

A revision of the spider genus *Portia* (Araneae : Salticidae)



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Synopsis

The spider genus *Portia* Karsch is revised. All the 16 known species (of which 5 are new) are described and figured. Biological and distributional data are given and a key to the species is provided. Two species groups based on the structure of the male genitalia are proposed. The type-material (including 14 holotypes) of 22 nominate species was examined and 7 lectotypes and 1 neotype are newly designated. One genus is revived, 2 generic and 4 specific names are newly synonymized and 6 new combinations are proposed.

Introduction

Portia is a distinctive genus of long-legged ornate spiders which have attracted the attention of naturalists on account of their conspicuous leg fringes and abdominal hair tufts. The genus is represented in both the Oriental and Ethiopian regions and at present includes 16 species.

Portia, as recognized in this paper, has previously been divided between two genera *Portia* and *Linus* which Simon (1901) placed in separate suprageneric groups, the Boetheae comprising *Portia* and *Boethus*, and the monogeneric Lineae. In the same work Simon synonymized *Brettus* Thorell, 1895 with *Portia*, but recent studies on the type species of *Brettus*, *B. cingulatus* Thorell, have shown that this genus is valid, and furthermore that several species at present in *Portia* will have to be transferred back into *Brettus*. Simon's understanding of *Portia* seems to have been based in part on *Portia semifimbriata* (Simon), from India and not on the type species *P. schultzii* Karsch from South Africa. *P. semifimbriata* agrees well with Simon's concept of Boetheae but it is not congeneric with *P. schultzii* and will have to be referred back into *Brettus*, i.e. its original combination. *P. schultzii*, in spite of uncertainties in respect of adult females (see below, p. 88), is clearly congeneric with *Portia fimbriata* (Doleschall), the type species of *Linus*. In fact a Madagascan record for *P. fimbriata* (Simon, 1901) probably refers to *P. schultzii* or even *P. africana* (Simon) both of which are now known to occur in Madagascar.

The Ethiopian species have been revised by Roewer (1965) who recognized both *Portia* and *Linus* as valid, distinguishing them by the curvature of the first eye row and carapace shape. Unfortunately he based his descriptions and figures almost entirely on the literature and did not examine many of the type specimens. His new genus *Neccocalus*, proposed for *Cocalus africanus* Thorell, is a synonym of *Portia* as *C. africanus* is conspecific with the widespread West African species *P. africana*.

Genus *PORTIA* Karsch

Sinis Thorell, 1878, June: 269. Type species *Salticus fimbriatus* Doleschall, by original designation [Junior homonym of *Sinis* Heer, 1862: 31]. Petrunkevitch, 1928: 246. Bonnet, 1958: 4061.

Portia Karsch, 1878 [December]: 774. Type species *Portia schultzei* Karsch, by original designation and monotypy. Peckham & Peckham 1885: 267. Simon, 1901: 400–403. Petrunkevitch, 1928: 182. Bonnet, 1958: 3766. Roewer, 1965: 10.

Linus Peckham & Peckham, 1885: 289 [Replacement name for *Sinis* Thorell]. Simon, 1901: 400, 408, 410. Petrunkevitch, 1928: 181. Sherriffs, 1931: 538. Bonnet, 1957: 2482. Roewer, 1965: 14. **Syn. n.**

Boethoportia Hogg, 1915: 501. Type species *Boethoportia ocellata* Hogg, by monotypy. Petrunkevitch, 1928: 181. Strand, 1929: 15. Roewer, 1954: 933. Bonnet, 1955: 892 [Synonymized by Prószyński, 1971: 385].

Neccocalus Roewer, 1965: 20. Type species *Cocalus africanus* Thorell, by original designation and monotypy. **Syn. n.**

Simon (1901), without giving his reasons, synonymized *Brettus* Thorell with *Portia* Karsch. However, preliminary studies on the holotype of the type species *Brettus cingulatus* Thorell have shown that the genus is valid and it is here removed from synonymy **gen. rev.** The genus will be revised in a paper in preparation.

DEFINITION. Medium to large spiders ranging from about 4.5 to 9.5 mm in length. Sexes alike in general body form, but colour markings sometimes showing slight sexual dimorphism. Usually ornate with tufts of hair and leg fringes; colour patterns composed on setae (easily rubbed). **Carapace:** high, usually with marked slope from posterior lateral eyes to anterior row and to posterior thoracic margin; fovea elongate, just behind posterior lateral eyes; sculpturing not marked. **Eyes:** anteriors subcontiguous, apices procurved to recurved; posterior median eyes relatively large, about midway between anterior lateral and posterior lateral eyes or nearer to anterior laterals; posterior row usually narrower than anterior row; quadrangle length between 38 and 55 per cent of carapace length. **Clypeus:** high, concave. **Chelicerae:** medium to large, more or less vertical; promargin with three teeth, retromargin with three to six. **Maxillae:** elongate, usually divergent. **Labium:** subtriangular, about as long as broad. **Sternum:** scutiform to elongate scutiform. **Pedichel:** short. **Abdomen:** usually ovoid to elongate ovoid, rarely elongate; scuta lacking; spinnerets subequal in length, anteriors and posteriors robust, medians slender, usually hirsute; colulus apparently lacking, its position indicated by scanty hair tuft in front of spinnerets; trachea (Fig. 1D) unbranched, arising from transverse slit just in front of spinnerets and apparently limited to the abdomen. **Legs:** long and slender, usually with conspicuous fringes; spines numerous, generally robust; claw tufts present, scopula lacking, but female metatarsi I and tarsi I with minute ventral setae (Pl. 5c, d). **Female palp:** usually hirsute with terminal claw. **Male palp:** femoral apophysis usually lacking; tibia with prolateral and ventral apophyses; cymbium usually modified proximally and often with a prolateral flange (Fig. 1B, F); embolus moderately long and slender; conductor sometimes present; tegulum with peripheral seminal reservoir, a deeply curved furrow and a tripartite membranous apophysis (adjacent to the embolic base) that sometimes extends laterally to form a small tegular apophysis (Fig. 10A, D); median apophysis lacking. **Epigyne:** relatively simple openings usually indistinct; seminal ducts generally short, wide and very dark, opening into large, dark, rounded spermathecae.

Remarks. The conductor (c) is very closely associated with the embolic shaft and would appear to have a supporting or protective function. In *P. labiata* (Thorell) and *P. crassipalpis* (Peckham & Peckham) the conductor is well developed (Figs 9B, 10A), but in *P. fimbriata* (Doleschall) it is greatly reduced, its presence being indicated by a shallow groove across the embolic shaft (Pl. 3a,

b). This groove is not joined to another groove which extends along the inside of the embolus and terminates near the tip (Pl. 3e, f). In *P. schultzii* and several other species the conductor is apparently absent. The tripartite membranous apophysis (m) is generally indistinct (Pl. 3b, c) and its prolateral extension is not always evident.

As might be expected preliminary observations with the scanning electron microscope have revealed additional characters which will undoubtedly be of phylogenetic significance. For example, the species examined in this study all have the same type of setae (Pl. 4, 5) which appear to show inter- and intraspecific differences. Unfortunately a detailed analysis of microsculpture cannot be presented as several species are known only from one or two specimens that are in poor condition and cannot be used for SEM studies.

BIOLOGY. Gravely (1921) reports an Indian species of '*Linus*' stalking and pouncing on a pholcid, *Smeringopus* sp., in its web. Another species (Bristowe, 1941) was seen devouring an Indian web-building pisaurid, *Euprothenops ellioti* (O. P.-C). Bristowe also records '*Linus fimbriatus*' feeding on *Smeringopus elongatus* (Vinson), on an *Araneus* and on a *Theridion*. In each case the '*Linus*' met with success in capturing its prey and remained in the victim's web to eat the owner before retiring. *P. fimbriata* has also been recorded from the web of *Nephila malabarensis* (Sherriffs, 1931).

An African *Portia* has been found in association with another spider's web by John and Frances Murphy, who collected two immature specimens of *P. schultzii* Karsch from an extensive diplurid web in Kenya. Important observations (previously unpublished) were made by Frances Murphy who successfully reared the above juveniles through four or five moults. The female died after its penultimate or final moult (see p. 88), but the male reached adulthood. In captivity both spiders made several webs which were apparently used for trapping and locating prey. The male's web was more flimsy than that of the female, but neither web appeared to be essential as both spiders readily caught wingless fruit flies when the cages were cleaned and the webs destroyed. Moulting was not observed, but several exuvia were found hanging upside down below the sheet-web and it seems reasonably certain that *P. schultzii* moults in the open. The adult male did not spin a web, but when placed on that of the female (Pl. 1a, b) found no difficulty in running about and adopted poses which had not been previously noticed and were taken to be part of a courtship routine. Another species, believed to be *P. durbanii* Peckham & Peckham collected by the author and Mr A. Russell-Smith in Durban, was also reared through several moults by Frances Murphy, but there was no web spinning activity. The specimen, apparently a subadult male, died just before its final moult.

Bristowe (pers. comm.) quite naturally assumed that *Portia* invaded spider webs for the purpose of feeding, but the above observations on captive specimens suggests that some *Portia* species may build and live in their own webs and use them for prey capture, either in isolation or in association with the webs of other spiders. Careful field observations are needed to resolve this aspect of behaviour as web building has not to my knowledge been reported for salticid spiders.

AFFINITIES. The affinities of *Portia* cannot be fully reviewed at present as numerous related genera have yet to be revised. The structure of the genitalia suggests that *Portia* is closely related to *Brettus* and some species of *Cocalus* (e.g. *C. lancearius* Thorell). Unfortunately the type species of *Cocalus*, *C. concolor* Koch, known only from a single male specimen, has no palps and I am unable to present a diagnosis at the moment.

Preliminary observations suggest that *Portia*, *Brettus*, *Cocalus* and other genera with large posterior median eyes may be related to lyssomanid spiders. For example, *P. adonis* (Simon), *P. albolimbata* (Simon) and *P. semifimbriata* (Simon) do not belong in *Portia* but represent another genus *Brettus* (type species *Brettus cingulatus* Thorell), which may form a link between *Asemonia* and *Portia*. If one considers Simon's concept of *Portia* (based in part on *P. semifimbriata*) and its affinities with *Boethus* (sensu Simon) then Simon's comment (Simon, 1901) that: '*Les Boethus (Nealces* E. Sim.) me paraissent faire le passage des *Lyssomanes* aux *Cocalodes* et aux *Linus*' become significant. The affinities of *Cocalodes* are uncertain but the genus is probably close to *Brettus*.

The taxonomic status of lyssomanids has yet to be resolved. The presence of four eye rows has until recently been considered diagnostic of lyssomanids but it has already been shown (Galiano,

1976 and Wanless, 1978a) that several 'typical' salticid genera have similar eye formulae. The most aberrant example of a salticid with four eye rows is *Athamas whitmeei* O. P.-Cambridge, which has the anterior lateral eyes behind and almost exactly above the anterior medians. Even Simon (1901) remarked on the similarity with *Lyssomanes*, but as far as I am aware he has never suggested that the genera were closely related, presumably because the genitalia of *A. whitmeei* are of the type frequently found in the Salticidae. If *Portia* and related genera were transferred to the Lyssomanidae, then the large posterior median eyes might be considered as generally diagnostic of Lyssomanidae. However *Pandisus*, a small madagascan genus closely related to *Asemonia*, is exceptional in having small posterior median eyes.

Platnick (1971) has suggested that courtship behaviour in *Lyssomanes bradyspilus* Crane, as described by Crane (1949), indicates that lyssomanids should have family status, but Galiano (1976) holds the view that on anatomical grounds the group merits no more than subfamily rank. The decision is made difficult as our knowledge of the group is very limited. However, the web spinning behaviour of *P. schultzii*, the flimsy brooding webs of *Lyssomanes jemineus* Peckham & Wheeler (Eberhard, 1974) and *Asemonia* sp. n. (Murphy coll, vials 1549, 3661; F. Murphy unpublished observations) are in contrast to known salticid behaviour. Furthermore, the branched tracheal systems of several 'typical' Salticidae (Lamy, 1902; Hill, 1977 and Wanless, 1978a) are more complex than the unbranched systems found in *Asemonia* (Wanless unpublished observation), *Portia* (Fig. 1D) and *Lyssomanes* (Lamy, 1902 and Forster, pers. comm.). Forster (1970) has already argued that the general complexity of the tracheal system (i.e. branched or unbranched) is of more evolutionary significance than the presence or absence of tracheal intrusions into the cephalothorax. There is thus evidence to support Platnick's view, or at least suggest that lyssomanids should be accorded a higher taxonomic rank than other salticid subfamilies as they are understood at the present time.

