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Studies on some giant crab
spiders of the family Heteropodidae
from India

Veena D. Sethi
B. K. Tikader

Issued by the Director
Zoological Survey of India, Calcutta

RECORDS
OF THE
ZOOLOGICAL SURVEY OF INDIA

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**STUDIES ON SOME GIANT SPIDERS OF THE
FAMILY HETEROPODIDAE FROM INDIA**

By

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सत्यमेव जयते

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STUDIES ON SOME GIANT CRAB SPIDERS OF THE FAMILY HETEROPODIDAE FROM INDIA

By

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INTRODUCTION

The spiders of the family Heteropodidae are known as Giant Crab spiders on account of their large size and the attitude of the legs Crab like. The knowledge of Indian heteropodid spiders is very less. Some scanty information on Indian forms provided by the previous workers like Simon (1864), Thorell (1895), Pocock (1900), Hogg (1902), Gravely (1931), Dyal (1935), Patel (1972), Tikader (1960-75). But they did not emphasis the anatomy of genitalia which is the most important morphological character of species differentiation. Latreille (1804) erected the genus *Heteropoda* with the type species *Heteropoda vanatoria* (Linnaeus 1766). But it was kept under Thomisidae upto (1880). Though Thorell (1873) denominated the family Heteropodidae. Simon (1885) kept genus *Heteropoda* under sparassidae family. Further Thorell (1895) in his paper *Spiders of Burma* kept Heteropodidae as family status, Pocock (1900) described in his *Fauna of British India Arachn.* the sub-family Heteropodinae under family Clubionidae. Platnick and Levi (1973) discussed in details regarding the validity of family name as Heteropodidae, Eusparassidae, Sparassidae the conclusion has come Heteropodidae name for the family status must be used. This paper deals with the systematic studies of the genus *Heteropoda* Latreille, *Olios* Walckenaer, *Spariolenus* Simon.

We are fortunate enough to have the opportunity to study the types of many Heteropodidae spiders which were described by Simon, Pocock & Gravely and are deposited in the Museum National d'Histoire Naturelle, Paris, British Museum (Natural History) London and National collection of Zoological Survey of India, Calcutta.

The description and illustration of all known species have been made on the basis of types or authenticated identified female specimens in our collection.

The type specimens will be deposited in National Collection of Zoological Survey of India, Calcutta. Other named and Identified will be deposited in Western Regional Station, Zoological Survey of India, Poona.

GENERAL TAXONOMIC CHARACTERS OF SPIDERS WITH SPECIAL REFERENCE TO THE FAMILY HETEROPODIDAE

The body of the spider is divisible into a distinctive *cephalothorax* and *abdomen*, joined together by a narrow pedicel. The *cephalothorax* is covered dorsally by a hard sclerotic, the *carapace*, and ventrally by the sternum as in text-figs. 2 and the anterior margin of sternum articulates movably with the *labium*. With few exceptions there is a deep transverse groove, forming a kind of hinge, between the sternum and the labium. The legs are articulated in the pleural membrane between the lateral edges of the *carapace* and *sternum*.

On the cephalic region six to eight simple eyes are present. The eyes are generally of two kinds, viz., black or *diurnal* and white or *nocturnal* eyes. When only one type is present, the condition is described as *homogeneous*, in contrast to the *heterogeneous*, when both the types are present. The eyes are usually arranged in a double row, viz., the *anterior row* and the *posterior row*. Each row usually contains four eyes. The rows of eyes are frequently curved. If the curvature is such that the lateral eyes are further forward than the medium eyes, the row is called *procurved*, and if further back, recurved as in text-fig. 8. According to their position, the eyes are described as the *anterior medians*, the *posterior medians*, the *anterior laterals* and the *posterior laterals*. The cephalic area, occupied by the eyes, is termed as *ocular quad*. The area between the anterior row of eyes and the anterior margin of carapace is *clypeus*. There is often a depression in the middle of the thorax, called *throacic groove* or *fovea* as in text-fig. 1.

There are six pairs of appendages on the cephalothorax. The first pair of appendages are the chelicerae. Each chelicers bears a curved fang at its apex. The inner surface of chelicera may be finely denticulate and may also have a groove, into which the fang can be closed when not in use. This groove may also be armed with tooth on each side; the outer margin of this groove is described as *promargin* and the inner margin as *retromargin*. There are sometimes long stout hairs on the promargin to constitute the so called fang scapulae, as in text-fig. 5.

The pedipalps are the second pair of appendages. The palp proper is composed of six segments, viz., *coxa*, *trochanter*, *femur*, *patella*, *tibia* and *tarsus* as in text-fig. 4. In females the tarsus is simple and may or may not be with a single claw. The basal segment, the coxa of palp expands into a plate like structure called maxilla, each side of which is generally provided with thick tuft of hairs called scapulae as in text-fig. 4. In mature males the tarsus of palp is modified to carry a complicated copulatory organ. Generally, the tibia, sometimes also the patella constitute *apophysis* of the palp (which is of different shapes in different species) and is of very

important taxonomic value. Generally the tarsus has a bowl-shaped cavity on its ventral surface and is called *cymbium*. In many groups mature males are provided with an appendage, the *paracymbium*. The complex structure of mature male palp is very important for generic or specific identification of spiders. The complicated palpal organ consists of many parts, but that is a matter beyond the scope of this fauna.

There are four pairs of legs designated as I, II, III and IV respectively. Each leg is composed of seven segments, viz. *coxa*, *trochanter*, *femur*, *patella*, *tibia*, *metatarsus* and *tarsus* as in text-fig. 6. The legs are variously clothed with spines, spinules, bristles and hairs of various types. The distal ends of tarsi are provided with two or three claws. A characteristic tuft of hair called *claw-tuft* is sometimes found just above the claw. Spines on the dorsal sides of legs are distinguished as *dorsal spines* and those on the ventral side as *ventral spines*, as in text-fig. 6. Spiders usually have at least two claws at the end of each tarsus. In many families a single median ventral third claw is present as in text-fig. The paired claws may be provided with a few teeth.

The abdomen is produced posteriorly into a conical *anal tubercle* and bears three pairs of spinnerets ventrally, viz., the first or the *anterior pair*, the second or the *median* and the third or the *posterior pair* of spinnerets as in text-fig. 9. In a number of families there is present in front of the anterior (ventral) spinnerets a seive-like plate, called the *cribellum*. The special type of silk is omitted from this organ and is combed by a series of curved bristles comprising the calamistrum borne on metatarsus IV. In many families of spiders which do not possess the cribellum, a conical appendage called the *colulus*, lies between the basis of the anterior spinnerets.

The ventral surface of abdomen is provided with one or two pairs of *lung-books*, followed by one or two paired spiracles. The female genital organ is epigynum, is situated just anterior to a transverse fold, known as *epigastric furrow* as in text-fig. 2. In many cases the epigynum is provided with a tongue like sclerotic projection called scape. But in most cases the epigynum is plate like, single plate or pairs of plates. Sometimes these paired genital plates are called *lateral lobes* as in case of heteropodid spiders, a *median sclerotic piece* is often present in between the paired lateral lobes as it is seen here in *Olios fuliginus* (Pocock), in text-fig. 11. Epigynum having two external openings which lead to the *spermathecas* inside and a pair of narrow curved tubes called *fertilization tubes* originate from the posterior margin of spermathecae as in text-fig. 12. Sometimes the ducts of spermathecae are very convoluted and complicated type.

The tarsi of spider are often armed with hairs of the type known as *tenent hairs*, i.e., hairs dilated at their tips. In some families, spiders have very fine hairs called as *pubescence*. Sometimes the hairs are modified as *spinyhairs* or *macrosetae*.

Apart from the above mentioned general characters, the heteropodid spiders are possessing some special morphological characters having highly taxonomic importance as stated below.

Carapace generally longer than wide but in the genera *Heteropoda* and *Spariolenus* it is little wider than long. Cephalic part distinctly elevated and sometimes separated by semicircular grooves. In *Palystes* the cephalic part not distinctly separated from thoracic part which is high and convex. In the heteropodid spider the thoracic groove is longitudinal and distinct except *Olios* where this groove is indistinct and fine. In *Thecticopis* the carapace is very high so the cephalic part is strongly convex. Eyes of posterior row are very important in this family of spiders for their separation into different genera. Posterior row or eyes recurved in *Heteropoda*, *Spariolenus*, *Torania* and *Panaretus* but straight in *Palystes*. Posterior median eyes are generally subequal to the posterior laterals in this family except in *Heteropoda* and *Torania* where it is smaller than laterals. Ocular quad generally narrow anteriorly so as to form a trapezium or in some cases it is nearly square as in *Olios* and *Torania*.

Sternum heart shaped in general but in *Panaretus ignichelis* it is oval shaped. Maxilla shows distinct longitudinal crest in *Spariolenus* only. Labium almost longer than wide but in *Olios* and *Thecticopis canesums* the labium is wider than long. Chelicerae moderately or highly strong, vertical and non-divergent, fang furrow armed with 2 and 4 teeth on outer and inner margins respectively but in *Torania* it is 5 and 5, and in *Spariolenus* it is 2 and 5-6.

Legs are laterigrade, crab like ; tarsus and metatarsus may have thick scopulae on the ventral side, paired tarsal claws armed with teeth. Legs generally long and strong but in *Thecticopis* they are less laterigrade, strong and stout, tarsi and metatarsi are short in length covered with thick scopulae ventrally. Apex of metatarsus of heteropodid spiders provided with a soft trilobate membrane allowing hyperextension of the tarsus.

Palpal organ of male spider is highly complicated and variable from genus to genus, species to species. Palpal organ of *Olios phipsoni* is illustrated in the text-fig. 13. where the structures are as follows. The cymbium is a concave plate like and peracymbium is only a prominent spur like structure arising straight from the axis of the base of the cymbium but separated from the cymbium as in text-fig. There are three kinds of books called apophysis, according to their position in the genital

bulb they are terminal apophysis, subterminal apophysis and median apophysis. These apophysis are provided with spurs at the endal position and are varied extremely in different genera. The embolus is long and winding and supported by conductor as in text-fig. 13 Tegulum is ring like sclerite bearing terminal apophysis, sometimes it is modified to knob like structure. There is one striking structure haematodocha which is a sac like structure, the wall of haematodocha consists of elastic connective tissue and during mating it is distended with blood. In *Torania gloriosa* the embolus is much coiled and freely encircles the whole genital bulb and turns upwards. One pair of smooth tibial apophysis are found in the *Thectocopsis*.

Abdomen of heteropodids is oval shaped, covered with small hairs in general. But in *Torania* the abdomen is some-what pentagonal and in *Spariolenus* it is pear shaped. In some *Palystes* patches of long erectile hairs are seen. Spinnerets are normal in this family but in *Thectocopsis* one peculiar character is found, where the spinnerets are supported on a membranous stalk strengthened by a hairy chitinous ring.

Epigynum is species specific structure and it is well established that the differences in the structure of both external and internal are the best way for separating females in spider. The lateral lobes epigynum may or may not be well sclerotised. In *Heteropoda* and *Spariolenus* the lateral lobes are separated and non-fused longitudinally, except *Heteropoda venatoria* where the lateral lobes are in close contact mid-longitudinally throughout their length, but not fused together. In *Olios* the epigynal lateral lobes fused anteriorly, but in *Thectocopsis* these lateral lobes are fused widely at the anterior end leaving a deep cavity in between. In *Palystes flavidus* the epigynum having with a V-shaped heavily sclerotised median piece in between the lateral lobes at the centre. In *Torania gloriosa* this median piece is present at the anterior end of the lateral lobes.

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. Panjab Univ.*, 1 : 204.
- 1942. Heteropodidae : Comstock, *The Spider book*, : 564.
- 1951. Heteropodidae : Bonnet, *Biblic. 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 in 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 provided 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.

Genus. I. *Spariolenus* Simon

1880. *Spariolenus* Simon, *Act. Soc. Linn. Bord.*, 34 : 227.
 1897. *Spariolenus* : Simon, *Hist. Nat. Araign.*, 2 : 56.
 1900. *Spariolenus* : Pocock, *Fauna Brit. India*, : 263.
 1931. *Spariolenus* : Gravely, *Rec. Indian Mus.*, 33 (3) : 257.
 1935. *Spariolenus* : Dyal, *Bull. Zool. Panjab Univ.*, 1 : 211.

Characters : Cephalothorax nearly as wide as long ; Carapace moderately or very high posteriorly ; cephalic part slightly depressed anteriorly. Anterior row of eyes straight or slightly procurved ; posterior row of eyes recurved ; all lateral eyes larger than medians ; ocular quad narrow in front than behind. Maxillae with distinct median longitudinal crest. Inner margin of fang furrow armed with 5-6 teeth.

Type-species : *Spariolenus tigris* Simon.

Distribution : India, Sri Lanka, Malacca.

Key to the species of the genus *Spariolenus* Simon

1. Carapace wider than long (Fig. 14) : clypeus slightly more than 1.50 mm. in length ; thoracic part roundish in shape (Fig. 14) ; abdomen pear shaped and three pairs of sigilla on the dorsum (Fig. 14) ; epigynum simple and less sclerotised (Figs. 17) — — *petricola*
 Carapace longer than wide (Fig. 19) ; clypeus nearly 1.00 mm. in length ; thoracic part elongated in shaped (Fig. 19) ; abdomen pentagonal and two pairs of sigilla on the dorsum (Fig. 19) ; epigynum complicated and highly sclerotised (Figs. 24). *tigris*

***Spariolenus petricola* Gravely**

(Figs. 14—18)

1931. *Spariolenus petricola* Gravely, *Rec. Indian Mus.*, 33 (3) : 250.1954. *Spariolenus petricola* : Roewer, *Kat. der Araneae*, 2 (A) : 724.

General : Cephalothorax brownish yellow, legs yellowish with brown tinted, abdomen yellow with dark irregular patches. Total length 16.80 mm. ; carapace 8.50 mm. long, 8.80 mm. wide ; abdomen 9.00 mm. long, 8.10 mm. wide.

Cephalothorax : Slightly wider than long, covered with fine hairs, carapace roundish with cephalic part small and elevated than the thoracic part, thoracic fovea deep, distinct and longitudinal as in text-fig. 14. Anterior row of eyes procurved as it is seen from in front, anterior lateral eyes one and half times larger than anterior medians ; posterior row of eyes recurved, and posterior laterals are largest of all and placed on prominent tubercles as in text-fig. 14 ; ocular quad longer than wide and narrow in front than behind as in text-fig. 14. Clypeus wide. Sternum heart shaped, pale yellow in colour. Maxilla longer than wide, provided with longitudinal crest as in text-fig. 16 Labium longer than wide, light brown in colour with yellow apex, provided with a notch on each side as in text-fig. 16 Chelicera moderately strong, brownish in colour, outer margin of fang furrow armed with 3 teeth and inner margin with 5 teeth as in text-fig. 15. Legs very long and strong, spiny, moderately laterigrade.

Abdomen : Pear shaped, covered with small yellow hairs. Dorsum of abdomen provided with three pairs of sigilla and irregular dark brown patches as in text-fig. 14. Ventral side of abdomen yellowish with a pair of longitudinal lines. Epigynum simple, small, net strongly chitinised with parallel sides as in text-fig. 17 Internal genitalia as in text-fig. 18.

Distribution : India : Khandagiri, Puri, Orissa ; Pachmarhi, Mahadeo Hills, M.P. ; Dhurwas, Chama, Panaji, Goa.

Remarks : The description and illustrations are based on the Type-species of Gravely, received from the National Collection of Z.S.I., Calcutta, Regd. No. 1509/18.

***Spariolenus tigris* Simon**

(Figs. 19-24)

1880. *Spariolenus tigris* Simon, *Act. Soc. Linn. Bord.*, 34 : 281.1897. *Spariolenus tigris* : Simon, *Hist. Nat. Araign.*, 2 (1) : 56.1900. *Spariolenus tigris* : Pocock, *Fauna Brit. India, Arachn.*, : 264.1931. *Spariolenus tigris* : Gravely, *Rec. Indian Mus.*, 33 (3) : 257.

1935. *Spariolenus tigris* : Dyal, *Bull. zool. Punjab Univ.*, 1 : 211.

1954. *Spariolenus tigris* : Roewer, *Kat. der Araneae*, 2 (A) : 722.

General : Cephalothorax brownish yellow, legs yellowish with light brown patches, abdomen yellowish with dark brown patches. Total length 16.50 mm. ; carapace 6.60 mm. long, 8.00 mm. wide ; abdomen 8.00 mm. long, 5.90 mm. wide.

Cephalothorax : Slightly longer than wide, cephalic part moderately higher than thoracic part, covered with fine hairs, thoracic fovea as in text-fig. 19. Anterior row of eyes procurved as seen from in front, anterior lateral eyes nearly twice larger than anterior medians ; posterior row of eyes slightly recurved as seen from above as in text-fig. 19, posterior laterals largest of all and placed on prominent stalks ; ocular quad longer than wide and narrow anteriorly as in text-fig. 19. Sternum heart shaped, yellow in colour. Maxillae provided with distinct longitudinal crest and thick scopulae, brownish in colour as in text-fig. 20. Labium slightly wider than long, brownish with yellow apex, provided with a horizontal ridge as in text-fig. 20. Chelicerae moderate, brownish in colour, outer margin of fang furrow provided with 3 teeth and inner margin with 5 teeth as in text-fig. 21. Legs very long and strong, spiny, laterigrade. Male palp as in text-fig. 22.

Abdomen : Pentagonal, covered with dusty yellow hairs and pubescence as in text-fig. 19. Dorsum of abdomen provided with two pairs of sigilla and dark brown patches and marks as in text-fig. 19. Ventrums of abdomen pale and having with a pair of longitudinal brown lines. Epigynum provided with a pair of rounded pits bounded by semi circular rings and lateral lobes longitudinally widely separated as in text-fig. 23. Internal genitalia complicated, spiral tubes and spermathecae as in text-fig. 24.

Distribution : India : Poona, Matheran, Ratnagiri, Maharashtra, Calcutta, Baharpur, Serampore, West Bengal ; Siripur, Saran, Bihar. Pakistan : Sind, Lahore, Quetta, Punjab.

Remarks : Description and illustrations are based on the authenticated identified female specimen received from the B.M. (N.H.), London, Regd. No. 1899- 9.21.511. Other male and female specimens were also been received from M.N.H.N., Paris, and National Collections of Z.S.I., Calcutta, which were also compared and studied. Male palp is illustrated from the specimen received from National Collection of Z.S.I., Calcutta, Regd. No. 1576.

Genus. IV. *Heteropoda* Latreille

1804. *Heteropoda* Latreille, *N. Dic. hist. nat.*, 24 : 135.
 1945. *Heteropoda* : Erichson, *Soloduri*, 1845 : 7.
 1870. *Heteropoda* : Thorell, *N. Act. reg. Soc. Sci. Upsal.*, (3) 7 : 174.
 1880. *Heteropoda* : Simon, *Act. Soc. linn. Bord.*, 34 : 228.
 1900. *Heteropoda* : F. O. P. Cambridge, *Biol. Cent. Amar. Zool.*, 1 : 120.
 1900. *Heteropoda* : Pocock, *Fauna Brit. India, Arachn.*, : 259-271.
 1907. *Heteropoda* : Strand, *Zool. Anz.*, 31 (17-18) : 559.
 1928. *Heteropoda* : Petrunkevitch, *Trans. Connec. Acad. Arts Sci.*, 29 : 158.
 1931. *Heteropoda* : Gravely, *Rec. Indian Mus.*, 33 (3) : 247.
 1935. *Heteropoda* : Dyal, *Bull. Zool. Punjab Univ.*, 1 : 208-209.
 1973. *Heteropoda* : Patel, *Orient. Insects*, 7 (1) : 127-132.
 1977. *Heteropoda* : Tikader, *Rec. Zool. Surv. India*, 72 : 189-192.

Characters : Carapace nearly as long as wide, upper surface nearly flat or in some very high posteriorly ; cephalic parts slightly depressed in front. Posterior row of eyes recurved, the lateral eyes larger and prominent ; eyes of anterior row straight or little procurved, anterior laterals larger than medians ; ocular quad longer than wide, narrow in front. Maxillae plain, not crested. Epigynum provided with a pair of lobes, usually separated by a median septum.

Type-species : *Heteropoda venatoria* (Linn.)

Distribution : From India eastwards to Australia, U.S.A., China, Japan, Hong-Kong, Sri Lanka, Burma, Sumatra, Java.

Key to the species of the genus *Heteropoda* Latreille

- | | | |
|--|--------|------------------|
| 1. Carapace longer than wide or nearly as long as wide | ... | 2 |
| Carapace wider than long | | 14 |
| 2. Carapace longer than wide | | 3 |
| Carapace as long as wide | | 7 |
| 3. Labium longer than wide | | 4 |
| Labium wider than long | | 8 |
| 4. Epigynum provided with median piece | | 5 |
| Epigynum not provided with median piece | | 6 |
| 5. Abdomen elongated oval, clothed with small hairs ; paired lateral lobes of epigynum narrowly divergent anteriorly (Fig. 28) ; median piece constricted at the middle (Fig. 28) ; spermathecae simple sac like (Fig. 29) | | <i>phasma</i> |
| Abdomen roundish oval, clothed with large hairs ; paired lateral lobes of epigynum widely divergent anteriorly (Fig. 33) ; median piece constricted at the base (Fig. 34) ; spermathecae convoluted and complicated type (Fig. 33) | | <i>kuluensis</i> |

6. Abdomen with 3 pairs of sigilla and a horizontal white band at the posterior end on the dorsum (Fig. 35); paired lateral lobes of epigynum simple and widely separated throughout their length (Fig. 39) ... *fabrai*
- Abdomen with 2 pairs of sigilla and no white band on the dorsum (Fig. 40); paired lateral lobes of epigynum subdivided posteriorly and are in contact midlongitudinally but not fused (Fig. 44) ... *andamanensis*
7. Abdomen roundish with 3 pairs of sigilla on the dorsum (Fig. 46); labium with no lateral notch; epigynal lateral lobes are in contact on midlongitudinal line and divergent anteriorly (Fig. 51); spermathecae simple sac like (Fig. 50); ... *promota*
- Abdomen elongated with 2 pairs of sigilla on the dorsum (Fig. 52); labium provided with lateral notch on each side; epigynal lateral lobes divergent posteriorly but are in contact midlongitudinally at the anterior end (Fig. 56); spermathecae convoluted type (Fig. 57) ... *venatoria*
8. Inner margin of fang furrow of chelicera armed with 4 teeth; epigynal median piece if present descends down nearly at the end of the lateral lobes or median piece may not present ... 9
- Inner margin of fang furrow of chelicera armed with 5 teeth (Fig. 59); epigynum with median piece descends down upto the middle of the lobes from the anterior end (Fig. 62) ... *robusta*
9. Outer margin of fang furrow armed with 3 teeth; median piece if present not constricted at the middle or median piece may not present; cephalic region not narrow anteriorly ... 10
- Outer margin of fang furrow armed with 2 teeth (Fig. 66); median piece of epigynum constricted at the middle (Fig. 68); cephalic region distinctly narrow anteriorly (Fig. 64) ... *malitiosa*
10. Epigynum not provided with a median piece in between the paired lateral lobes ... 11
- Epigynum not provided with any median piece ... 13
11. Carapace and legs provided with small brown spots all over; median piece less sclerotised, small but broad in between the lateral lobes (Fig. 75); in internal genitalia the spermathecae simple and small sac like (Fig. 74) ... *shillongensis*
- Carapace and legs not provided with brown spots; median piece heavily sclerotised and long; internal genitalia different type ... 12

12. Abdomen with 3 pairs of sigilla and a midlongitudinal yellow streak upto the middle from the anterior end on the dorsum (Fig. 75) ; median piece form a septum in between the lateral lobes (Fig. 79) ; spermathecae sac like, not spiral (Fig. 80) *leprosa*
 Abdomen with 2 pairs of sigilla and no mid-longitudinal yellow streak like marking on the dorsum (Fig. 82) ; median piece long but not forming any septum in between the lateral lobes (Fig. 85) ; spermathecae complicated spiral type (Fig. 86) *hampsoni*
13. Abdomen more narrow anteriorly and broad, roundish posteriorly ; no pale coloured spots on the dorsum ; epigynal lateral lobes separated and parallel on the midlongitudinal line and form a small cavity at the posterior end (Fig 90) *languida*
 Abdomen more narrow posteriorly and broad, roundish anteriorly ; dorsum with full of pale coloured small spots ; epigynal lateral lobes almost in contact on the midlongitudinal line and subdivided posteriorly and form a cavity at the anterior end by being divergent (Fig. 95) *akashi*
14. Outer margin of fang furrow of chelicera armed with 2 teeth. 15
 Outer margin of fang furrow of chelicera armed with 3 teeth. 16
15. Both anterior and posterior rows of eyes are almost equal in length ; inner margin of fang furrow of chelicera armed with 3 teeth (Fig. 98) ; lateral lobes of epigynum widely divergent anteriorly but they are in contact at the posterior end and form a deep cavity in between the lateral lobes (Fig. 102) *sexpunctata*
 Anterior row of eyes shorter in length than the posterior row of eyes ; inner margin of fang furrow of chelicera armed with 4 teeth (Fig. 104) ; lateral lobes of epigynum divergent anteriorly from the middle of their length and they are not in contact but separated by a fine gap (Fig. 106) *lutea*
16. Epigynum provided with a median piece ; lateral lobes form a cavity at the posterior end 17
 Epigynum not provided with median piece ; lateral lobes not form a cavity at the posterior end 19
17. Abdomen provided with 3 pairs of sigilla on the dorsum (Fig. 108) ; median piece of epigynum constricted at the base, lateral lobes large and widely separated anteriorly (Fig. 113) *lentula*
 Abdomen provided with 2 pairs of sigilla on the dorsum median piece of epigynum not constricted at the base, lateral lobes of epigynum otherwise 18

18. Abdomen roundish with no markings on the dorsum ; median piece of epigynum almost straight at its proximal end and wider distally (Fig. 117) ; lateral lobes parallel to each other (Fig. 118) *kandiana*
 Abdomen oval with a dark brown horizontal marking and other patches are present on the dorsum ; median piece of epigynum wider at its proximal end and narrow distally (Fig. 119) ; lateral lobes divergent anteriorly (Fig. 123) ... *nilgirina*
19. Epigynum provided with a horizontal plate over the anterior end of the lateral lobes (Fig. 128) ; lateral lobes are in contact throughout their length and bent outwardly at the posterior end (Fig. 129) *sikkimensis*
 Epigynum not having such horizontal place ; lateral lobes otherwise 20
20. Abdomen with tufts of large hairs form a patch at the anterior end on the dorsum (Fig. 130) ; paired lateral lobes are in contact on the midlongitudinal line but divergent anteriorly and form a cavity (Fig. 134) *nicobarensis*
 Abdomen not provided with such tufts of hairs paired lateral lobes are not in contact 21
21. Abdomen elliptical, dark brown patches form an indistinct pattern on the dorsum (Fig. 135) ; lateral lobes widely separated at the posterior end and quite divergent anteriorly, no cavity in between them (Fig. 140) *bhaikakai*
 Abdomen roundish oval, a dark coloured curved transverse marking present at the posterior end on the dorsum (Fig. 140) ; lateral lobes separated at the anterior end by leaving a cavity in between them (Fig. 144) *plebeja*

Heteropoda phasma Simon

(Figs. 25—29)

- 1897, *Heteropoda phasma* Simon, *Mem. Soc. Zool. France*, 10(2) : 258.
 1900. *Heteropoda phasma* : Pocock, *Fauna Brit. India, Arachn.*, : 260.
 1931. *Heteropoda phasma* : Gravely, *Rec. Indian Mus.*, 33(3) : 252.
 1954. *Heteropoda phasma* : Roewer, *Kat. der Araneae*, 2(A) : 717.

General : Cephalothorax brownish with yellow patches, legs brownish, abdomen yellowish. Total length 15.75 mm. Carapace 7.50 mm. long, 7.30 mm. wide ; abdomen 9.40 mm. long, 6.10 mm. wide.

Cephalothorax : Slightly longer than wide, cephalic region distinct but flat with the thoracic part on the top, thoracic furrow distinct, fine and longitudinal as in text-fig. 25. Anterior row of eyes procurved as seen from in front, posterior row of eyes distinctly recurved as seen from above, text-fig. 25, both the lateral eyes are subequal in size. Ocular quad

narrow in front and longer than wide as in text-fig. 25. Chelicerae moderately strong, outer and inner margins of fang furrow with 3 and 4 teeth respectively as in text-fig. 26. Labium longer than wide. Maxillae with thick scopulae. Sternum heart shaped. Legs moderate, long.

Abdomen : Elongated oval, anteriorly truncated clothed with small hairs, dorsum provided with 3 pairs of sigilla and light colour patches as in text-fig. 25. Epigynal lateral lobes widely separated leaving a deep cavity at the posterior end and a median piece present in between the lateral lobes as in text-fig. 28.

Distribution : India : Tehri, Garhwal, Jaunsar, Mussourie, Kasauli, U.P. ; Assam ; Deccan, South India.

Remarks : Description and illustrations are made on the basis of identified specimen received from the B.M. (N.H.) London, Regd. No. 2.5.31.

***Heteropoda kuluensis* sp. nov.**

(Figs. 30—34)

General : Cephalothorax and legs reddish brown in colour, abdomen greyish yellow in colour. Total length 21.20 mm. Carapace 9.20 mm. long, 9.00 mm wide ; abdomen 12.40 mm. long, 10.00 mm. wide.

Cephalothorax : Carapace slightly longer than wide, cephalic region distinct and flat with the thoracic region on the top of the carapace, radial marking are prominent on thoracic part, and thoracic furrow fine and longitudinal as is text-fig. 30. Anterior row of eyes procurved as seen from in front and posterior row of eyes recurved as seen from above as in text-fig. 30, anterior lateral eyes are slightly larger than posterior laterals. Ocular quad longer than wide and narrower in front than behind as in text-fig. 30. Chelicerae very strong, armed with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 32 Labium longer than wide. Maxillae light reddish brown with thick scopulae. Sternum heart shaped, yellowish in colour. Legs long and very strong, clothed with large hairs, spiny.

Abdomen : Nearly oval shaped, clothed with large hairs, dorsum provided with 3 pairs of sigilla as in text-fig. 30. Epigynum with paired lateral lobes, separated from each other and divergent anteriorly, a median piece is present in between upto the middle of lateral lobes from the anterior end, the median piece is constructed at the base as in text-fig. 34. Internal genitalia as in text-fig. 33.

Holotype : one female, 3 legs are broken kept in spirit.

Type-locality : Manali, Kulu, Haryana, India. Coll. *Shri M. Chandra*, 27.7.1973.

Discussion : This species is closely related with *Heteropoda nilgirina* Pocock but differs as follows. (i) Carapace slightly longer than wide but in *nilgirina* it is wider than long. (ii) Labium longer than wide but in *nilgirina* it is wider than long. (iii) Epigynal lateral lobes more larger and elongated than that of *nilgirina*. (iv) Median piece constricted at the base but it is broader at the base in *nilgirina*. (v) Spermathecae and ducts are different in both the species in their internal genitalia.

***Heteropoda fabrei* Simon**

(Figs. 35—39)

1885. *Heteropoda fabrai* Simon, *Bull. Soc. Zool. France*, 10 : 32.

1896. *Heteropoda ambiguus* : Simon, *Ann. Soc. Ent. France*, 65 : 489.

1900. *Heteropoda fabrei* : Pocock, *Fauna Brit. India, Arachn.*, : 261.

General : Dark brownish in colour. Total length 17.00 mm. Carapace 8.50 mm. long, 8.10 mm. wide, abdomen 9.20 mm. long, 7.80 mm. wide.

Cephalothorox : Longer than wide, cephalic region distinct but flat on the top with the thoracic region ; thoracic furrow distinct and longitudinal. Anterior row of eyes straight as seen in front and posterior row of eyes slightly recurved as seen from above as in text-fig. 35 both anterior and posterior lateral eyes are equal in size. Ocular quad longer than wide, slightly narrow in front. Chelicerae strong and stout, both inner and outer margins of fang furrow armed with 4 teeth on each as in text-fig. 36 Labium slightly longer than wide as in text-fig. 37. Legs moderately long and strong, clothed with white fine hairs and spinny.

Abdomen : Oval but anteriorly truncated as in text-fig. 35. Dorsum of abdomen having with 3 pairs of sigilla and a distinct white horizontal band at the posterior end as in text-fig. 35. Epigynum with lateral lobes widely separated from each other throughout their length as in text-fig. 38. Internal genitalia as in text-fig. 39.

Distribution : So far this species is known from its Type locality-Ramnad, Tamil Nadu, India, described by Simon.

Remarks : Description and illustrations have been prepared on the basis of female Type-specimen, received from the M.N.H.N., Paris, Regd. No. 4573.

Heteropoda andamanensis Tikader

(Figs. 40-45)

1977. *Heteropoda andamanensis* Tikader, *Rec. Zool. Surv. India*, 72 : 189-191

General : Cephalothorax yellowish brown, legs light brownish, abdomen yellowish. Total length 30.10 mm. Carapace 12.60 mm. long, 10.80 mm. wide ; abdomen 17.50 mm. long, 9.70 mm. wide.

Cephalothorax : Longer than wide, covered with small hairs, cephalic region distinct but flat to the top of thoracic region, thoracic furrow longitudinal and conspicuous as in text-fig. 40. Ocular region brownish in colour. Anterior row of eyes procurved as seen from in front, anterior laterals are biggest of all eyes as in text-fig. 40. Ocular quad narrow in front than behind and longer than wide. Clypeus much wider. Chelicerae moderately strong, dark brownish, clothed with hairs, outer and inner margins of fang furrow armed with 3 and 4 teeth respectively as in text-fig. 42. Labium longer than wide, provided with a horizontal ridge as in text-fig. 41. Maxillae yellowish in colour with thick scopulae. Sternum heart shaped, yellowish. Legs very long and stout, clothed with hairs and spines, tibia and metatarsi of 1st and 2nd legs provided with 3 pairs of ventral spines. Male palp as in text-fig. 43.

Abdomen : Longer than wide, clothed with fine hairs, tapering at both the ends as in text-fig. 40. Dorsum provided with 2 pairs of sigilla. Ventral side more pale in colour than the dorsal side and provided with 4 longitudinal lines. Epigynum with lateral lobes meet mid longitudinally but not fused with each other, anteriorly leaving a cavity as in text-fig. 44 ; at the lower and the lobes are subdivided as in text-fig. 44. Internal genitalia as in text-fig. 45.

