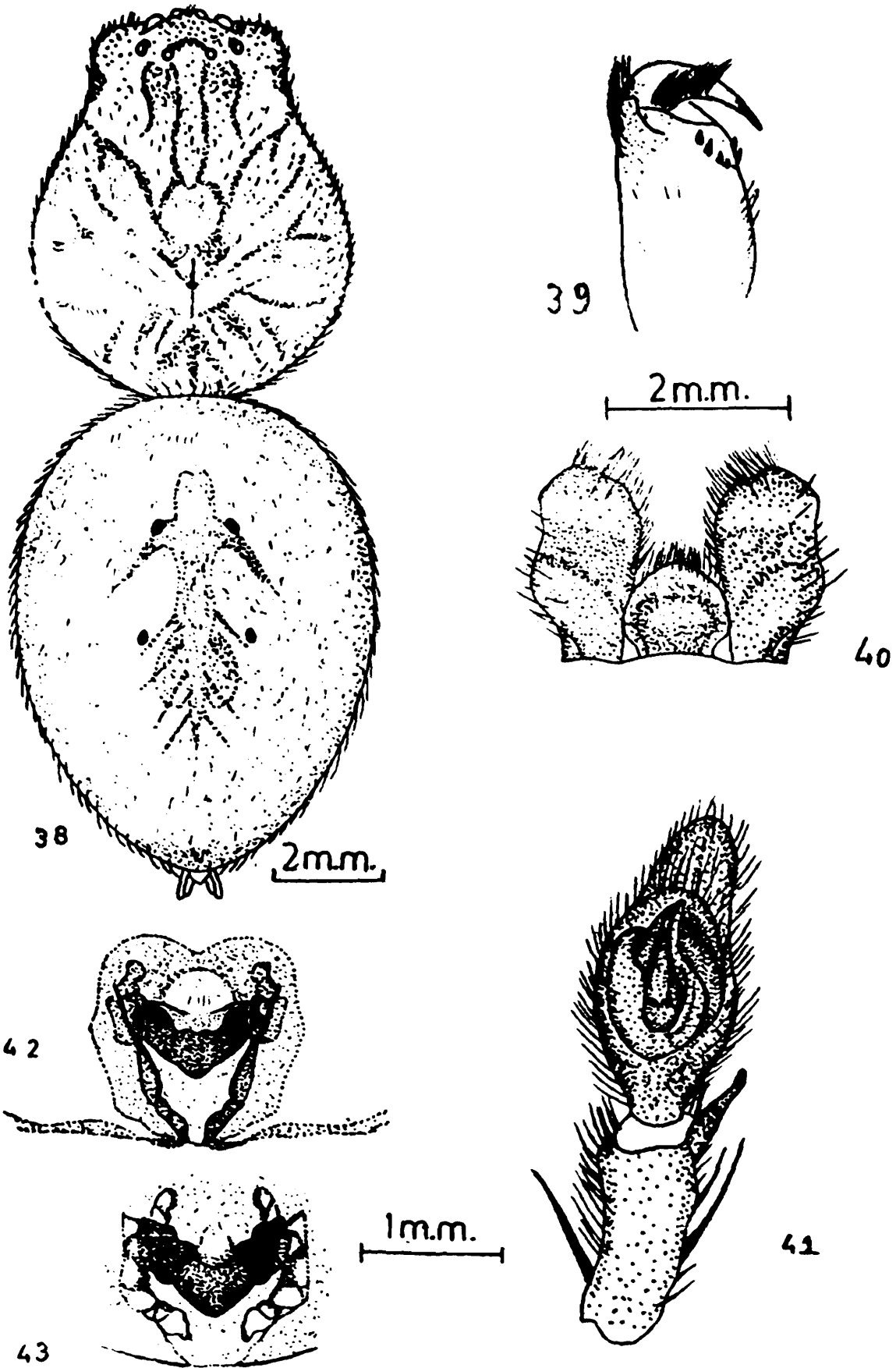
Abdomen : Oval, yellowish, dorsum provided with two pairs of sigilla and patches of long erected hairs as in text-fig. 33. Ventral side having with a pair of midlongitudinal lines. epigynum highly sclerotised and the lateral lobes are in contact throughout their length midlongitudinally leaving a narrow transverse cavity in front of them as in text-fig. 36. Internal genitalia complicated, fertilization tube spiral in structure as in text-fig. 37.