List of species in the genus *Portia* Karsch, 1878

- Portia africana* (Simon, 1886)
P. albimana (Simon, 1900)
P. alboguttata (Lawrence, 1938)
P. assamensis sp. n.
P. cazomboensis sp. n.
P. crassipalpis (Peckham & Peckham, 1907)
P. durbanii Peckham & Peckham, 1903
P. falcifera sp. n.
P. fimbriata (Doleschall, 1859)
P. kenti Lessert, 1925
P. labiata (Thorell, 1887)
P. madagascarensis sp. n.
P. oreophila sp. n.
P. russata Simon, 1900
P. schultzii Karsch, 1878
P. solitaria Lessert, 1927

Key to species of *Portia*

Males

- | | | | | | |
|---|--|---|---|--|--|
| 1 | Tibial apophysis jointed (Figs 14C, F; 16B, C) (Africa, Madagascar) | . | . | . | 2 |
| - | Tibial apophysis not jointed (Ethiopian and Oriental regions) | . | . | . | 4 |
| 2 | Tibial apophysis very robust (Fig. 16B-D) (Madagascar) | . | . | <i>madagascarensis</i> sp. n. (p. 114) | |
| - | Tibial apophysis slender (Fig. 14C, F) | . | . | . | 3 |
| 3 | Embolus short and slender (Fig. 14A) (South Africa) | . | . | . | <i>kenti</i> Lessert (p. 111) |
| - | Embolus long and robust (Fig. 14B) (Uganda) | . | . | . | <i>falcifera</i> sp. n. (p. 111) |
| 4 | Femora of palp with a distal blunt apophysis (Fig. 13B) (South Africa) | . | . | . | <i>durbanii</i> Peckham & Peckham (p. 109) |

- Femoral apophysis lacking	5
5 Embolus relatively short (Fig. 12B) (Sri Lanka)	<i>albimana</i> (Simon) (p. 107)
- Embolus relatively long	6
6 Tegular apophysis present (Fig. 10A, D, C, F)	7
- Tegular apophysis absent	8
7 Tibial apophysis slender (Fig. 10B) (Sri Lanka, India, Burma, Thailand, Malaysia, Sumatra)	<i>labiata</i> (Thorell) (p. 103)
- Tibial apophysis robust (Fig. 10F) (Assam, Nepal)	<i>assamensis</i> sp. n. (p. 105)
8 Conductor well developed (Fig. 9B) (Malaysia, Borneo)	<i>crassipalpis</i> (Peckham & Peckham) (p. 100)
- Conductor poorly developed or lacking	9
9 Cymbial flange as in Fig. 1B, F; clypeus with a white spot below each AM (Zaire, Kenya, Tanzania, South Africa, Madagascar)	<i>schultzi</i> Karsch (p. 88)
- Cymbial flange otherwise; white spots lacking	10
10 Cymbial flange as in Fig. 4D; clypeus with curved white 'moustache' (West and Central Africa)	<i>africana</i> (Simon) (p. 93)
- Cymbial flange as in Fig. 7G; 'moustache' lacking	<i>fimbriata</i> (Doleschall) (p. 99)

Females

1 Epigyne as in Fig. 17B; body with white longitudinal bands (Fig. 17D) (Madagascar)	<i>oreophyla</i> sp. n. (p. 116)
- Epigyne and body otherwise	2
2 Epigyne as in Fig. 6B, spermathecae large, ducts apparently lacking; (Madagascar)	<i>russata</i> Simon (p. 97)
- Epigyne otherwise	3
3 Anterior eye row strongly recurved in frontal view	4
- Anterior eye row procurved in frontal view	6
4 Epigyne with central curtain-like membrane (Fig. 2C) (Angola, South Africa)	<i>cazomboensis</i> sp. n. (p. 90)
- Epigyne without central membrane	5
5 Epigyne with delicate septum (Fig. 13D) (South Africa)	<i>durbanii</i> Peckham & Peckham (p. 109)
- Septum lacking; epigyne as in Fig. 3D-F (Guinea, Ivory Coast, Zaire)	<i>solitaria</i> Lessert (p. 91)
6 Epigyne with sclerotized septum as in Fig. 5A, B, C (Africa)	7
- Epigyne otherwise	8
7 Septum central, ducts not extended posteriorly (Fig. 5A, B, F)	<i>africana</i> (Simon) (p. 93)
- Septum distal, ducts extended posteriorly (5C, D, H)	<i>alboguttata</i> (Lawrence) (p. 96)
8 Epigyne small and pale; spermathecae indistinct (Fig. 1G; Pl. 3b) (Africa) [? subadult ♀]	<i>schultzi</i> Karsch (p. 88)
- Epigyne otherwise (Oriental region)	9
9 Epigyne as in Fig. 8A-F; clypeus not thickly white haired	<i>fimbriata</i> (Doleschall) (p. 99)
- Epigyne otherwise; clypeus thickly white haired	10
10 Epigynal orifice undivided (Fig. 11B)	<i>labiata</i> (Thorell) (p. 103)
- Epigynal orifice divided (Fig. 11E)	<i>assamensis</i> sp. n. (p. 105)

The *schultzi*-group

The *schultzi*-group occurs in both the Ethiopian and Oriental regions and is comprised of ten species. It is characterized by the presence of a fixed male palpal tibial apophysis that lacks the membranous joint found in the *kenti*-group. The latter group is known only from males and it is not known if the epigynes of *schultzi*-group females show any diagnostic features relative to the *kenti*-group.

Two species, *P. cazomboensis* sp. n. and *P. solitaria* Lessert, resemble the *kenti*-group in having the first eye row recurved in frontal view. However, I have not placed them in the *kenti*-group as the males of both species are unknown and the resulting definition based on the female genitalia could be misleading. Furthermore, *P. russata* (Simon) is somewhat intermediate as the first eye row is only slightly recurved and not procurved as in other species of this group.

Portia schultzi Karsch

(Fig. 1A-G; Pls 1, 2, 4a, b)

Portia schultzi Karsch, 1878 : 774, ♀. Holotype ♀, South Africa, Port Natal (MNHU, Berlin) [examined].
P. schultzi: Simon, 1901 : 402, 403 [Unjustified emendation]. Petrunkevitch, 1928 : 182. Roewer, 1954 : 934.
 Bonnet, 1958 : 3767. Roewer, 1965 : 12. Prószyński, 1971 : 461.

Brettus martini Simon, 1900 : 31, ♀, South Africa, Natal, Zululand (? MNHN, Paris) [Not examined, presumed lost; synonymized by Simon, 1901 : 402, 403]. Roewer, 1954 : 934. Bonnet, 1958 : 3767.

Linus lesserti Lawrence, 1937 : 254, fig. 22, ♂. Holotype ♂, South Africa, Zululand, Hluhluwe Game Reserve (NM, Pietermaritzburg. No. 75) [Examined]. Roewer, 1954 : 935. Bonnet, 1957 : 2482. Roewer, 1965 : 17, fig. 16a-c. Prószyński, 1971 : 425. Syn. n.

REMARKS. (i) Some parts of the holotype of *P. schultzi* including the epigyne have been preserved on a microscope slide and it compares well with a specimen collected in Kenya and reared through four or five moults by Mrs Frances Murphy. Both specimens have small pale epigynes (Pl. 4b; Fig. 1G) with obscure spermathecae unlike other species in the genus. The spermathecae may not be completely formed and it is probable that both specimens are subadult, but I could be mistaken and the 'subadult female' is described and provided for in the identification key. The identity of the male is based on a specimen from Kenya taken with the female referred to above and reared to adulthood. This male is conspecific with *Linus lesserti* which is now regarded as a junior synonym.

(ii) A vial labelled '19618 *Port scultzi* [sic] Karsch (= *martini* E.S) Natal' contains one female and several immatures of *P. durbanii* Peckham & Peckham. The female is possibly the type of *Brettus martini* Simon, as there is no other vial in the Simon collection (Paris), labelled *martini*. However, this assumption may not be correct and the name *Brettus martini* is regarded as *nomen dubium*.

DIAGNOSIS. *P. schultzi* is very similar to *P. fimbriata* (Doleschall), but can be readily distinguished by the shape of the cymbial flange (Fig. 1F) and pale epigyne (Pl. 4b; Fig. 1G), but see remarks under (i) above.

MALE FROM SOUTH AFRICA. *Carapace* (Fig. 1C): orange-brown with dark brown mottling; eye region shiny (when rubbed) with scattered long hairs, thoracic part has a metallic sheen under some angles of illumination; clothed in recumbent dark brown and whitish hairs with scanty thoracic white-haired tufts and broad white marginal bands from between coxae I-II and coxae IV. *Eyes*: anteriors subcontiguous with apices procurved, fringed by pale orange hairs and with tufts of orange to dark orange hairs above AM, outside of AL and inside PL. *Clypeus*: mottled orange and blackish with light orange-brown hairs and a white-haired spot below each AM. *Chelicerae*: orange-brown with darker markings and pale orange and white hairs; promargin with three teeth, retromargin with two. *Maxillae and labium*: orange-brown to brown-black. *Sternum*: scutiform; orange-brown with blackish median area and spots opposite coxae I-III and between coxae IV, the pattern reinforced by white hairs in pale areas and dark brown ones elsewhere. *Abdomen*: yellow-orange to orange-brown with blackish-mottling; clothed in black and light orange hairs with nine white dorsal hair tufts; venter and sides mottled orange-brown and black with scattered white tufts and obscure blackish band from epigastric furrow to spinnerets; spinnerets orange-brown with light orange and black hairs. *Legs*: orange-brown with darker markings and a metallic sheen under some lights; clothed in brownish hairs and scattered white tufts; tibiae and patellae ventrally fringed with long black hairs, medially scanty on tibiae III-IV; spines robust and numerous. *Palp* (Fig. 1A, B, E, F): clothed in yellow-white hairs, with strong prolateral white-haired fringes on tibiae and patellae.

Dimensions (mm): total length 5.36; carapace length 2.52, breadth 2.04, height 1.76; abdomen length 2.8; eyes, anterior row 1.76, middle row 1.56, posterior row 1.69; quadrangle length 1.10. *Ratios*: AM : AL : PM : PL :: 30 : 14 : 10 : 15, AL-PM-PL : 18-19, AM : CL :: 30 : 19.

FEMALE FROM KENYA (? SUBADULT). This specimen resembles the ♂ in body form, but it died just after moulting and appears rather pale. *Carapace*: similar to ♂ but white haired tufts and marginal bands inconspicuous. *Eyes*: more or less as in ♂. *Clypeus*: mottled yellow-brown and black with

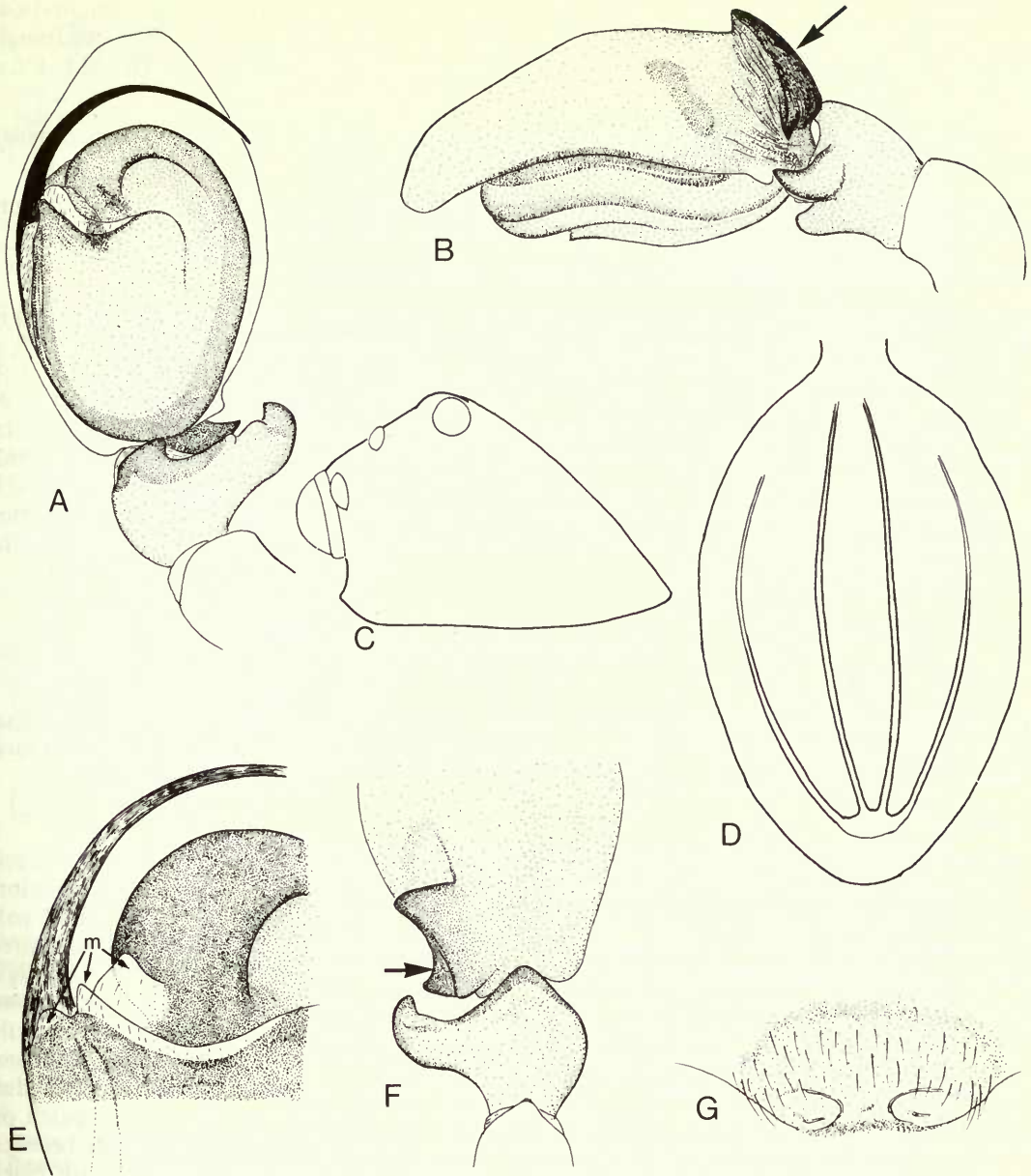


Fig. 1 *Portia schultzei* Karsch, ♂ from South Africa: (A) palp, ventral view; (B) palp, lateral view; (C) carapace, lateral view; (D) tracheal system, schematic; (E) palp, region of tripartite membrane; (F) tibia and cymbial flange from above. ♀ from Kenya: (G) epigyne, ? subadult.

marginal white-haired band. *Chelicerae*: pale yellow with black distal markings; sparsely clothed in whitish and light orange hairs. *Maxillae and labium*: similar to ♂, but paler. *Sternum*: more or less as in ♂. *Abdomen*: light yellow with black markings; generally rubbed, but with scattered white and orange-brown hairs; venter mottled blackish with two yellow spots in front of spinnerets; spinnerets dark brownish. *Legs*: light yellow with blackish markings and bands on femora and tibiae; fringes as in ♂; spines more or less as in ♂. *Epigyne* (Pl. 4b; Fig. 1G): small and pale.