Distribution : India : Long Island, Havlock Island, Andamans ; Kozicode, Kerala.

Remarks : Description and illustrations are based on the Holotype ♀ and one Allotype male (palp) which were housed in the W.R.S., Poona, Regd. No. not yet given.

Heteropoda prompta (O.P. Cambridge)

(Figs. 46—51)

1885. *Sarotes prompta* O.P. Cambridge, *Sci. Res. Sec. Yarkand Miss., Arachn.*, : 71.
 1897. *Heteropoda casaria* : Simon, *Mem. Soc. Zool. France*, 10(2) : 259.
 1900. *Heteropoda prompta* : Pocock, *Fauna Brit. India, Aracha*, : 261.
 1931. *Heteropoda prompta* : Gravely, *Rec. Indian Mus.*, 33(3) : 256.
 1954. *Heteropoda prompta* : Roewer, *Kat. der Araneae*, 2(A) : 718.

General : Cephalothorax and legs brownish, abdomen dark brownish with yellow patches. Total length 15.00 mm. Carapace 6.50 mm. long, 6.50 mm. wide ; abdomen 9.40 mm. long, 7.20 mm. wide.

Cephalothorax : As long as wide, cephalic region more elevated just behind the ocular area and almost flat on the top with the thoracic region, thoracic furrow distinct, longitudinal as in text-fig. 46. Anterior row of eyes slightly procurved as seen from in front and posterior row slightly recurved as in text-fig. 46, both the laterals are equal in size. Ocular quad longer than wide and wider behind than in front as in text-fig. 46. Chelicerae very strong, armed with 3 and 4 teeth on outer and inner margins of fang furrow as in text-fig. 47. Labium wider than long apex is roundish in shape as in text-fig. 49. Maxillae thick and provided with scopulae. Sternum heart shaped dark in colour. Legs moderately strong and long, clothed with hairs, spinny. Male palp as in text-fig. 48.

Abdomen : Roundish shaped, dorsum with 3 pairs of sigilla and yellowish marking as in text-fig. 46, covered with yellow pubescence. Ventral side provided with a V-shaped distinct yellow marking in between the epigastric furrow and the spinnerets. Epigynum with large lateral lobes meet on midlongitudinal line but not fused, leaving a cavity at the anterior end as in text-fig. 51. Internal genitalia as in text-fig. 51.

Distribution : India : Kalimpong, Darjeeling, West Bengal, Simla, Himachal Pradesh ; Kumaon, Garhwal, Javnsar, Mussouri, Tehri Hills, Uttar Pradesh ; Sikkim. Nepal : Katmandu.

Remarks : Description and illustrations are made on the basis of a female and a male specimen received from the National Collection of Z.S.I., Calcutta, Regd. 1700/18. I also have studied the identified specimen received from the B.M. (N.H.), London, Regd. No. 1898.

***Heteropoda venatoria* (Linnaeus)**

(Figs. 52—57)

- 1766. *Araneae venatoria* Linnaeus, *Syst. Nat.*, 12 : 1035.
- 1804. *Heteropoda venatoria* : Latreille, *Nouv. Dict. Hist. Nat.*, 24 : 135.
- 1836. *Ocypete setulosa* : C. L. Koch, *Die Arachniden*, 3 : 40.
- 1837. *Olios colombianus* : Walckenaer, *Hist. Nat. Ins.* 1 : 571.
- 1878. *Heteropoda venatoria* : Thorell, *Ann. Mus. Civ. Genova*, 13 : 191.
- 1897. *Heteropoda regia* : Simon, *Hist. Nat. Araign.*, 2(1) : 54.
- 1900. *Heteropoda vanatoria* : Pocock, *Fauna Brit. India, Arachn.*, : 260.
- 1931. *Heteropoda venatoria* : Gravely, *Rec. Indian Mus.*, 33 (3) : 257.
- 1935. *Heteropoda venatoria* : Dyal, *Bull. Zool. Punjab Univ.*, 1 : 209.
- 1954. *Heteropoda venatoria* : Roewer, *Kat. der Araneae*, 2 (A) : 712.
- 1972. *Heteropoda venatoria* : Yaginuma, *Act. Arachnol.*, 23(2) : 21-22.

General : The whole body is dark brown in colour. Total length 31.40 mm. Carapace 13.70 mm. long, 13.80 mm. wide, abdomen 18.20 mm. long, 10.00 mm. wide.

Cephalothorax : Nearly as long as wide—a little wider than long, cephalic region higher at the anterior end but flat posteriorly with the thoracic region on the top of the carapace, thoracic furrow longitudinal and distinct as in text-fig. 52. Anterior row of eyes procurved as seen from in front and posterior row slightly recurved as seen from above as in text-fig. 52. Both anterior and posterior laterals are equal in size, ocular quad narrow in front and longer than wide as in text-fig. 52. Chelicerae very strong, armed with 2 and 4 teeth on the outer and inner margins of fang furrow respectively, as in text-fig. 53. Labium wider than long. Maxillae broad and with thick scopulae. Sternum heart shaped, dark brown in colour. Legs long and very strong. Male palp as in text-fig. 55.

Abdomen : Elongated, tapering at the posterior end and truncated at the anterior end, clothed with hairs. Dorsum with 2 pairs of sigilla and posterior end with dark patches as in text-fig. 52. Epigynum with lateral lobes directed inward posteriorly and at the middle they meet each other upto the anterior end, no cavity in between the lateral lobes as in text-fig. 56. Internal genitalia as in text-fig. 57.

Distribution : India : Ootacamund, Madras city, Tamil Nadu ; Siripur, Saran, Bihar ; Tindharia, Darjeeling, Calcutta, West Bengal, and almost all over India. It is a cosmopolitan species in the world.

Remarks : Description and illustrations are based on the identified female and male specimens received from the B.M. (N.H.), London, Regd. No. 1895, 7.18. 47.

***Heteropoda robusta* Fage**

(Figs. 58—63)

1924. *Heteropoda robusta* Fage, *Rec. Indian Mus.* 26(1) : 66.

1954. *Heteropoda robusta* : Roewar, *Kat. der Araneae*, 2(A) : 718.

General : Cephalothorax and legs brownish, abdomen dark brown with pale patches. Total length 17.20 mm. Carapace 7.75 mm. long, 6.90 mm. wide ; abdomen 9.35 mm. long ; 5.10 mm. wide.

Cephalothorax : Longer than wide, cephalic region flat with the thoracic region on the top of the carapace, thoracic furrow longitudinal and distinct as in text-fig. 58. Anterior row of eyes procurved as seen

from in front and posterior row of eyes recurved as seen from above as in text-fig. 58. Ocular quad longer than wide, and narrow in front than behind as in text-fig. 58. Chelicerae strong, dark brown, armed with 3 and 5 teeth on outer and inner margins of fang furrow respectively as in text-fig. 59. Labium wider than long. Maxillae strong and with thick scopulae. Sternum heart shaped, yellowish in colour. Legs long and strong.

Abdomen : Elongated oval with truncated anterior end, clothed with hairs, dorsum provided with 2 pairs of sigilla and dark marking as in text-fig. 58. Epigynum with lateral lobes separated from each other and the median piece broad descends down from the anterior end to the middle part as in text-fig. 61. Internal genitalia as in text-fig. 62.

Distribution : India : Suju Cave, Garo Hills, Assam ; Shillong, Meghalaya ; Kanha National Park, M.P.

Remarks : Description and illustrations have been prepared from a female specimen collected from Kanha National Park, M.P. which was identified by me after comparing with a named specimen received from the National Collection of Z.S.I., Calcutta, Regd. No. 2105/18.

Heteropoda malitiosa Simon

(Figs. 46—69)

1906. *Heteropoda malitiosa* Simon, *Ann. Soc. Ent. France*, 75 : 294.

1954. *Heteropoda malitiosa* : Roewer, *Kat. der Araneae*, 2(A) : 717.

General : Body reddish brown in colour. Total length 17.90 mm. Carapace 8.50 mm. long, 8.30 mm. wide ; abdomen 10.10 mm. long, 5.60 mm. wide.

Cephalothorax : Carapace slightly longer than wide, anteriorly narrow as in text-fig. 64, cephalic region distinctly higher but flat posteriorly with the thoracic region on the top of the carapace, thoracic furrow prominent and longitudinal as in text-fig. 64. Anterior row of eyes procurved as seen from in front and posterior row recurved as seen from above as in text-fig. 64. Posterior laterals largest of all, anterior medians are very small as in text-fig. 64. Ocular quad longer than wide and very narrow in front as in text-fig. 64. Sternum heart shaped, yellowish brown in colour. Chelicerae armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 66. Labium wider than long. Legs long and strong, spinny. Male palp as in text-fig. 67.

Abdomen : Elongated oval, clothed with hairs, dorsum provided with 2 pairs of sigilla and a dark coloured patch at the posterior end as in text-

fig. 64. Epigynal lobes separated longitudinally and a median piece which is constricted at the middle, present in between them a small cavity is formed at the posterior end by the lateral lobes as in text-fig. 68. Internal genitalia as in text-fig. 69.

Distribution : India : Ganji.

Remarks : I have studied the Type—specimen of Simon, received from the M.N.H.N., Paris Regd. No. 18335 Batch No. 1680, on the basis of which this description and illustrations are prepared.

***Heteropoda shillongensis* sp. nov.**

(Figs. 70—75)

General : Cephalothorax and legs pale yellowish with small brown spots all over, abdomen yellowish ochre in colour. Total length 7.45 mm. Carapace 3.70 mm. long, 3.40 mm. wide ; abdomen 4.00 mm. long, 2.30 mm. wide.

Cephalothorax : Slightly longer than wide, cephalic region distinctly elevated but flat with the thoracic part on the top of the carapace, clothed with small hairs, thoracic furrow fine and distinct and longitudinal as in text-fig. 70. Anterior row of eyes slightly procurved as seen from in front and posterior row recurved as seen from above, text-fig. 70 both the lateral eyes are subequal in size. Ocular quad longer than wide and rectangular in shape as in text-fig. 70. Chelicerae moderate, armed with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 72. Labium wider than long, Maxillae with thick scopulae. Sternum heart shaped. Legs moderate, small brown spots all over, tibia with 6 pairs of ventral large spines, clothed with small hairs. Male palp as in text-fig. 73.

Abdomen : Oval, clothed with small hairs, dorsum provided with 2 pairs of sigilla and obscure dark brown patches at the rear end as in text-fig. 70. Epigynum less sclerotised, the paired lateral lobes widely separated from each other and anteriorly divergent, median piece is present and broad as in text-fig. 75. Internal genitalia as in text-fig. 74.

Holotype one female in good condition, kept in spirit. *Allotype* one male (Abdomen detached). *Paratype* ten females.

Type-locality : Holotype collected from the Botanical Garden, Shillong, Meghalaya, India. Coll. *Dr. R.K. Varshney*. 16.8.1967 Allotype 10, 200 Immature, Malki, Shillong, Meghalaya, India. Coll. *Shri R. Giri*, 18.2.1971. Paratype 10 ♀ ♀ Botanical Garden, Shillong, Meghalaya, India. Coll. *Dr. R.K. Varshney*. 16.8.1967.

Discussion : This species is very much similar to *Meteropoda sikki-*

mensis Gravely but differs in the following ways. (i) Carapace slightly longer than wide but it is wider than long in *sikkimensis*, (ii) Carapace and legs are full of small brown spots but these are absent in *sikkimensis*, (iii) Ocular quad rectangular shaped but it is narrower anteriorly in *sikkimensis*. (iv) Epigynal lateral lobes are unfused and widely separated and divergent anteriorly in *shillongensis* while these are in contacted on the midlongitudinal linx throughout their length in *sikkimensis*. (v) Median piece small but broad while no median piece is found in *sikkimensis*.

Heteropoda leprosa Simon

(Figs. 75—81)

1884. *Heteropoda leprosa* Simon, Ann. Mus. Civ. Genova, 30 : 144.

1900. *Heteropoda leprosa* : Pocock, Fauna Brit. India, Arachn., : 262.

1931. *Heteropoda leprosa* : Gravely, Rec. Indian Mus., 33(3) : 252.

1954. *Heteropoda leprosa* : Roewer, Ket. der Araneae, 2(A) 716.

General : Cephalothorax and legs brownish, abdomen brownish with yellow patches. Total length 19.50 mm. Carapace 7.80 mm. long, 7.50 mm. wide, abdomen 11.50 mm. long 7.70 mm. wide.

Cephalothorax : Slightly longer than wide, cephalic region distinct and flat on the top with thoracic part, thoracic furrow distinct and longitudinal as in text-fig. 75. Anterior row of eyes narrowly procurved as seen from in front and posterior row recurved as it is seen from above, text-fig. 75, both the lateral eyes are equal in size. Ocular quad longer than wide and narrow in front as in text-fig. 75. Labium thick, slightly wider than long, brown in colour, text-fig. 77. Sternum heart shaped, yellowish brown in colour. Chelicerae strong, dark brown in colour, armed with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 76. Legs moderately long and strong. Male palp as in text-fig. 81.

Abdomen : Oval, anteriorly truncated ; dorsum provided with 3 pairs of sigilla and a yellow midlongitudinal streak like marking upto the middle of the abdomen from the anterior end as in text-fig. 75. Epigynum provided with indistinct small lateral lobes present only at the posterior end and median piece is long prominent and form a median septum as in text-fig. 81. Internal genitalia as in text-fig. 80.

Distribution : India : Travancore, Cochin, Kerala ; Ootacamund, Nilgiri Hills, Tamil Nadu ; Kasuli, Jaunsar, U.P. ; Punkebari, Tindheria, Pashok, Kalimpong, Darjeeling, West Bengal ; Sikkim ; Daffla Hills, Assam ; Nicobar Islands. Burma : Rangoon, Tenasserim, Tovoy.

Remarks : Illustrations and descriptions are made on one female identified specimen received from the National Collection of Z.S.I., Calcutta, Regd. No. 1654/18. The male palp is drawn and studied from a male specimen received from the B.N. (N.H.), London, Regd. No. 1899. One female specimen from the M.N.H.N., Paris, Regd. No. 1-747, also studies by me.

Heteropoda hampsoni Pocock

(Figs. 82—86)

1901. *Heteropoda hampsoni* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 485.

1931. *Heteropoda hampsoni* : Gravely, *Rec. Indian Mus.*, 33(3) : 255.

1954. *Heteropoda hampsoni* : Roewer, *Kat. der Araneae*, 2(A) : 716.

General : The whole body is dark brown in colour. Total length 26.40 mm. Carapace 11.60 mm. long, 10.90 mm. wide ; abdomen 14.50 mm. long, 10.30 mm. wide.

Cephalothorax : Longer than wide, cephalic region slightly elevated anteriorly but flat posteriorly with the thoracic region on the top of the carapace, thoracic furrow longitudinal fine and distinct as in text-fig. 82. Anterior row of eyes slightly procurved as seen from in front and posterior row of eyes slightly recurved as seen from above, text-fig. 82, both anterior and posterior laterals are same in size. Ocular quad longer than wide and narrow anteriorly than behind as in text-fig. 82. Chelicerae very powerful and stout, armed with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 83. Labium wider than long. Legs very long and powerful.

Abdomen : Oval, clothed with small and large hairs. Dorsum provided with 2 pairs of sigilla, dark markings forming a pattern as in text-fig. 82. Epigynum with lateral lobes widely separated and parallel with each other and a narrow median piece is present in between them as in text-fig. 85. Internal genitalia as in text-fig. 86.

Distribution : India : Ootacamund, Nilgiri Hills, Tamil Nadu.

Remarks : Description and illustrations have been prepared on the basis of Type-specimen of Pocock received from the B.M. (N.H.), London, Regd. No. 1888.57.

Heteropoda languida Simon

(Figs. 87—91)

1887. *Heteropoda languida* Simon, *J. Asiat. Soc. Bengal*, 56(2) : 102.

1900. *Heteropoda languida* : Pocock, *Fauna Brit. India Arachn.* : 262.

1954. *Heteropoda languida* : Roewer. *Kat. der Araneae*, 2(A) : 716

General : Total length 20.10 mm. Carapace 10.10 mm. long, 9.00 mm. wide, abdomen 10.30 mm. long, 7.10 mm. wide.

Cephalothorax : Longer than wide, cephalic part remarkably higher than thoracic region, thoracic furrow longitudinal and distinct as in text-fig. 87. Anterior row of eyes slightly procurved as seen from in front and posterior row of eyes slightly recurved as seen from above, both anterior and posterior laterals are equal in size. Ocular quad longer than wide and wider behind than in front as in text-fig. 87. Chelicerae moderate with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 88. Labium nearly twice wider than long as in text-fig. 39. Legs moderately strong and long.

Abdomen : Oval shaped, pale in colour, clothed with fine hairs. Dorsum of abdomen provided with 3 pairs of sigilla as in text-fig. 87. Epigynum with lateral lobes separated throughout their length, no median piece is present, a small cavity left by the lateral lobes at the posterior end as in text-fig. 90. Internal genitalia as in text-fig. 91.

Distribution : Burma : Tavoy.

Remarks : I have studied this species of Burma Though so far it is not recorded from India, but as Burma is adjacent to India it may occur in our fauna. Description and illustrations are prepared on the basis of Type Specimen, received from the M.N.H.N., Paris, Regd. No. 8.5888.

Heteropoda akashi sp. nov.

(Figs. 92—96)

General : Cephalothorax and legs yellow ochre in colour, abdomen anteriorly pale yellowish and posteriorly light brownish. Total length 12.80 mm. Carapace 5.40 mm. long, 4.80 mm. wide ; abdomen 7.70 mm. long, 5.30 mm. wide.

Cephalothorax : Carapace longer than wide, clothed with pubescence and hairs, cephalic region slightly higher anteriorly and flat posteriorly with the thoracic region on the top of the carapace, thoracic furrow distinct and longitudinal as in text-fig. 92. Anterior row of eyes procurved as seen from in front and posterior row recurved as seen from above as in text-fig. 92, both anterior and posterior laterals are subequal in size. Ocular quad longer than wide and narrow in front than behind as in text-fig. 92. Chelicerae moderately strong, armed with 3 and 4 teeth on outer and inner margins of fang furrow as in text-fig. 93. Labium wider than long. Maxillae flat with thick scopulae, provided with a dark patch at the basal

end as in text-fig. 94. Legs moderate, femora with dark brown spots on the ventral side, spinny.

Abdomen : Oval, tapering at the posterior end, clothed with hairs. Dorsum decorated with small brownish spots all over and 3 pairs of sigilla as in text-fig. 92. Epigynal paired lateral lobes are very close to each other but separated midlongitudinally by fine gap and widely separated and divergent at the anterior end by leaving a cavity inbetween, posteriorly the lobes are subdivided as in text-fig. 95. Internal genitalia as in text-fig. 96.

Holotype one female in spirit, not in good condition. Some legs are broken. Chelicerae loosely attached, kept in spirit. *Paratype* two females in good condition, kept in spirit.

Type-locality : Barapani, Khashi and Jaintia Hills, Meghalaya, India. Coll. Dr. A.K. Mondal, 18.4.1964.

Discussion : This species is closely associated with *Heteropoda prompta* (O.P. Cambridge) but differs as follows : (i) Carapace longer than wide but in *prompta* it is as long as wide. (ii) Abdomen more tapering posteriorly than in *prompta*. (iii) No V-marking on the ventral side of abdomen but in *prompta* distinct such marking is present. (iv) Epigynal lateral lobes sub-divided posteriorly but in *prompta* no such divisions of lateral lobes are found. (v) In internal genitalia, the spermathecae ducts are different in both the species.

***Heteropoda sexpunctata* Simon**

(Figs. 97—102)

1885. *Heteropoda sexpunctata* Simon, *Bull. Soc. Zool. France*, 10 : 14.

1900. *Heteropoda sexpunctata* : Pocock, *Fauna Brit. India, Arachn.*, : 261.

1931. *Heteropoda sexpunctata* : Gravely, *Rec. Indian Mus.*, 33(3) : 250.

1954. *Heteropoda sexpunctata* : Roewer, *Kat. der Araneae*, 2 (A) : 718.

General : Cephalothorax and legs yellowish brown, abdomen greyish in colour. Total length 16.60 mm. Carapace 10.30 mm. long, 7.20 mm. wide.

Cephalothorax : Slightly wider than long, clothed with fine hairs, cephalic region small and narrowly distinguished from the thoracic part, almost flat with the thoracic part on the top as in text-fig. 97. Thoracic furrow longitudinal and distinct as in text-fig. 97. Anterior row of eyes procurved as seen from in front and posterior row recurved as seen from above as in text-fig. 97 both lateral eyes are same in size. Ocular quad longer than narrow anteriorly as in text-fig. 97. Chelicerae moderately strong, armed with 2 and 3 teeth on outer and inner margins of fang

furrow respectively as in text-fig. 98. Labium wider than long. Maxillae with thick scopulae. Sternum heart shaped, yellow in colour. Legs moderate. Male palp as in text-fig. 100.

Abdomen : Oval, greyish in colour, clothed with fine hairs. Dorsum provided with 2 pairs of sigilla and a pale and grey patches forming a design as in text-fig. 97. Epigynal lateral lobes divergent widely at the anterior end by leaving a deep depression inbetween they are in contact very narrowly at the posterior end as in text-fig. 101 ; no median piece is present in the epigynum. Internal genitalia as in text-fig. 102.

Distribution : India : Calcutta, Serampur, Birbhum, West Bengal ; Shabgunge, Bihar ; Barkuda islands, Chilks Lake, Ganjam, Puri, Orissa ; Vandallur, Pallavaram, Nagalapuram Hills, Chingleput, Tamil Nadu ; Jalarpet, Arcot, Karnataka ; Murmgao Bay, Goa ; E. Khandesh, W. Khandesh, Thana, Maharashtra ; Surat, Gujarat.

Remarks : Description and illustrations are prepared on the basis of female and male identified specimens received from the National Collection of Z.S.I., Calcutta, Regd. No. 1634/18. I also have studied another lot of female and male identified specimens, received from the M.N.H.N., Paris, Regd. No. 15288. Batch No. 1682.

Heteropoda lutea Thorell

(Figs. 103—107)

1895. *Heteropoda lutea* : Thorell, *Descript. catal. Spid. Burma*, : 265.

1900. *Heteropoda lutea* : Pocock, *Fauna Brit. India, Arachn.*, : 263.

1901. *Heteropoda lutea* : Leardi, *Atti. Mus. Milano*, 40 : 89.

1954. *Heteropoda lutea* : Roewer, *Kat. der Araneae*, 2(A) : 717.

General : The specimen is yellowish brown in colour. Total length 10.75. Carapace 4.70 mm. long, 5.10 mm. wide ; abdomen 6.25 mm. long, 3.50 mm. wide.

Cephalothorax : Wider than long, cephalic part elevated anteriorly and flat with the thoracic part on the top of the carapace, thoracic furrow distinct and longitudinal as in text-fig. 103. Anterior row of eyes procurved as seen from in front and posterior row recurved as seen from above as in text-fig. 103. Ocular quad longer than wide and narrow anteriorly as in text-fig. 103. Chelicerae strong, armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 104. Labium wider than long. Sternum heart shaped, yellowish. Legs strong and red spots on the dorsals.

Abdomen : Elongated, truncated anteriorly and tapering posteriorly,

clothed with hairs and pubescence, dorsum provided with 3 pairs of sigilla and some dark markings as in text-fig. 103. Epigynal lateral lobes large, converging posteriorly and widely diverging at the anterior end, with no mid piece as in text-fig. 106. Internal genitalia as in text-fig. 107.

Distribution : So far this species is reported from its Type locality—Tharrawaddy, Burma.

Remarks : I have studied this species of Burma. Though so far it is not recorded from India but as Burma is adjacent to India it may occur in our fauna. Description and illustrations are prepared on the basis of Type-specimen, received from the B.M. (N.H.), London, Regd. No. 95.9.21., 849.

Heteropoda lentula Pocock

(Figs. 108—113)

1901. *Heteropoda lentula* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 496.

1954. *Heteropoda lentula* : Roewer, *Kat. der Araneae*, 2(A) : 716.

General : Cephalothorax and legs dark brown and abdomen yellowish in colour. Total length 14.35 mm. Carapace 6.80 mm. long, 7.50 mm. wide ; abdomen 7.70 mm. long, 5.50 mm. wide.

Cephalothorax : Wider than long, covered with hairs, cephalic region higher anteriorly but flat with the thoracic region on the top, thoracic furrow distinct and longitudinal as in text-fig. 108. Anterior row of eyes procurved as seen from in front and posterior row recurved as seen from above, text-fig. 108. Ocular quad longer than wide and narrow anteriorly as in text-fig. 108. Chelicerae moderate, dark brown in colour, armed with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 109. Labium wider than long. Maxillae with thick scopulae. Sternum heart shaped. Legs long and slender. Male palp as in text-fig. 111.

Abdomen : Oval, clothed with hairs and pubescence, dorsum provided with dark brown markings and 3 pairs of sigilla as in text-fig. 108. Epigynal paried lobes widely separated, leaving a small cavity at the posterior end, and a median piece present which is constricted at its basal end as in text-fig. 112. Internal genitalia as in text-fig. 113.

Distribution : India : Ponmadi, Travancore, Tinnevely, Tamil Nadu.

Remarks : I had received the female and male Type-specimens of Pocock from the B.M. (N.H.), London, Regd. No. 1899. 7.11.7, on the basis of which the description and illustrations were made.

Heteropoda kandiana Pocock

(Figs. 114—118)

1899. *Heteropoda kandiana* Pocock, *Jr. Bombay nat. Hist. Soc.* 12 : 752.
 1900. *Heteropoda kandiana* : Pocock, *Fauna Brit. India, Arachn.*, : 261.
 1931. *Heteropoda kandiana* : Gravely, *Rec. Indian Mus.*, 33(3) : 249.
 1935. *Heteropoda kandiana* : Dyal, *Bull. zool. Panjab Univ.* 1 : 208.
 1954. *Heteropoda kandiana* : Roewer, *Kat. der Araneae*, 2(A) : 716.

General : Cephalothorax reddish brown, legs yellowish brown, abdomen pale yellow. Total length 21.00 mm. Carapace 8.00 mm. long, 8.80 mm. wide ; abdomen 13.70 mm. long, 11.90 mm. wide.

Cephalothorax : Wider than long, cephalic region distinct and slightly elevated than the thoracic region, thoracic furrow deep, distinct and longitudinal as in text-fig. 114A. Anterior row of eyes procurved as seen from in front and posterior row of eyes recurved as seen from above, text-fig. 114, both anterior and posterior laterals are equal in size. Ocular quad longer than wide and wider behind than in front as in text-fig. 114. Chelicerae very strong and stout, outer and inner margins of fang furrow armed with 3 and 4 teeth respectively as in text-fig. 115. Labium longer than wide, reddish brown. Maxillae flat with thick scopulae. Sternum heart shaped, anterior end truncated, yellowish in colour. Legs very long and strong covered with hairs and large spines.

Abdomen : Round shaped, covered with small hairs, dorsum provided with 2 pairs of sigilla. Epigynum with lateral lobes widely separated but parallel with each other, median piece present inbetween the lateral lobes leaving a cavity at the posterior end, lateral lobes as in text-fig. 117. Internal genitalia as in text-fig. 118.

Distribution : India : Tindharia, Darjeeling, West Bengal ; Barku Hills, Puri, Orissa ; Suju Cave, Garo Hills, Khasi and Jaintia Hills, Cherrapunji, Assam. Sri Lanka : Kandy.

Remarks : Description and illustrations are made on the basis of authenticated identified female specimen received from the National Collection of Z.S.I., Calcutta, Regd. No. 1689/78. I also have studied the Type-specimen of Pocock received from the B.M. (N.H.), London, Regd. No. 1892. 10.18.47.

Heteropoda nilgirina Pocock

(Figs. 119—123)

1901. *Heteropoda nilgirina* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 495.
 1931. *Heteropoda nilgirina* : Gravely, *Rec. Indian Mus.*, 33(3) : 253.
 1954. *Heteropoda nilgirina* : Roewer, *Kat. der Araneae*, 2(A) : 717.

General : Cephalothorax and legs brownish, abdomen brown with yellow patches. Total length 20.00 mm. long. Carapace 7.75 mm. long, 8.50 mm. wide ; abdomen 12.90 mm. long, 10.20 mm. wide.

Cephalothorax : Wider than long, clothed with fine hairs, cephalic region slightly high anteriorly but flat with the thoracic region posteriorly on the top of the carapace, thoracic furrow fine, distinct and longitudinal as in text-fig. 119. Anterior row of eyes procurved as seen from in front and posterior row of eyes recurved as seen from above, both the lateral eyes are same in size. Ocular quad longer than wide, narrow in front than behind. Chelicerae strong, armed with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 120. Labium wider than long. Maxillae with thick scopulae. Sternum heart shaped, yellow in colour. Legs long and strong, hairy and spiny.

Abdomen : Oval, anteriorly truncated, clothed with hairs, dorsum provided with 2 pairs of sigilla and a distinct dark coloured horizontal band at the posterior end as in text-fig. 119. Epigynum with small lateral lobes separated posteriorly by leaving a cavity at the posterior end and they meet only at the middle where the median piece joins them from anterior end as in text-fig. 122. Internal genitalia as in text-fig. 123.

Distribution : India : Nilgiri, Kotagiri, Fatagiri, Ootacamund, Coonoor, Tamil Nadu, Chakrata, Dehra Dun, Garhwal, Saharanpur, U.P.

Remarks : Illustrations and description are prepared on the basis of authenticated identified specimen (female), received from the B.M. (N.H.), London, Regd. No. 1899. 7.10.30.

***Heteropoda sikkimensis* Gravely**

(Figs. 124—129)

1931. *Heteropoda sikkimensis* Gravely, *Rec. Indian Mus.*, 33(3) : 255.

1954. *Heteropoda sikkimensis* : Roewer, *Kat. der Araneae*, 2(A) : 718.

General : Cephalothorax and legs dull yellowish brown, abdomen pale with some dark patches. Total length 11.70 mm. Carapace 5.85 mm. long, 6.60 mm. wide ; abdomen 5.95 mm. long, 4.50 mm. wide.

Cephalothorax : Wider than long, cephalic part slightly elevated than thoracic part and almost flat on the top of the carapace with the thoracic part ; thoracic furrow longitudinal, fine and distinct as in text-fig. 124. All eyes are on black spots as in text-fig. 124. Anterior row of eyes slightly procurved as seen from in front, posterior row recurved as in text-fig. 124, anterior lateral eyes slightly larger than posterior laterals. Ocular

quad longer than wide and narrow in front as in text-fig. 124. Chelicerae moderate, outer margin with 3 and inner margin with 4 teeth on the fang furrow as in text-fig. 125. Maxillae flat with scopulae. Sternum heart shaped, pale yellow and concave anteriorly. Legs moderately strong covered with spines and hairs. Male palp as in text-fig. 127.

Abdomen: Oval with anterior end stumpy, cloved with hairs as in text-fig. 124. Dorsum provided with 3 pairs of sigilla and dark brown markings as in text-fig. 124. Epigynum provided with paired lateral lobes, contact on the mid-longitudinal line as in text-fig. 128, anterior end having with a horizontal plate and lateral lobe of each side bent outwardly at the posterior end as in text-fig. 128. Internal genitalia as in text-fig. 129.

Distribution: India: Sukna, Pashok, Kalimpong, Kursoong, Lebong, Darjeeling, West Bengal; Sikkim, Shillong, Meghalaya.

Remarks: Illustrations and description have been prepared on the basis of female and a male Type specimens of Gravely, received from the National Collection of Z.S.I., Calcutta, Regd. No. 1508/18.

Heteropoda nicobarensis Tikader

(Fig. 130—134)

1977. *Heteropoda nicobarensis* Tikader, *Rec. Zool. Surv. India*, 72: 191-192.

General: Cephalothorax and legs brownish, abdomen yellowish brown. Total length 18.40 mm. Carapace 9.20 mm. long, 9.40 mm. wide; abdomen 9.90 mm. long, 6.25 mm. wide.

Cephalothorax: Carapace wider than long, clothed with thick brown hairs, cephalic region distinct but flat to the top of the thoracic region; thoracic furrow deep, distinct and longitudinal as in text-fig. 130. Ocular region brownish, anterior row of eyes shorter than posterior row. Anterior row of eyes procurved as seen front in front, posterior row of eyes slightly recurved as in text-fig. 130. both anterior laterals and posterior laterals are same in size. Ocular quad longer than wide and narrow anteriorly. Clypeus nearly thrice wider than the diameter of anterior medians. Chelicerae strong, covered with large hairs, outer and inner margins of fang furrow armed with 3 and 4 teeth respectively as in text-fig. 132. Labium wider than long as in text-fig. 131. Maxillae yellowish in colour and with scopulae. Sternum heart shaped and yellowish in colour. Legs long, strong, clothed with hairs, spinny; tibia and metatarsi of 1st and 2nd legs provided with 3 and 2 pairs of ventral spines respectively.

Abdomen: Longer than wide, clothed with thick hairs, slightly narrow

behind. Dorsum of abdomen provided with tufts of large hairs form a patch anteriorly as in text-fig. 130, and a pair of sigilla. Ventral side covered with large hairs and a pair of longitudinal lines are present. Epigynum with paired lateral lobes which are in contact with each other on the midlongitudinal line but not fused and are separated at the lower end as in text-fig. 133, anteriorly these lateral lobes leaving a cavity as in text-fig. 133. Internal genitalia as in text-fig. 134.

Distribution : India : Kamorta Island, Nicobar ; Malapuram, Kerala.

Remarks : Description and illustrations are prepared on the basis of Holotype ♀, housed in the W.R.S., Poona, Regd. No. not yet given.

Heteropoda bhaikakai Patel & Patel

(Figs. 135—140)

1973. *Heteropoda bhaikakai* Patel & Patel, *Orient. Insect.*, 7(1) : 127-132.

General : Cephalothorax and legs are yellowish brown in colour, abdomen yellowish with some brownish patches. Total length 13.70 mm. Carapace 6.00 mm. long, 6.30 mm. wide ; abdomen 7.50 mm. long, 5.00 mm. wide.