Distribution : India : Assam, Burma : Rangoon, Tenasserim. Sumatra, Malaysia.

Remarks : Description and illustrations based on the female specimen which was received from the National Collection of Z.S.I., Calcutta, Regd. No. 8580/9. This specimen of Calcutta was wrongly identified as *Heteropoda venatoia*. After comparing this specimen with the authenticated identified specimen of M.N.H.N., Paris, Regd. No. 1133, B.No. 1741 found it is *Palystes kochi*.

***Palystes flavidus* Simon**
(Figs. 38-43)

1896. *Palystes flavidus* : Simon, *Ann. Soc. Ent. France*, **65** : 489.
 1900. *Palystes flavidus* : Pocock, *Fauna Brit. India, Arachn.*, : 256.
 1931. *Palystes flavidus* : Gravely, *Rec. Indian Mus.*, **33(3)** : 258.
 1935. *Palystes flavidus* : Dyal, *Bull. Zool. Panjab Univ.*, **1** : 210.
 1954. *Palystes flavidus* : Roewer, *Kat. der Araneae*, **2(A)** : 727.



Figs. 38-43. *Palystes flavidus* Simon 38. Dorsal view of female, legs omitted. 39. Inner view of right chelicera showing arrangements of teeth. 40. Ventral view of labium and maxillae. 41. Ventral view of right male palp. 42. Epigynum, ventral view. 43. Internal genitalia, dorsal view.

General : Cephalothorax yellowish in colour, legs yellowish with faint brownish lint, abdomen pale yellowish. Total length 15.80 mm. long, 5.90 mm. wide; abdomen 9.80 mm. long, 6.75 mm. wide.

Cephalothorax : Longer than wide, cephalic part slightly and not distinctly elevated from the thoracic part; carapace covered with fine hairs; thoracic furrow longitudinal as in text-fig. 38. Anterior row of eyes procurved as seen from in front, anterior lateral eyes one and half times larger than the anterior medians as in text-fig. 38; posterior row of eyes slightly procurved as seen from above; ocular quad much narrower anteriorly than behind. Clypeus narrow. Sternum heart shaped, anteriorly concave, yellowish in colour. Maxillae longer in shape, yellowish in colour. Labium longer than wide, pale yellowish, obtuse at the apex as in text-fig. 40. Chelicera moderately strong, armed with 2 and 4 teeth outer margins and inner margin of fang furrow respectively as in text-fig. 39. Legs long and strong, spiny, yellowish in colour, covered with white hairs. Male palp as in text-fig. 41.

Abdomen : Oval, yellowish, dorsum as in text-fig. 38 and provided with 2 pairs of sigilla. Epigynum provided with a V-shaped sclerite in between the lateral lobes as in text-fig. 41. Internal genitalia as in text-fig. 43.

Distribution : India : Trichinopoly, Remnod, Tamil Nadu, Barkuda Island, Chilka Lake, Ganjam, Orissa; Serampore, Calcutta, Tollygunga, Kalimpong, West Bengal; Allahabad, U.P.; Sripur, Saran, Bihar; Eastern Himalayas.

Remarks : Description and illustrations are based on the authenticated identified female and male specimen received from the National Collection of Z.S.I., Calcutta, Reg. No. 1783/18. One female identified specimen of Simon, collected from Trichinopoly, Madras, also been studied which was received from the M.N.H.N., Paris, Regd. No. 10907.

Genus *Thectocopsis* Karsch

- 1884. *Thectocopsis* Karsch, *Sitz. ber. Ges. Naturw. Marburg*, : 65.
- 1897. *Thectocopsis* : Pocock, *Abh. senck. naturf. Ges.*, 23 : 621.
- 1898. *Thectocopsis* : Simon, *Hist. Nat. Araig.*, 2 : 205.
- 1900. *Thectocopsis* : Pocock, *Fauna Brit. India, Arachn.*, : 270.
- 1931. *Thectocopsis* : Gravely, *Rec. Indian Mus.*, 33(3).
- 1935. *Thectocopsis* : Dyal, *Bull. Zool. Panjab Univ.*, 1 : 211.
- 1938. *Thectocopsis* : Sherrifs, *Hong-Kong Nat.*, 8(3-4) : 183.