Dimensions (mm): total length about 4.8; carapace length 2.54, breadth 2.04, height 1.64; abdomen length 1.4; eyes, anterior row 1.68, middle row 1.48, posterior row 1.61; quadrangle length 1.12. *Ratios*: AM : AL : PM : PL :: 27 : 12.5 : 9.5 : 13, AL-PM-PL : 16-17, AM : CL :: 27 : 15.

VARIATION. ♂ total length varies from 4.8 to 7.7 mm; carapace length 2.2-3.12 mm (ten specimens). Variation not marked except for bare patches in rubbed specimens.

BIOLOGY. Important observations made by Mrs Frances Murphy on captive specimens from Kenya has been summarized elsewhere (p. 85) and additional data are given below.

DISTRIBUTION. Kenya, Madagascar, South Africa, Tanzania, Zaire.

MATERIAL EXAMINED. Type data given in synonymy. KENYA: Kilifi, beaten from diplurid web in shrub layer about 90 m from the sea, 2 juveniles, 13.8.74, reared in captivity, ♀ died iii.1975, ♂ matured i.1975, killed iv.1975 (J. & F. Murphy, vial 4340). MADAGASCAR: Mt Ankarana, 1 ♂, ii.1956 (E. Renson, MT 142.985) (MRAC, Tervuren). SOUTH AFRICA: Durban, 3 ♂♂ (G. P. Staunton); Port Natal, 1 ♂ (BMNH). Pietermaritzburg, 1 ♂ (C. Akerman, NM, 1497); Pietermaritzburg; 2 ♂♂, xii. 1939 (Arbuckle, NM. 2883); 2 ♂♂, xii.1940 (E. Praltgala, NM. 3344); 1 ♂, xi.1962, 1 ♂, 1 juvenile ♀, xii, 1953 (R. F. Lawrence, NM. 8793, 5953). Rosi Bay, 1 ♂ (Toppin, NM. 1957) (NM, Pietermaritzburg). TANZANIA: Tendaguru, British Museum (Natural History) Expedition to East Africa, 1 ♂, ii.1926 (W. E. Cutler) (BMNH). ZAIRE: Albertville, 1 ♂, 1959 (J. Verhoustraite, MT. 115072) (MRAC, Tervuren).

Portia cazomboensis sp. n.

(Fig. 2A-D)

DIAGNOSIS. *P. cazomboensis* is a distinctive species readily distinguished by the median epigynal membrane (Fig. 2C, arrowed). Its affinities are uncertain but it appears to be related to *P. solitaria* Lessert.

MALE. Unknown.

FEMALE HOLOTYPE. *Carapace* (Fig. 2A): yellow-orange with brownish mottling on lower thoracic sides; clothed in recumbent short white hairs. *Eyes*: with black surrounds except AM; anteriors subcontiguous with apices strongly recurved, fringed by whitish hairs and has a tuft of pale yellow hairs outside PM. *Clypeus*: yellow-orange with darker markings; sparsely white haired with several long pale hairs marginally. *Chelicerae*: pale yellow-orange with darker markings; fringed by long light yellow hairs with very scanty proximal and medial transverse bands composed of recumbent, short clear yellowish hairs; promargin and retromargin with three teeth. *Maxillae and labium*: light orange-brown, but maxillae blades and labial tip light yellow. *Sternum*: scutiform; pale orange lightly tinged black, and with orange margins. *Abdomen*: rubbed; dull yellow with central grey-black anterior band followed by two chevrons with a dark patch on either side; the front chevron is margined anteriorly by a white line extending laterally between patches, a similar but obscure line margins the posterior chevron; venter yellow with black markings and central black band from epigyne to spinnerets; clothed in fine silky hairs. *Legs*: Legs I pale brown to orange-brown with dense brown haired fringes on venter and dorsum of tibiae and venter of patellae and femora. Legs II-III yellow-brown with obscure darker femoral markings. Legs IV as III but femoral markings more distinct and with distal orange band on tibiae. Spines numerous, moderately robust. *Palp*: pale yellow with light orange tips and blackish femoral markings; fringed with long white hairs. *Epigyne* (Fig. 2B-D).

Dimensions (mm): total length 5.8; carapace length 2.6, breadth 2.04, height 1.56; abdomen length 3.3; eyes, anterior row 1.4, middle row 1.1, posterior row 1.2; quadrangle length 1.0. *Ratios*: AM : AL : PM : PL :: 11 : 6 : 5 : 6, AL-PM-PL : 7-9.5, AM : CL :: 11 : 6.

VARIATION. A ♂ from South Africa measures 6.5 mm total length, 2.84 mm carapace length.

DISTRIBUTION. Angola. South Africa.

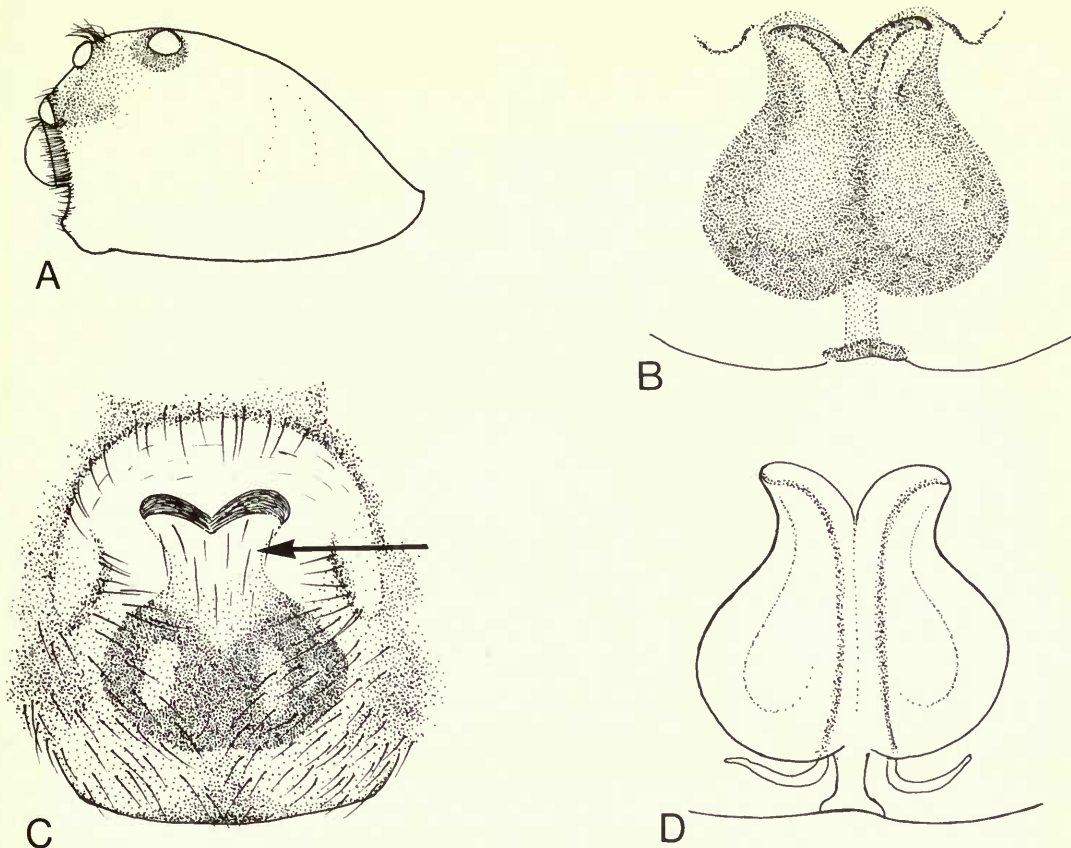


Fig. 2 *Portia cazomboensis* sp. n., holotype ♀: (A) carapace, lateral view; (C) epigyne. Paratype ♀: (B) vulva, ventral view; (D) vulva, dorsal view.

MATERIAL EXAMINED. Holotype ♀, ANGOLA: Cazombo, 13.ii.1955 (*A de Barros Machado*, Ang. 4909.22). Paratype: SOUTH AFRICA: Rosi Bay, 1 ♀ (*Toppin*, NM, 1957 part) (NM, Pietermaritzburg).

Portia solitaria Lessert

(Fig. 3A–F)

Portia solitaria Lessert, 1927 : 425, fig. 14, ♀. Holotype ♀, Zaire, Medje (AMNH, New York) [Examined].

Roewer, 1954 : 934. Bonnet, 1958 : 3767. Roewer, 1965 : 13, fig. 13. Prószyński, 1971 : 461.

Linus guineensis Berland & Millot, 1941 : 399, fig. 92, ♀. Holotype ♀, Guinea, Kankan (MNHN, Paris) [Examined]. Roewer, 1954 : 935; 1965 : 14. Syn. n.

Portia guineensis (Berland & Millot) Roewer, 1965 : 14.

REMARKS. Roewer (1965) correctly transferred *L. guineensis* Berland & Millot to *Portia*, but as he did not examine the type specimen he did not notice that the figures provided by Berland & Millot (1941, fig. 92, D and I) must be transposed for the captions to read correctly.

DIAGNOSIS. *P. solitaria* is similar to *P. cazomboensis*, but can be distinguished by the absence of a translucent epigynal membrane (Fig. 3E, D, F).

MALE. Unknown.

FEMALE HOLOTYPE. *Carapace* (Fig. 3A): orange-brown with darker mottling; clothed with recumbent white hairs. *Eyes*: with black surrounds except AM; anteriors subcontiguous with apices

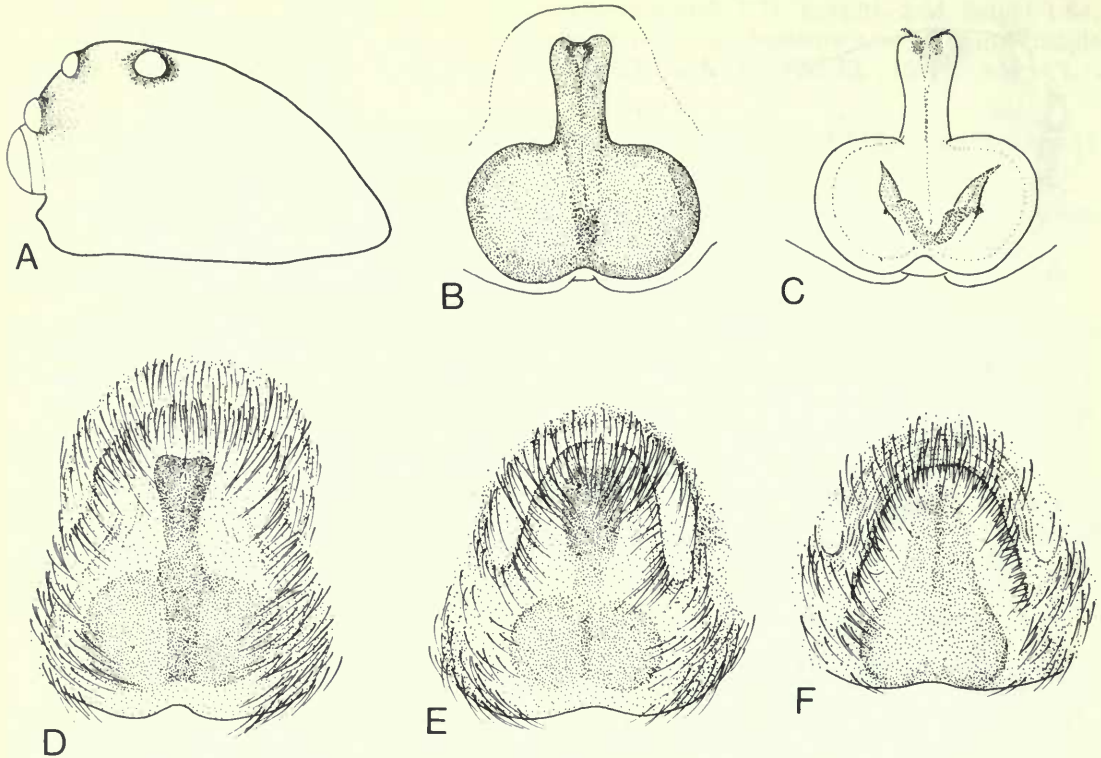


Fig. 3 *Portia solitaria* Lessert, holotype ♀: (A) carapace, lateral view; (E) epigyne. ♀ from Ivory Coast: (B) vulva, ventral view; (C) vulva, dorsal view; (D) epigyne. Holotype ♀ of *L. guineensis* Berland & Millot: (F) epigyne.