Cephalothorax : Wider than long, clothed with thick brown hairs all over and a few large hairs as in text-fig. 135. Cephalic region small in comparison to thoracic region and flat on the top with the thoracic part, thoracic furrow indistinct and longitudinal as in text-fig. 135. Anterior row of eyes procurved as seen from in front and posterior row of eyes recurved as seen from above, text-fig. 135, posterior lateral eyes larger than anterior laterals as in text-fig. 135. Ocular quad longer than wide and narrow in front. Chelicerae moderately strong, armed with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 138. Labium wider than long, pale at the apex. Maxillae longer in shape with thick scopulae as in text-fig. 136. Sternum heart shaped, clothed with large hairs. Legs long and strong, spinny and clothed with hairs. Male palp as in text-fig. 137.

Abdomen : Elliptical, dorsum with 2 pairs of sigilla, patches are forming a pattern as in text-fig. 135. Epigynum with lateral lobes widely separated and divergent from each other and no median longitudinal piece is present inbetween the lateral lobes as in text-fig. 139. Internal genitalia as in text-fig. 140.

Distribution : India : Naped (Type locality), Bhavnagar, Gujarat.

Remarks : Illustrations and description are prepared on the Paratype

female and a identified male specimen, received from its author Dr. B.H. Patel, Bhavnagar, Gujrat.

Heteropoda plebeja Thorell

(Figs. 141—145)

1887. *Heteropoda plebeja* Thorell, *Ann. Mus. Civ. Genova*, 25 : 237.

1900. *Heteropoda plebeja* : Pocock, *Fauna Brit. India, Arachn.*, : 262.

1954. *Heteropoda plebeja* : Roewer, *Kat. der Araneae*, 2(A) : 717.

General : Cephalothorax and legs dark brown, abdomen yellowish in colour. Total length 16.50 mm. Carapace 6.50 mm. long, 6.70 mm. wide ; 10.20 mm. long, 8.10 mm. wide.

Cephalothorax : Wider than long, carapace strongly elevated behind, thoracic furrow distinct and longitudinal as in text-fig. 141. Anterior row of eyes slightly procurved as seen from in front and posterior row of eyes recurved as seen from above as in text-fig. 141. Ocular quad longer than wide, narrow in front than behind as in text-fig. 141. Chelicerae strong and armed with 3 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 143. Labium wider than long. Sternum heart shaped, reddish brown in colour. Legs long and slender.

Abdomen : Roundish oval, tapering behind, dorsum provided with 2 pairs of sigilla and a curved dark marking at the posterior end as in text-fig. 141. Epigynum with paired lateral lobes separated widely by leaving a cavity inbetween them, no median piece is present as in text-fig. 144. Internal genitalia as in text-fig. 145.

Distribution : This species so far recorded from its type-locality only in Burma (Rangoon and Kyeikpadam).

Remarks : I have studied this species of Burma. Though so far it is not recorded from India but as Burma is quite adjacent to India it may occur in our fauna. Description and illustrations are prepared on the basis of Type-specimen, received from the B.M. (N.H.), London, Regd. No. 95.9.21., 843-8-48.

Genus. VII. **Olios** Walckenaer

1837. *Olios* Walckenaer, *Hist. Nat. Ins. Apt.*, 1 : 202.

1864. *Olios* : Simon, *Hist. Nat. Araign.*, : 521.

1897. *Sparassus* : Simon, *Hist. Nat. Araign.*, 2 : 35.

1912. *Olios* : Jarvi, *Ann. Acad. Sci. Fenn.*, (A) 4 (1) : 63.

1913. *Olios* : Comstock, *The Spider Book, New York*, : 552.

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

1935. *Olios* : Dyal, *Bull. Zool. Panjab Univ.*, 1 : 206.

1973. *Olios* : Platnick & Levi, *Bull. Brit. Arach. Soc.*, 2(8) : 166-167.

Characters : Carapace distinctly high and convex ; thoracic groove indistinct or may be absent. Anterior row of eye straight ; anterior medians largest and larger than laterals ; posterior row of eyes slightly procurved ; posterior laterals sessile ; ocular quad square. Clypeus very low. Labium rounded at the apex. Second leg longer than first. Tibia I armed with 2 pairs of inferior spines.

Type-species : *Olios argelasius* (Walckenaer).

Distribution : Tropical countries of the world.

Key to the species of the genus *Olios* Walckenaer

1. Carapace longer than wide or nearly as long as wide ... 2
 Carapace wider than long 9
2. Carapace longer than wide 3
 Carapace as long as wide 5
3. Labium not provided with any lateral notch (Fig. 147) ; epigynal lateral lobes completely fused anteriorly to form a horse-shoe shaped structure and posteriorly remain separated throughout (Fig. 150) ; present of median cleft inbetween the lateral lobes (Fig. 151) *iranii*
 Labium provided with lateral notch, one on each side ; epigynal lobes not fused ; no cleft present in between the lateral lobes 4
4. Abdomen provided with a midlongitudinal brown streak like marking on the dorsum (Fig. 152) ; chelicera with 3 teeth on the inner margin of fang furrow (Fig. 153) ; epigynal lateral lobes separated midlongitudinally by a gap and divergent outwardly at the anterior end (Fig. 155) ; lateral lobes subdivided posteriorly *bhavnagarensis*
 Abdomen not provided with any midlongitudinal markings on the dorsum (Fig. 157) ; chelicera with 5 teeth on the inner margin of fang furrow (Fig. 159) epigynal lateral lobes are in contact at the centre on midlongitudinal line and convergent anteriorly after separated from each other (Fig. 161) ; lateral lobes without any subdivisions posteriorly *xerxes*
5. Labium provided with lateral notch 6
 Labium not provided with any lateral notch 7
6. Abdomen oval shaped ; chelicera armed with 6 teeth on the inner margin of fang furrow (Fig. 164) ; epigynal lateral lobes indistinct and fused completely at the anterior end to form a cavity which opens posteriorly (Fig. 168) ; a small scape like structure has come out from the cavity (Fig. 167) *milleti*
 Abdomen pear shaped ; chelicera armed with 5 teeth on the inner margin of fang furrow (Fig. 171) ; epigynal lateral lobes

- distinct and not fused but are in contact on the midlongitudinal line and subdivided anteriorly to hold a small cavity (Fig. 173); no scape like structure is present in the epigynum (Fig. 179) *obesulus*
7. Abdomen oval shaped, dorsum with a dark patch at the anterior periphery (Fig. 175); epigynal lateral lobes completely fused anteriorly and holding a cavity inside (Fig. 179); in internal genitalia the spermathecae and ducts are convoluted and spiral type (Fig. 180) *punctipes*
Abdomen otherwise; epigynal lateral lobes not fused and are quite separated from each other; internal genitalia otherwise ... 8
8. Abdomen cone shaped, dorsum with a sword shaped long brownish marking on the midlongitudinal line (Fig. 181); epigynum provided with a median piece on which the separated lateral lobes overlap a little (Fig. 184); lateral lobes imagnated and form a small pocket on the postero-lateral side (Fig. 185) *kirane*
Abdomen pear shaped, dorsum with irregular brownish markings (Fig. 186); epigynum not provided with any median piece and lateral lobes separated from each other (Fig. 189); lateral lobes simple plate like and no pocket is formed on the postero-lateral side (Fig. 190) *sensilis*
9. Epigynum provided with a median piece 10
Epigynum not provided with any median piece 12
10. Abdomen with no dark brownish markings on the dorsum; chelicera armed with 5 teeth on inner margin of fang furrow (Fig. 193); slate like median piece of epigynum extending from the anterior end to the posterior end in between the lateral lobes and subdivided at the posterior end (Fig. 194) *tener*
Abdomen provided with dark brownish markings on the dorsum; chelicera armed with less than 5 teeth on the inner margin of fang furrow; median piece otherwise and not subdivided 11
11. Dorsum of abdomen provided with dark brown and yellow patches to form a definite pattern (Fig. 197); inner margin of fang furrow of chelicera armed with 4 teeth (Fig. 198); median piece of epigynum constricted at the base (Fig. 200); lateral lobes convergent at the posterior end (Fig. 201) *hampsoni*
Dorsum of abdomen provided with some dark brown patches but do not form any definite pattern (Fig. 202); inner margin of fang furrow of chelicera armed with 3 teeth (Fig. 204); median piece of epigynum not constricted at the base (Fig. 205); lateral lobes parallel to each other at the posterior end (Fig. 206) *fuligineus*
12. Labium without any lateral notch (Fig. 209); paired lateral lobes of epigynum fused anteriorly and divergent at the posterior end (Fig. 210); median cleft absent inside the cavity (Fig. 211) *admiratus*

Labium provided with lateral notch on each side (Fig. 213); paired lateral lobes of epigynum though divergent at the posterior end but not fused anteriorly (Fig. 215); distinct median cleft present inside the midlongitudinal cavity (Fig. 216) ... *gravelyi*

Olios iranii (Pocock)

(Figs. 146—151)

1901. *Sparassus irani* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 492.

1931. *Olios irani* : Gravely, *Rec. Indian Mus.*, 33(3) : 242.

1954. *Olios irani* : Roewer, *Kat. der Araneae*, 2(A) : 698.

General : Cephalothorax light brownish with cephalic part a little darker, legs yellowish, abdomen pale yellowish. Total length 20.60 mm. Carapace 11.30 mm long, 9.00 mm. wide; abdomen 13.80 mm. long, 8.30 mm. wide.

Cephalothorax : Longer than wide, clothed with fine hairs, cephalic region very high than thoracic region, thoracic furrow distinct and longitudinal. Anterior row of eyes recurved as seen from in front and posterior row of eyes almost straight, anterior medians are the largest of all and posterior medians are smaller than posterior laterals as in text-fig. 146. Ocular quad longer than wide and slightly narrow anteriorly as in text-fig. 146. Chelicerae very strong, dark brown, armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 148. Labium dark brown in colour with pale distal end, more wider than long as in text-fig. 147. Maxillae powerful with thick scopulae. Sternum heart shaped, anteriorly concave, yellowish in colour. Legs strong and long. Male palp as in text-fig. 149.

Abdomen : Large and oval shaped, dorsum provided with 2 pairs of sigilla as in text-fig. 146. Ventral side provided with a pair of midlongitudinal lines inbetween the epigastric furrow and the spinnerets. Epigynum circular plate like, with paired lateral lobes fused anteriorly forming a horse shoe like curve and separated throughout posteriorly and median cleft extending as a slit like from a little beyond the middle to the anterior end where lateral lobes fused together as in text-fig. 150. Internal genitalia as in text-fig. 151.

Discussion : India : N.W. Bombay, Poona, Nagpur, Maharashtra ; Siripur, Saran, Bihar ; N.W. Himalaya, Dehra Dun, U.P. Pakistan ; Kohat, W.W. Frontier Province, Khost, Baluchistan.

Remarks : Description and illustrations have been prepared on the basis of a syntype female, received from the B.M. (N.H.), London, Regd. No. 99.9.21. 519-520. The male palp has been illustrated from an identi-

fied specimen received from the National Collection of Z.S.I., Calcutta, Regd. No. 1581/18.

***Olios bhavnagarensis* sp. nov.**

(Figs. 152—156)

General: Cephalothorax and legs light yellowish brown in colour, abdomen greyish yellow with dark brown patches. Total length 10.50 mm. Carapace 4.90 mm. long, 4.65 mm. wide; abdomen 5.70 mm. long, 3.70 mm. wide.

Cephalothorax: Slightly longer than wide, cephalic region elevated than thoracic region, thoracic furrow longitudinal and distinct as in text-fig. 152. Anterior row of eyes nearly straight as seen from in front and posterior row of eyes slightly procurved as seen from above, text-fig. 152. Anterior medians are largest of all. Ocular quad longer than wide and narrow anteriorly than behind as in text-fig. 154. Chelicera moderately strong, armed with 2 and 3 teeth on outer and inner margins of fang furrow respectively as in text-fig. 153. Labium wider than long, provided with a lateral notch on each side as in text-fig. 154. Maxillae with thick scopulae. Sternum heart shaped, yellowish in colour. Legs moderately strong and long, tibia and tarsus of every leg provided with 2 large ventral spines on each.

Abdomen: Oval shaped, covered with thick hairs, dorsum provided with 2 pairs of sigilla and a midlongitudinal brown streak like marking as in text-fig. 152. Epigynum provided with a pair of large lateral lobes, separated by a narrow gap throughout their length as in text-fig. 155, posteriorly the lateral lobes are subdivided and anteriorly divergent outwards as in text-fig. 155. Internal genitalia as in text-fig. 156.

Holotype: One female in good condition in spirit.

Type-locality: Victoria Park, Bhavnagar, Gujarat, India. Coll. Shri S.K. Patel, 22.7.1980.

Discussion: This species is closely associated with *Olios obesulus* (Pocock) but differs as follows: (i) Carapace slightly longer than wide but in *Obesulus* it is as long as wide. (ii) Posterior row of eyes slightly procurved where as it is straight in *Obesulus*. (iii) Chelicera armed with 3 teeth on inner margin of fang furrow but in *Obesulus* inner margin armed with 5 teeth. (iv) Epigynum with large paired lateral lobes subdivided posteriorly and are separated from each other by a narrow gap throughout their length, but in *Obesulus* the large paired lateral lobes subdivided anteriorly and are almost in contact on the midlongitudinal line. (v) In

internal genitalia the spermathecae and ducts are different in both the species.

Olios xerxes (Pocock)

(Figs. 157—162)

1901. *Sparassus xerxes* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 489.
 1901. *Sparassus meynardi* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 490.
 1901. *Sparassus pearsoni* : Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 492.
 1931. *Olios xerxes* : Gravely, *Rec. Indian Mus.*, 33(3) : 240.
 1954. *Olios xerxes* : Roewer, *Kat. der Araneae*, 2(A) : 700.

General : Cephalothorax and legs light brownish, abdomen yellowish brown. Total length 29.50 mm. Carapace 13.80 mm. long, 11.80 mm. wide ; abdomen 18.50 mm. long, 13.50 mm. wide.

Cephalothorax : Longer than wide, cephalic part slightly elevated than thoracic part, thoracic furrow very fine and longitudinal as in text-fig. 157. Anterior row of eyes slightly recurved as seen from in front and posterior row nearly straight as seen from above as in text-fig. 157, anterior medians are largest of all. Ocular quad nearly as long as wide, narrow anteriorly as in text-fig. 157. Chelicera armed with 2 and 5 teeth on outer and inner margins of fang furrow respectively as in text-fig. 159. Labium wider than long with a lateral notch on each side. Maxilla with thick scopulae. Sternum heart shaped. Legs moderately strong, clothed with small hairs, spinny. Male palp as in text-fig. 160.

Abdomen : Barrel shaped, stumpy at both anterior and posterior end, clothed with small hairs, dorsum provided with 2 pairs of sigilla as in text-fig. 157. Epigynum heavily sclerotised, black coloured, paired lateral lobes are very close and are incontact on the midlongitudinal line leaving a cavity at the anterior end and are also divergent at the posterior end as in text-fig. 161. Internal genitalia as in text-fig. 162.

Distribution : India : Shillong, Meghalaya ; West Khandesh, East Khandesh, Poona, Maharashtra ; Bhavnagar, Gujarat. Pakistan : Baluchistan, Karachi. Iran : Persian Gulf, Afghanistan.

Remarks : Description and illustrations are based on a type female and male specimens received from the B. M. (N. H.) London, Regd. No. 1882.109.

Olios milleti (Pocock)

(Figs. 163—168)

1901. *Sparassus milleti* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 494.
 1931. *Olios milleti* : Gravely, *Rec. Indian Mus.*, 33(3) : 344.
 1954. *Olios milleti* : Roewer, *Kat. der Araneae*, 2(A) : 699.

General: Cephalothorax and legs pale yellowish in colour, abdomen chalk white in colour. Total length 19.70 mm. Carapace 8.00 mm. long, 8.00 mm wide; abdomen 12.50 mm. long, 9.60 mm. wide.

Cephalothorax: As long as wide, cephalic region slightly elevated than the thoracic region, thoracic furrow fine and longitudinal as in text-fig. 163. Anterior row of eyes slightly recurved as seen from in front and posterior row of eyes almost straight; anterior median eyes are largest of all as in text-fig. 163. Ocular quad nearly as long as wide and narrow anteriorly than behind as in text-fig. 163. Chelicera moderate, yellowish in colour, armed with 2 and 6 teeth on outer and inner margins of fang furrow respectively as in text-fig. 164. Labium wider than long provided with a notch on lateral side on each as in text-fig. 166. Maxillae moderate, with thick scopulae. Sternum heart shaped. Legs moderately strong and long. Male palp as in text-fig. 165.

Abdomen: Oval shaped, clothed with small hairs, dorsum provided with 2 pairs of sigilla and a dark grey coloured midlongitudinal streak from the anterior end to the middle as in text-fig. 163. Epigynum with indistinct lateral lobes which fused anteriorly to form a semicircular small cavity opens posteriorly, median cleft extended out at the posterior end as a scape like structure as in text-fig. 167. Internal genitalia as in text-fig. 168.

Distribution: India: Gopaldhara, Darjeeling, West Bengal; Bandra, Bombay, Nasik, Maharashtra; Siripur, Saran, Bihar; Barkuda Island, Chilka Lake, Orissa; Kambakkam Hill, Chingleput, Tamil Nadu; Bhavnagar, Gujarat. Sri Lanka: Paradeniya.

Remarks: Illustrations and description have been prepared on the basis of an identified female specimen received from the National Collection of Z. S. I., Calcutta, Regd. No. 1612/18. I also had received the male Type-species from the B.M. (N. H.), London, Regd. No. 99.11.2.44, the palpal organ is drawn from this.

***Olios obesulus* (Pocock)**

(Figs. 169—172)

1901. *Sparassus obesulus* Pocock, *J. Bombay nat. Hist. Soc.*, 13: 493.

1931. *Olios obesulus*: Gravely, *Rec. Indian Mus.*, 33(3): 245.

1954. *Olios obesulus*: Roewer, *Kat. der Araneae* 2(A): 699.

General: Cephalothorax and legs yellowish with some brownish patches, abdomen pale yellowish with dark brown patches. Total length 13.70 mm. Carapace 5.80 mm. long, 5.80 mm. wide; abdomen 8.60 mm. long, 5.70 mm. wide.

Cephalothorax : Carapace as long as wide, cephalic region elevated than thoracic region and provided with brown patches as in text-fig. 169, thoracic furrow fine and longitudinal. Anterior row of eyes almost straight and posterior row also straight as in text-fig. 169. Anterior median eyes largest of all. Ocular quad longer than wide and narrow in front than behind as in text-fig. 169. Chelicera moderately strong, dark brown in colour, armed with 2 and 5 teeth on outer and inner margins of fang furrow as in text-fig. 171. Labium wider than long, provided with a notch on each side laterally as in text-fig. 170. Maxilla with thick scopulae. Sternum heart shaped, yellowish in colour. Legs moderate, long, clothed with hairs and spines. Male palp as in text-fig. 172.

Abdomen : Pear shaped, dorsum provided with 2 pairs of sigilla and some yellow and brown patches to form a pattern as in text-fig. 169. Epigynum provided with paired lateral lobes which are in contact throughout the length on the midlongitudinal line and subdivided anteriorly as in text-fig. 173, a small cavity is present anteriorly inbetween subdivided lateral lobes as in text-fig. 173. Internal genitalia as in textfig. 174.

Distribution : India : Sangli, Poona, Bombay, Maharashtra ; Pyzabad, Allhabad, U. P. ; Jabalpur, M. P. ; Siripur, Saran, Bihar ; Podaspur, West Bengal ; Travancore, Tellichery, Kerala ; Madras city, Tamil Nadu.

Remarks : Description and illustrations are prepared on the basis of a female and male specimen collected and identified by me after comparing it with the Type-specimen of Pocock, received from the B. M. (N. H.), London, Regd. No, 99-11-153-154.

***Olios punctipes* Simon.**

(Figs. 175—180)

1884. *Olios punctipes* Simon, *Ann. Mus. Civ. Genova.* 20 : 339.
 1884. *Olios varscolor* : Simon, *Ann. Mus. Civ. Genova,* 20 : 367.
 1887. *Sarotes impudicus* : Thorell, *Ann. Mus. Civ. Genova,* 25 : 241.
 1900. *Sparassus puncticeps* : Pocock, *Fauna Brit. India, Arachn.,* : 268.
 1900. *Sparassus impudicus* : Pocock, *Fauna Brit. India, Arachn.,* : 268.
 1931. *Olios punctipes* : Gravely, *Rec. Indian Mus.,* 33(3) : 242.

General : Cephalothorax and legs reddish brown, abdomen greyish yellow. Total length 18.30 mm. Carapace 7.50 mm. long, 7.50 mm. wide ; abdomen 12.50 mm. long, 8.70 mm wide.

Cephalothorax : Carapace as long as wide, clothed with hairs, cephalic region elevated than thoracic region, thoracic furrow longitudinal as in text-fig. 175. Anterior row of eyes almost straight and posterior row also straight, anterior medians are largest of all, both laterals are on

distinct tubercles. Ocular quad as long as wide and narrow anteriorly than behind as in text-fig. 175. Chelicera very powerful, dark brown in colour, armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 176. Labium wider than long, with a notch on lateral side. Maxilla provided with thick scopulae. Sternum heart shaped, dark brown in colour. Legs long and strong, covered with hairs and spines. Male palp as in text-fig. 178.

Abdomen : Oval, tapering at the posterior end, anterior end of dorsum with dark patch at the periphery as in text-fig. 175, dorsum provided with 2 pairs of sigilla. Whole abdomen clothed with large hairs. Ventral side of abdomen clothed with dark brown hairs. Epigynum with paired lateral lobes fused anteriorly and widely separated posteriorly by leaving a small cavity as in text-fig. 180, no median piece is present. Internal genitalia as in text-fig. 180.

Distribution : India : Gopalpur, Ganjam, Orissa ; Chanda, M. P. ; Fyzabad, Mossouri, U. P. ; Siripur, Saran, Bihar ; Gmatia, Birbhum, Kalimpong, Tindharia, Darjeeling, Salt Lake, Calcutta, Serampur, Sibpur (Botanical gardens), West Bengal ; Garo Hills, Tura, Sonapur, Dejco, Assam ; Andaman Islands. Bangladesh : Rangamati, Chittagong Hill Tract. Burma : Maymyo, Tharrawaddy, Minhla. Malaysia : Lengong, Perak, Sumatra.

Remarks : Description and illustrations are prepared on the basis of female and male specimens—*Olios impudicus* received from the B.M. (N.H.), London, Regd. No. 4510.70.85.44. But this *impudicus* is synonymised with *punctipes* by Gravely (1931). I had received female specimen of *O. varicolor* Simon from the M.N. H.N., Paris, Regd. No. 6668. After studying thoroughly, including the internal genitalia, I found this *varicolor* is nothing but the *O. punctipes* Simon ; Therefore *varicolor* Simon (1884) has been synonymised with *punctipes* Simon (1984).

***Olios kiranae* sp. nov.**

(Figs. 181—185)

General : Cephalothorax and legs golden yellowish in colour, abdomen yellowish with midlongitudinal brown shord shaped streak. Total length 9.75 mm. Carapace 4.00 mm. long, 4.00 mm. wide ; abdomen 6.10 mm. long, 3.00 mm. wide.

Cephalothorax : Carapace as long as wide, clothed with fine hairs, cephalic region distinctly elevated than thoracic region, thoracic furrow fine and longitudinal as in text-fig. 181. Anterior row of eyes straight and

posterior row slightly procurved as in text-fig. 181. Anterior medians are largest of all. Ocular quad longer than wide and narrow anteriorly than behind. Chelicerae moderate, dark brown in colour, armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 182. Labium wider than long, lateral notch not present as in text-fig. 183. Maxillae provided with thick scopulae. Legs moderately strong, and long, clothed with hairs, less spinny.

Abdomen : Cone shaped, tapering at the posterior end, dorsum provided with 2 pairs of sigilla and a midlongitudinally sword like brownish marking as in text-fig. 181. Epigynum provided with paired lateral lobes widely separated posteriorly and divergent anteriorly, and a scape like median piece is present inbetween them at the anterior end as in text-fig. 184. each lateral lobe having with a pocket like invagination at the posterior end as in text-fig. 184. Internal genitalia as in text-fig. 185.

Holotype one female in good condition in spirit. *Paratype* 2 females in good condition in spirit.

Type-locality : All types have been collected from Victoria Park, Dist. Bhavnagar, Gujarat, India. Coll. *Shri S. K. Patel*, 22.7.1980.

Discussion : The species is close to *Olios hampsoni* (Pocock) but differs as follows. (i) Carapace as long as wide but in *hampsoni* it is wider than long. (ii) Labium not provided any lateral notch but in *hampsoni* labium provided with a small lateral notch. (iii) Abdomen cone shaped tapering at the posterior end but in *hampsoni* abdomen oval (iv) Dorsum of abdomen provided with a midlongitudinal shord shaped brownish marking but in *hampsoni* dorsum with different markings. (v) Epigynal lateral lobe provided with pocket like invagination at the posterior end, this lateral lobe with no such pocket at the posterior end in *hampsoni*. (vi) Lateral lobes partially cover lateral side of the median piece but in *hampsoni* lateral lobes quite apart from median piece (vii) In internal genitalia the spermathecae and ducts are different in both the species.

***Olios sensilis* Simon**

(Figs. 186—190)

1880. *Olios sensilis* Simon, *Act. Soc. Linn. Board.*, 34 : 303.

1900. *Sparassus sensilis* : Pocock, *Fauna Brit. India, Arachn.*, : 267.

1914. *Pelmopoda sensilis* : Jarvi, *Ann. Ac. Sci. Fennic.*, 4 (A : 1) : 85.

1954. *Olios sensilis* : Roewer, *Kat. der Araneae*, 2(A) : 699.

General : Body dark brownish in colour. Total length 16.60 mm. Carapace 8.40 mm. long, 8.40 mm. wide ; abdomen 8.60 mm. long, 6.50 mm. wide.

Cephalothorax : Carapace as long as wide, cephalic region distinctly elevated than thoracic region, thoracic furrow distinct and longitudinal as in text-fig. 186. Anterior row of eyes almost straight and posterior row of eyes slightly procurved. Ocular quad slightly longer than wide and narrow in front than in behind as in text-fig. 186. Chelicerae moderate, armed with 2 and 5 teeth on outer and inner margin of fang furrow respectively as in text-fig. 187. Labium wider than long, with no lateral notch on either side. Maxillae with thick scopulae. Sternum heart shaped, dark brown in colour. Legs moderate and long.

Abdomen : Roughly pear shaped, dorsum provided with 4 pairs of sigilla and some horizontal brownish bands as in text-fig. 186. Epigynum heavily sclerotised, paired lateral lobes kidney shaped, separated from other by wide gap, no median piece is present inbetween as in text-fig. 189. Internal genitalia as in text-fig. 190.

Distribution : India : Trichnopoly, Tamil Nadu. Sri Lanka : Kandy.

Remarks : Description and illustrations are prepared on the authenticated identified specimen received from the M.N.H.N., Paris, Regd. no. 14699.

Olios tener (Thorell)

(Figs. 191—196)

1891. *Sparassus tener* Thorell, *Svensk. Vet. Ak. Nandi*, 24 (14 : 2) : 80.
 1900. *Sparassus tener* : Pocock, *Fauna Brit. India, Arachn.*, : 269.
 1931. *Olios tener* : Gravely, *Rec. Indian Mus.*, 33(3) : 244.
 1954. *Olios tener* : Roewer, *Kat. der Araneae*, 2(A) : 700.

General : Cephalothorax and legs pale yellowish in colour, abdomen pale yellowish. Total length 11.10 mm. Carapace 4.25 mm. long ; 4.50 mm. wide ; abdomen 7.30 mm. long, 5.70 mm. wide.

Cephalothorax : Carapace slightly wider than long, cephalic region slightly elevated than thoracic region, thoracic furrow fine and longitudinal as in text-fig. 191. Anterior row of eyes slightly recurved as seen from in front and posterior row procurved as seen from above as in text-fig. 191 ; anterior medians largest of all. Ocular quad longer than wide and narrow anteriorly than behind as in text-fig. 191. Chelicera moderate, yellowish, armed with 2 and 5 teeth on outer and inner margins of fang furrow respectively as in text-fig. 193. Labium wider than long with a notch on each side as in text-fig. 192. Maxillae with thick scopulae. Legs thick and long. Male palp as in text-fig. 195.

Abdomen : Oval shaped, dorsum provided with 2 pairs of sigilla and a light greyish marking as in text-fig. 191. Epigynum with distinct lateral lobes inbetween them the plate like median piece present extending from anterior end to the posterior end, the median piece is subdivided at the posterior end as in text-fig. 194. Internal genitalia as in text-fig. 196.

Distribution : India : Bombay, Khandala Ghat, Raigad, Maharashtra ; Siripur, Saran, Bihar ; Bangalore, Karnataka ; Salt Lakes, Maiden, Calcutta, West Bengal ; Madras city, Tamil Nadu. Pakistan : Lahore, Punjab. Burma : Tharrawaddy.

Remarks : I have prepared the description and illustrations from an identified female specimen received from the National Collection of Z.S.I., Calcutta, Regd. No. 1606/18. The male palp is drawn from identified specimen received from the B. M. (N. H.), London, Regd. No. 1902. 12. 4. 23.

***Olios hampsoni* (Pocock)**

(Figs. 197—201)

1901. *Sparassus hampsoni* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 491.

1954. *Olios hampsoni* : Roewer, *Kat, der Araneae*, 2(A) : 698.

General : Cephalothorax and legs dark brown, abdomen yellow with brownish patches. Total length 15.00 mm. Carapace 7.30 mm. long, 7.90 mm. wide ; abdomen 8.70 mm. long, 7.50 mm. wide.

Cephalothorax : Wider than long, clothed with small hairs, cephalic region higher than the thoracic region. Thoracic furrow distinct and longitudinal as in text-fig. 197. Anterior row of eyes nearly straight as seen in front and posterior row of eyes procurved as seen from above as in text-fig. 197. Ocular quad longer than wide and narrow in front than behind as in text-fig. 197. Chelicerae moderate, armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 198. Labium wider than long with a small notch on either side. Maxillae with thick scopulae. Legs thin and long, clothed with hairs and spines.

Abdomen : Oval, with dark and yellow markings on the dorsum forming a definite pattern as in text-fig. 197, 2 pairs of sigilla on the dorsum. Epigynum with paired lateral lobes widely separated and divergent anteriorly, after divergent they also tend to be close further anteriorly as in text-fig. 200, a median piece which is constricted at the base, is present in between the paired lobes as in text-fig. 200. Internal genitalia as in text-fig. 201.

Distribution : India : Ootacamund, Nilgiri Hills, Tamil Nadu.

Remarks : Description and diagrams are prepared on the basis of Type-specimen, received from the B. M. (N. H.), London, Regd. No. 8857.

Olios fuliginus (Pocock)

(Figs. 202—206)

1901. *Sparassus fuliginus* Pocock, *J. Bombay nat. Hist. Soc.*, 13 : 491.

1954. *Olios fuliginus* : Roewer, *Kat. der Araneae*, 2(A) : 698.

General : Cephalothorax and legs brownish and abdomen yellowish in colour. Total length 19.10 mm. Carapace 8.70 mm. long, 10.00 mm. wide ; abdomen 11.50 mm. long, 9.00 mm. wide.

Cephalothorax : Wider than long, clothed with hairs, cephalic region higher than the thoracic region, thoracic furrow longitudinal as in text-fig. 202. Anterior row of eyes straight as seen from in front and posterior row slightly procurved as seen from above, anterior medians are largest of all. Ocular quad longer than wide and wider posteriorly than anteriorly as in text-fig. 202. Chelicerae strong, armed with 2 and 3 teeth on outer and inner margins of fang furrow respectively as in text-fig. 204. Labium wider than long. Maxillae with thick scopulae. Sternum heart shaped dark brown in colour. Legs long and strong, covered with hairs and spines, ventrally white.

Abdomen : Oval, dorsum provided with 2 pairs of sigilla and some irregular dark brown patches does not give any distinct pattern as in text-fig. 202. Ventral side black. Epigynum with paired lateral lobes widely separated anteriorly and divergent and a median piece in between them as in text-fig. 205. Internal genitalia as in text-fig. 206.

Distribution : India : Jadi, Satara, Maharashtra.

Remarks : Description and illustrations are based on female Type-specimen received from the B. M. (N. H.). London, Regd. No. 99. 9. 21. 517. 518.

Olios admiratus (Pocock)

(Figs. 207—211)

1901. *Sparassus admiratus* Pocock, *J. Bombay nat. Hist. Soc.* 13 : 492.

1954. *Olios admiratus* : Roewer, *Kat. der Araneae*, 2(A) : 698.

General : Cephalothorax and legs dark brown, abdomen yellow coloured. Total length 17.80 mm. Carapace 8.40 mm. long, 10.00 mm wide ; abdomen 9.00 mm. long, 7.00 mm. wide.

Cephalothorax : Wider than long, clothed with hairs, cephalic region elevated than thoracic region, thoracic furrow indistinct and longitudinal as in text-fig. 207. Anterior row of eyes almost straight and posterior row slightly procurved as in text-fig. 207, anterior medians largest of all as in text-fig. 207. Ocular quad as long as wide and narrow in front than behind as in text-fig. 207. Chelicerae moderate, armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 208. Labium wider than long, with no distinct notch. Maxillae provided with thick scopulae. Sternum heart shaped. Legs moderate and long, clothed with hairs and spines.

Abdomen : Oval dorsum provided with 2 pairs of sigilla and a pale yellow marking on anterior median part, a dark Y-shaped marking also present on the dorsum as in text-fig. 207. Epigynum with paired lateral lobes divergent posteriorly, no median piece is present as in text-fig. 210. internal genitalia as in text-fig. 211.

Distribution : India : Bombay, Maharashtra.

Remarks : Diagrams and description are prepared on the female Type specimen received from the B. M. (N.H.), London, Regd. No. 99. 7. 10. 25.

***Olios gravelyi* sp. nov.**

(Figs. 212—216)

General : Cephalothorax legs yellowish brown, abdomen light yellowish with some dark brown patches. Total length 10.00 mm. Carapace 4.00 mm. long, 4.40 mm. wide ; abdomen 6.15 mm. long, 4.20 mm. wide.

Cephalothorax : Carapace wider than long, clothed with fine hairs, cephalic region elevated than thoracic region thoracic furrow fine and longitudinal. Anterior row of eyes straight as seen from in front and posterior row also almost straight as seen from above as in text-fig. 212. Anterior medians largest of all. Ocular quad longer than wide and equally wide in both anterior and posterior ends as in text-fig. 212. Chelicera moderate, yellowish in colour armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively as in text-fig. 214. Labium wider than long, laterally provided with a notch on either side as in text-fig. 213. Maxilla provided with thick scopulae. Legs moderately strong and long, femora and tibiae of anterior 3 pairs of legs with small brown spots on the ventral sides, clothed with hairs and spines.