Characters : Cephalothorax longer than broad thick, anteriorly broad and longitudinally convex. Posterior row of eyes procurved; lateral eyes sessile; anterior median eyes larger than anterior laterals; ocular quad more or less squarish. Legs short, less laterigrade; first leg longer than second or may be equal; tibia I armed with 5-7 pairs

of inferior spines. Spinnerets supported on a membranous stalk and strengthened by a hairy chitinous ring.

Type-species : *Thelcticopis severa* (L.Koch).

Distribution : Burma, Thailand, Sri Lanka Solomon islands.

***Thelcticopis canescens* Simon**
(Figs. 44-49)

1887. *Thelcticopis canescens* Simon, *J. Asiat. Soc. Bengal*, 56(2) : 103.

1895. *Thelcticopis birmanica* : Thorell, *Descrip. Catal. Spider Burma.*, : 274.

1900. *Thelcticopis canescens* : Pocock, *Fauna Brit. India, Arachn.*, : 271.

1931. *Thelcticopis canescens* : Gravelly, *Rec. India, Mus.*, 32(3) : 245.

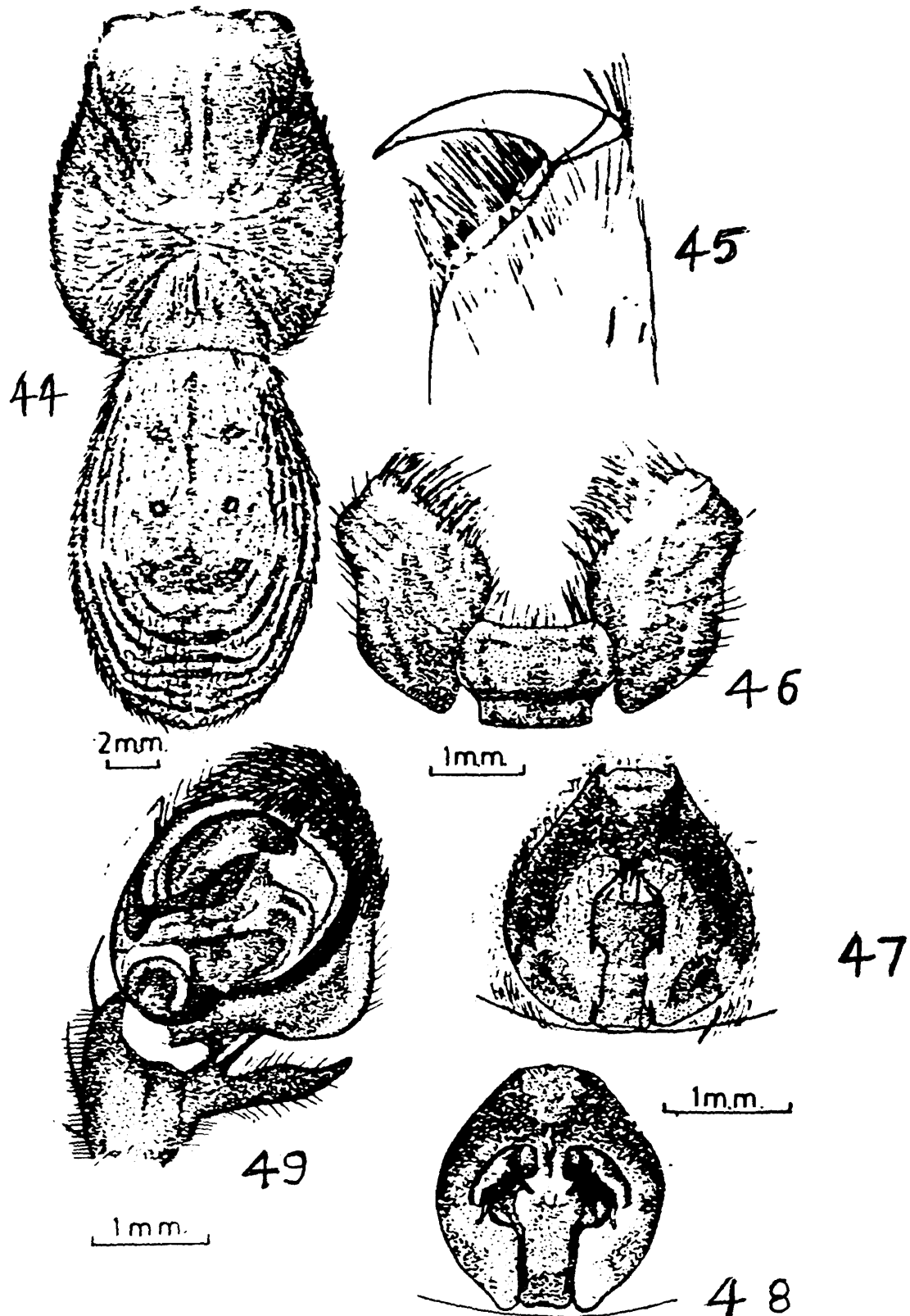
General : Cephalothorax reddish brown, legs brownish in colour, abdomen greyish yellow with some earthen coloured markings. Total length 28.90 mm.; carapace 14.50 mm. long, 11.40 mm. wide; abdomen 15.20 mm. long, 9.60 mm. wide.