strongly recurved, fringed with whitish hairs. *Clypeus*: sparsely covered in short white hairs and fringed by long pale orange ones. *Chelicerae*: orange to light orange with blackish markings; thickly clothed in long light orange hairs; promargin with three teeth, retromargin with four. *Maxillae*: light orange with darker markings. *Labium*: orange-brown with light orange tip. *Sternum*: scutiform; light orange tinged by black and with clear dark orange margins; shiny with very scanty tufts of pale orange hair opposite coxae I–III and between coxae IV. *Abdomen*: more or less rubbed; light yellow-orange with sooty dorsal markings and a broad black band from epigyne to spinnerets; dorsum sparsely clothed with brown and white hairs, forming a pattern similar to that of *P. cazomboensis* sp. n.; tufts apparently lacking; spinnerets pale yellow-orange. *Legs*: orange-brown with brown-black markings especially on posteriors; fringes rubbed; spines strong and numerous. *Palp*: pale yellow with light orange tips and darker femoral markings; clothed in long whitish hairs. *Epigyne* (Fig. 3B, C, E).

Dimensions (mm): total length 5.44; carapace length 2.68, breadth 2.16, height 1.64; abdomen length 3.0; eyes, anterior row 1.52, middle row 1.20, posterior row 1.40; quadrangle length 1.16. *Ratios*: AM : AL : PM : PL :: 13 : 7 : 5.5 : 6.5, AL–PM–PL : 7–10.5, AM : CL :: 13 : 6.

VARIATION. Female total length varies from 5.44 to 6.64 mm, carapace length 2.68–3.2 mm (three specimens). The leg fringes, composed of stiff brown-black hairs, are present on venter and dorsal of tibiae I and ventrodistally on femora I and tibiae IV. The epigyne varies in the degree of sclerotization but the general outlines are fairly characteristic.

DISTRIBUTION. Guinea, Ivory Coast, Zaire.

MATERIAL EXAMINED. Type data given in synonymy. **IVORY COAST:** Lisière, forest gallery, 1 ♀ (MNHN, Paris).

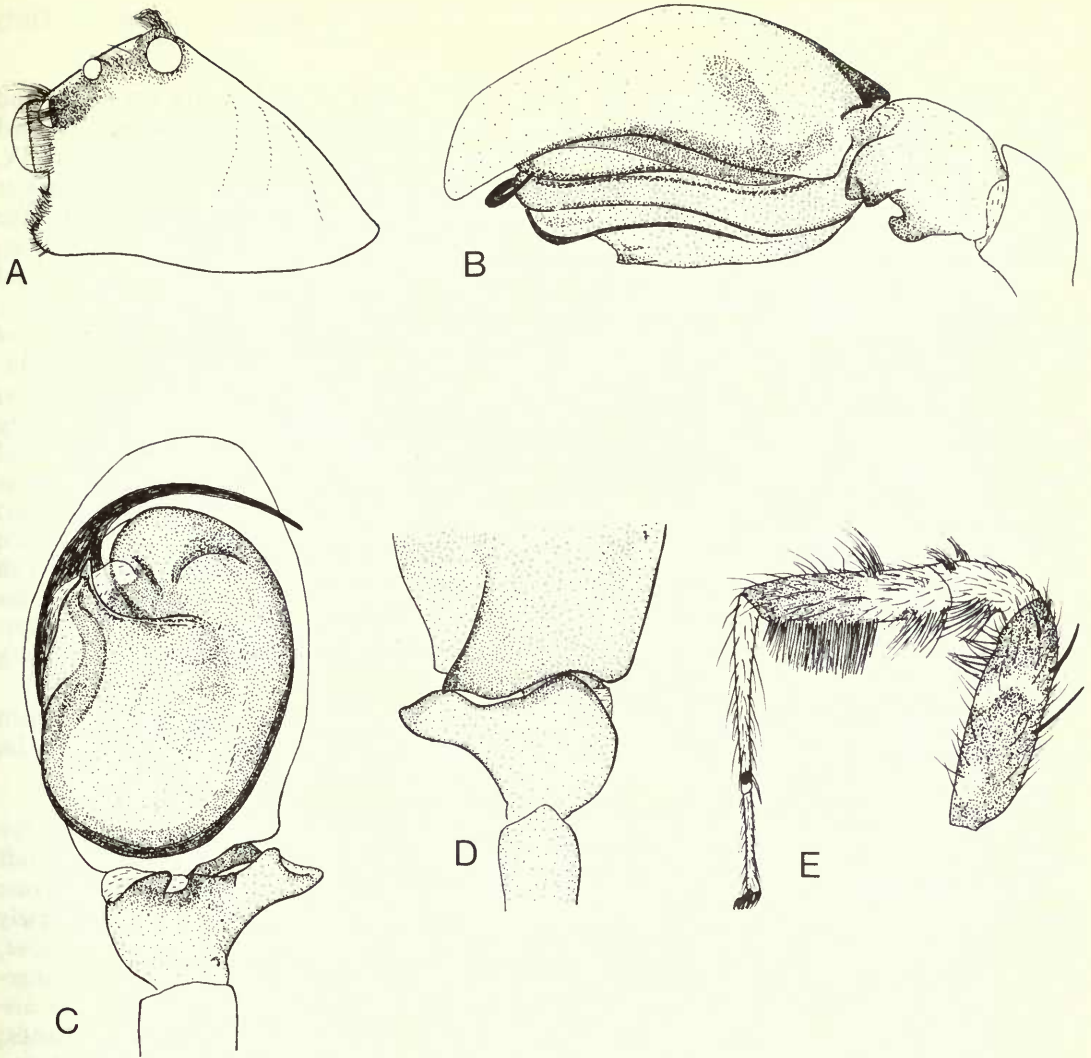


Fig. 4 *Portia africana* (Simon), ♂ from Sierra Leone: (A) carapace, lateral view; (B) palp, lateral view; (C) palp, ventral view; (D) tibia and cymbial flange from above; (E) leg I.

Portia africana (Simon) comb. nov.

(Figs 4A-E; 5A, B, F, G; Pl. 5b)

Linus africanus Simon, 1886 : 393, ♂. LECTOTYPE ♂ (here designated) Zaire, Landana (MNHN, Paris. No. 7547) [Examined]. Simon, 1901 : 409, 410; 1909 : 412. Berland & Millot, 1941 : 398-401, figs 91, 92. Roewer, 1954 : 935. Bonnet, 1957 : 2482. Roewer, 1965 : 16, fig. 15. Prószyński, 1971 : 425. Cutler, 1976 : 132.

Cocalus africanus Thorell, 1899 : 91, ♂. Holotype ♂, Cameroon (NR, Stockholm) [Examined]. Simon, 1901 : 407. Roewer, 1954 : 934. Bonnet, 1956 : 1173. *Syn. n.*

Neccocalus africanus (Thorell) Roewer, 1965 : 20, fig. 21 [Proposed as type species of monotypic genus *Neccocalus* Roewer, 1965].

DIAGNOSIS. *P. africana* is closely related to *P. alboguttata* (Lawrence) known only from the female. It can usually be separated by the elongate epigynal septum (Fig. 5A, B), but this is variable and is sometimes clogged with waxy secretions (see also Berland & Millot, 1941 : 399, fig. 91). In some

cases it may be necessary to examine the vulva in which the relatively short seminal ducts are fairly distinctive (Fig. 5G).

MALE FROM SIERRA LEONE. *Carapace* (Fig. 4A): orange-brown with light orange eye region and darker markings; faintly iridescent violet or green under some angles of illumination; clothed in recumbent white and light brown hairs with an irregular marginal band from coxae II to IV, and also with three rather sparse white haired tufts on thoracic part. *Eyes*: anterior row more or less contiguous with apices slightly procurved, fringed by whitish hairs with whitish to orange hair tufts above AM, outside of AL and inside PL. *Clypeus*: below AM a light orange transverse, crescent-shaped region clothed with short pale yellow hairs and a distinctive narrow white band just below AM. *Chelicerae*: orange-brown with darker markings; thinly clothed in fine light brown hairs with whitish hairs proximally; groove with three teeth on each margin. *Maxillae and labium*: orange-brown suffused with black, but inner margins of maxillae and labial tip lighter. *Sternum*: elongate scutiform; yellow-brown faintly tinged by black and with light orange margins; densely clothed with creamy white hairs, less dense medially and with very scanty tufts of long brown hairs opposite coxae I-III and between coxae IV. *Abdomen*: mottled yellow-brown and black with blackish markings; clothed in white, orange-brown and black hairs with conspicuous tufts composed of orange and creamy white hairs; venter yellow-brown with blackish markings; spinnerets brown with creamy white and light brown hairs. *Legs*: tarsi and metatarsi yellow-brown to orange-brown, the latter with longitudinal black stripes; remaining segments brown with darker brown and yellow-brown markings forming irregular bands on femora; tibiae and patellae partially fringed with long brown hairs, ventrally; spines strong and numerous. *Palp* (Fig. 4B-D): yellow-brown to orange-brown with blackish femoral bands; clothed in pale yellowish hairs with long white prolateral fringes on tibiae and patellae.

Dimensions (mm): total length 6.08, carapace length 2.72, breadth 2.41, height 2.0; abdomen length 3.44; eyes, anterior row 1.86, middle row 1.64, posterior row 1.8; quadrangle length 1.28. *Ratios*: AM : AL : PM : PL :: 16 : 8 : 6 : 8, AL-PM-PL : 8-7, AM : CL :: 16 : 12.

FEMALE FROM SIERRA LEONE. *Carapace*: orange-brown with faint sooty markings and paler eye region; clothed with short fine recumbent white and light brownish hairs, with a scanty tuft behind fovea; marginal thoracic band apparently lacking. *Eyes*: more or less as in ♂. *Clypeus*: crescent-shaped region densely white haired. *Chelicerae*: orange with blackish markings; densely white haired proximally with long light brown hairs distally marginal teeth as in ♂. *Maxillae, labium and sternum*: more or less as in ♂. *Abdomen*: similar to ♂, but tufts composed of orange-brown to dark brown hairs. *Legs*: similar to ♂, but femoral and tibial bands slightly more distinctive. *Palp*: whitish yellow, tipped with orange-brown, and with blackish femoral bands; densely fringed with long white hairs. *Epigyne* (Fig. 5A, F, G): clothed with creamy yellow hairs.

Dimensions (mm): total length 7.84; carapace length 3.56, breadth 3.08, height 2.52; abdomen length 4.24; eyes, anterior row 2.26, middle row 2.04, posterior row 2.25; quadrangle length 1.52. *Ratios*: AM : AL : PM : PL :: 18 : 9 : 7 : 9.5, AL-PM-PL : 11-11.5, AM : CL :: 18 : 15.

VARIATION. ♂ total length varies from 5.2 to 7.2 mm, carapace length 2.6-3.2 mm (ten specimens). ♀ total length from 4.8-9.6 mm, carapace length 2.5-3.7 mm (11 specimens). Freshly preserved specimens have black leg fringes and some females have more regular, but indistinct marginal thoracic bands from coxae II to IV. Cheliceral teeth vary from two to three denticles on each margin. The tibial apophyses of the male palps show slight variations in form which is sometimes emphasized by small differences in the angle of view. The epigynal septum is variable (Fig. 5A, B) and normally obscured by hairs; the openings on either side are occasionally filled with secretions.

BIOLOGY. According to Berland & Millot (1941), *P. africana* shows a preference for the branches of bushes and can be recognized at a glance by the tufts of hairs which ornament the legs and abdomen.

DISTRIBUTION. Angola, Cameroon, Central African Republic, Gabon, Ghana, Ivory Coast, Sierra Leone, Zaire, Zambia.