Abdomen : Oval, clothed with hairs, dorsum provided with 2 pairs of sigilla and dark brown markings as in text-fig 213. Epigynum with large paired lateral lobes widely separated at the posterior end but gradually

covering toward anterior end and again diverging outwardly ; mid-longitudinally these two lobes holding a large cavity, and inside the cavity median cleft is formed by the lobes as in text-fig. 215. Internal genitalia as in text-fig. 216.

Holotype one female in good condition, only 1st left leg is lost, in spirit.

Type-locality : Kanch's trace, Shillong, Meghalaya, India. Coll. Shri S.N. Prasad, 7.3.1960.

Discussion : This species is quite close to the *olios xerxes* (Pocock) but differs in following ways. (i) Carapace wider than long but in *xerxes* carapace is longer than wide. (ii) Chelicera armed with 2 and 4 teeth on outer and inner margins of fang furrow respectively whereas in *xerxes* outer and inner margins armed with 2 and 5 teeth respectively. (iii) Epigynal lateral lobes are not in contact on midlongitudinal line, divergent at posterior end, slightly narrow anteriorly and again divergent outwardly but in *xerxes* the epigynal lateral lobes are in contact on the midlongitudinal line, slightly divergent at the posterior end and the anterior end convergent inwards. (iv) In internal genitalia the spermathecae and ducts are different in both the species.

***Olios phipsoni* (Pocock)**

(Figs. 217—218)

1899. *Sparassus phipsoni* Pocock, *J. Bombay nat. Hist. Soc.* 12 : 752.

1900. *Sparassus phipsoni* : Pocock, *Fauna Brit. India, Arachn.*, : 268.

1954. *Olios phipsoni* : Roewer, *Kat. der Araneae*, 2(A) : 699.

General : The body yellowish in colour. Total length 20.00 mm. Carapace 10.50 mm. long, 10.50 mm. wide ; abdomen 10.70 mm. long, 8.80 mm. wide.

Cephalothorax of Male example : Carapace as long as wide, cephalic region remarkably higher than the thoracic region, thoracic furrow distinct and longitudinal. Anterior median eyes are largest. Both anterior row and posterior row of eyes are almost straight as in text-fig. 217. Ocular quad slightly longer than wide and narrow in front than behind. Male palp as in text-fig. 218, the paracymbium spine like.

Abdomen of Male example : Oval shaped with a light mid-dorsal markings and lateral side with dark patches as in text-fig. 217, clothed with hairs.

Distribution : India : Bombay, Maharashtra.

Remarks : Illustration and description have been prepared on the basis of Male Type specimen received from the B.M. (N.H.), London, Regd. No. Nil.

Olios stimulator (Simon)

(Figs. 219—220)

1897. *Sparassus stimulator* Simon, *Mem. Soc. Zool. France*, 10 (2) : 258.

1900. *Sparassus stimulator* : Pocock, *Fauna Brit. India, Arachn.*, : 269.

1954. *Olios stimulators* : Roewer, *Kat. der Araneae*, 2(A) : 699.

General : Cephalothorax and legs yellowish brown in colour, abdomen dark brown. Total length 22.20 mm. Cephalic region 11.50 mm. long, 10.90 mm. wide ; abdomen 12.00 mm. long, 7.00 mm. wide.

Cephalothorax of Male example : Carapace longer than wide, cephalic region very high than thoracic region. Anterior median eyes are the largest of all. Anterior row of eyes more or less straight, posterior row a little procurved as in text-fig. 219. Ocular quad longer than wide and narrow in front than behind. Male palp as in text-fig. 220, paracymbium spine like but flat at the anterior end as in text-fig. 220.

Abdomen of Male example : Elongated oval shaped with no distinct markings on the dorsum, clothed with hairs.

Distribution : India : Poona, Konkan, Maharashtra, Himalayan range.

Remarks : Description and illustrations are made on the basis of Male Type specimen received from the M.N.H.N., Paris, Regd. No. 18695.

Olios wroughtoni (Simon)

(Figs. 221)

1897. *Sparassus wroughtoni* Simon, *Mem. Soc. Zool. France*, 10(2) : 257.

1900. *Sparassus wroughtoni* : Pocock, *Fauna Brit. India, Arachn.*, : 268.

1931. *Olios wroughtoni* : Gravely, *Rec. Indian Mus.*, 33(3) : 244.

1954. *Olios wroughtoni* : Roewer, *Kat. der Araneae*, 2(A) : 700.

General : The body is dark brown in colour. Total length 13.30 mm. Carapace 6.10 mm. long, 6.90 mm. wide ; abdomen 7.30 mm. long, 5.20 mm. wide.

Cephalothorax of Male example : Carapace wider than long, cephalic region very high than thoracic region. Anterior median eyes are the largest of all. Anterior row of eyes almost straight and posterior row

recurved a little as in text-fig. 221. Ocular quad longer than wide and narrow in front than behind as in text-fig. 221. Chelicera strong, outer margin armed with 4 teeth. Male palp as in text-fig. 221, paracymbium twisted at the distal end as in text-fig.

Abdomen of Male example : Oval shaped, with a few dark horizontal markings on the mid-dorsum, clothed with hairs.

Distribution : India : Siripur, Saran, Bihar ; Matheran, Maharashtra, Bulsar, Gujarat ; North Konkan.

Remarks : Illustration and description are prepared on the basis of an identified Male specimen received from the M.N.H.N., Paris, Regd. No. 18.702.

ACKNOWLEDGEMENTS

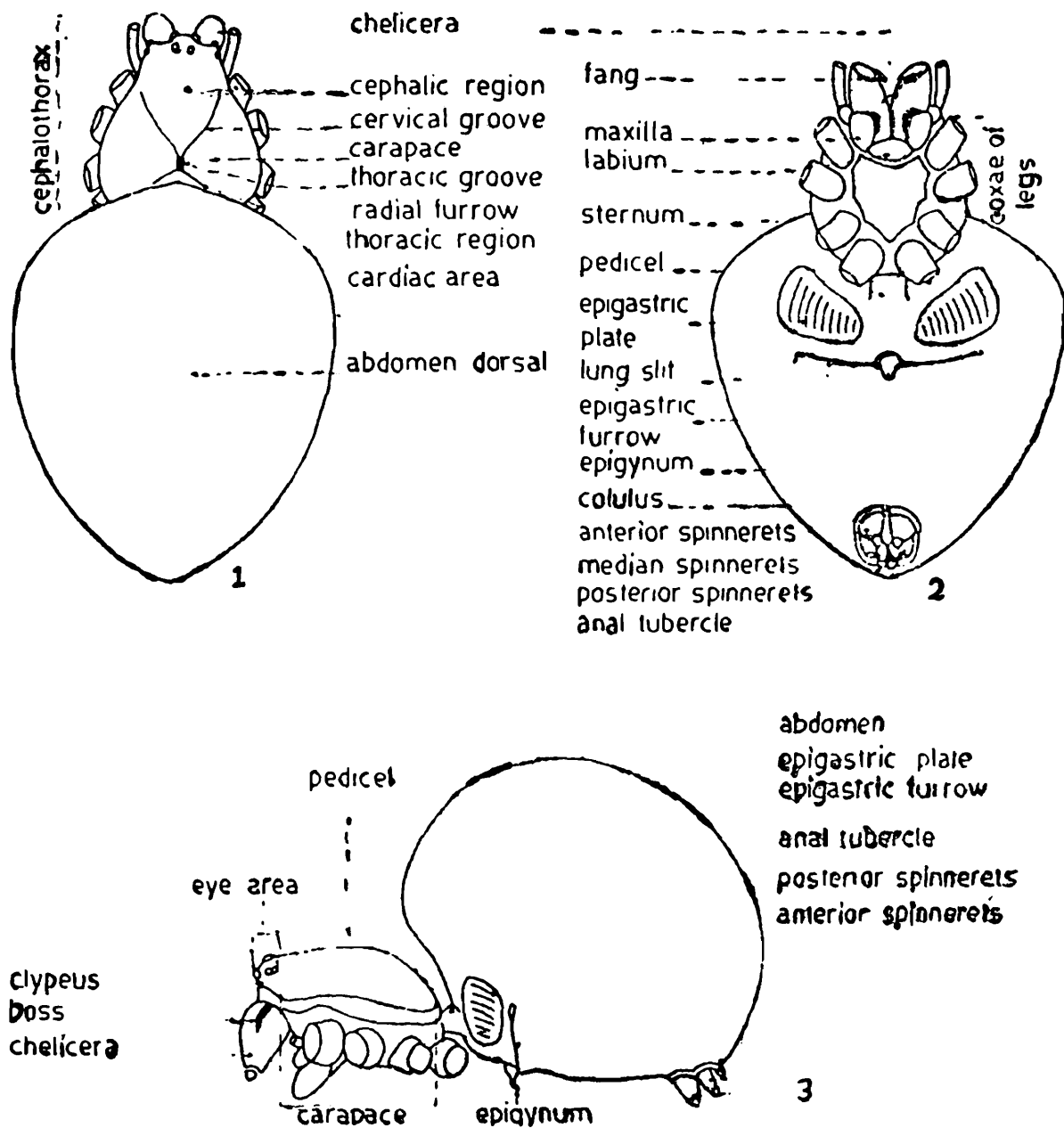
We are thankful to Dr. B. S. Lamba, Joint Director and Dr. R. H. Kamble, Scientist 'B' of Western Regional Station, Zoological Survey of India, Pune, for providing us necessary facilities to carry out this research work. Our thanks are also due to Dr. Animesh Bal, Zoologist, Z.S.I., Calcutta ; for going through the manuscript and his valuable suggestions. We express our appreciations to Mr. F. R. Wanles, Mr. P. D. Hillyard of British Museum (Natural History) Soc. London and Dr. M. Hubert of Museum National d'History naturelle, Paris for sending the type specimens for studies.

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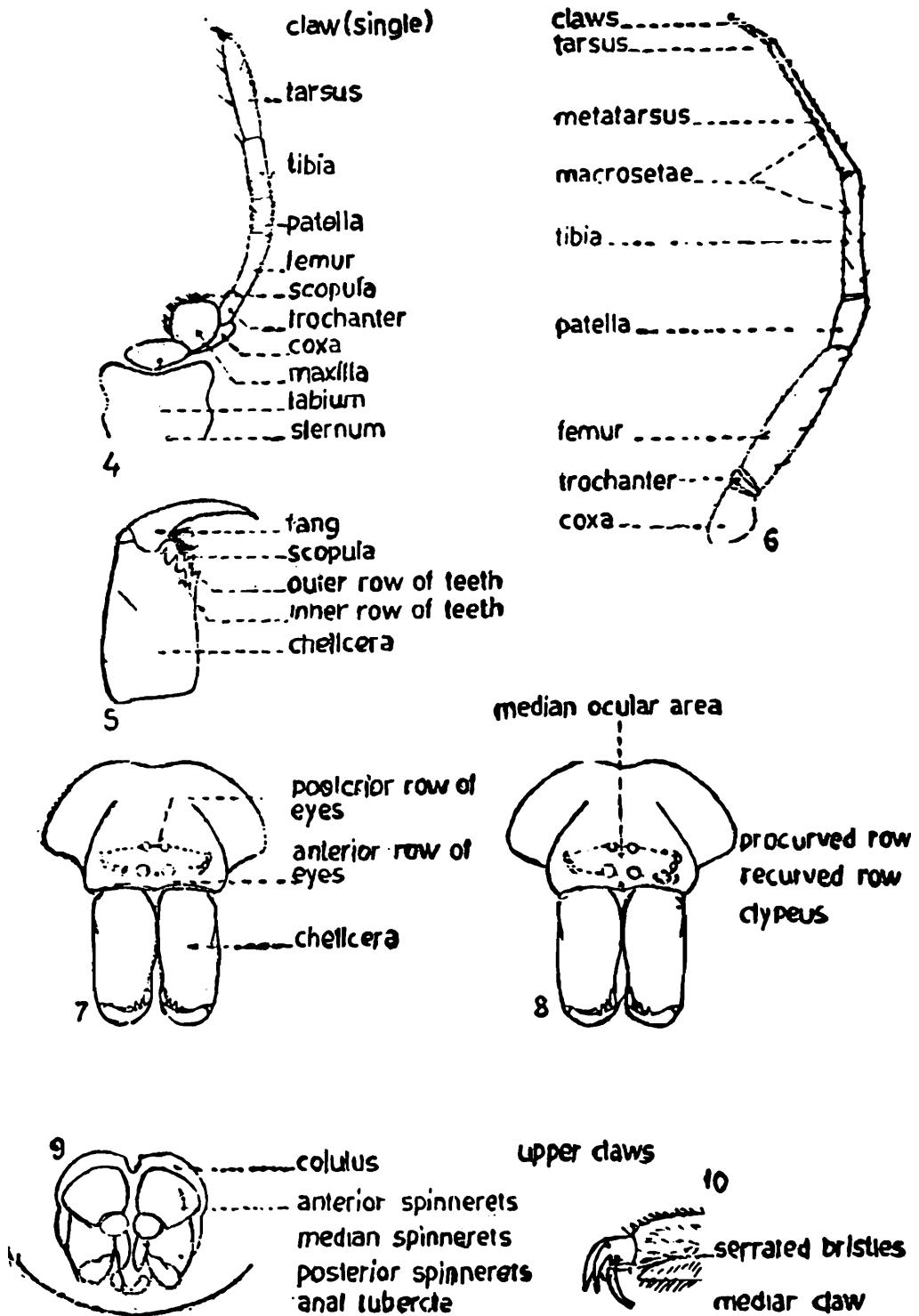
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FIGURES



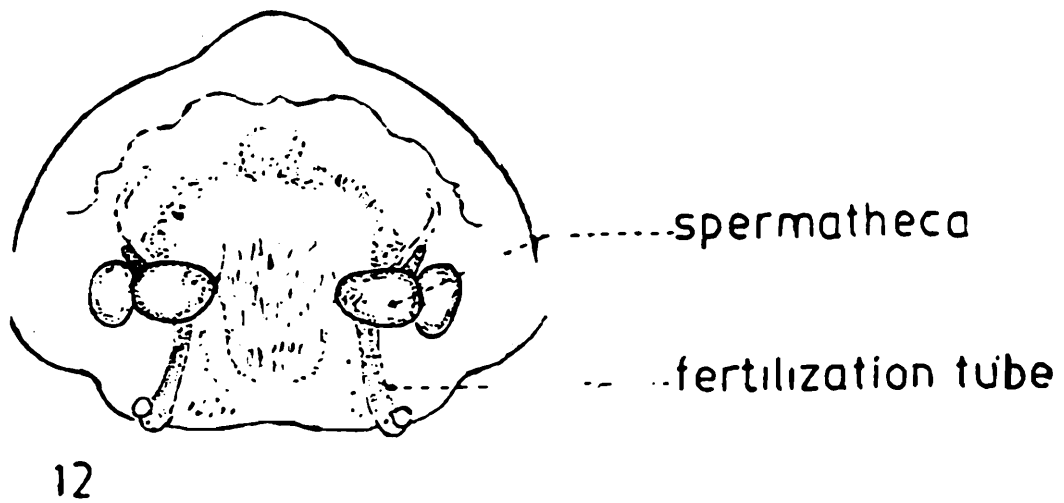
Figs. 1—3

1. Dorsal view of a typical spider showing different parts of the body.
2. Ventral view of a typical spider showing different parts of the body.
3. Lateral view of a typical spider showing different parts of the body.



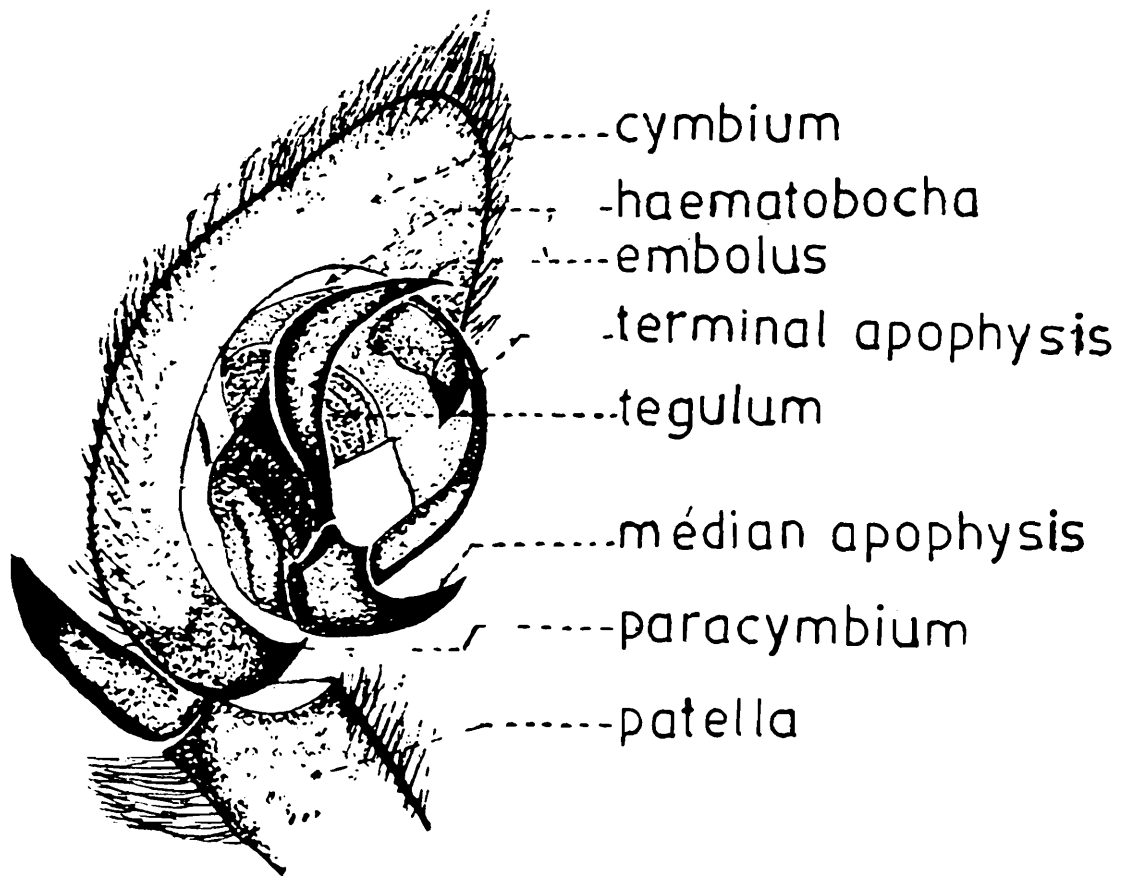
Figs. 4—10

4. Labium, maxilla and left pedipalp of a female showing different parts.
5. Inner view of right chelicera showing different parts.
6. Lateral view of a leg of spider showing different segments.
7. Front view of face of a typical spider.
8. Front view of face of a typical spider showing the arrangement of eyes.
9. Ventral view of spinnerets.
10. Distal end of tarsus showing claws.



Figs. 11—12

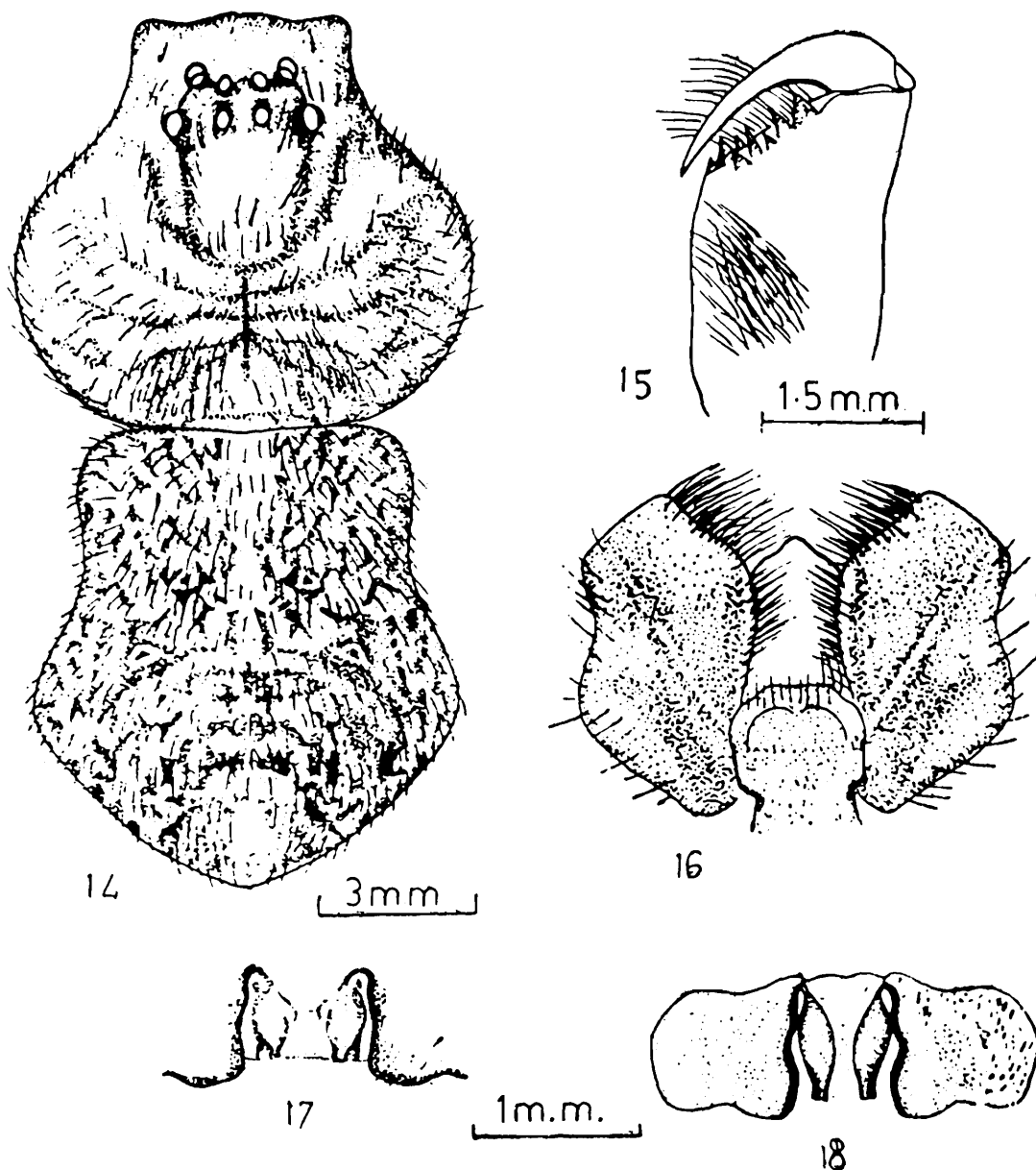
11. Ventral view of epigynum of *Olios fuligineus* (Pocock) showing different parts.
12. Dorsal view of internal genitalia of *O. fuligineus* showing different parts.



13

Fig. 13

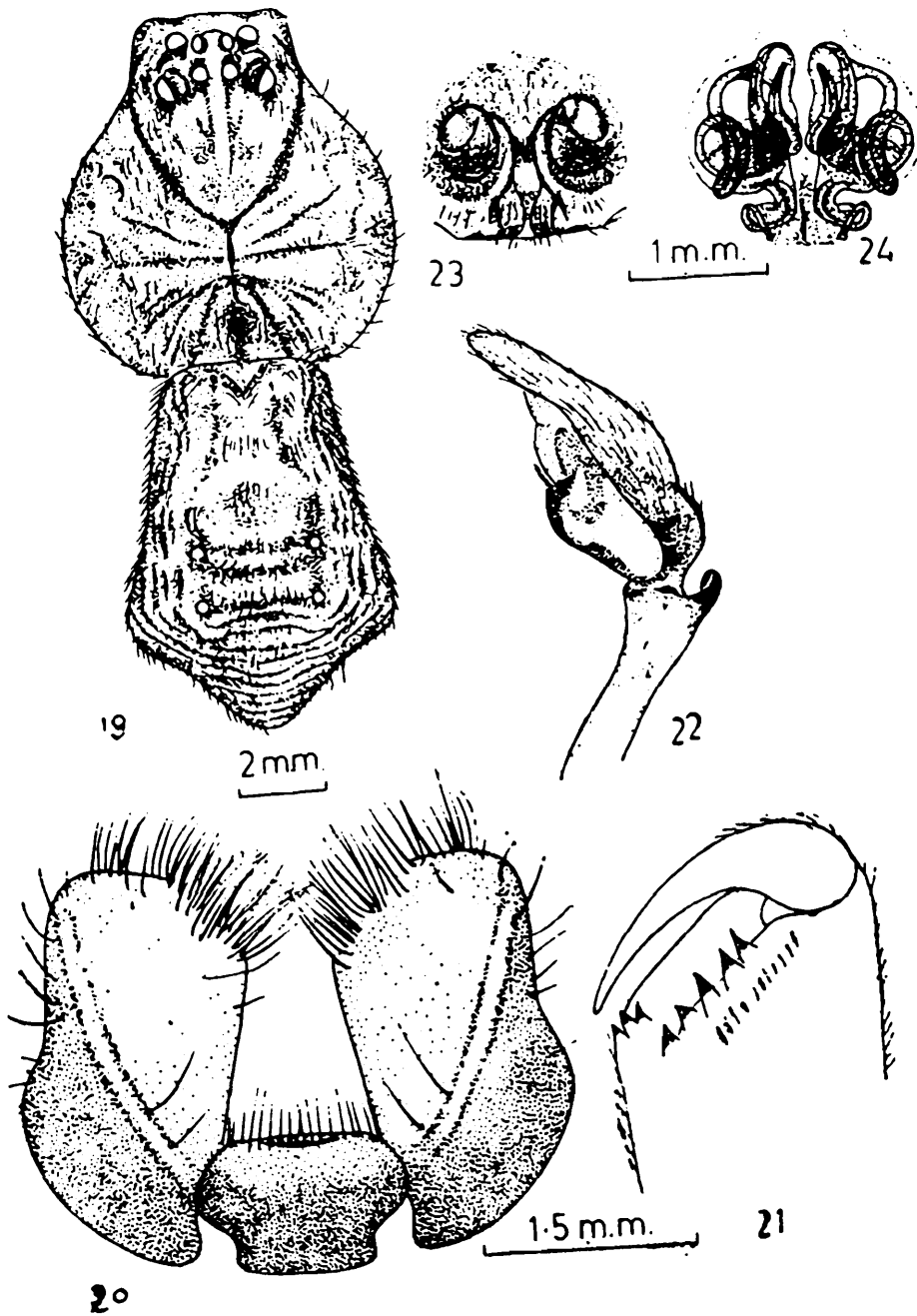
13. Ventral view of left male palp of *Olios phipsoni* (Pocock) showing different parts.



Figs. 14—18

Spariolenus petricola Gravely

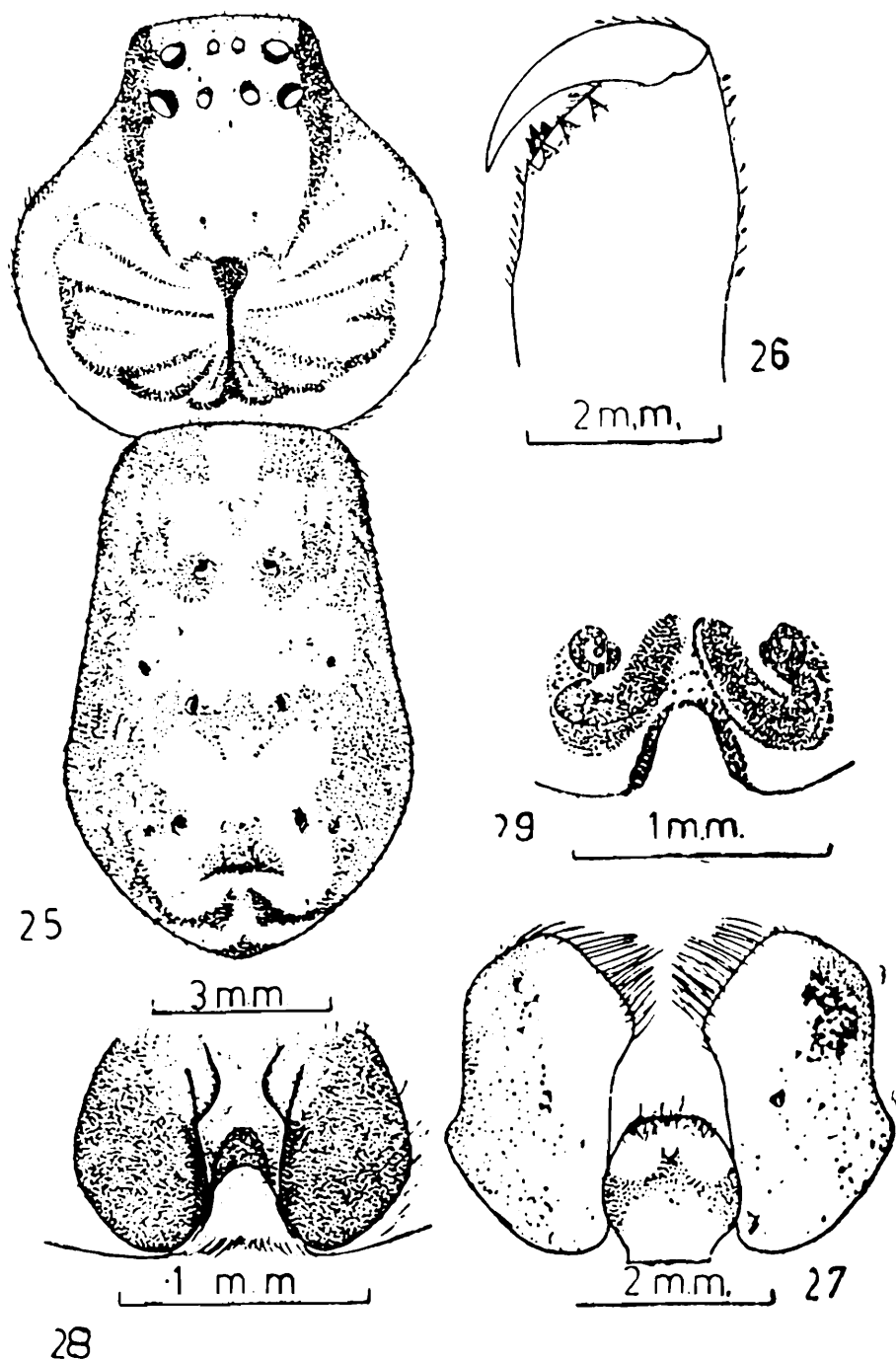
- 14. Dorsal view of female, legs omitted.
- 15. Inner view of left chelicera showing arrangements of teeth.
- 16. Ventral view of labium and maxillae.
- 17. Epigynum, ventral view.
- 18. Internal genitalia, dorsal view.



Figs. 19 - 24

Spariolenus tigris Simon

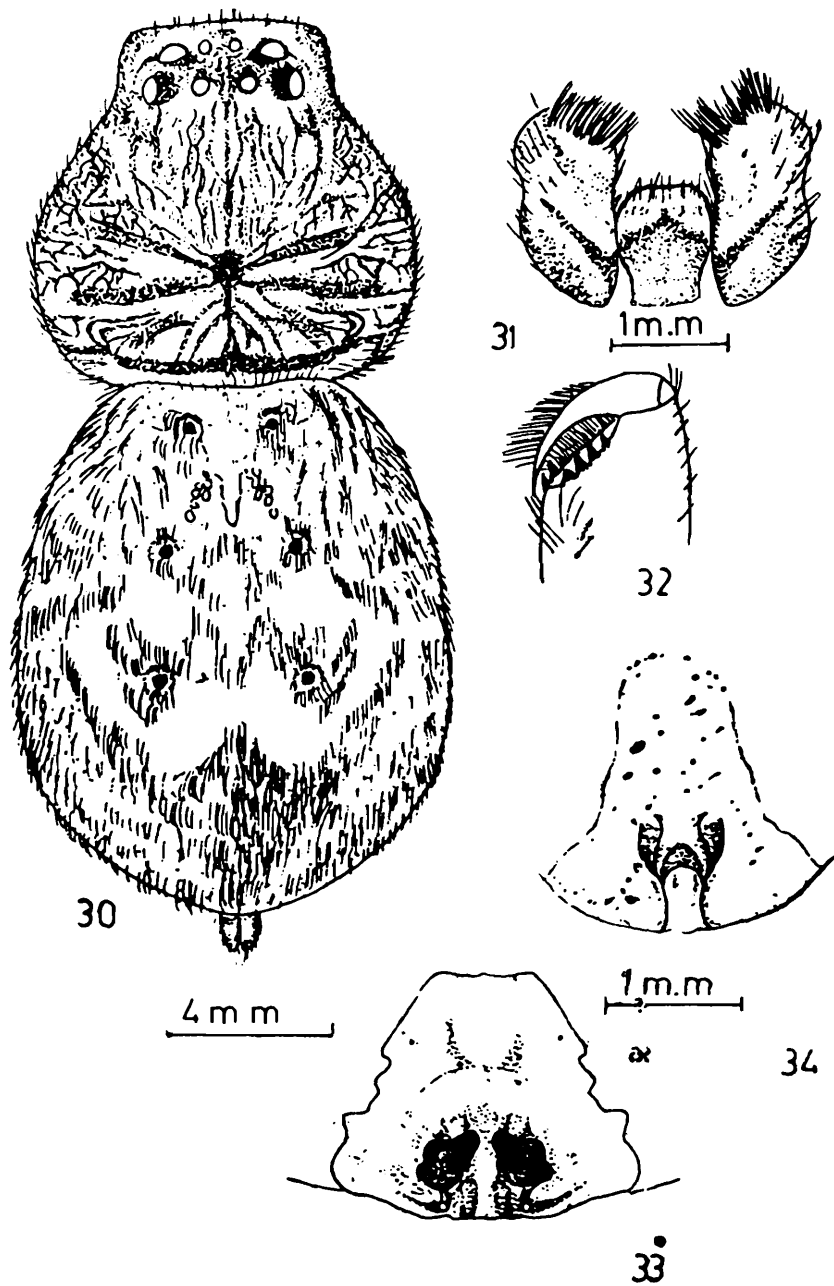
19. Dorsal view of female, legs omitted.
20. Ventral view of labium and maxillae.
21. Inner view of left chelicera showing arrangements of teeth.
22. Lateral view of left male palp.
23. Epigynum, ventral view.
24. Internal genitalia, dorsal view.