Cephalothorax : Longer than wide, cephalic part exceedingly high and convex, thoracic part sloping down towards the periphery, covered with large hairs and pubescence, thoracic fovea indistinct. Anterior row of eyes slightly procurved as seen from in front, anterior laterals smaller than anterior medians, anterior medians are largest of all as in text-fig. 44; posterior row of eyes also slightly procurved, posterior laterals are far away from the posterior medians as in text-fig. 44; ocular quad narrow anteriorly than behind as in fig. 44. Sternum heart shaped, concave anteriorly, reddish brown in colour. Maxilla wider distally, provided with thick scopulae. Labium wider than long dark brown in colour, having with a horizontal ridge as in text-fig. 46. Chelicera robust and very strong, dark brownish in colour, outer margin of fang furrow armed with 2 large teeth and inner margin armed with 4 small teeth as in text-fig. 45. Legs not very long but strong and stout, covered with hairs, metatarsi and tarsi with thick leg scopulae on the ventral side. Male palp as in text-fig. 49.

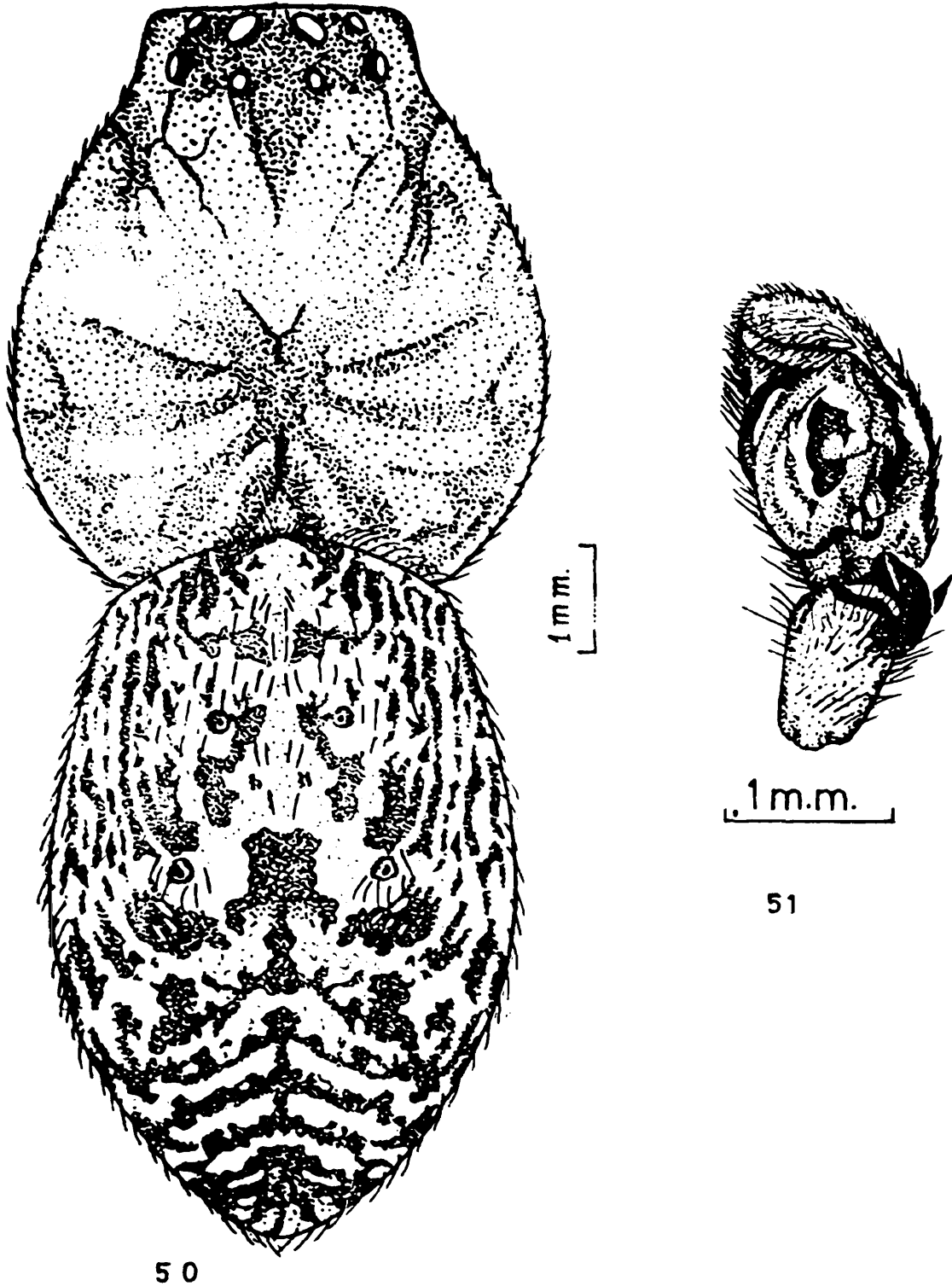
Abdomen : Barrel shaped, covered with hairs. Dorsum of abdomen provided with 3 pairs of sigilla and earthen coloured linear markings as in text-fig. 44. Ventral side having with a pair of mid-longitudinal white lines, and a single white line on each side. Epigynum heavily sclerotised, lateral lobes fused anteriorly and median piece narrow at the middle as in text-fig. 47. Internal genitalia as in text-fig. 48.