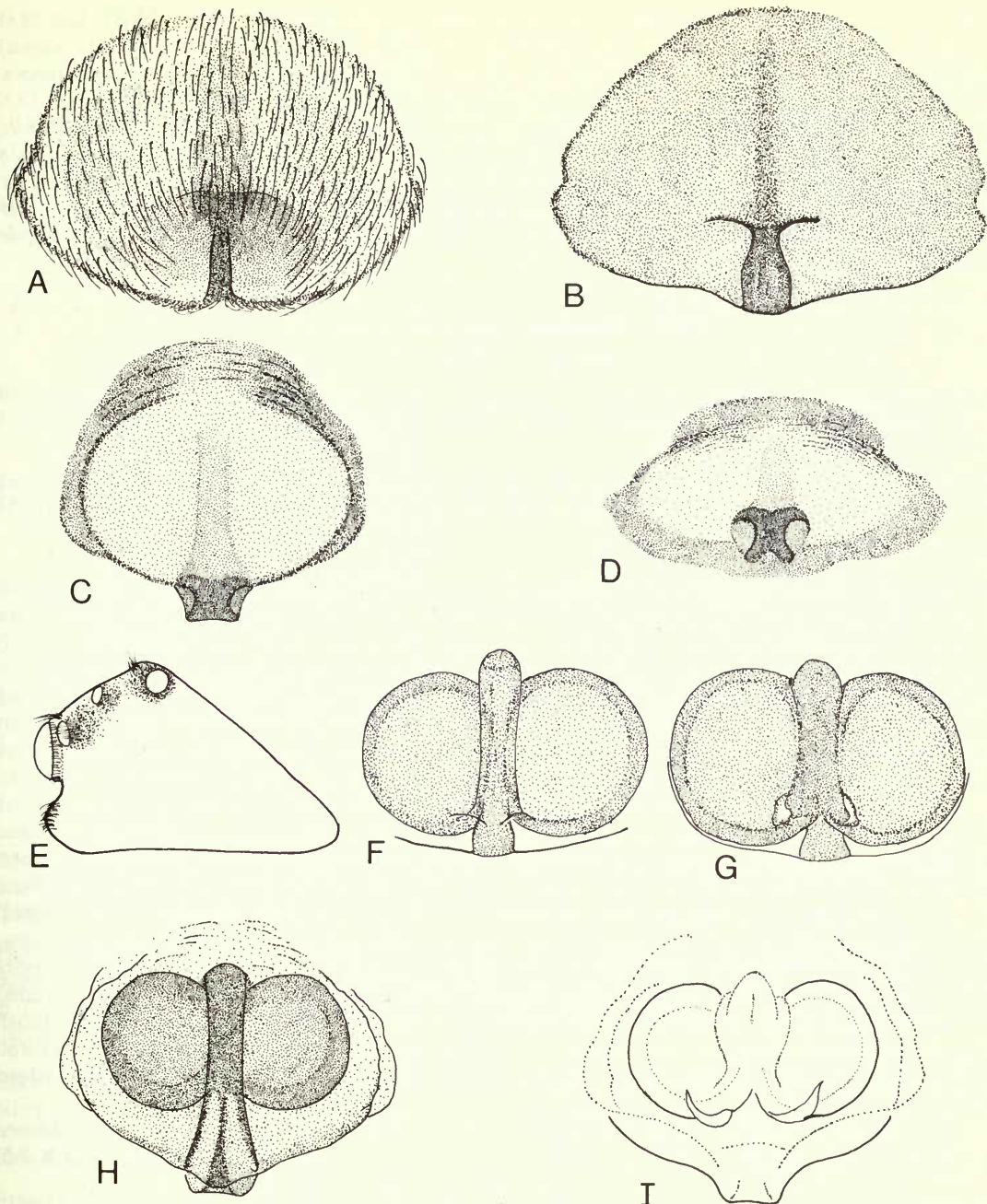


Fig. 5 (A, B, F, G) *Portia africana* (Simon), ♀ from Sierra Leone: (A) epigyne; (F) vulva, dorsal view; (G) vulva, ventral view. ♀ from Angola: (B) epigyne. (C, D, E, H, I) *Portia alboguttata* (Lawrence), ♀ from South Africa: (C) epigyne; (D) epigyne, viewed from behind; (E) carapace, lateral view; (H) vulva, ventral view; (I) vulva outline, dorsal view.

MATERIAL EXAMINED. Type data given in synonymy. ANGOLA: Dundo: 1 ♀, 8.x.1946 (*A. B. Machado*, Ang. 65.10); in house, 1 ♂ (*A. Correia*, Ang. 22111); 1 ♀, 10.v.1962 (*A. B. Machado*, Ang. 16962); in garden, 1 ♂, 21.ii.1960 (*A. B. Machado*, Ang. 15375.1); laboratory garden, 1 ♀, 29.ix.1973 (*L. de Carvalho*, Ang. 23529) Parc Carrisso, 1 ♂, 31.x.1960 (*A. B. Machado*, Ang.

23019.2.16). Lobito, under stones, 2 ♀♀, 31.xii.1948 (*A. B. Machado*, Ang. 1268). CENTRAL AFRICAN REPUBLIC: Bambari, 3 ♀♀, ii.1969 (*G. Pierrard*, MT. 136626) (MRAC, Tervuren). GABON: Makokou, 2 ♂♂, xii.1965 (*R. P. Darchen*, MT. 130410) (MRAC, Tervuren). GHANA: Bibianaba, 1 ♂, 29.x.1911 (*H. G. F. Spurell*) (BMNH). IVORY COAST: Man, 3 ♂♂, 5 ♀♀, vii.1937 (*L. Berland, J. Millot*) (MNHN). Paris. SIERRA LEONE: Fourah Bay, 1 ♂, 1 ♀, 1.x.1958 (*E. White*) (BMNH). ZAIRE: Ht Katanga, Terr. de Jadotville, colline Kasompi W. 1 ♀, x.1956 (*Z. Bacq*. MT. 90998); Katanga, Lubumbashi, 1 ♀, iv-v.1966 (*J. Godeaux*, MT. 131508); Kivu: Terr. Uvira, entre Kalundu et Kavimvira, 1 ♀, vi. 1961 (*R. Kiss*, MT. 11926); Bukavu, 2 ♀♀, 1951 (*H. Bomans*, MT. 69321-22) (MRAC, Tervuren). ZAMBIA: Abercorn, 1 ♂, xi.1945 (*P. D. L. Guilbride*) (BMNH).

Portia albuguttata (Lawrence) comb. nov.

(Fig. 5C, D, E, H, I)

Linus albuguttatus Lawrence, 1938: 520, ♀. Holotype ♀, South Africa, Port Shepstone, Natal (NM, Pietermaritzburg, No. 1484) [Examined]. Roewer, 1954: 935; 1965: 19, fig. 19. Prószyński, 1971: 425. Cutler, 1976: 132.

DIAGNOSIS. *P. albuguttata*, known only from the female, is closely related to *P. africana* (Simon), but can be distinguished by the structure of the epigyne (Fig. 5C, D, H, I), see remarks on page 93.

MALE. Unknown.

FEMALE FROM SOUTH AFRICA, PORT SHEPSTONE. *Carapace* (Fig. 5E): orange with darker cephalic sides and a band of blackish mottling encircling mid-thoracic region; iridescent violet under some angles of illumination; clothed with fine recumbent white and black hairs (the latter mostly restricted to mottled areas). *Eyes*: anteriors subcontiguous with apices slightly procurved, fringed by light yellow-orange hairs and with tufts of yellow-orange hairs outside AL. *Clypeus*: dark orange with distinctive white haired band. *Chelicerae*: reddish orange with white hairs proximally and long fine ones distally; groove with three teeth on each margin. *Maxillae and labium*: dark reddish orange, but inner margins of maxillae and labial tip lighter. *Sternum*: elongate scutiform; brownish orange with reddish orange margins; clothed in short white hairs and long brownish ones forming a pattern similar to that found in *P. africana*. *Abdomen*: mottled blackish and yellow-brown; clothed in white, light orange and blackish hairs with conspicuous tufts composed of orange to brown hairs tipped white; venter blackish; spinnerets brown, with white and brown hairs. *Legs*: tarsi and metatarsi yellow-brown, the latter with longitudinal black stripes; remaining segments brown to orange-brown with irregular yellow bands on posterior femora; tibiae and patellae with interrupted long black ventral fringes, incomplete on the tibiae; femora clothed ventrally with white hairs forming irregular horizontal stripes on legs I-II, but restricted to the yellowish bands on legs III-IV; spines moderately strong and numerous. *Palp*: whitish yellow tipped with orange-brown, and with blackish femoral bands and blotches on tibiae and patellae; fringed with long white hairs. *Epigyne* (Fig. 5C, D, H, I): clothed with white hairs, edged with black.

Dimensions (mm): total length 8.2; carapace length 3.4, breadth 3.0, height 2.4; abdomen length 4.8; eyes, anterior row 2.2, middle row 1.9 posterior row 2.0; quadrangle length 1.5. *Ratios*: AM : AL : PM : PL :: 17 : 8 : 6 : 8, AL-PM-PL : 10-12, AM : CL :: 17 : 13.

VARIATION. Female total length varies from 5.2 to 9.3 mm, carapace length 3.2-4.0 mm (eight specimens).

BIOLOGY. Unknown.

DISTRIBUTION. Malawi, South Africa.

MATERIAL EXAMINED. Holotype ♀, data given in synonymy. MALAWI: Lake Nyasa, 1 ♀ (BMNH). SOUTH AFRICA: Kruger National Park, Pafuri, 1 ♀ (*H. Braack*) (SIMR, Johannesburg); Swaziland, 1 ♀ (*R. C. H. Sweeney*) (BMNH); Pietermaritzburg 1 ♀, xii.1965 (*R. F. Lawrence*, NM, 9507), 1 ♀, 1917 (*C. Akerman*, NM. 1754); Port Shepstone, 1 ♀, xii.1936 (NM. 1367) (NM, Pietermaritzburg).

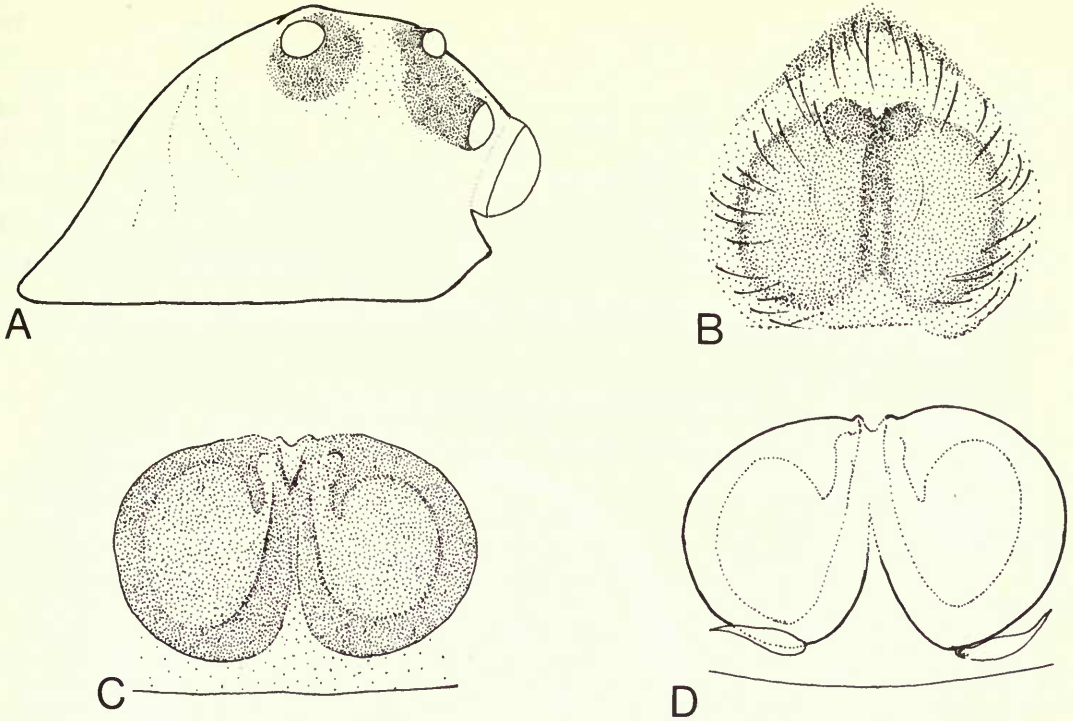


Fig. 6 *Portia russata* Simon, lectotype ♀: (A) carapace, lateral view; (B) epigyne; (C) vulva, ventral view; (D) vulva outline, dorsal view.

Portia russata Simon

(Fig. 6A–D)

Portia (Brettus) russata Simon, 1900a : 381, ♀. LECTOTYPE ♀ (here designated) Madagascar, Antongil (MNHN, Paris. No. 10257) [Examined].

Portia russata Simon, 1901 : 402. Roewer, 1954 : 934. Bonnet, 1958 : 3766. Roewer, 1965 : 13.