Figs. 25—29

Heteropoda phasma Simon

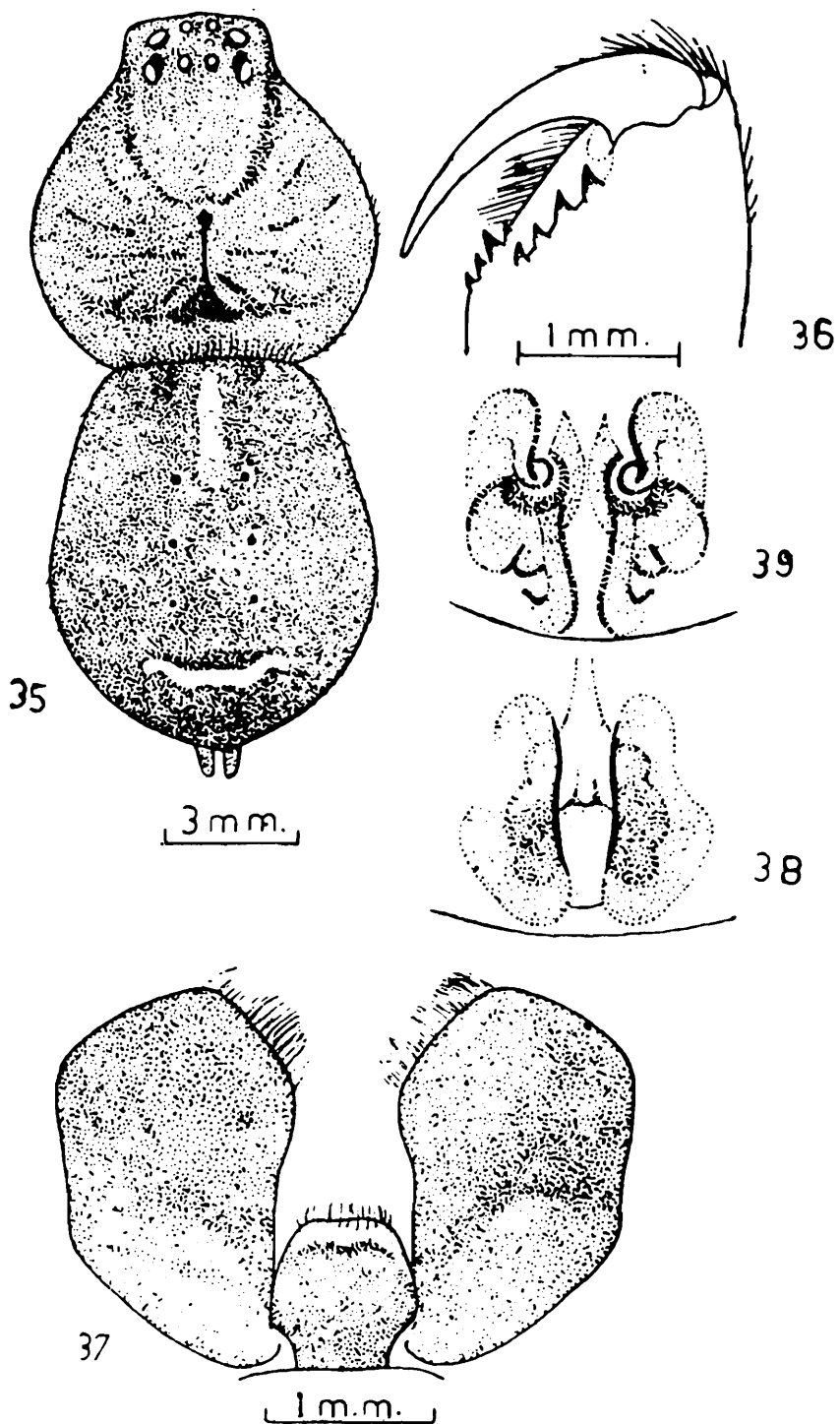
- 25. Dorsal view of female, legs omitted.
- 26. Inner view of left chelicera showing arrangements of teeth.
- 27. Ventral view of labium and maxillae.
- 28. Epigynum, ventral view.
- 29. Internal genitalia, dorsal view.



Figs. 30—34

Heteropoda kuluensis sp. nov.

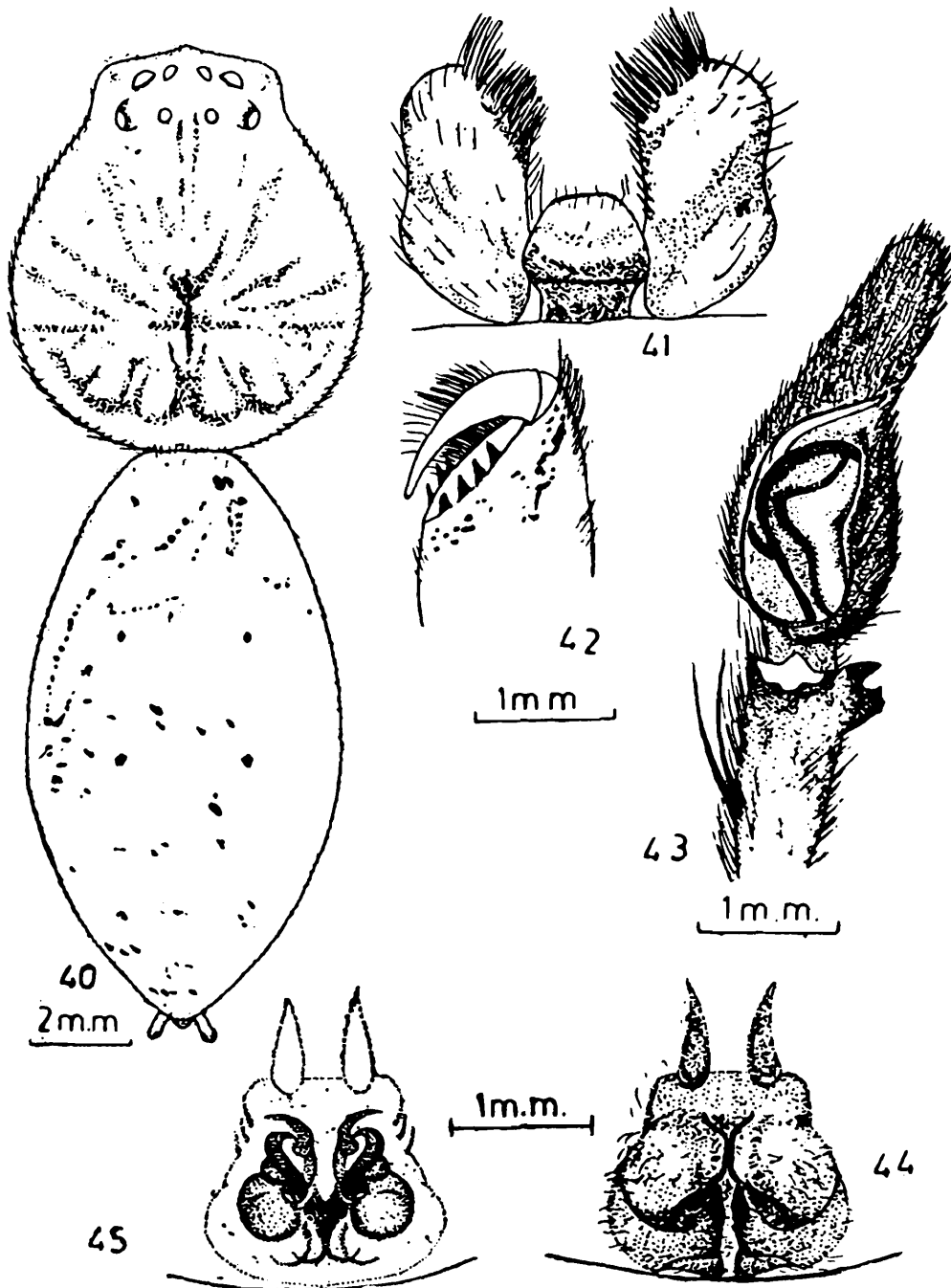
30. Dorsal view of female, legs omitted.
 31. Inner view of left chelicera showing arrangements of teeth.
 32. Ventral view of labium and maxillae.
 33. Epigynum, ventral view.
 34. Internal genitalia, dorsal view.



Figs. 35—39

Heteropoda fabrei Simon

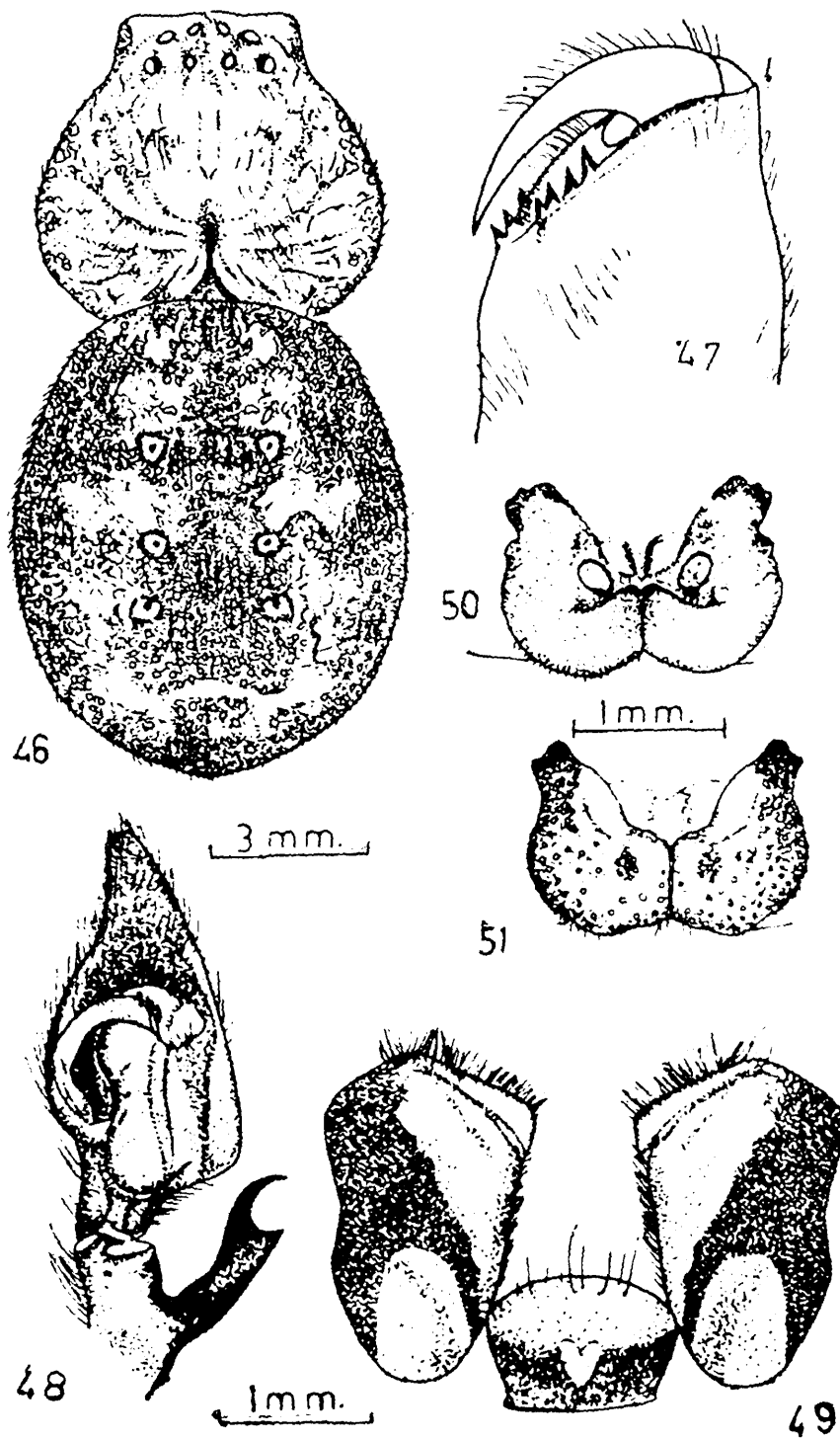
- 35. Dorsal view of female, legs omitted.
- 36. Inner view of left chelicera showing arrangements of teeth.
- 37. Ventral view of labium and maxillae.
- 38. Epigynum, ventral view.
- 39. Internal genitalia, dorsal view.



Figs. 40—45

Heteropoda andamanensis Tikader

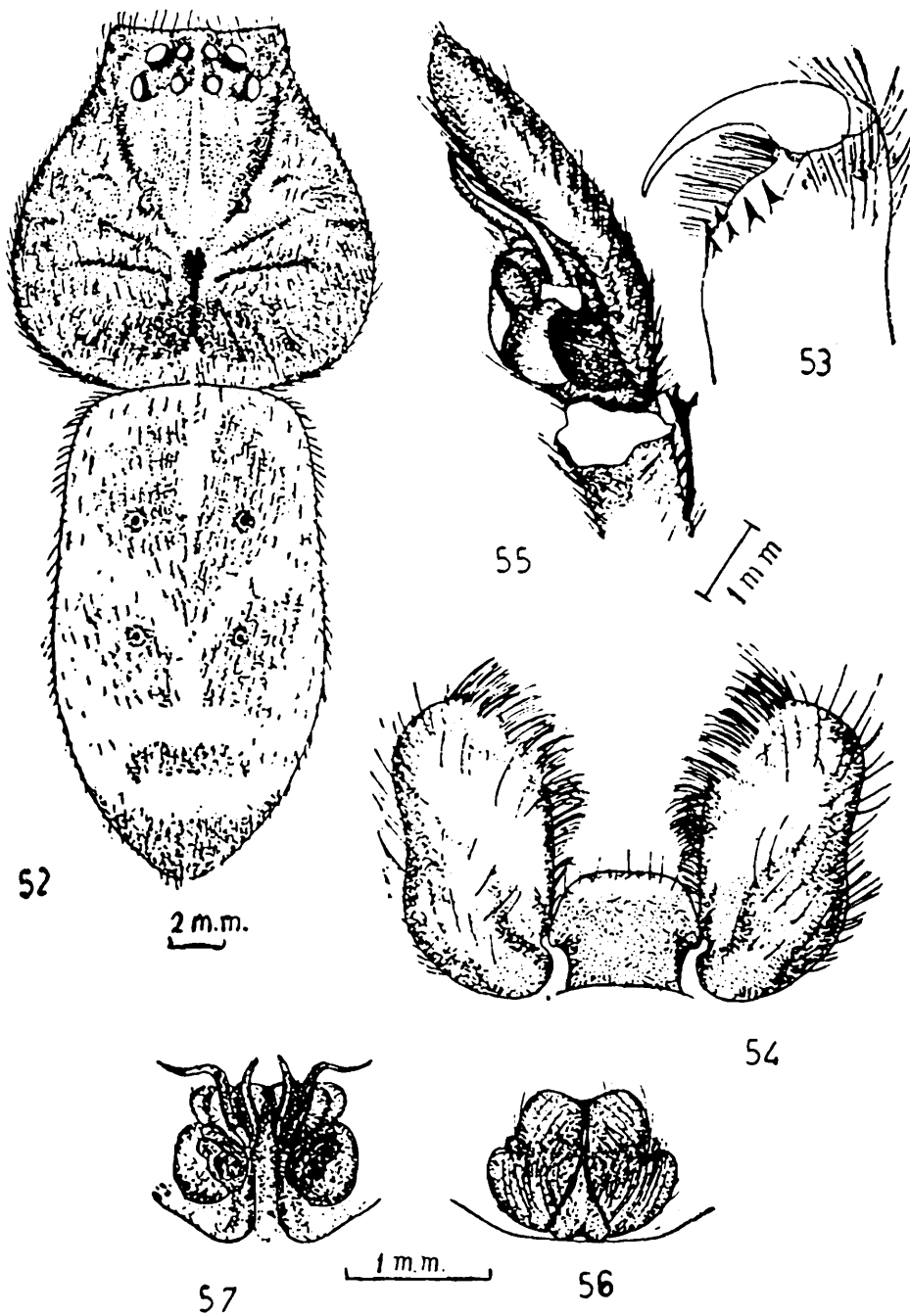
- 40. Dorsal view of female, legs omitted.
- 41. Ventral view of labium and maxillae.
- 42. Inner view of left chelicera showing arrangements of teeth.
- 43. Ventral view of left male palp.
- 44. Epigynum, ventral view.
- 45. Internal genitalia, dorsal view.



Figs. 46—51

Heteropoda promota (O. P. Cambridge)

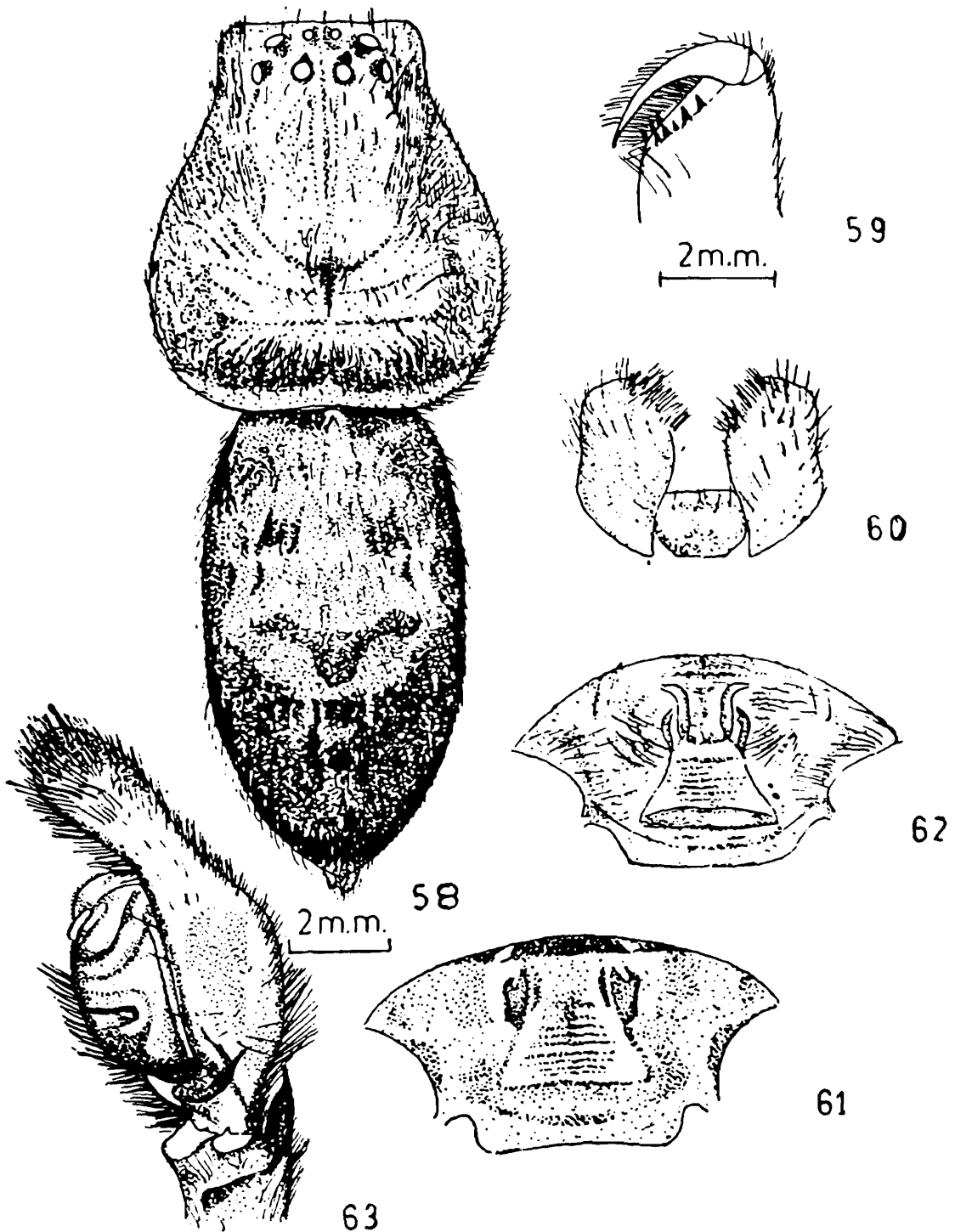
- 46. Dorsal view of female, legs omitted.
- 47. Inner view of left chelicera showing arrangements of teeth.
- 48. Ventral view of right male palp.
- 49. Ventral view of labium and maxillae.
- 50. Epigynum, ventral view.
- 51. Internal genitalia, dorsal view.



Figs. 52—57

Heteropoda venatoria (Linnaeus)

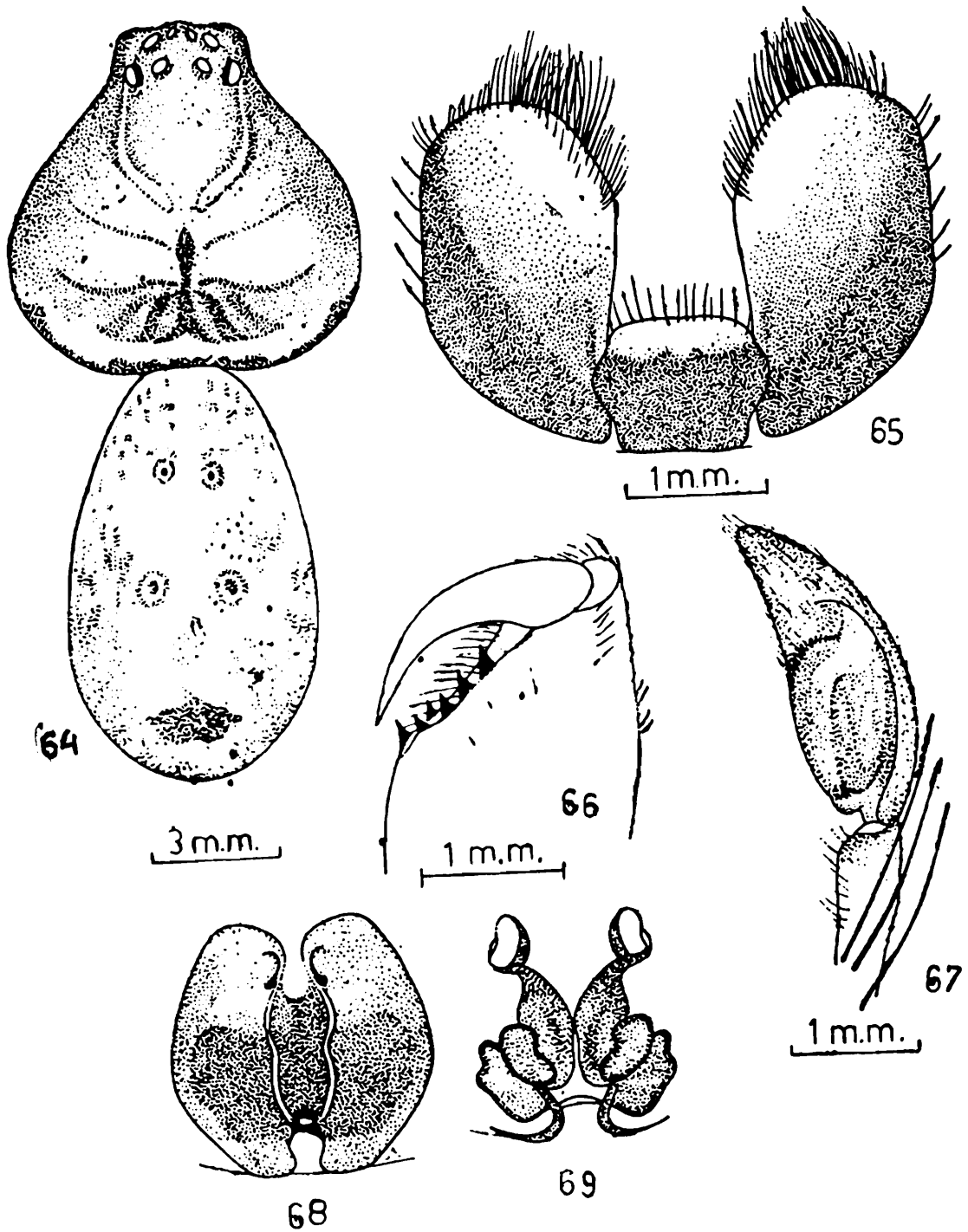
- 52. Dorsal view of female, legs omitted.
- 53. Inner view of left chelicera showing arrangements of teeth.
- 54. Ventral view of labium and maxillae.
- 55. Pro-lateral view of right male palp.
- 56. Epigynum, ventral view.
- 57. Internal genitalia, dorsal view.



Figs. 58—63

Heteropoda robusta Fage

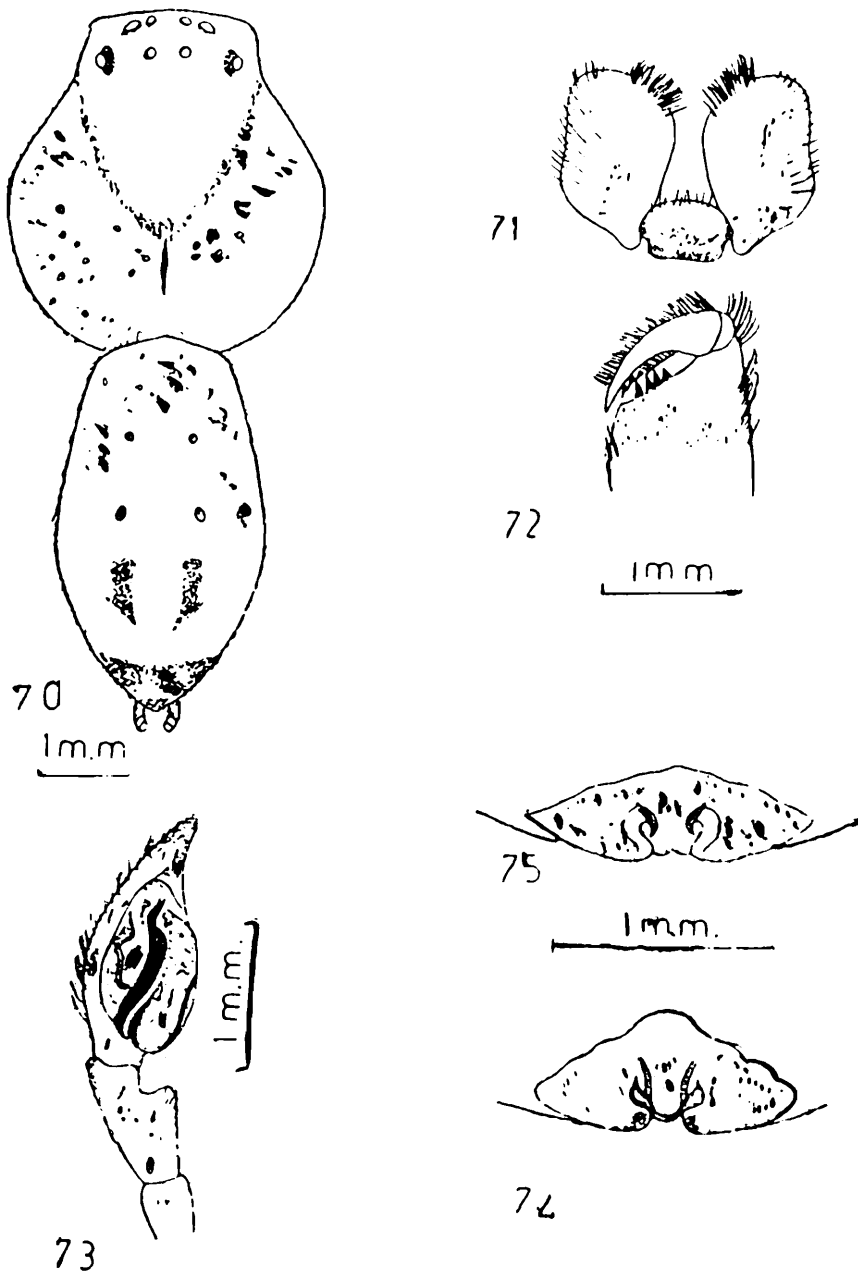
- 58. Dorsal view of female, legs omitted.
- 59. Inner view of left chelicera showing arrangements of teeth.
- 60. Ventral view of labium and maxillae.
- 61. Epigynum, ventral view.
- 62. Internal genitalia, dorsal view.
- 63. Male palp.



Figs. 64—69

Heteropoda malitiosa Simon

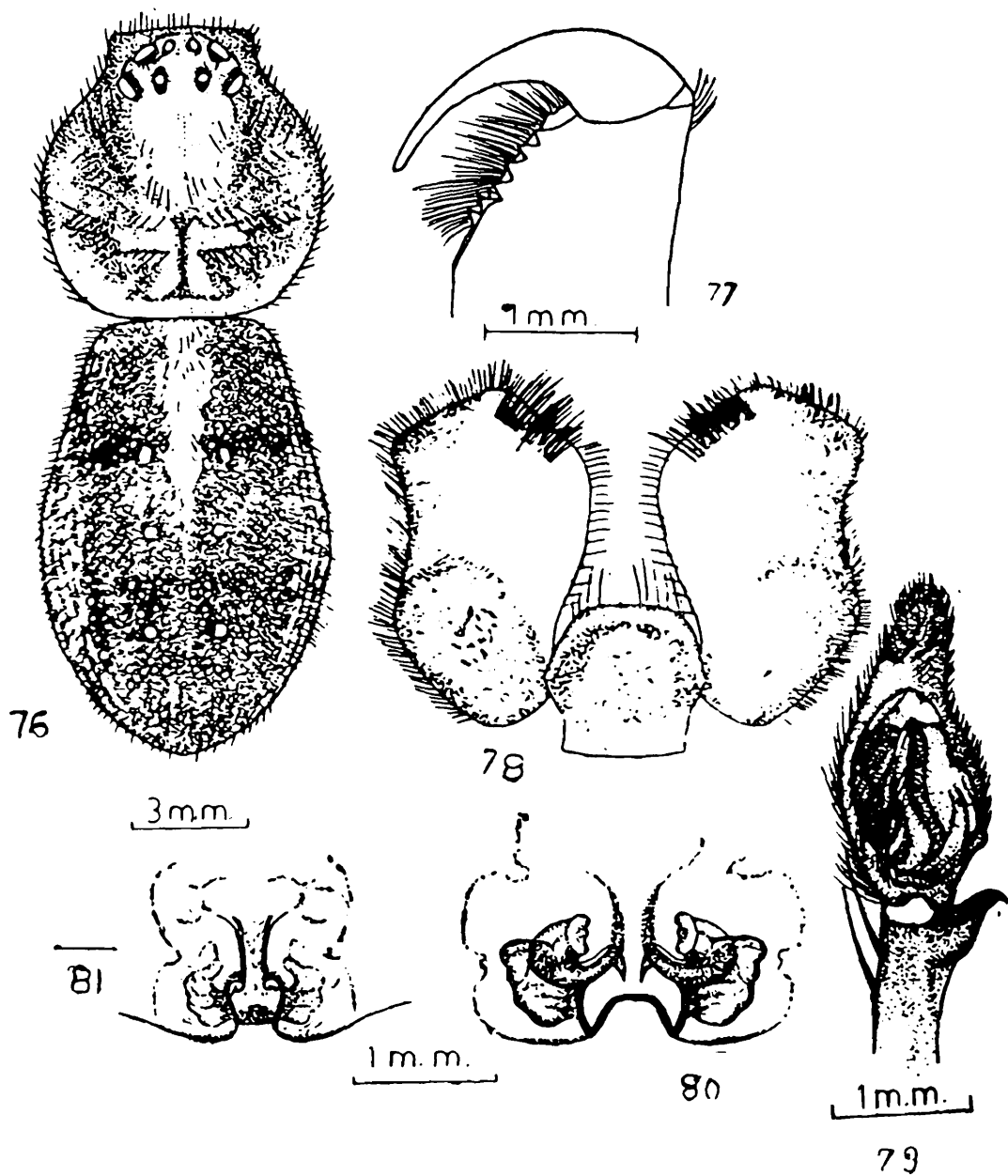
- 64. Dorsal view of female, legs omitted.
- 65. Inner view of left chelicera showing arrangements of teeth.
- 66. Ventral view of labium and maxillae.
- 67. Ventral view of right male palp.
- 68. Epigynum, ventral view.
- 69. Internal genitalia, dorsal view.



Figs. 70—75

Heteropoda shillongensis sp. nov.