Distribution India : Andaman & Nicobar Islands. Burma : Tavoy, Tenasserim. Thailand.

Remarks Description and illustrations are based on the female specimen collected by Dr. B. K. Tikader from Andaman which was received from unidentified collection of Z.S.I., Calcutta, Regd. No. Nil. We also had received one authentically identified male specimen from M.N.H.S., Paris, Regd. No. 8587. The male palp is given in Fig. 49.



Figs. 44-49. *Thectocipis canescense* Simon 44. Dorsal view of female, legs omitted. 45. Inner view of left chelicera showing arrangements of teeth. 46. Ventral view of labium and maxillae. 47. Epigynum, ventral view. 48. Internal genitalia, dorsal view. 49. Ventral view of right male palp.



Figs. 50-51. *Thelcticopis maindroni* Simon 50. Dorsal view of male, legs omitted. 51. Ventral view of right male palp.

***Thelcticoois maindroni* Simon**
(Figs. 50-51)

1906. *Thelctycopis maindroni* Simon, *Ann. Soc. Ent. France*, 75 : 295.

1931. *Thelctycopis maindroni* : Gravely, *Rec. Indian Mus.*, 33(3) : 217.

1954. *Thelctycopis maindroni* : Roewer, *Kat. der Araneae*, 2(A) : 686.

General : Cephalothorax and legs yellowish, abdomen yellowish with brownish markings. Total length 12.25 mm., carapace 6.00 mm. long, 5.25 mm. wide; abdomen 7.00 mm. long, 4.65 mm. wide.

Cephalothorax : Slightly longer than wide, cephalic region higher than the thoracic region, longitudinal thoracic furrow present as in text-fig. 50. Anterior row of eyes nearly straight, anterior medians largest and oval in shape and obliquely placed as in text-fig. 50; posterior row of eyes procurved and eyes are equally placed from each other. Ocular quad squarish as in text-fig. 50. Male palp simple type, conductor distinct at the anterior end, paracymbium bifurcated as in text-fig. 51.

Abdomen : Roughly barrel shaped, dorsum provided with 2 pairs of sigilla and dark brown patches as in text-fig. 51.

Distribution : This species is reported so far from its Type-specimen is the only example of this species, the description and illustrations are based on the Male Type Specimen received from the M.N.H.N., Paris, Regd. No. 17289.

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