The vial labelled '10257 *Port russata* E. S. Antongil (type)' was found to contain two species, both represented by females. One of the specimens agrees more or less with Simon's original description of *P. russata* and is designated lectotype. The other species represents a new taxon described elsewhere in this paper (p. 116).

DIAGNOSIS. Although *P. russata* is placed in the *schultzi*-group it is not very closely related to the other species, and can be readily distinguished by the structure of the epigyne (Fig. 6B–D).

MALE. Unknown.

FEMALE FROM MADAGASCAR. *Carapace* (Fig. 6A): orange-brown with paler eye region; irregularly clothed with recumbent, short white hairs. *Eyes*: anteriors subcontiguous with apices slightly recurved, fringed by white hairs. *Clypeus*: orange-brown, edged with black; sparsely fringed by white hairs, with oblique white bands below AL. *Chelicerae*: orange-brown tinged with black; sparsely white haired proximally with fine, long orange hairs elsewhere; promargin with three teeth, retromargin with four. *Maxillae and labium*: orange-brown to light yellowish. *Sternum*: elongate scutiform: yellow-orange with very scanty patches of orange-hairs opposite coxae I–III and between coxae IV. *Abdomen*: rubbed; yellow-orange with blackish markings; clothed in scattered patches of orange and light yellow hairs. Spinnerets light yellow. *Legs*: yellowish orange to orange with obscure femoral bands; ventral fringes of orange-brown hair on tibiae I and II, of

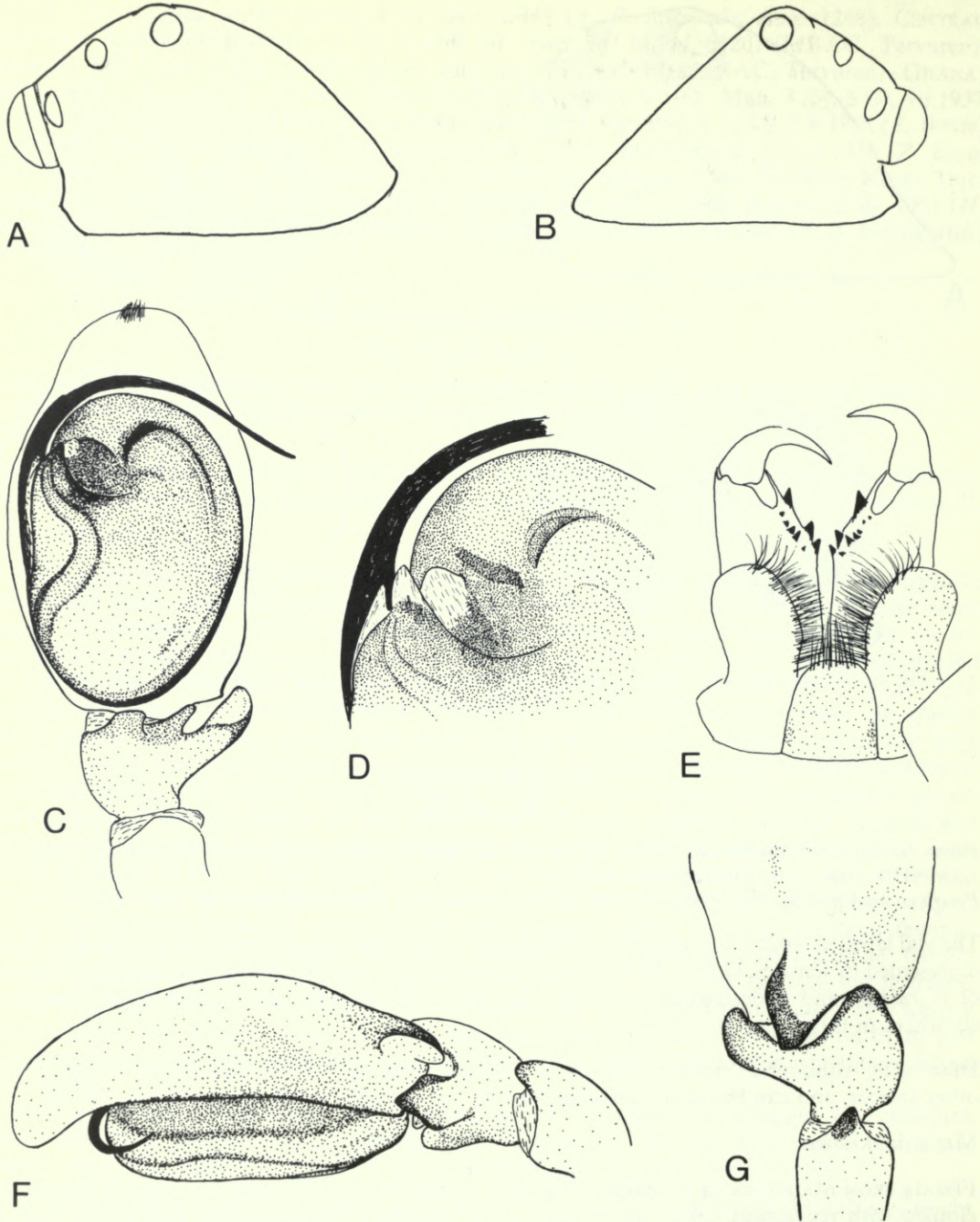


Fig. 7 *Portia fimbriata* (Doleschall), ♂ from Amboina: (A) carapace, lateral view; (C) palp, ventral view; (D) palp, region of tripartite membrane; (E) chelicerae, maxillae and labium; (F) palp, lateral view; (G) tibia and cymbial flange from above. Holotype ♀ of *L. alticeps* Pocock: (B) carapace, lateral view.

whitish hair on patellae I and mixed white and orange-brown hairs on femora I-II. Spines strong and numerous. *Palp*: light yellow with long white hairs. *Epigyne* (Fig. 6B-D).

Dimensions (mm): total length 6.8; carapace length 2.8, breadth 2.4, height 1.8; abdomen length 4.4; eyes, anterior row 1.8, middle row 1.6, posterior row 1.7; quadrangle length 1.4. *Ratios*: AM : AL : PM : PL :: 15 : 7.5 : 5 : 7.5, AL-PM-PL :: 9.5-14, AM : CL :: 15 : 8.

VARIATION. Lectotype ♀ measures 6.0 mm total length, 2.56 mm carapace length.

BIOLOGY. Unknown.

DISTRIBUTION. Madagascar.

MATERIAL EXAMINED. Lectotype ♀, data given in synonymy. MADAGASCAR: 1 ♀ (UM, Oxford).

Portia fimbriata (Doleschall) comb. nov.

(Figs 7A-G; 8A-F; Pls 3a-f; 4c-f; 5c, d, f)

Salticus fimbriatus Doleschall, 1859 : 22, pl. 5, fig. 2, ♂, ♀. LECTOTYPE ♂ (here designated) Amboina (RNH, Leiden, vial 5426) [Examined].

Attus fimbriatus: Hasselt, 1877 : 54.

Sinis fimbriatus: Thorell, 1878 : 270; 1881 : 499, 707. 1895 : 359.

Linus fimbriatus: Karsch 1891 : 299. Thorell, 1892 : 352, 475. Simon, 1901 : 409-11; 1901a : 70. Strand. 1909 : 97; 1911 : 177. Rainbow, 1911 : 278. Petrunkevitch, 1928 : 181. Sherriffs, 1931 : 538; 1939 : 196. Roewer, 1954 : 935. Bonnet, 1957 : 2482. Chrysanthus, 1968 : 49, figs 1-6. Prószyński, 1971 : 425.

Linus alticeps Pocock, 1899 : 117, fig. 14, ♀. Holotype ♀, Rubiana, New Georgia (Solomon Islands) (BMNH), reg. no. 1898.12.5.60 [Examined]. Simon, 1901 : 410. Rainbow, 1913 : 14. Blumental, 1935 : 711. Roewer, 1954 : 936. Bonnet, 1957 : 2482. Prószyński, 1971 : 425. *Syn. n.*

Boethoportia ocellata Hogg, 1915 : 502, fig. 1, ♂, ♀. LECTOTYPE ♂ (here designated) Dutch New Guinea (BMNH, reg. no. 1921.3.24.125-6) [Examined]. Petrunkevitch, 1928 : 181. Roewer, 1954 : 933. Bonnet, 1955 : 892. Prószyński, 1971 : 385. [Synonymy noted by D. J. Clark, and published with acknowledgment by Prószyński, 1971.]

The characters given by Pocock (1899) to separate *L. alticeps* Pocock from *P. fimbriata* (Doleschall) would appear to be artefacts. The nearly square posterior cephalic angle has been caused by a tear in the thorax; furthermore, the carapace is partly detached from the sternum and legs, thus increasing its apparent height. The specimen, is, in other respects, identical with *P. fimbriata*.

DIAGNOSIS. *P. fimbriata* is closely related to *P. crassipalpis* (Peckham & Peckham), but can be separated by the structure of the palp (Fig. 7C, F, G). The female of *P. crassipalpis* is unknown.

MALE FROM AMBOINA. *Carapace* (Fig. 7A): orange-brown with lighter eye region; clothed in short, recumbent orange-brown hairs; with a white haired band from fovea to posterior margin and broad, white marginal bands from coxae II to coxae IV. *Eyes*: anteriors more or less contiguous with apices procurved, fringed with orange-brown hairs. *Clypeus*: orange-brown with sooty markings; clothed in light orange-brown hairs. *Chelicerae*: orange-brown with darker markings: proximally a thin transverse band of white hairs, elsewhere thinly clothed in long fine light orange hairs; promargin with three teeth, retromargin with five. *Maxillae and labium*: orange-brown with sooty markings, but inner margins and labial tip paler. *Sternum*: scutiform; light yellowish with orange margins; densely covered in creamy white hairs, with very scanty tufts composed of long brown hairs opposite coxae I-III and between coxae IV. *Abdomen*: light yellowish with blackish markings clothed in light yellow and orange-brown hairs and five tufts composed of orange to creamy white hairs; yellow-brown with blackish markings; spinnerets orange-brown tinged by black, clothed in orange-brown hairs. *Legs*: orange-brown with lighter distal segments; tibiae and patellae with long dark brown ventral fringes, incomplete on tibiae II-IV; very abrupt lateral and dorsal fringes also present on tibiae; spines moderately strong and numerous. *Palp* (Fig. 7C, D, F, G; Pl. 3a-f): yellow-brown to dark orange-brown with yellowish white hairs.

Dimensions (mm): total length 6.4; carapace length 2.82, breadth 2.76, height 2.24. abdomen

length 3.6; eyes, anterior row 2.2, middle row 1.96, posterior row 2.08; quadrangle length 1.56. *Ratios*: AM : AL : PM : PL :: 19.5 : 9 : 6 : 9, AL-PM-PL :: 10-10, AM : CL :: 19.5 : 10.

FEMALE FROM NEW GUINEA. *Carapace*: orange with sooty markings and pale eye region; clothed in recumbent white hairs in eye region, with scattered short brown hairs and very scanty patches of white hair becoming denser behind fovea and forming thin irregular bands on the margins between coxae II and IV. *Eyes*: more or less as in ♂, anteriors fringed by white and orange hairs, with tufts of orange to dark brown hairs behind AM, outside AL and inside PL. *Clypeus*: orange with faint blackish markings; clothed in recumbent light orange-brown hairs with a poorly defined white stripe below AL and several long stout hairs below AM. *Chelicerae*: orange with sooty markings; thinly clothed in fine whitish hairs and stouter dark brown ones. *Maxillae, labium and sternum*: more or less as in ♂. *Abdomen*: light yellow clothed in white, light orange and brownish hairs with tufts composed of dark brownish orange to white hairs. *Legs*: similar to ♂, but femora and tibiae III-IV obscurely banded with light yellow; fringes very dense, ventrals incomplete on tibiae II to IV, dorsals present on tibiae and patellae, prolaterals on tibiae I-IV, retrolaterals on tibiae III-IV. *Palp*: light yellow to distally dark orange with a blackish femoral band; fringed by white and orange-brown hairs. *Epigyne* (Fig. 8C): clothed in whitish and dark brown hairs.

Dimensions (mm): total length 10.5; carapace length 3.84, breadth 3.52, height 2.72; abdomen length 5.68; eyes, anterior row 2.64, middle row 2.4 posterior row 2.56; quadrangle length 1.76. *Ratios*: AM : AL : PM : PL :: 22 : 10 : 7 : 10.5, AL-PM-PL :: 12-11, AM : CL :: 22 : 13.

VARIATION. ♂ total length varies from 5.2-6.5 mm, carapace length 2.32-2.8 mm (eight specimens). ♀ total length from 6.8-10.5 mm, carapace length 2.72-3.84 mm (six specimens). The male tibial apophysis shows slight variations in shape, but the greatest apparent differences are more often caused by the angle of view. The epigynes are sometimes plugged with waxy secretions; the lip of the lower margin varies in curvature and may be smooth or rough, also the anterior orifice margin (arrowed in Fig. 8A) can be distinct or obscure.