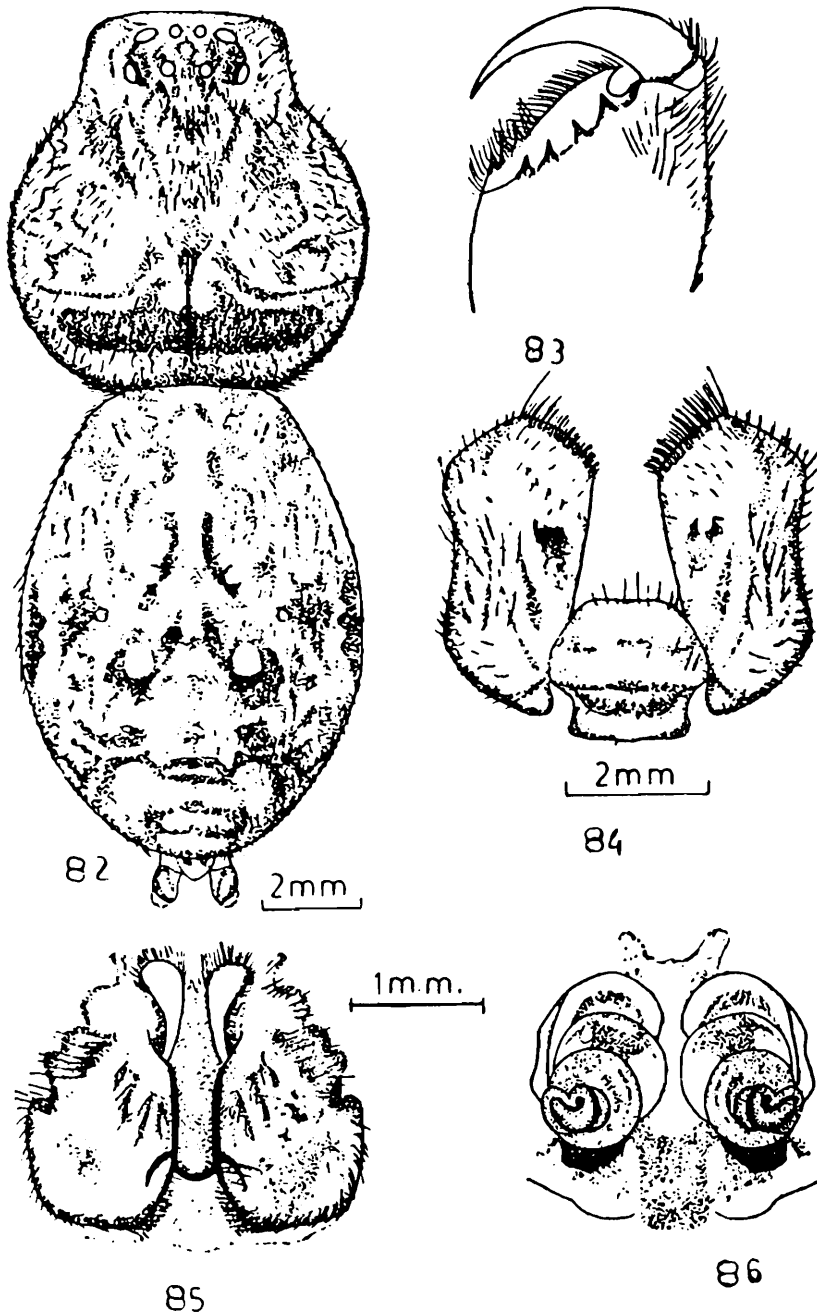
- 70. Dorsal view of female, legs omitted.
- 71. Inner view of left chelicera showing arrangements of teeth.
- 72. Ventral view of labium and maxillae.
- 73. Ventro-lateral view of left male palp.
- 74. Epigynum, ventral view.
- 75. Internal genitalia, dorsal view.



Figs. 76—81

Heteropoda leprosa Simon

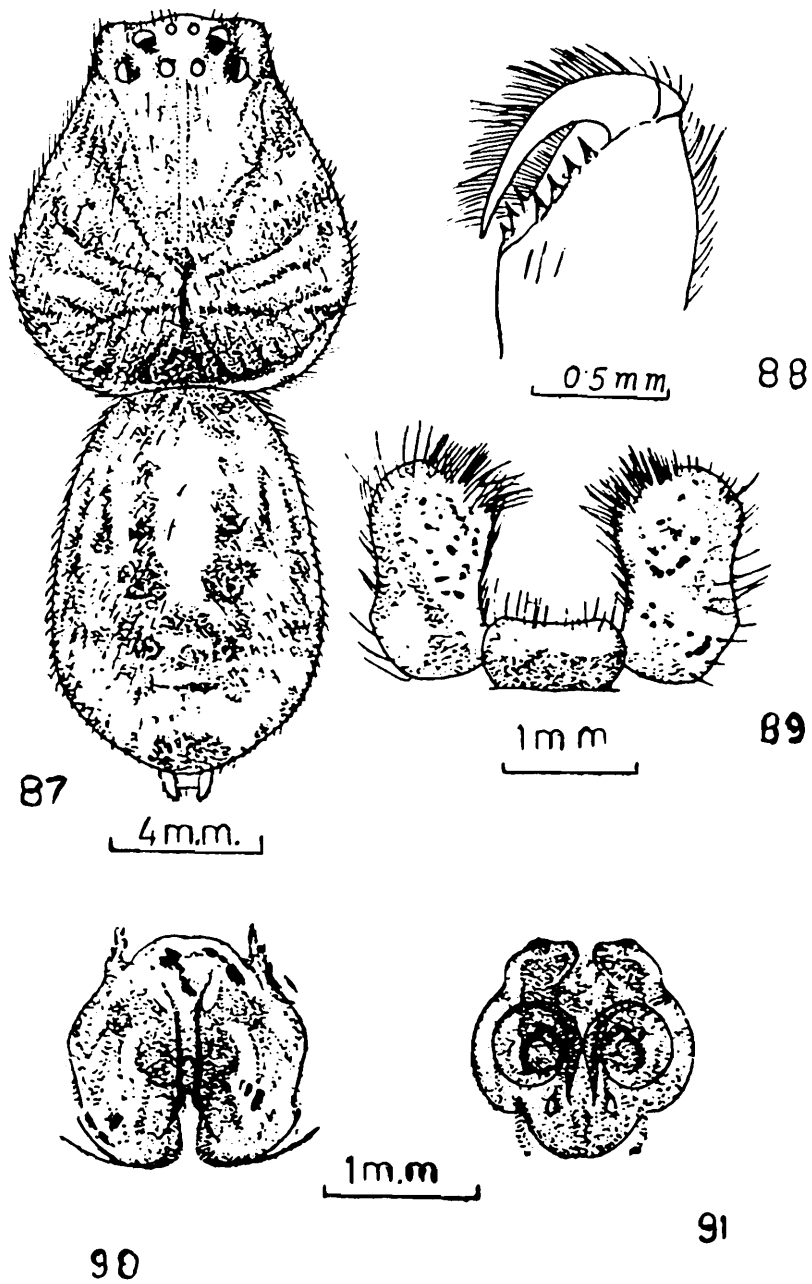
- 76. Dorsal view of female, legs omitted.
- 77. Inner view of left chelicera showing arrangements of teeth.
- 78. Ventral view of labium and maxillae.
- 79. Ventral view of left male palp.
- 80. Epigynum, ventral view.
- 81. Internal genitalia, dorsal view.



Figs. 82—86

Heteropoda hampsoni Pocock

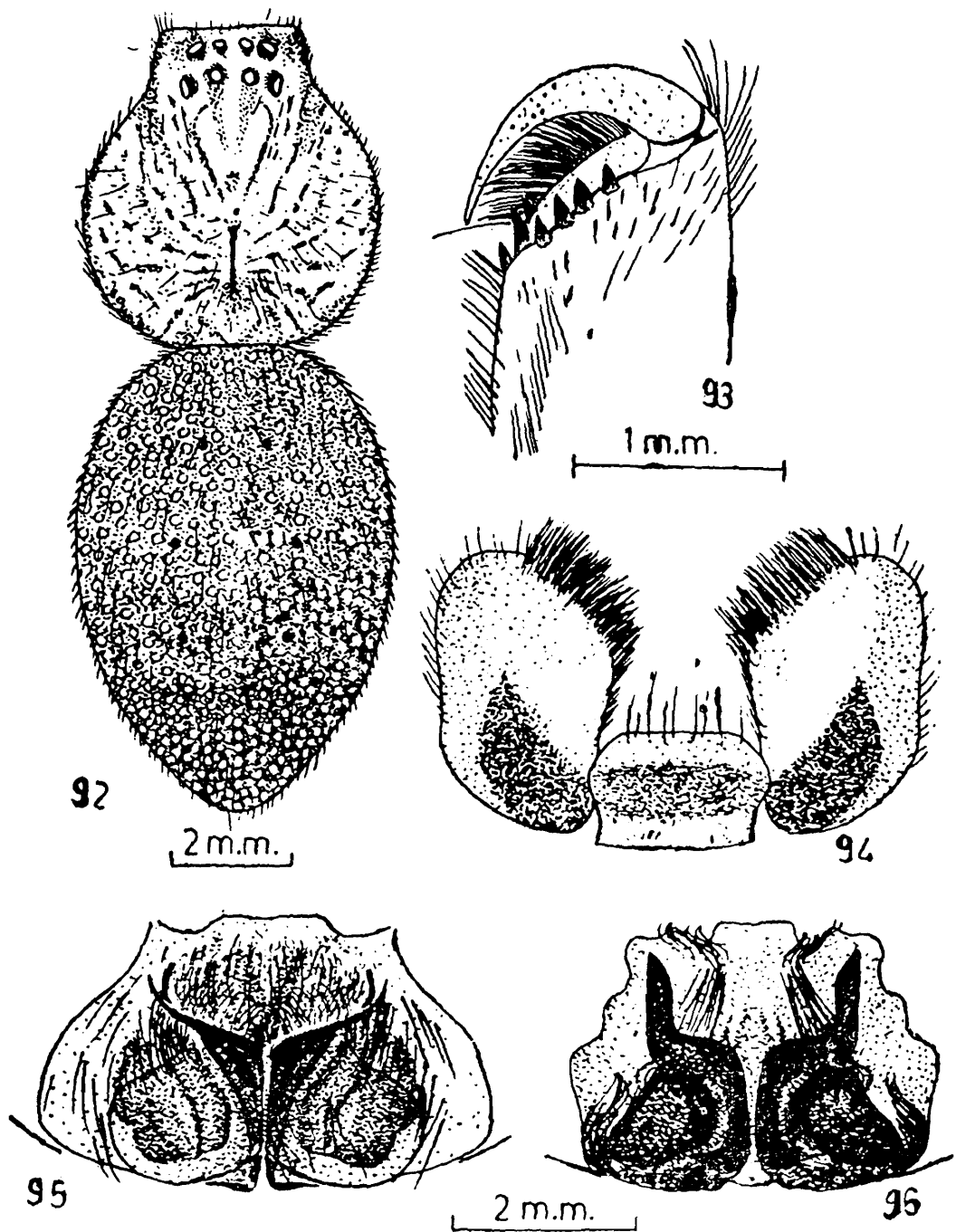
- 82. Dorsal view of female, legs omitted.
- 83. Inner view of left chelicera showing arrangements of teeth.
- 84. Ventral view of labium and maxillae.
- 85. Epigynum, ventral view.
- 86. Internal genitalia, dorsal view.



Figs. 87—91

Heteropoda languida Simon

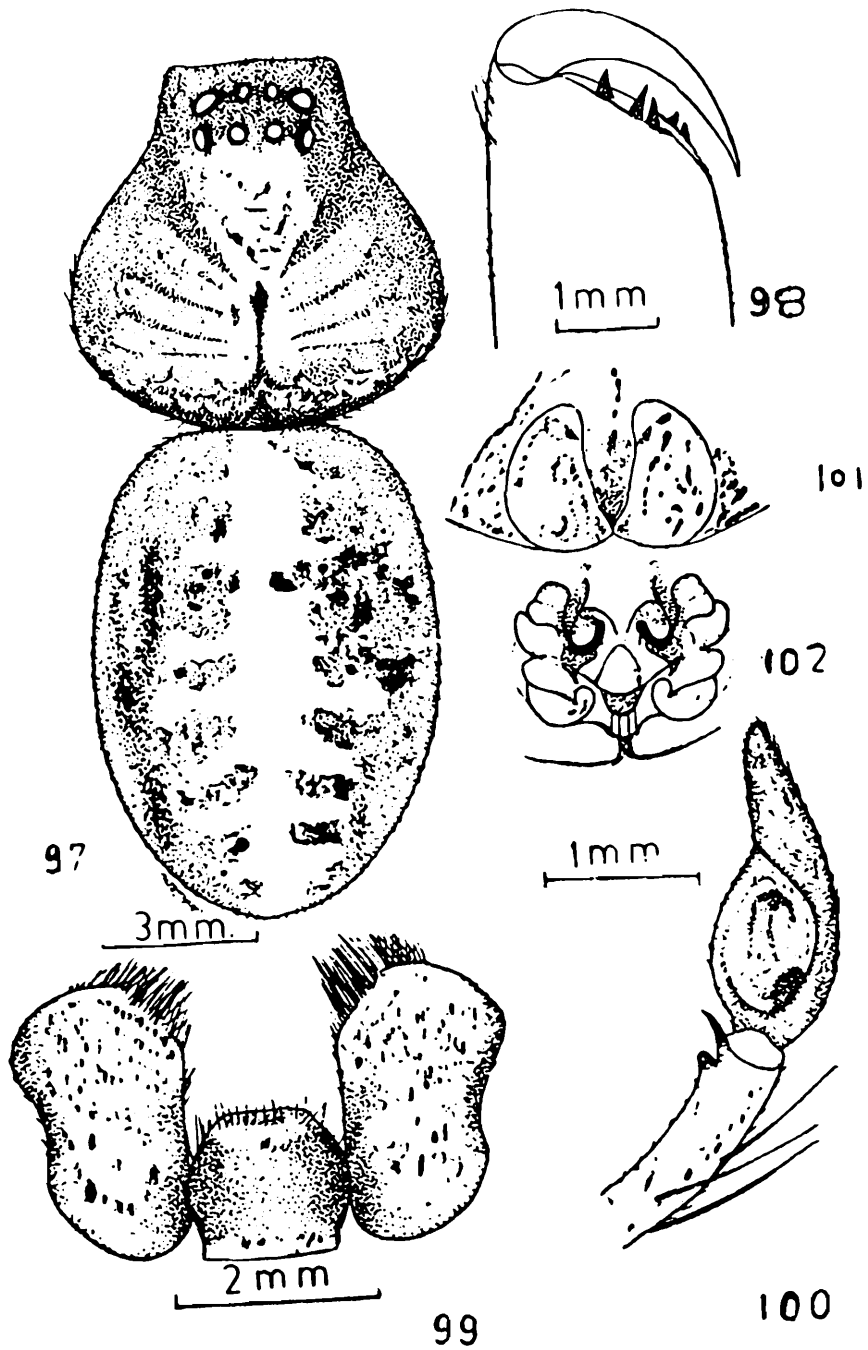
- 87. Dorsal view of female, legs omitted.
- 88. Inner view of left chelicera showing arrangements of teeth.
- 89. Ventral view of labium and maxillae.
- 90. Epigynum, ventral view.
- 91. Internal genitalia, dorsal view.



Figs. 92—96

Heteropoda akashi sp. nov.

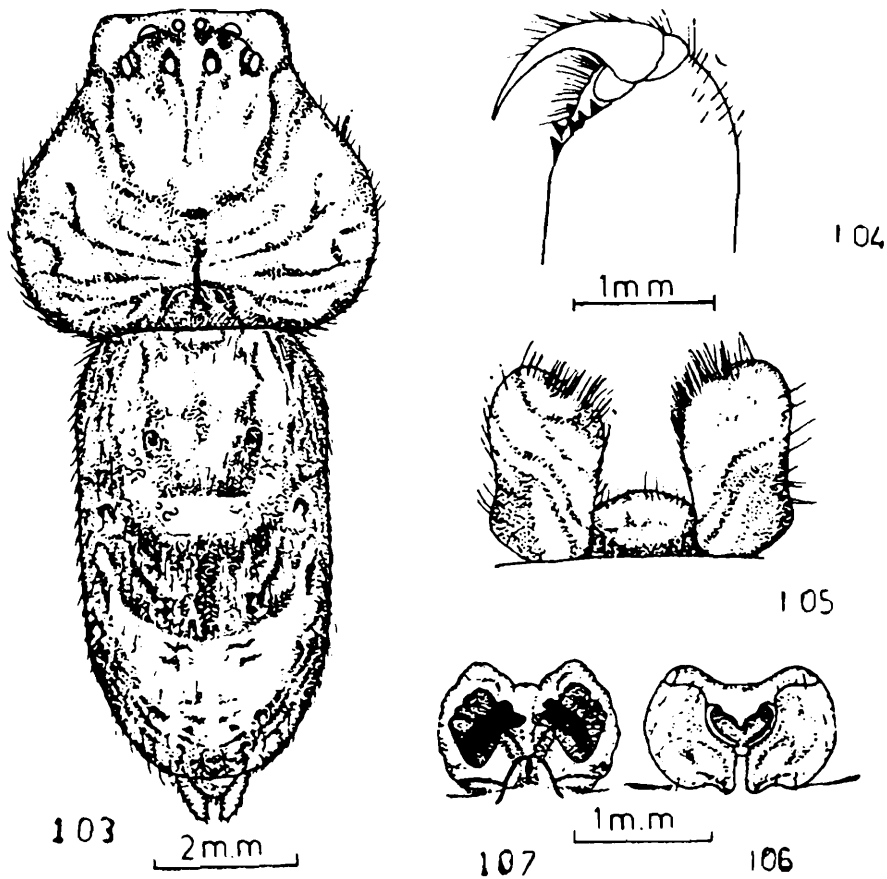
- 92. Dorsal view of female, legs omitted.
- 93. Inner view of left chelicera showing arrangements of teeth.
- 94. Ventral view of labium and maxillae.
- 95. Epigynum, ventral view.
- 96. Internal genitalia, dorsal view.



Figs. 97—102

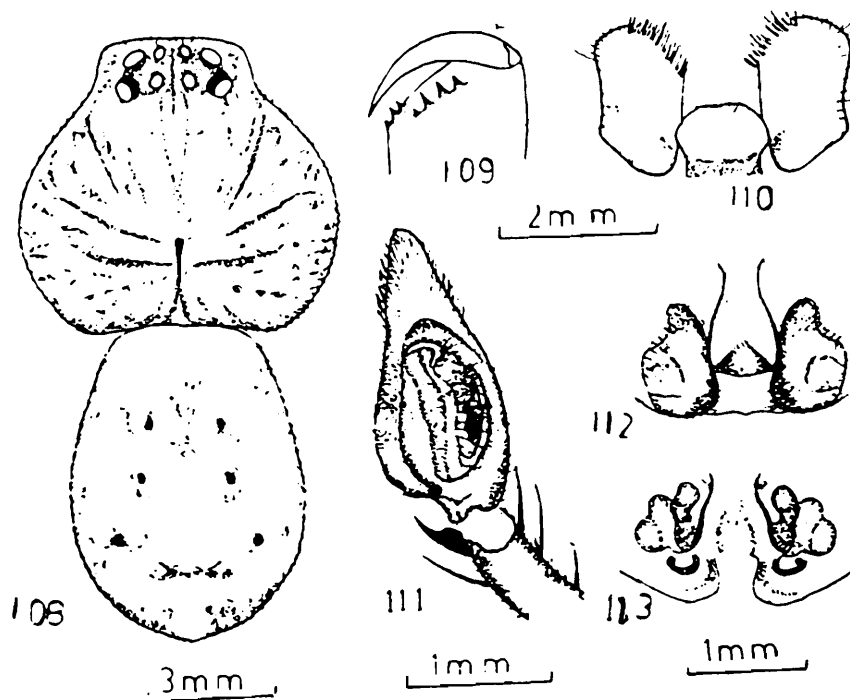
Heteropoda sexpunctata Simon

97. Dorsal view of female, legs omitted.
 98. Inner view of right chelicera showing arrangements of teeth.
 99. Ventral view of labium and maxillae.
 100. Ventral view of right male palp.
 101. Epigynum, ventral view.
 102. Internal genitalia, dorsal view.



Heteropoda lutea Thorell

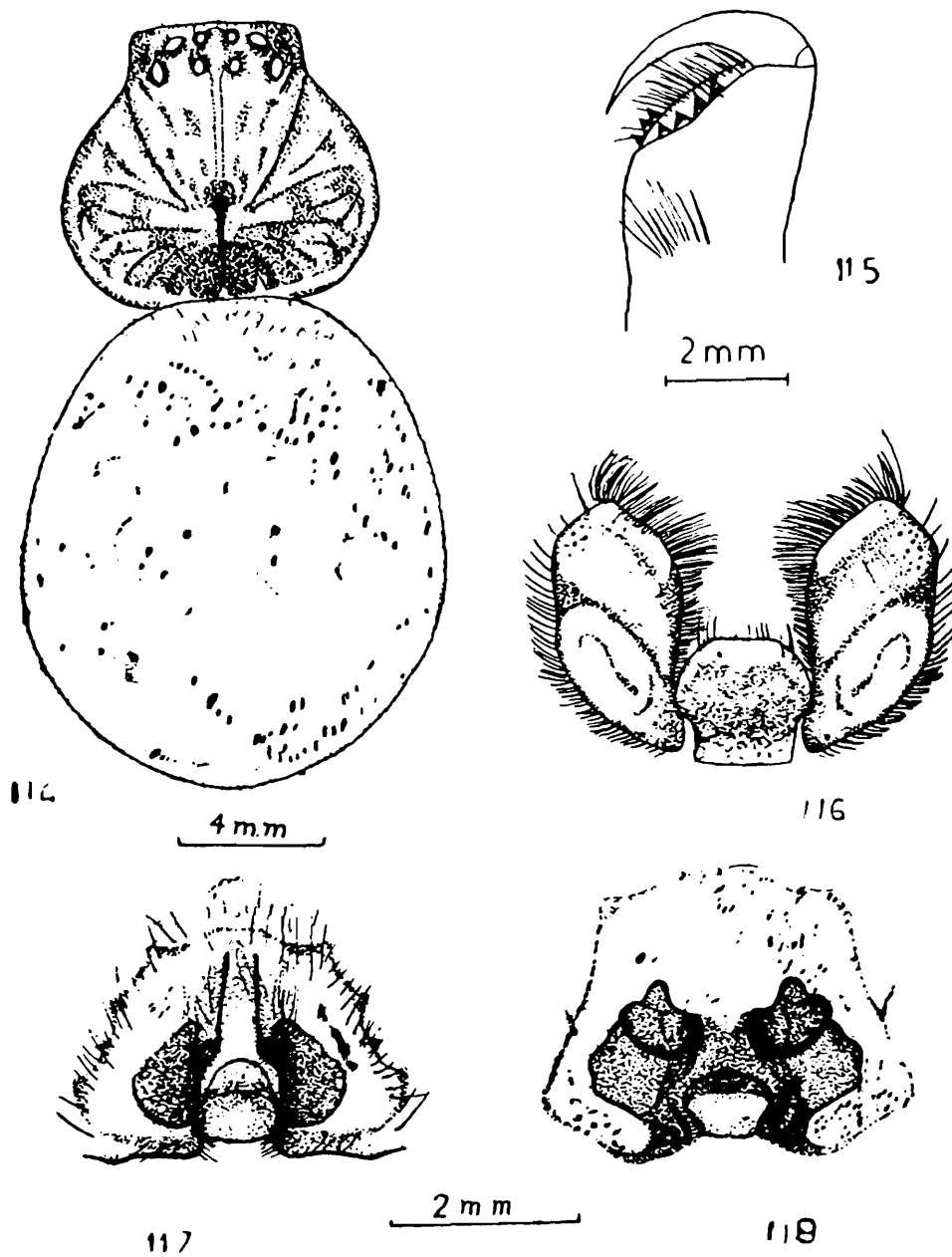
- 103. Dorsal view of female, legs omitted.
- 104. Inner view of left chelicera showing arrangements of teeth.
- 105. Ventral view of labium and maxillae.
- 106. Epigynum, ventral view.
- 107. Internal genitalia, dorsal view.



Figs. 108—113

Heteropoda lentula Pocock

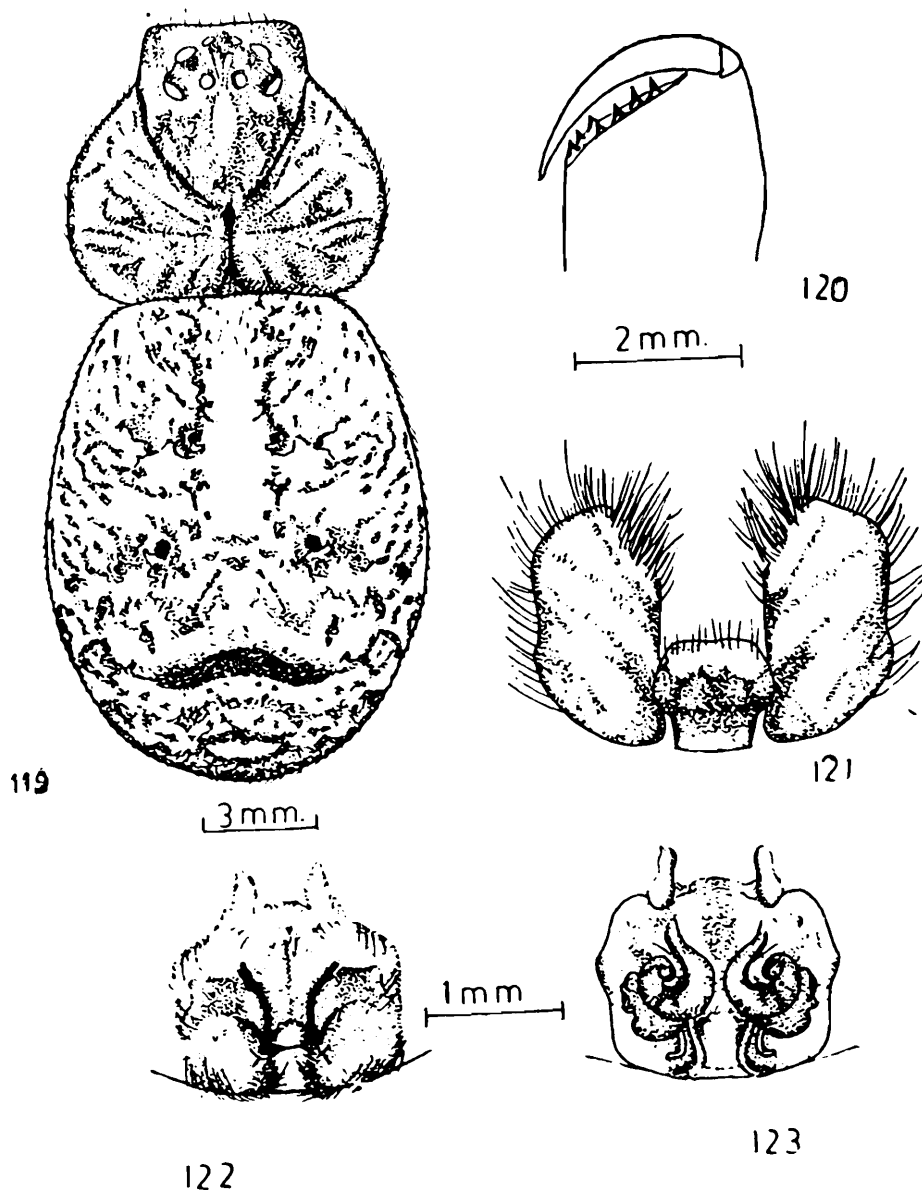
- 108. Dorsal view of female, legs omitted.
- 109. Inner view of left chelicera showing arrangements of teeth.
- 110. Ventral view of labium and maxillae.
- 111. Ventral view of left male palp.
- 112. Epigynum, ventral view.
- 113. Internal genitalia, dorsal view.



Figs. 114—118

Heteropoda kandiana Pocock

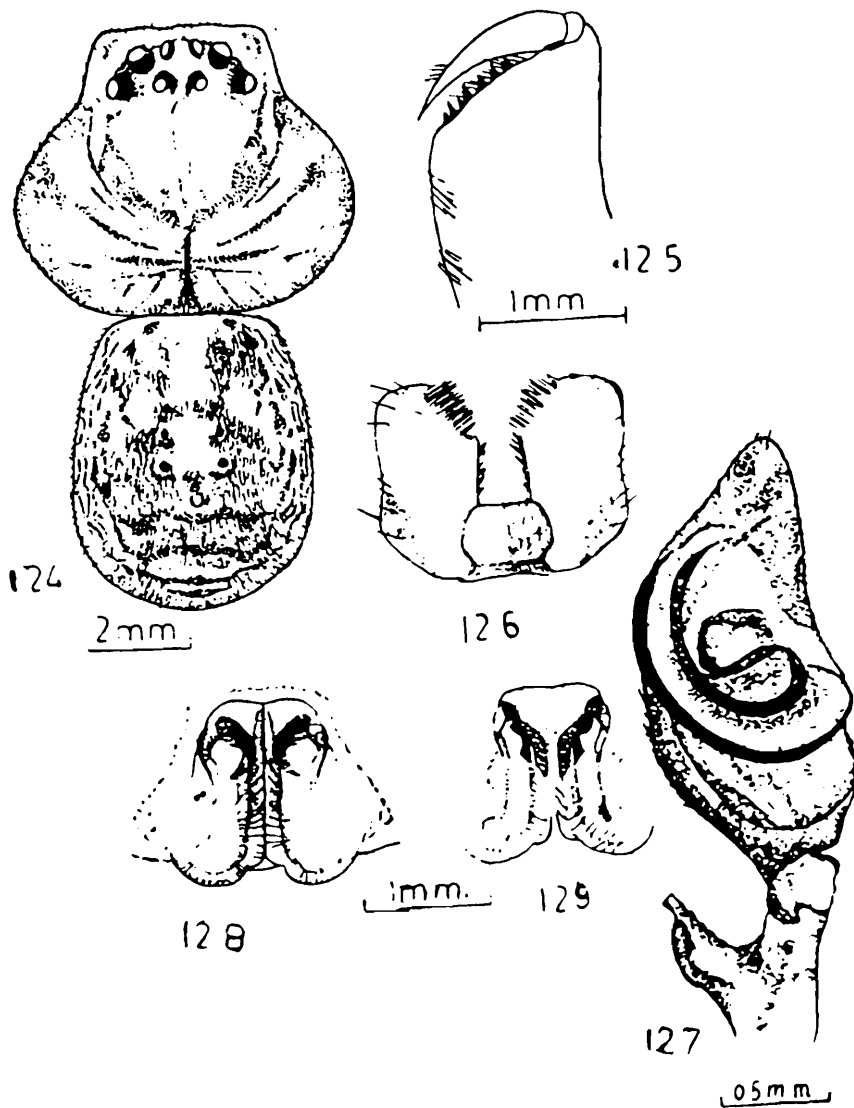
- 114. Dorsal view of female, legs omitted.
- 115. Inner view of left chelicera showing arrangements of teeth.
- 116. Ventral view of labium and maxillae.
- 117. Epigynum, ventral view.
- 118. Internal genitalia, dorsal view.



Figs. 119—123

Heteropoda nilgirina (Pocock)

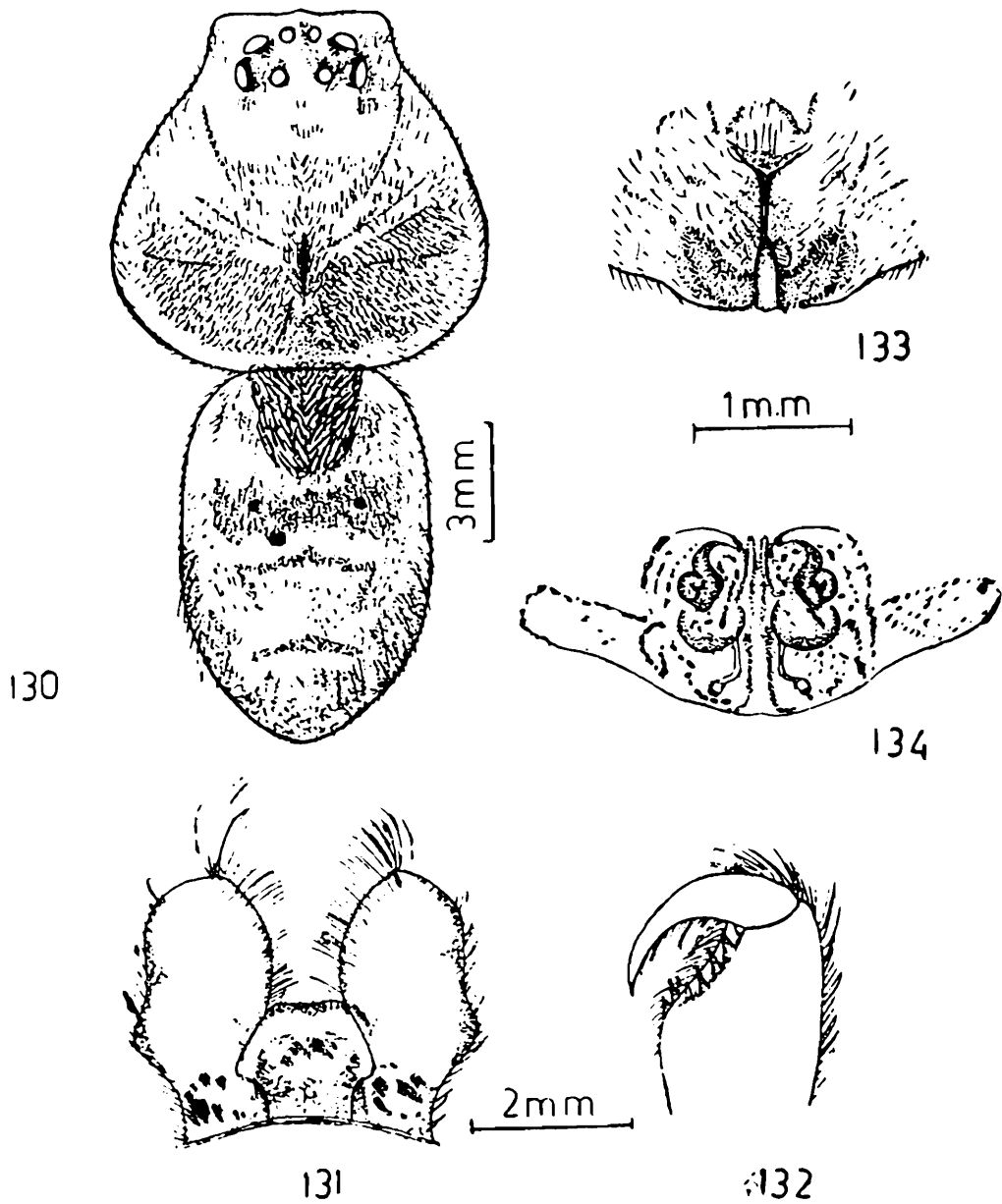
119. Dorsal view of female, legs omitted.
 120. Inner view of left chelicera showing arrangements of teeth.
 121. Ventral view of labium and maxillae.
 122. Epigynum, ventral view.
 123. Internal genitalia, dorsal view.