BIOLOGY. Unknown, but considered by P. T. Lehtinen (pers. comm.) to be synanthropic rather than cosmopolitan. It has certainly been confused with *P. labiata* in the past and its distribution, given below, is now more restricted. Its occurrence in Sri Lanka needs confirmation.

DISTRIBUTION. Amboina, Mussau Island, New Georgia, New Guinea, Solomon Islands, Sri Lanka, Yule Island.

MATERIAL EXAMINED. Type data given in synonymy. AMBOINA: Ceram, 2 ♂♂, 3 ♀♀, (MNHN, Paris, no. 5568) (MNHN, Paris); 1 ♂ (BMNH); 1 ♀, Peckham coll. no. 4123 (MCZ, Harvard); 2 ♂♂, Peckham coll. (*F. C. Muir, T. Barbour*) (MCZ, Harvard). MUSSAU ISLAND: Talumalas, 1 ♀, 5.ii.1962 (*Noona Dan Exp.* 1961-62) (BMNH). NEW GUINEA: Kokoda, Papua, 1200 ft, 2 ♂♂, v.1933 (*L. E. Cheesman*); Cyclops Mts, Sabron, 1 ♂, v.1936 (*L. E. Cheesman*); Waigea, Go Village, N. Mayalilrt Bay, 1 ♀, vii.1938 (*L. E. Cheesman*) (BMNH); 1 ♂, 1 ♀, early 1943 (*Capt Tinkham*); 1 ♂, ix-x.1944 (*R. B. Burrows*) (AMNH, New York). SRI LANKA: Galle, 1 ♂ (*E. Simon*, no. 16266) (MNHN, Paris). YULE ISLAND: 1 ♀ (NR, Stockholm).

REMARKS. This species has previously been recorded from Africa, Madagascar, India, Sri Lanka, Hong Kong, Java and Cape York, Australia. The Australian records are probably valid, but I have not seen the specimens concerned. A female from Madagascar, identified as *L. fimbriata* by Simon, is in fact *P. africana*; other specimens from Java and Sri Lanka, incorrectly determined as *P. fimbriata* by Simon, are *P. labiata*, although the Sri Lanka vial also contained a male *P. fimbriata*. The species is almost certainly absent from Africa, and its occurrence in India and Hong Kong cannot be accepted at present as the specimens may have been misidentified.

Portia crassipalpis (Peckham & Peckham) comb. n.

(Fig. 9A-D; Pl. 5a, e)

Linus crassipalpis Peckham & Peckham, 1907 : 605, ♂. Holotype ♂, Sarawak, Kuching (MCZ, Harvard) [Examined]. Roewer, 1954 : 936. Bonnet, 1957 : 2482. Prószyński, 1971 : 425.

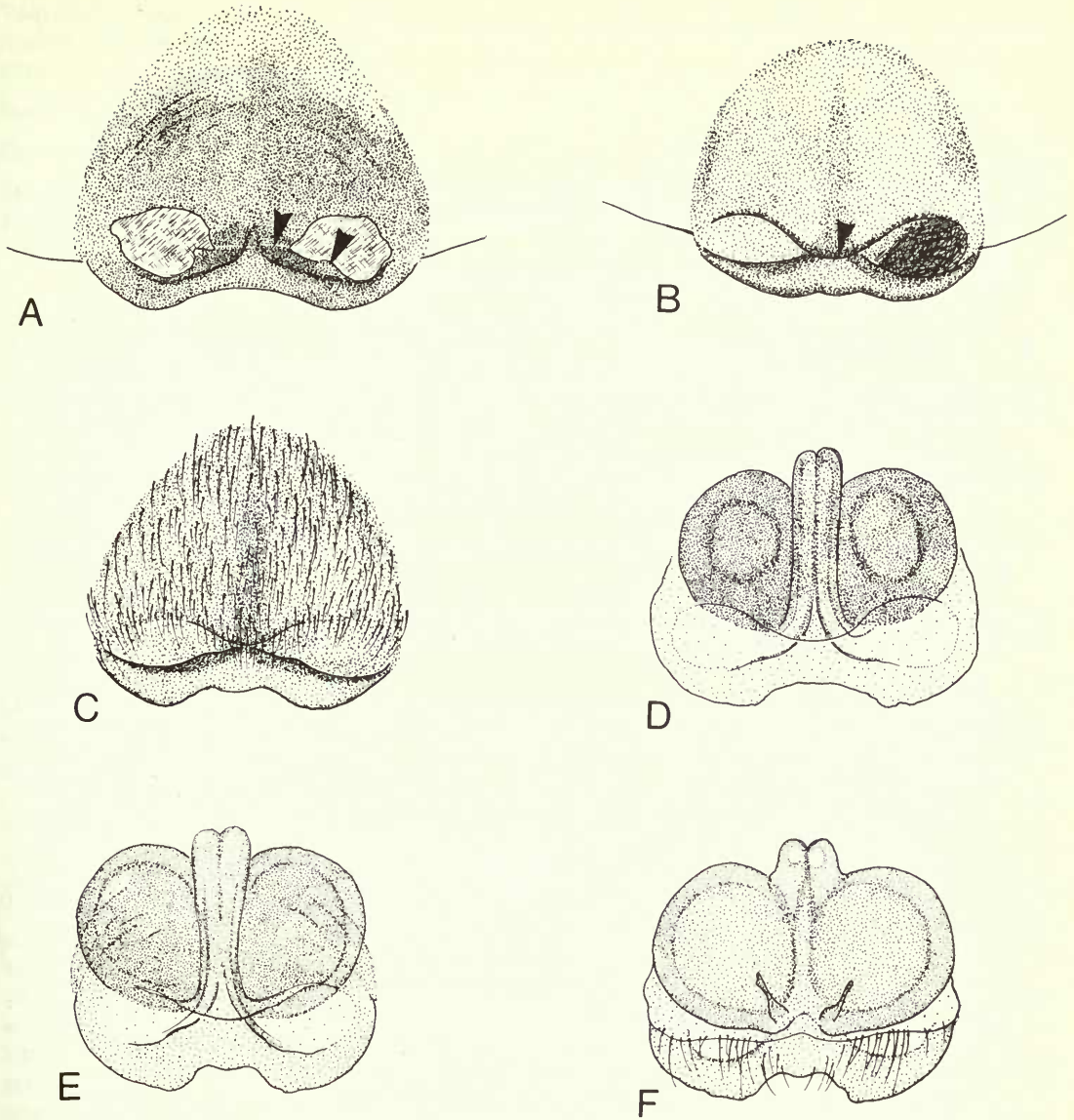


Fig. 8 *Portia fimbriata* (Doleschall), ♀ from Amboina: (A) epigyne 'plugged'; (D) vulva, ventral view; (E) vulva, ventral view of another specimen; (F) vulva, dorsal view. Holotype ♀ of *L. alticeps* Pocock: (B) epigyne 'plugged' on one side. ♀ from New Guinea: (C) epigyne with setae shown.

DIAGNOSIS. *P. crassipalpis*, known only from the male, is closely related to *P. fimbriata*, but can be readily distinguished by the structure of the palp (Fig. 9B–D).

FEMALE. Unknown.

MALE FROM BORNEO. *Carapace* (Fig. 9A): yellow-brown; clothed in recumbent orange hairs in eye region, with orange and brown-black ones on thoracic part; from fovea to posterior margin a white wedge-shaped band and from coxae II to coxae IV, broad white marginal bands. *Eyes*: anteriors contiguous with apices procurved, fringed by orange hairs with long black ones above AM, and with orange tufts outside AL and inside PL. *Clypeus*: yellow-brown with blackish markings; thinly clothed in pale yellow-orange hairs. *Chelicerae*: yellow-brown with blackish

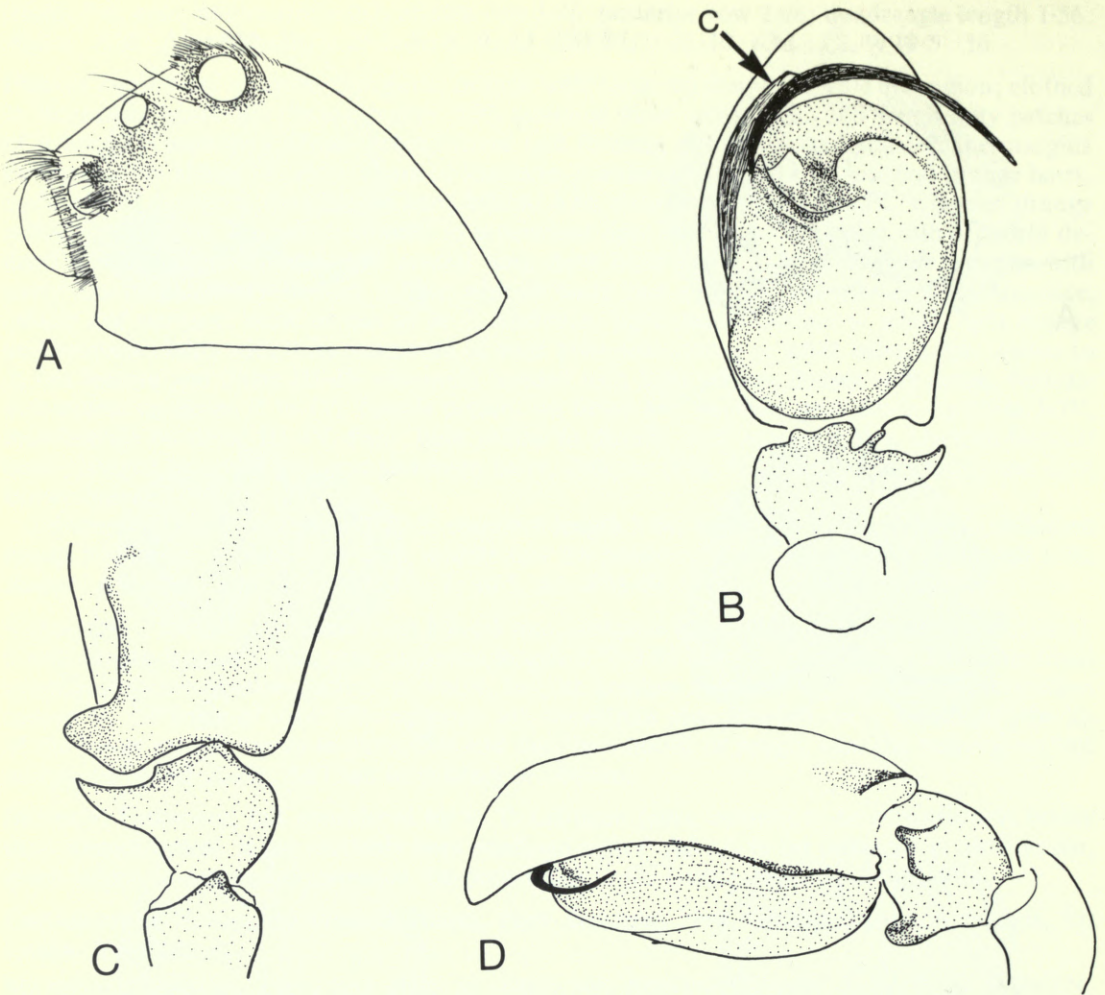


Fig. 9 *Portia crassipalpis* (Peckham & Peckham), ♂ from Borneo: (A) carapace, lateral view; (B) palp, ventral view; (C) tibia and cymbial flange from above; (D) palp, lateral view.

markings; sparsely clothed in long fine hairs; promargin with three teeth, retromargin with six. *Maxillae and labium*: yellow-brown tinged blackish. *Sternum*: elongate scutiform: yellow-brown with faint pattern of blackish spots; thinly clothed in whitish yellow hairs with long blackish ones opposite coxae I-III and between coxae IV. *Abdomen*: yellow-brown with blackish markings; clothed in whitish yellow hairs anteriorly, grading to orange posteriorly, with scattered long stiff brown hairs and a pair of very scanty creamy white tufts just beyond the middle; venter mottled yellow-brown and black; spinnerets brownish orange with orange hairs. *Legs*: generally yellow-brown tinged blackish, but tarsi and metatarsi lighter, the latter with blackish apices; also the posterior femora vaguely annulated with yellow-brown; tibiae and patellae with long black ventral fringes, incomplete on tibiae III-IV; spines strong and numerous. *Palp* (Fig. 9B-D): yellowish to yellow-orange with blackish proximal femoral bands; clothed in orange hairs with creamy white tufts on inside of tibiae and patellae; conductor well developed.

Dimensions (mm): total length 5.12; carapace length 2.28, breadth 1.98, height 1.76; abdomen length 2.44; eyes, anterior row 1.86, middle row 1.64, posterior row 1.8; quadrangle length 1.2. *Ratios*: AM : AL : PM : PL :: AL-PM-PL : 8-6, AM : CL :: 16 : 10.

VARIATION. Total length of ♂ varies from 4.8 to 5.12 mm, carapace length 2.24–2.56 mm (three specimens). The holotype and a male from Malaya have the eye region lighter than the thoracic part.

BIOLOGY. Unknown.