Figs. 124—129

Heteropoda sikkimensis Gravely

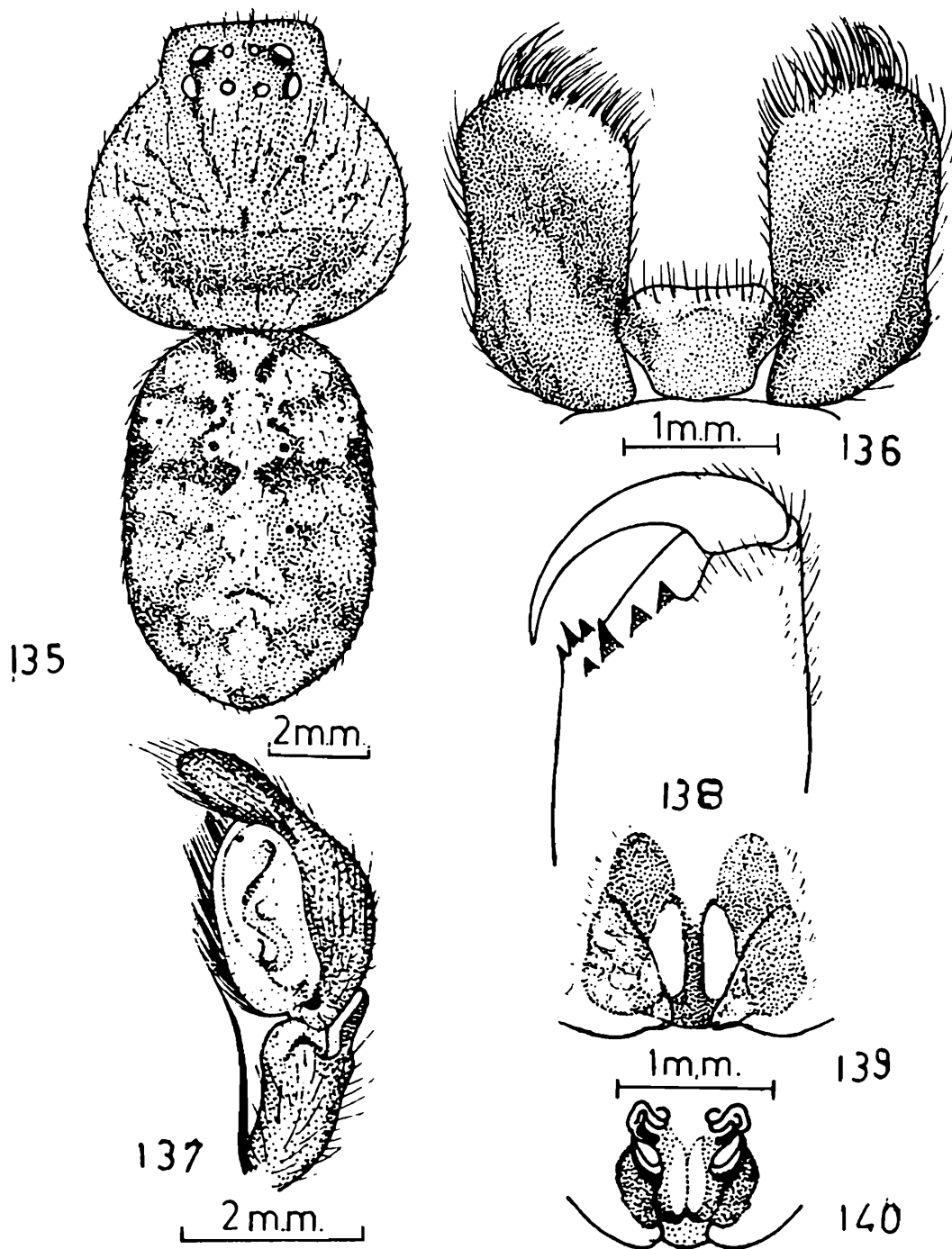
- 124. Dorsal view of female, legs omitted.
- 125. Inner view of left chelicera showing arrangements of teeth.
- 126. Ventral view of labium and maxillae.
- 127. Ventral view of left male palp.
- 128. Epigynum, ventral view.
- 129. Internal genitalia, dorsal view.



Figs. 130—134

Heteropoda nicobarensis Tikader

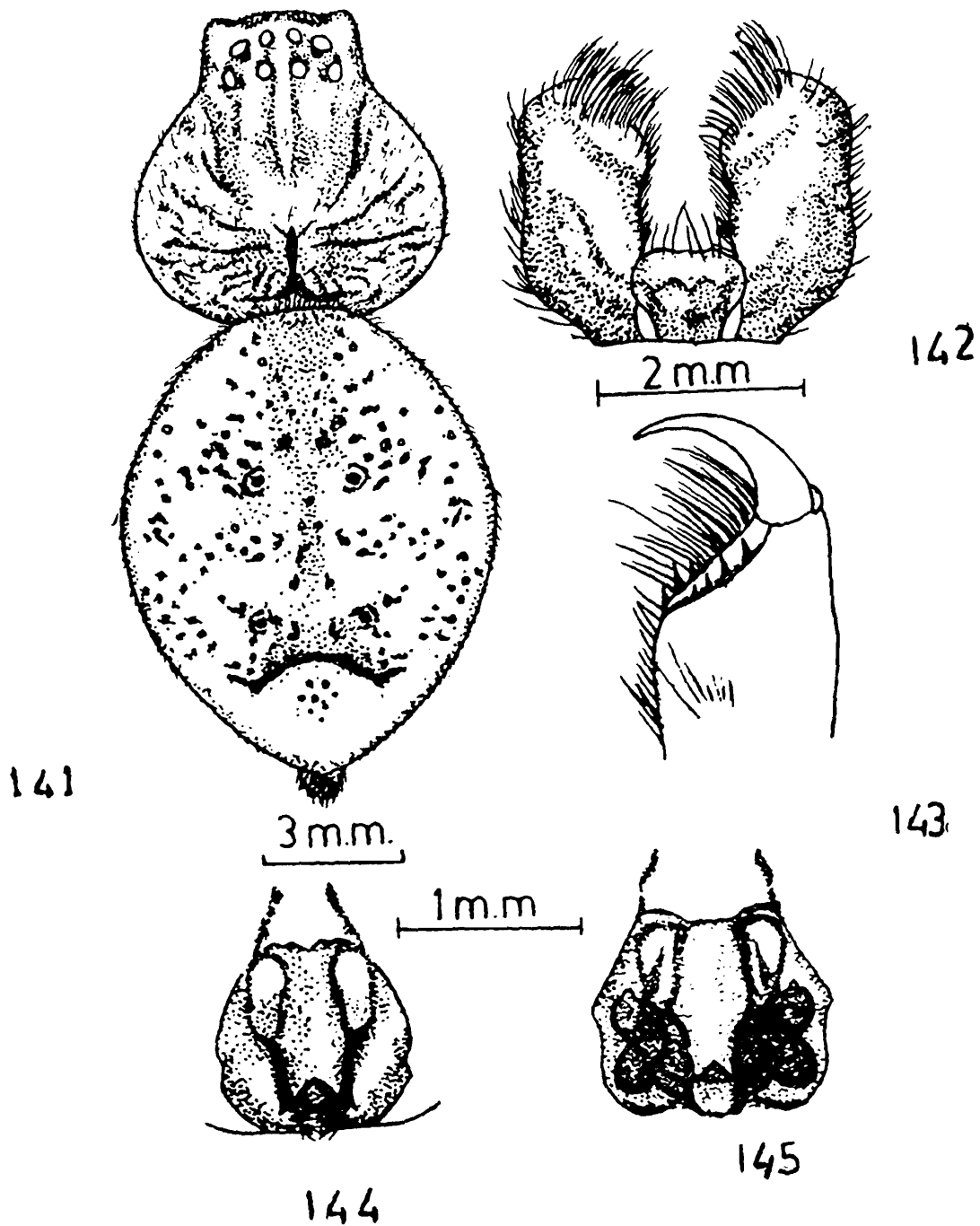
130. Dorsal view of female, legs omitted.
 131. Inner view of left chelicera showing arrangements of teeth.
 132. Ventral view of labium and maxillae.
 133. Epigynum, ventral view.
 134. Internal genitalia, dorsal view.



Figs. 135—140

Heteropoda bhaikakai Patel

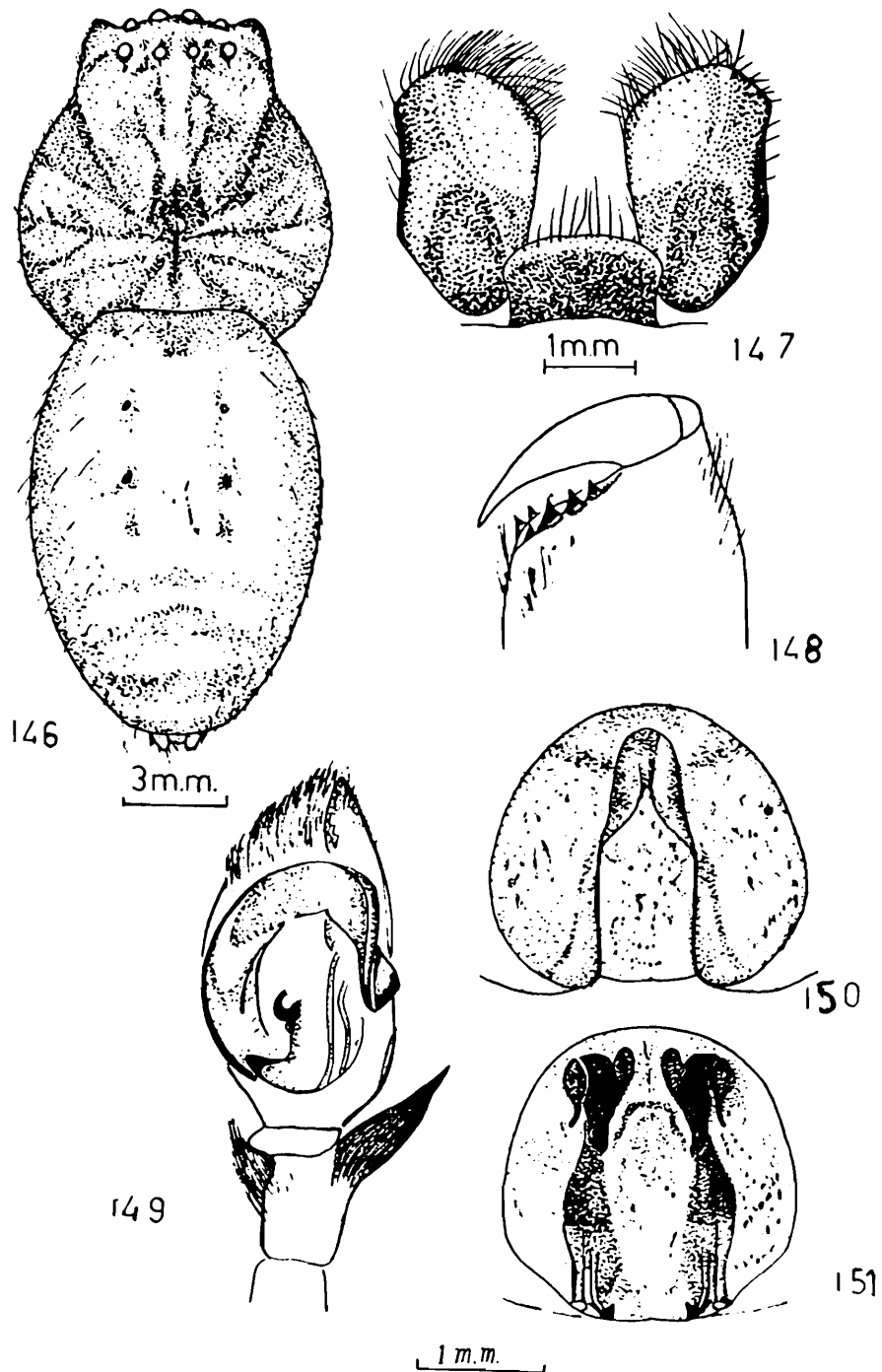
- 135. Dorsal view of female, legs omitted.
- 136. Inner view of left chelicera showing arrangements of teeth.
- 137. Ventral view of labium and maxillae.
- 138. Ventro-lateral view of right male palp.
- 139. Epigynum, ventral view.
- 140. Internal genitalia, dorsal view.



Figs. 141—145

Heteropoda plebeja Thorell

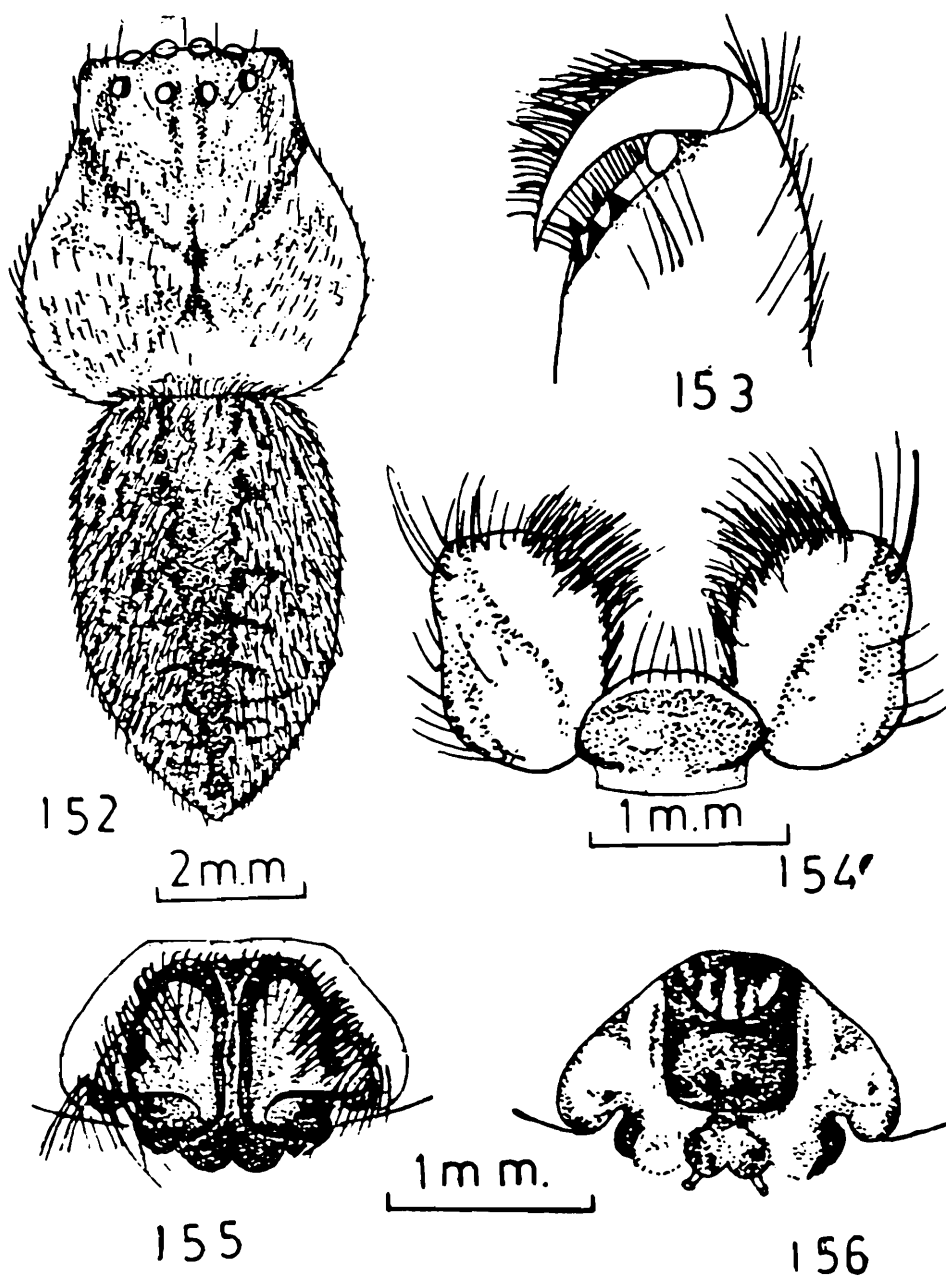
- 141. Dorsal view of female, legs omitted.
- 142. Inner view of left chelicera showing arrangements of teeth.
- 143. Ventral view of labium and maxillae.
- 144. Epigynum, ventral view.
- 145. Internal genitalia, dorsal view.



Figs. 146—151

Ollos iranii (Pocock)

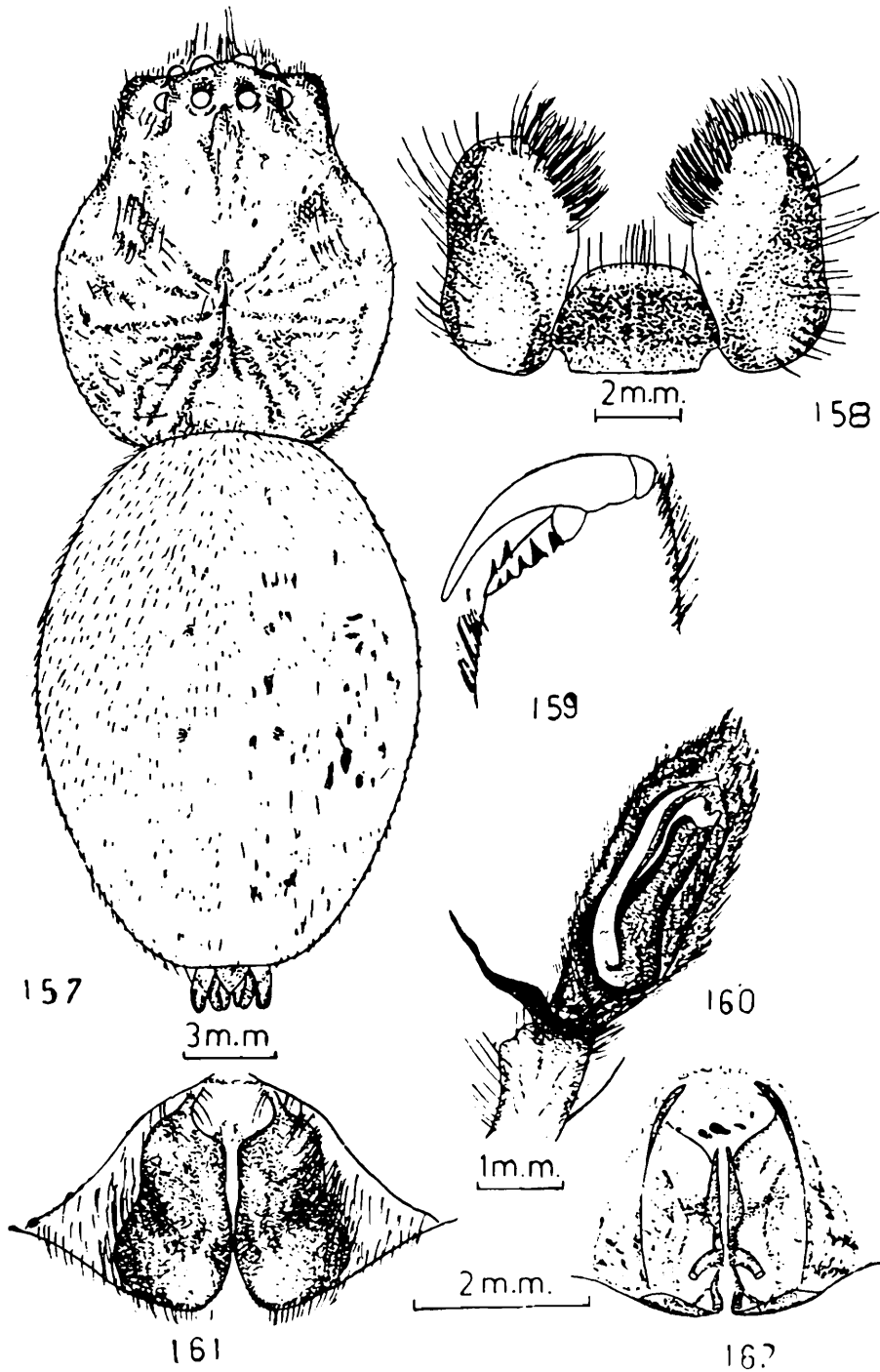
- 146. Dorsal view of female, legs omitted.
- 147. Inner view of left chelicera showing arrangements of teeth.
- 148. Ventral view of labium and maxillae.
- 149. Ventral view of right male palp.
- 150. Epigynum, ventral view.
- 151. Internal genitalia, dorsal view.



Figs. 152—156

Olios bhavnagarensis sp. nov.

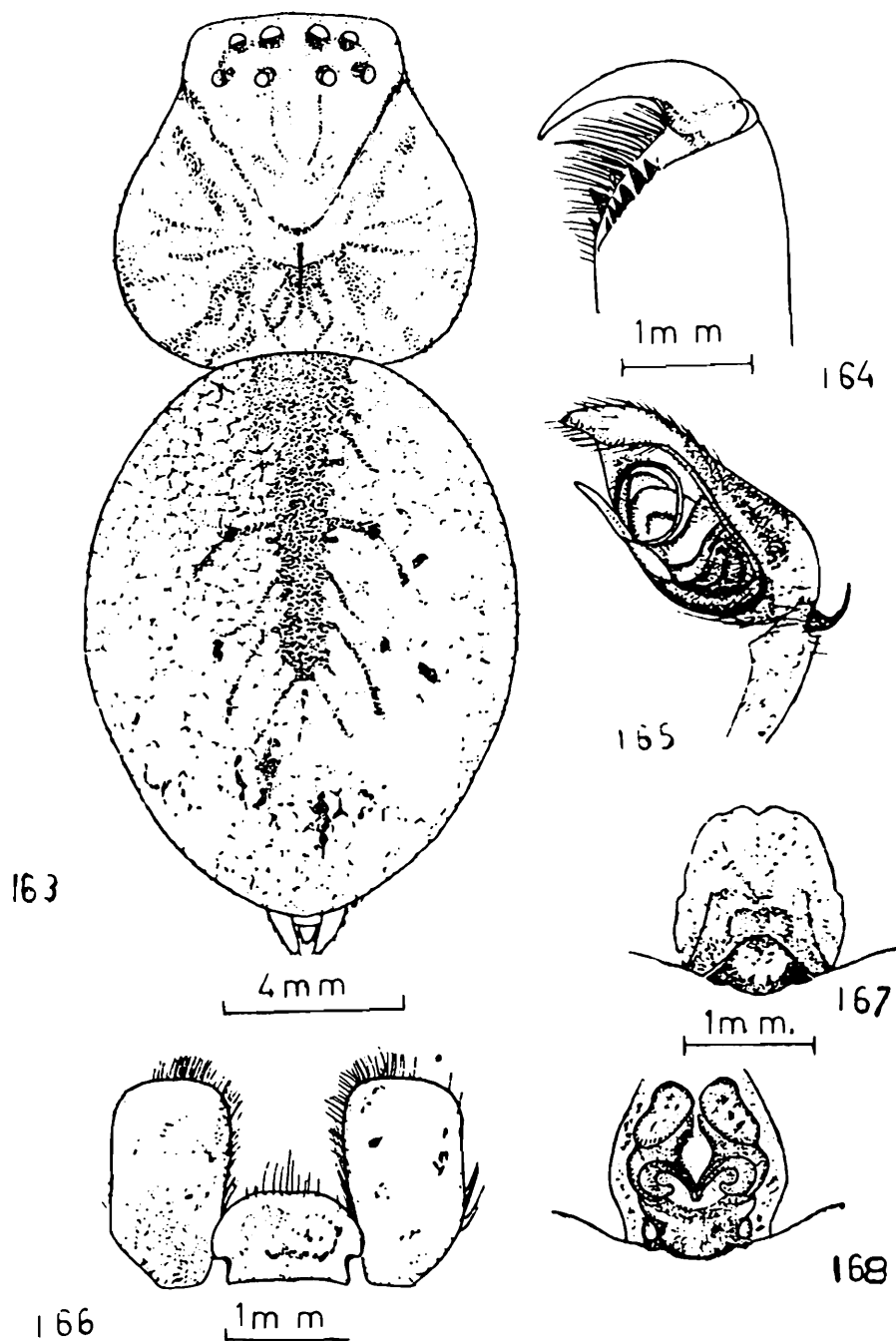
152. Dorsal view of female, legs omitted.
 153. Inner view of left chelicera showing arrangements of teeth.
 154. Ventral view of labium and maxillae.
 155. Epigynum, ventral view.
 156. Internal genitalia, dorsal view.



Figs. 157—162

Olios xerxes (Pocock)

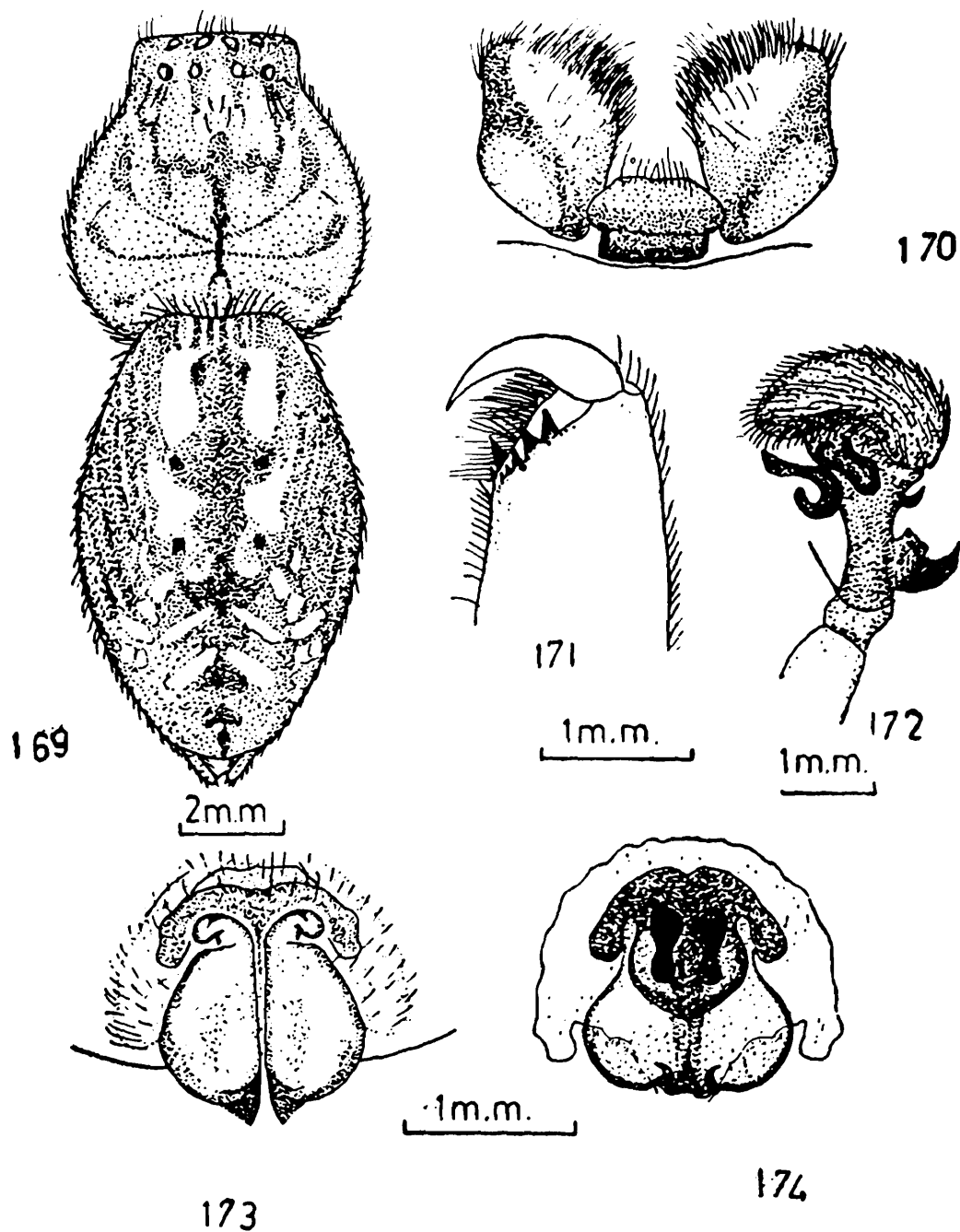
- 157. Dorsal view of female, legs omitted.
- 158. Inner view of left chelicera showing arrangements of teeth.
- 159. Ventral view of labium and maxillae.
- 160. Ventral view of left male palp.
- 161. Epigynum, ventral view.
- 162. Internal genitalia, dorsal view.



Figs. 163—168

Olios milleti (Pocock)

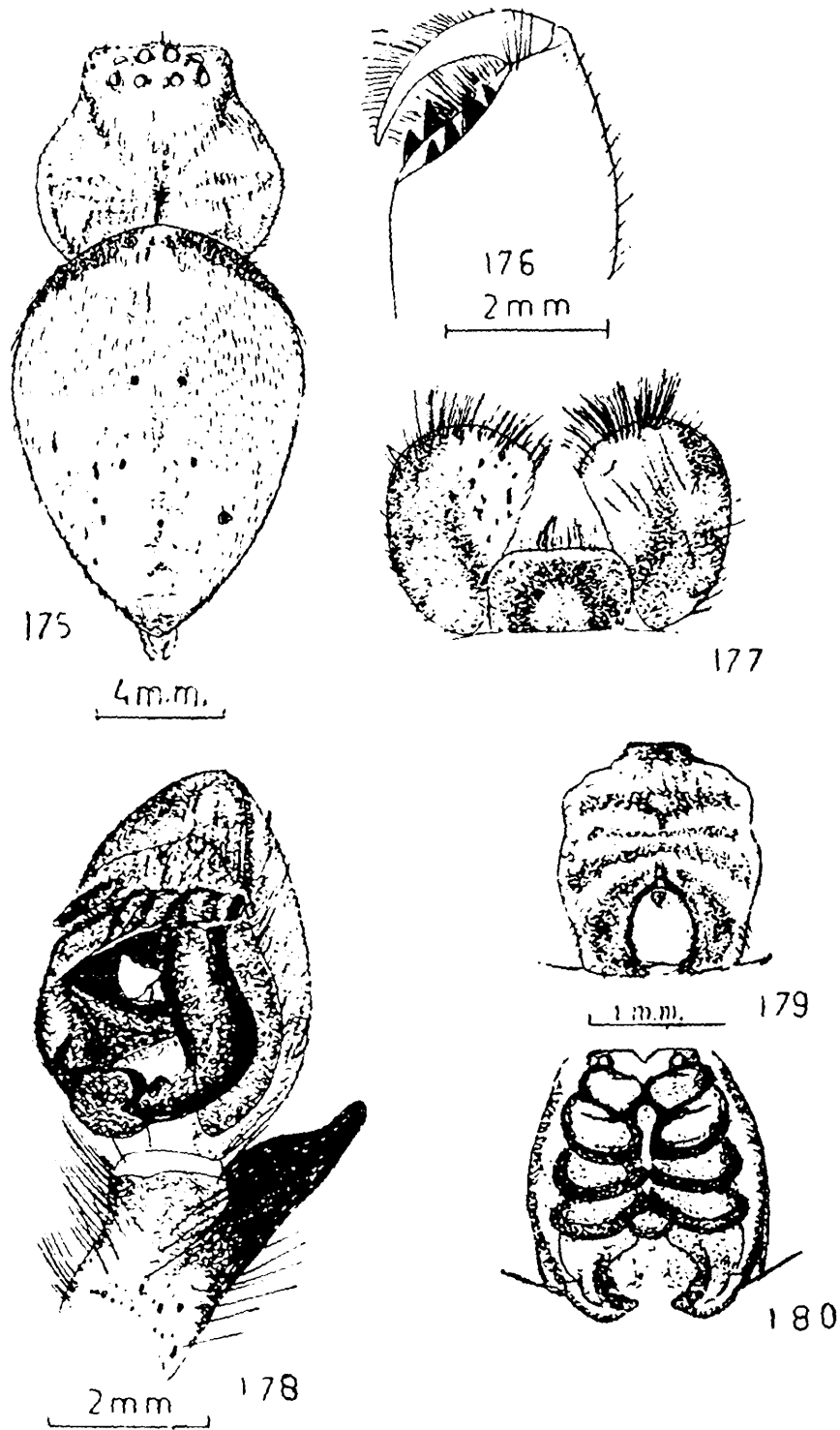
163. Dorsal view of female, legs omitted.
 164. Inner view of left chelicera showing arrangements of teeth.
 165. Ventro-lateral view of right male palp.
 166. Ventral view of labium and maxillae.
 167. Epigynum, ventral view,
 168. Internal genitalia, dorsal view.



Figs. 169—174

Olios obesulus (Pocock)

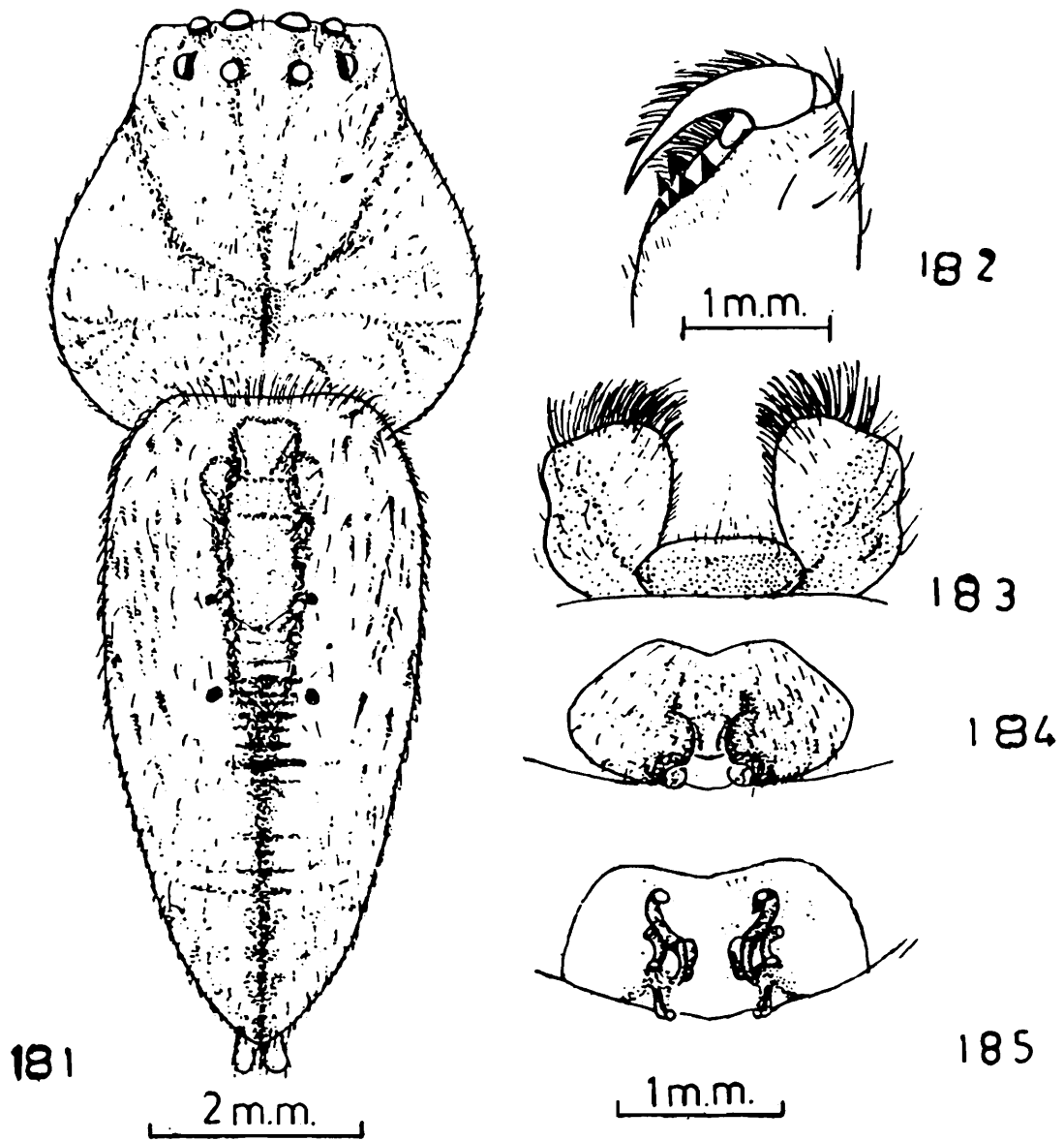
- 169. Dorsal view of female, legs omitted.
- 170. Ventral view of labium and maxillae.
- 171. Inner view of left chelicera showing arrangements of teeth.
- 172. Lateral view of right male palp.
- 173. Epigynum, ventral view.
- 174. Internal genitalia, dorsal view.



Figs. 175—180

Olios punctipes Simon

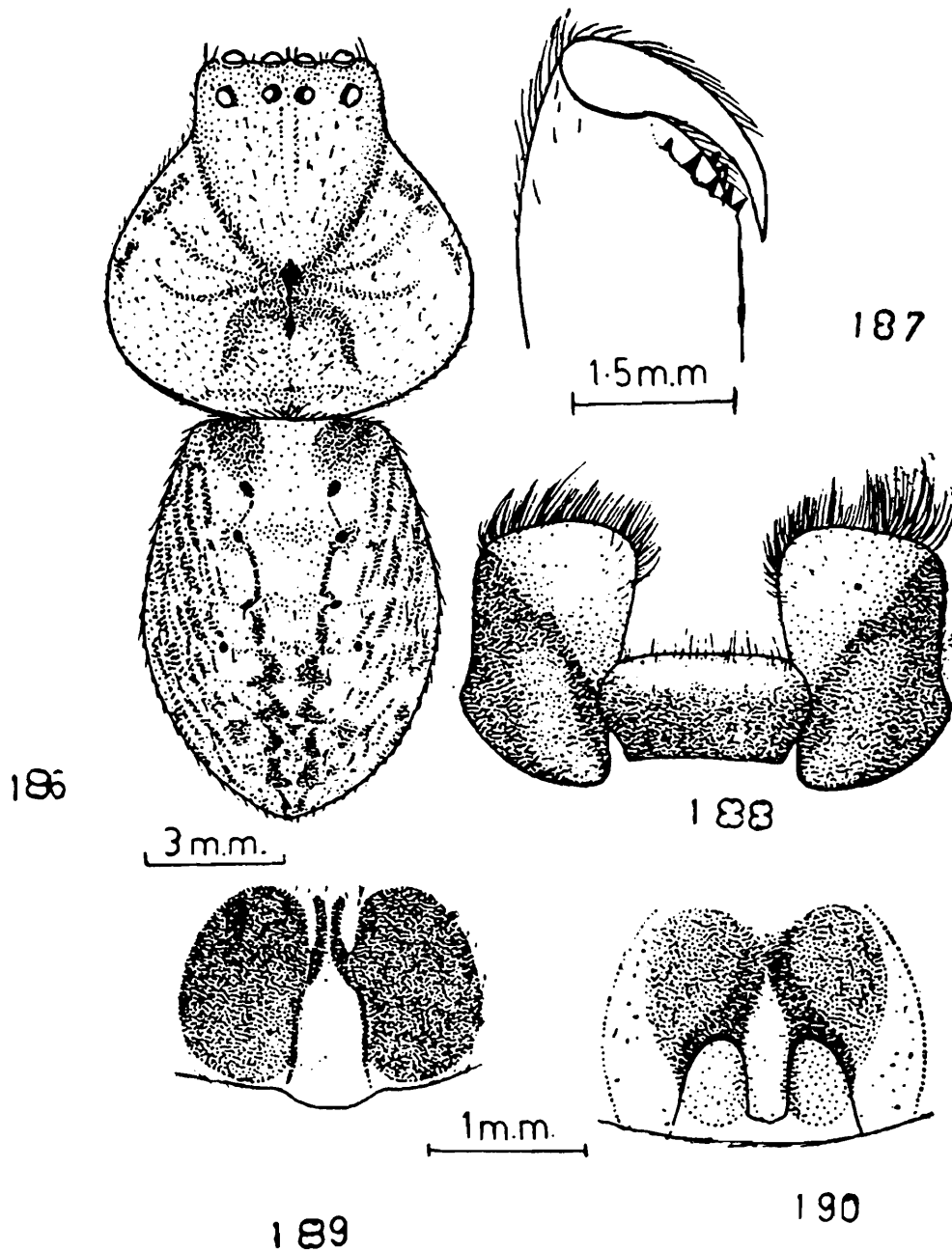
- 175. Dorsal view of female, legs omitted.
- 176. Inner view of left chelicera showing arrangements of teeth.
- 177. Ventral view of labium and maxillae.
- 178. Ventral view of right male palp.
- 179. Epigynum, ventral view.
- 180. Internal genitalia, dorsal view.



Figs. 181—185

Olios kiranae sp. nov.

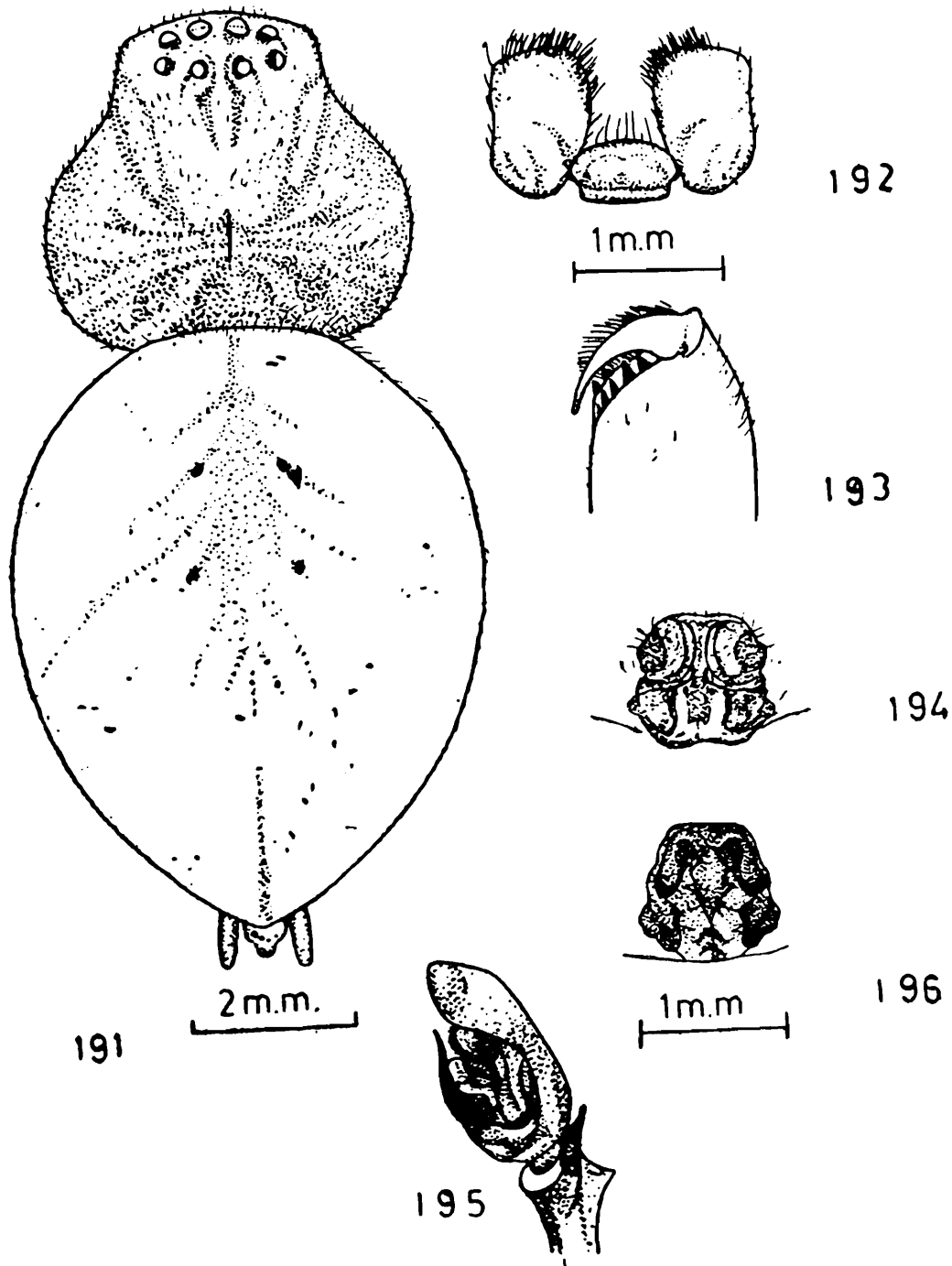
- 181. Dorsal view of female, legs omitted.
- 182. Inner view of left chelicera showing arrangements of teeth.
- 183. Ventral view of labium and maxillae.
- 184. Epigynum, ventral view.
- 185. Internal genitalia, dorsal view.



Figs. 186—190

Olios sensilis Simon

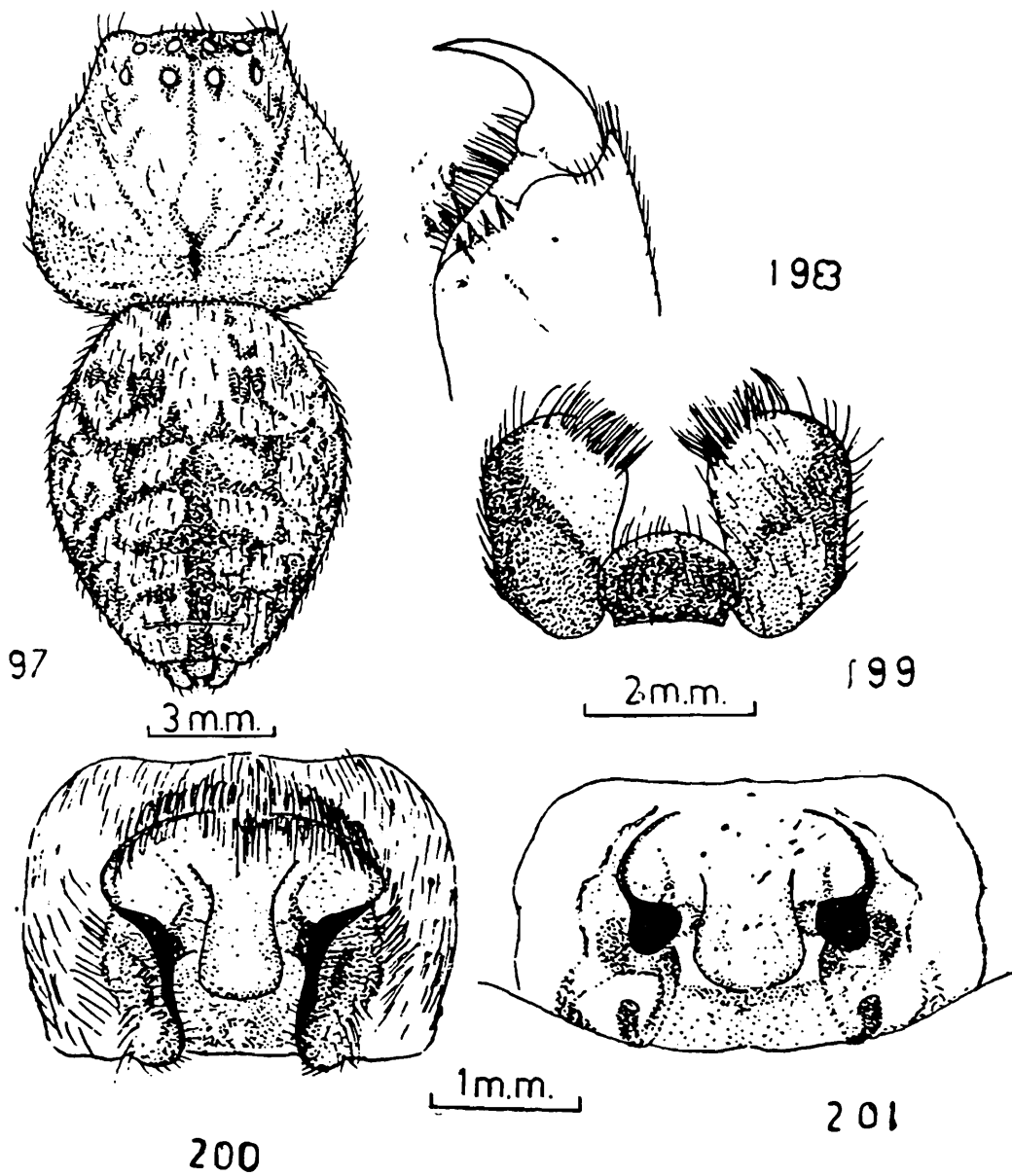
186. Dorsal view of female, legs omitted.
 187. Inner view of right chelicera showing arrangements of teeth.
 188. Ventral view of labium and maxillae.
 189. Epigynum, ventral view.
 190. Internal genitalia, dorsal view.



Figs. 191—196

Olios tener (Thorell)

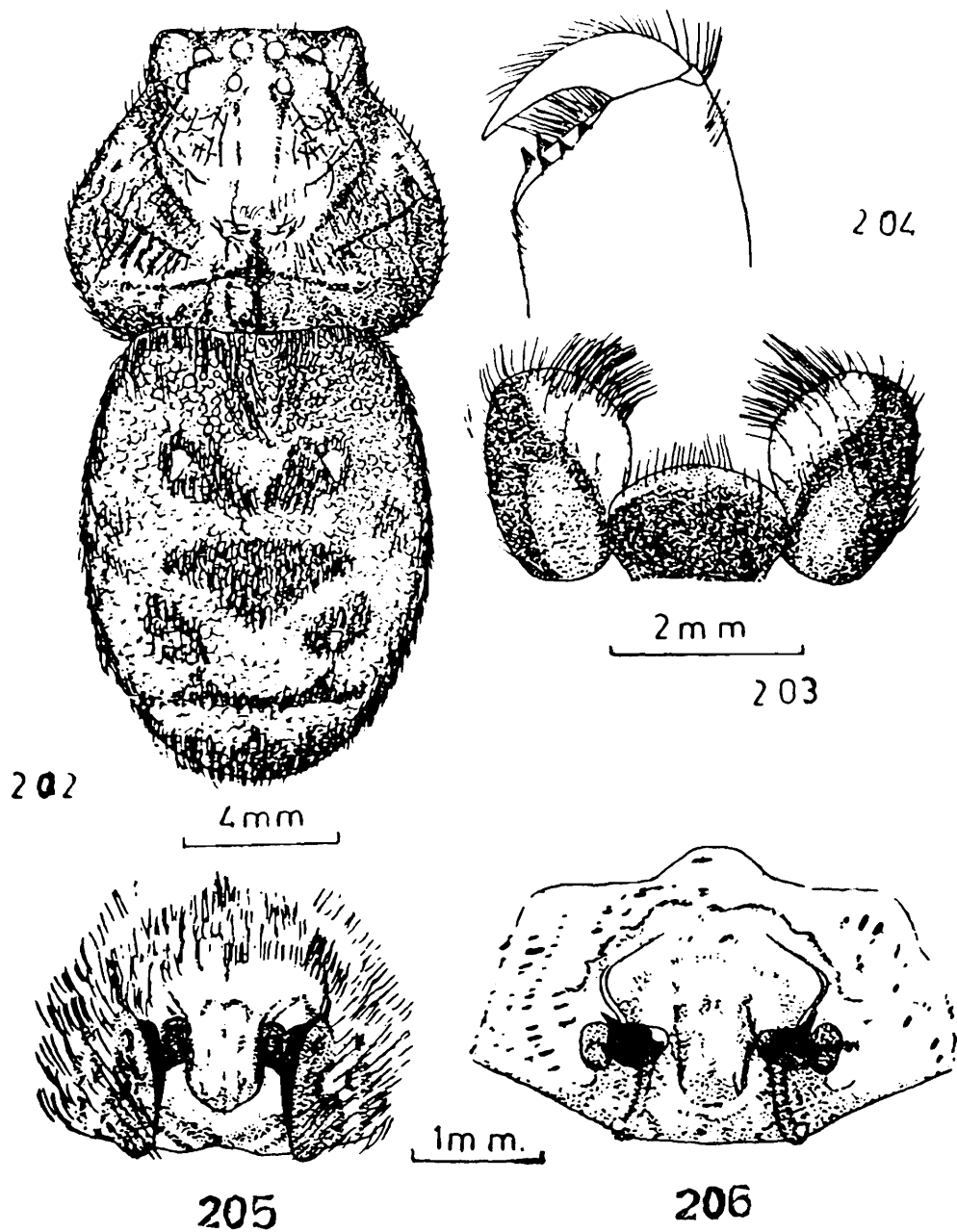
- 191. Dorsal view of female, legs omitted.
- 192. Inner view of left chelicera showing arrangements of teeth.
- 193. Ventral view of labium and maxillae.
- 194. Epigynum, ventral view.
- 195. Ventro-lateral view of right male palp.
- 196. Internal genitalia, dorsal view.



Figs. 197—201

Olios hampsoni (Pocock)

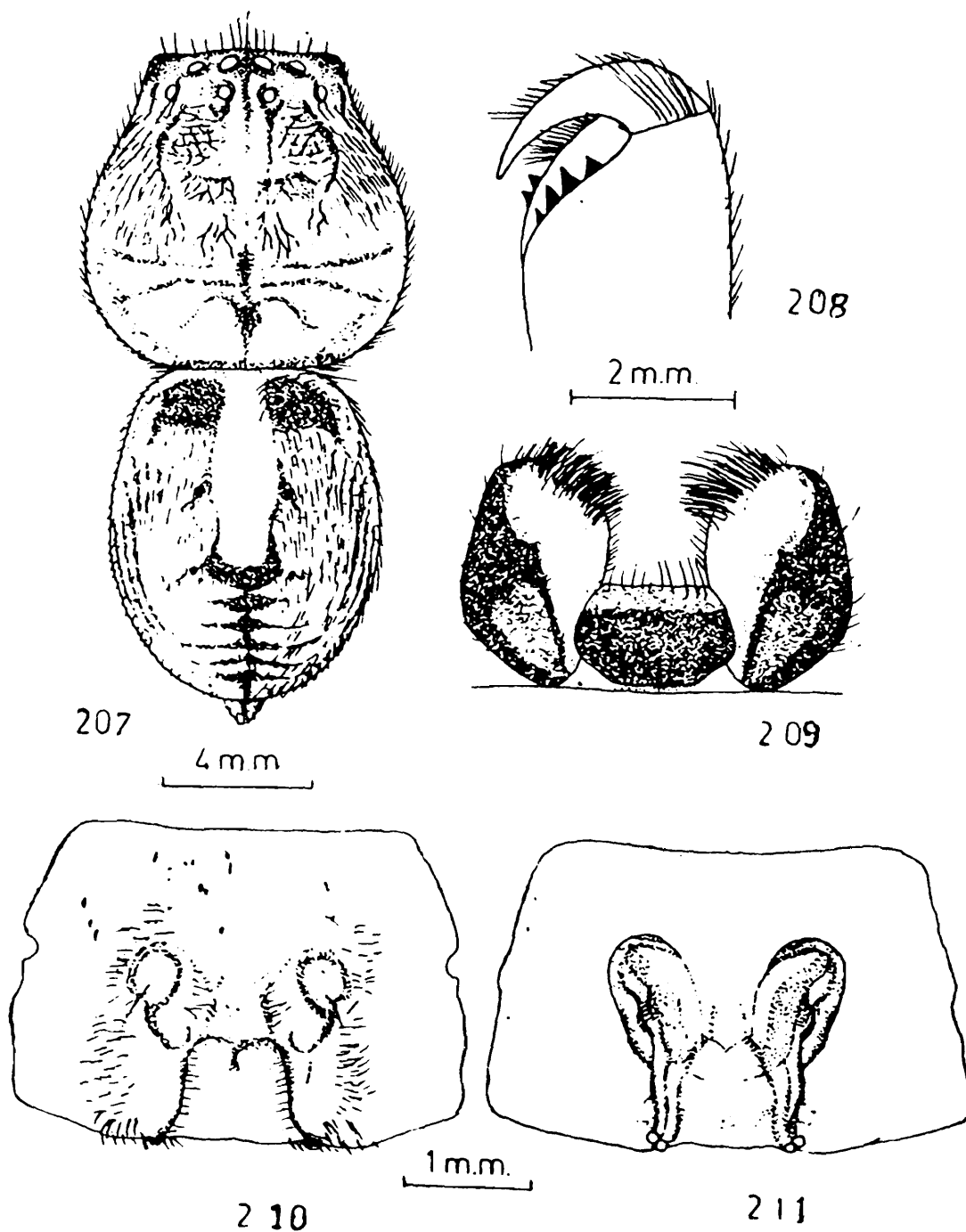
197. Dorsal view of female, legs omitted.
 198. Inner view of left chelicera showing arrangements of teeth.
 199. Ventral view of labium and maxillae.
 200. Epigynum, ventral view.
 201. Internal genitalia, dorsal view.



Figs. 202—206

Olios fuliginus (Pocock)

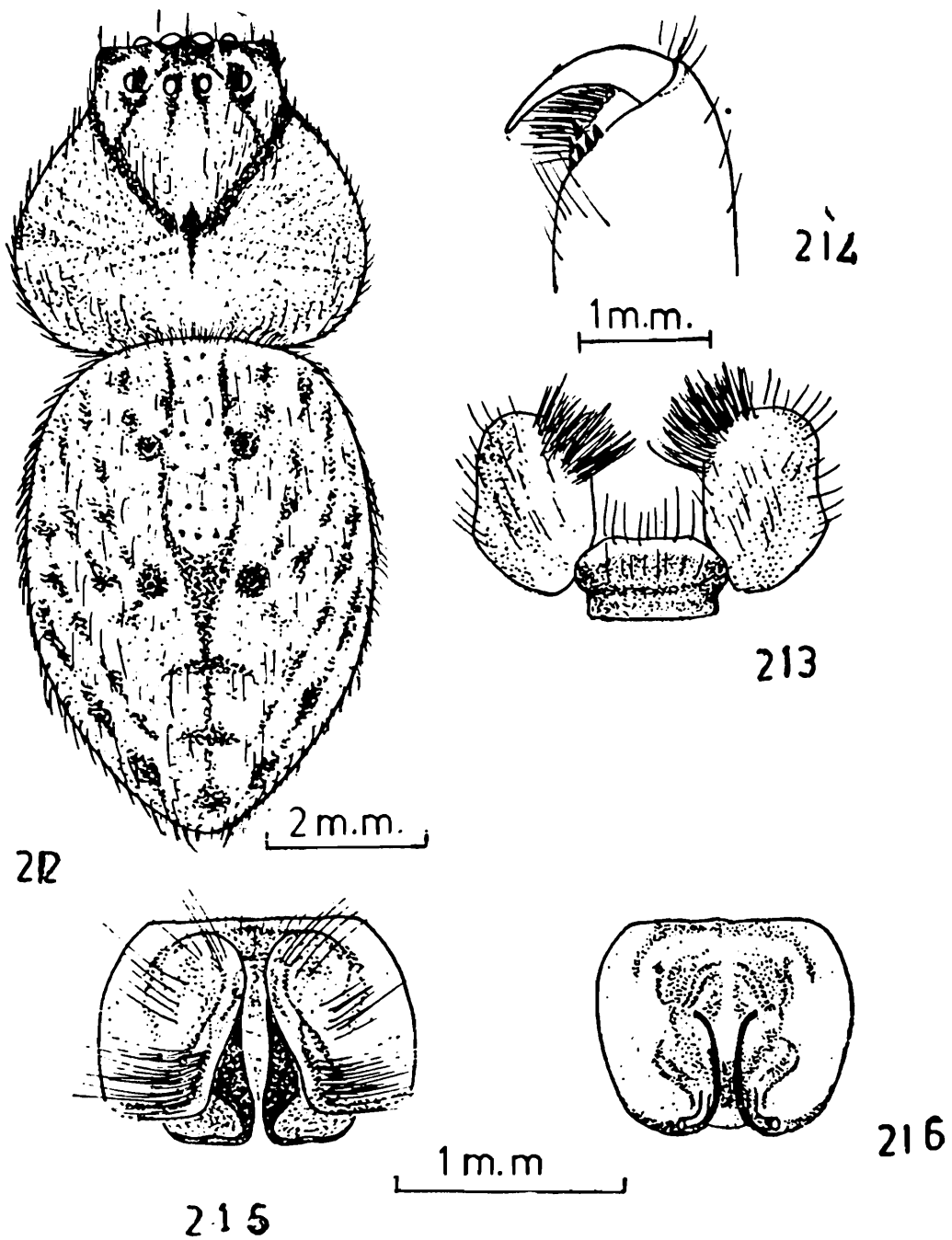
- 202. Dorsal view of female, legs omitted.
- 203. Ventral view of labium and maxillae.
- 204. Inner view of left chelicera showing arrangements of teeth.
- 205. Epigynum, ventral view.
- 206. Internal genitalia, dorsal view.



Figs. 207—211

Olios admiratus (Pocock)

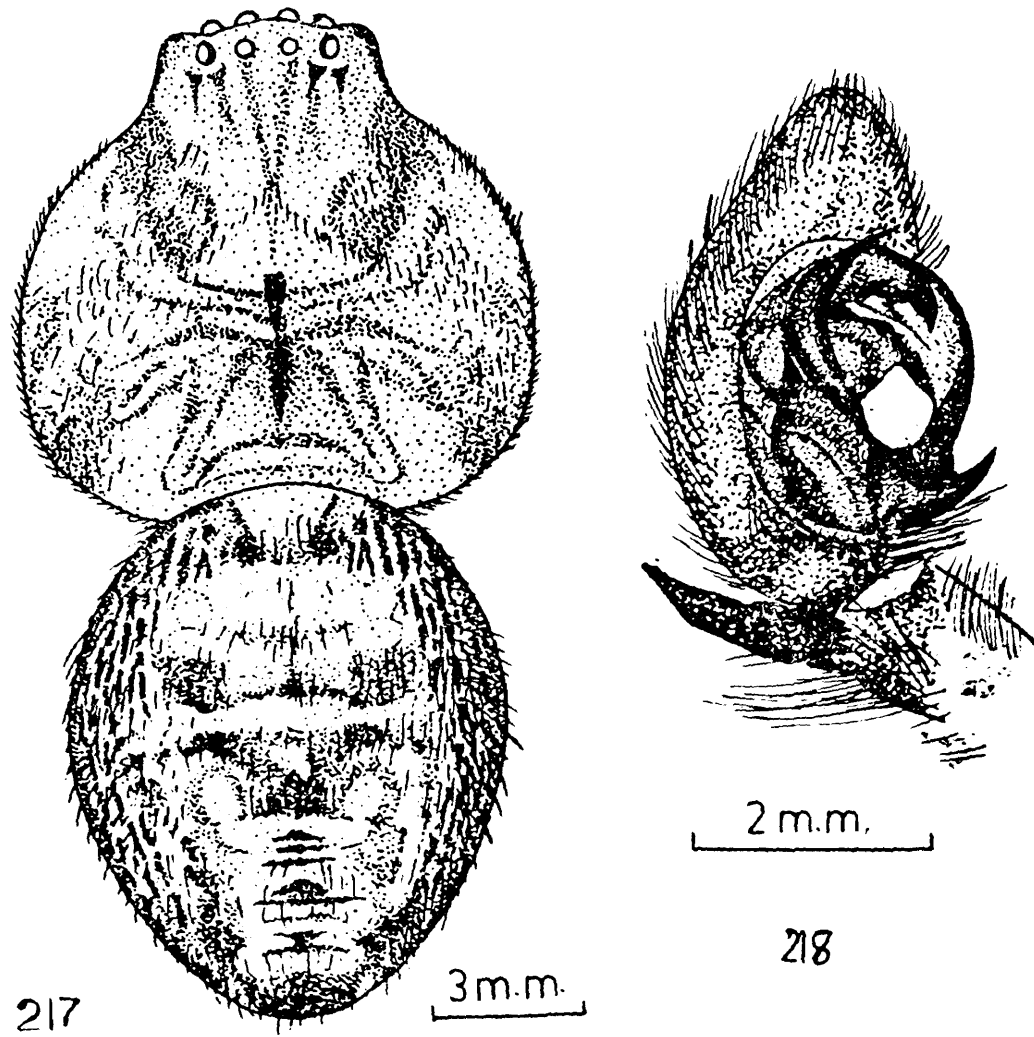
207. Dorsal view of female, legs omitted.
 208. Inner view of left chelicera showing arrangements of teeth.
 209. Ventral view of labium and maxillae.
 210. Epigynum, ventral view.
 211. Internal genitalia, dorsal view.



Figs. 212—216

Olios gravelvi sp. nov.

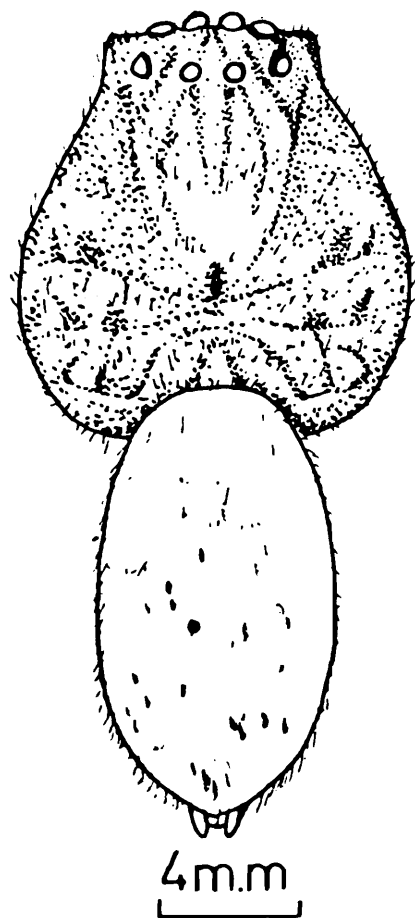
- 212. Dorsal view of female, legs omitted.
- 213. Inner view of left chelicera showing arrangements of teeth.
- 214. Ventral view of labium and maxillae.
- 215. Epigynum, ventral view.
- 216. Internal genitalia, dorsal view.



Figs. 217—218

Olios phipsoni (Pocock)

217. Dorsal view of male, legs omitted.
 218. Ventro-lateral view of left male palp.



219



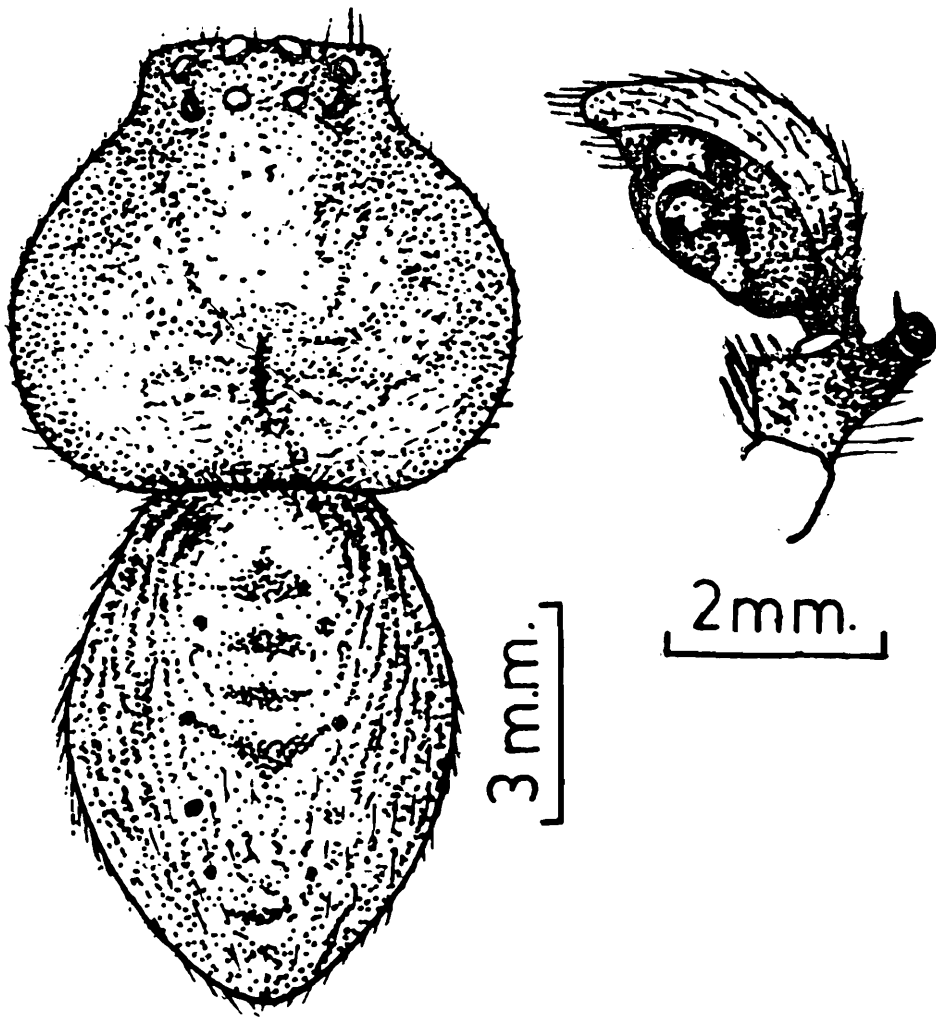
220

Figs. 219—220

Olios stimulator (Simon)

219. Dorsal view of male, legs omitted.

220. Ventral view of right male palp.



221

Fig. 221

Olios wroughtoni (Simon)

221. Dorsal view of male, legs omitted.
 221. Ventro-lateral view of right male palp.