DISTRIBUTION. Borneo, Malaya.

MATERIAL EXAMINED. Type data, given in synonymy. BORNEO: East Coast, 1 ♂, 13.ix.1975 (*J. R. Thomson*, vial K20) (BMNH). MALAYA: Singapore, 1 ♂, 1898 (*H. N. Ridley*) (BMNH).

Portia labiata (Thorell) comb. nov.

(Figs 10A–C; 11A–C)

Sinus fimbriatus Doleschall; Hasselt, 1882: 50, pl. V, fig. 16 [Misidentification].

Linus labiatus Thorell, 1887: 354, ♀ and juvenile. LECTOTYPE ♀ (here designated) Burma, Bhamo (MCSN, Genoa) [Examined]. Thorell, 1895: 359. [= *S. fimbriatus*: Hasselt, non Doleschall, 1859; = *L. dentipalpis* Thorell]. Simon, 1901: 409–410, 1903: 749.

Linus (?) *dentipalpis* Thorell, 1890: 35, ♂. Holotype ♂, Sumatra, Boven Rawas [*S. fimbriatus*: Hasselt 1882] (RNH, Leiden, no. 5428) [Examined]. Thorell, 1892: 352, 475. Simon, 1901: 410, 1903: 749, 1048 [Transferred to *Erasinus*].

Erasinus labiatus: Simon, 1903: 749, 754. Roewer, 1954: 1068. Bonnet, 1956: 1725. Prószyński, 1971: 401.

DIAGNOSIS. *P. labiata* is closely related to *P. assamensis* sp. n., but can be distinguished by the more slender tibial apophysis in males (Fig. 10B) and undivided epigynal orifice in females (Fig. 11B).

MALE FROM MALAYA. *Carapace* (Fig. 11A): orange-brown, lighter in eye region; clothed in short, recumbent brown-black hairs with a white wedge-shaped band from fovea to posterior margin and broad white marginal bands from coxae I to IV. *Eyes*: anteriors subcontiguous with apices procurved, anteriors fringed by orange hairs with scanty tufts of darker hairs behind AM and outside AL. *Clypeus*: orange-brown with blackish markings; clothed in light orange-brown hairs with fine whitish hairs centrally. *Chelicerae*: orange-brown with brown-black markings; sparsely clothed in fine light yellowish orange hairs; promargin with three teeth, retromargin with five. *Maxillae and labium*: brown-black with inner margin of maxillae and labial tip paler. *Sternum*: scutiform, yellow-brown tinged black; clothed in white hairs, less dense centrally and marginally, with very scanty tufts of long dark brown hairs opposite coxae I–III and between coxae IV. *Abdomen*: brownish with lighter markings; generally clothed in recumbent orange-brown hairs with a pattern of blackish ones posteriorly and a short, central white haired band flanked by black hairs anteriorly with a series of hair tufts composed of long orange to creamy white hairs; venter, yellow-brown with poorly defined central black band; spinnerets dark brown. *Legs*: Legs I–II generally dark brown with vague light femoral markings. Legs III similar but femoral markings slightly more distinct; tarsi and metatarsi lighter, the latter with dark brownish marks particularly around spine sockets. Legs IV as III but markings slightly more distinct; tibiae and patellae with long black ventral fringes, incomplete on tibiae II–IV; very abrupt mid-dorsal fringes also present on tibiae I–IV; spines moderately strong and numerous. *Palp* (Fig. 10A–C): orange-brown to dark brown; clothed in orange and white hairs, conductor well developed.

Dimensions (mm): total length 6.5; carapace length 2.64, breadth 2.44, height 2.0; abdomen length 3.52; eyes, anterior row 1.92, middle row 1.72, posterior row 1.84; quadrangle length 1.34. *Ratios*: AM : AL : PM : PL :: 17 : 8 : 5 : 8, AL–PM–PL : 9–9, AM : CL :: 17 : 12.

FEMALE FROM MALAYA. *Carapace*: orange-brown, lighter in eye region with sooty markings radiating from fovea and with a violet to green iridescent sheen in some lights; clothed in whitish hairs, with scattered long brown ones in eye region. *Eyes*: more or less as in ♂. *Clypeus*: conspicuously marked by transverse, crescent-shaped band of short white hairs with a marginal fringe of long whitish ones. *Chelicerae*: dark orange-brown; sparsely clothed in long clear white hairs with transverse white haired bands proximally; promargin with three teeth, retromargin with four.

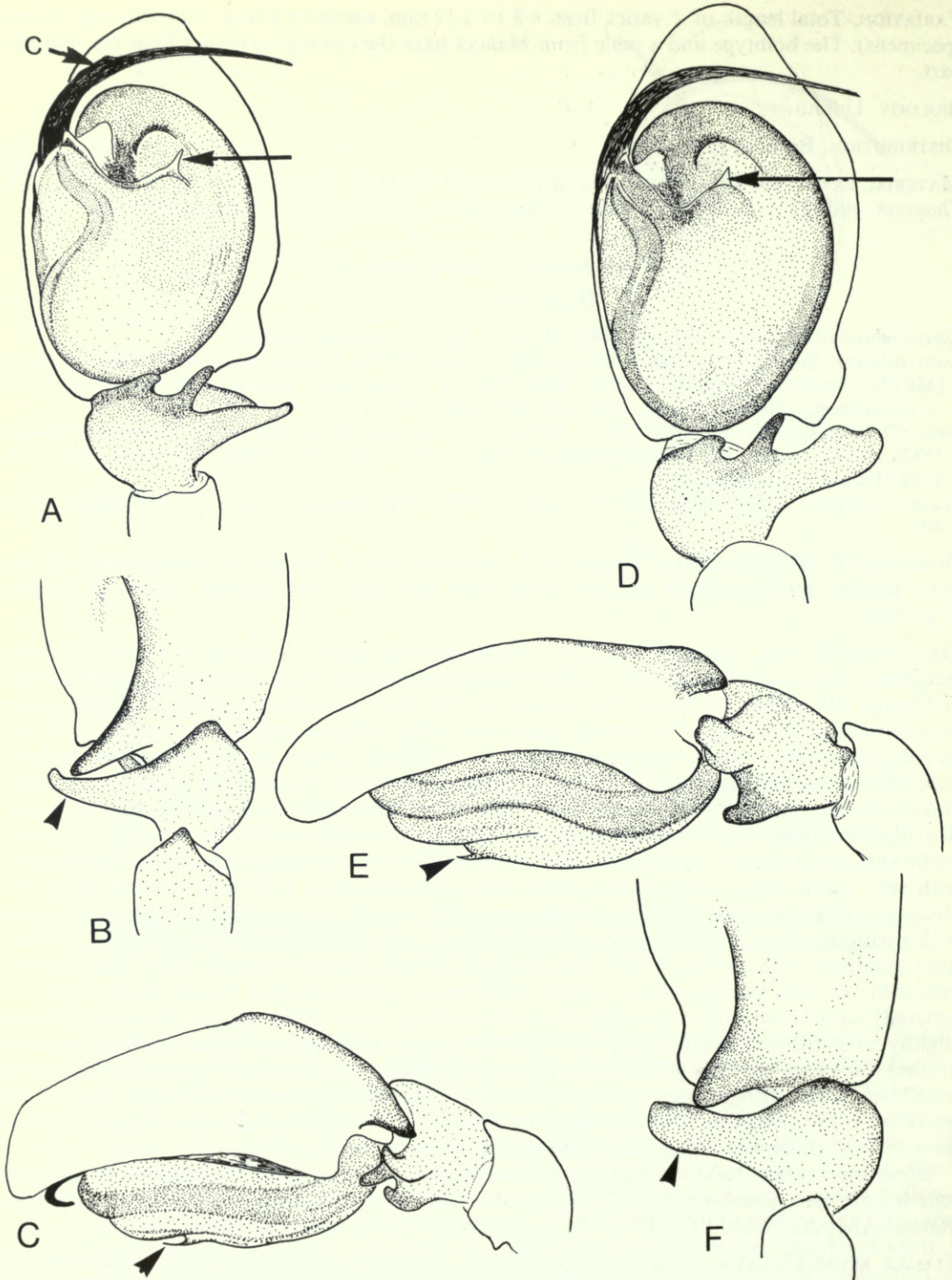


Fig. 10 (A–C) *Portia labiata* (Thorell), ♂ from Malaysia: (A) palp, ventral view; (B) tibia and cymbial flange from above; (C) palp, lateral view. (D–F) *Portia assamensis* sp. n., holotype ♂: (D) palp, ventral view; (E) palp, lateral view; (F) tibia and cymbial flange from above.

Maxillae, labium and sternum: as in ♂. *Abdomen*: mottled brown and black; covered with golden, whitish and black hairs with a series of tufts composed of brownish or creamy brown hairs tipped with white; spinnerets brown-black. *Legs*: more or less as in ♂, but with numerous long white hairs on underside of femora. *Palp*: light yellow with dark brown spots; fringed with long white hairs. *Epigyne* (Fig. 11B-C).

Dimensions (mm): total length 6.5; carapace length 2.88, breadth 2.62, height 2.0; abdomen length 3.6; eyes, anterior row 2.0, middle row 1.82, posterior row 1.96; quadrangle length 1.4. *Ratios*: AM : AL : PM : PL :: 17 : 8 : 5.5 : 8, AL-PM-PL : 10-10, AM : CL :: 17 : 11.

VARIATION. ♂ total length varies from 5.28 to 7.5 mm, carapace length 2.4-3.28 mm (eight specimens). ♀ total length from 6.56 to 9.44 mm, carapace length 2.76-3.84 mm (eight specimens). The tibial apophysis is sometimes more distinctly knob-shaped and the epigyne is often plugged.

BIOLOGY. Unknown, but one male has been taken from a pholcid web.

DISTRIBUTION. Burma, India, Malaya, Sarawak, Siam, Sri Lanka, Sumatra.

MATERIAL EXAMINED. Type data, given in synonymy. BURMA: Tenasserim, 1 ♀ (*E. W. Oates*); Tharrawaddy, 1 ♂ (*E. W. Oates*) (BMNH). INDIA: Madras, Nilghiri Hills, 1 ♂ (*Sir George Hampson*) (BMNH). MALAYA: Kuala Lumpur, Batu village, taken from a pholcid web in derelict hut, 1 ♂, 12.ix.1973 (*A. D. Blest*, vial 27(B)); Singapore, Seletar Reserve, about 1 mile from Nee Soon village, in natural clump of dead grass, 1 ♀, 17.ix.1973 (*A. D. Blest*, vial 36(C)); Kuala Lumpur, 1 ♂ (*C. Boden Kloss*); Singapore, 1 ♂, 1898 (*H. N. Ridley*) (BMNH). SARAWAK: Moss forest, 4000 ft, 1 ♀, 16.x.1932 (Oxford Univ. Sarawak Exped.) (BMNH). SIAM: Bangkok, 1 ♂ (*H. Hillman*) (BMNH). SRI LANKA: Franatim, 1 ♀, viii.1905 (*A. Willey*); Peralena, Botanical gardens, 1 ♂, 1 ♀ (*Freeman*); Colombo, 1 ♂ (*E. E. Green*); 1 ♀ (BMNH); 1 ♂ (UM, Oxford); Galle (*E. Simon*, vial 16266) (MNHN, Paris). SUMATRA: Hanan Kloof, 2 ♂♂, 2 ♀♀ (*E. Jacobson*, Reismoser coll) (NM, Wien); Forte de Kock, 1 ♂, 2 ♀♀, iv.1914 (*E. Jacobson*, det Thorell vial 5424); Buo, 2 ♂♂, 1 sub ♀, ii.1914 (*E. Jacobson*, vial 5425) (RNH, Leiden).

Portia assamensis sp. n.

(Figs 10D-F; 11D-F)

DIAGNOSIS. *Portia assamensis* is closely related to *P. labiata* (Thorell), but may be distinguished by the robust tibial apophysis (arrowed, fig. 10F) in males, and the divided epigynal orifice in females (Fig. 11E). The white haired clypeus readily separates female *P. assamensis* from female *P. fimbriata* (Doleschall).

MALE HOLOTYPE. *Carapace* (Fig. 11D): orange-brown with paler eye region; clothed in recumbent, light orange hairs with median white band from fovea to posterior margin and broad white marginal bands from coxae I to coxae IV. *Eyes*: anteriors subcontiguous with apices procurved, fringed by whitish hairs. *Clypeus*: light orange-brown; very sparsely clothed in fine hairs. *Chelicerae*: orange-brown with darker markings; sparsely clothed in long fine hairs, teeth not examined. *Maxillae and labium*: orange-brown, inner margins of maxillae and labium lighter. *Sternum*: elongate scutiform; light yellow-brown with darker margins; densely clothed in creamy white hairs with several long fine brown ones opposite coxae I-III and between coxae IV. *Abdomen*: rubbed; yellow-brown to orange-brown with darker markings; clothed in fine whitish and light orange hairs; spinnerets brownish. *Legs*: dark orange; tibiae and patellae I clothed in light orange hairs with brown ventral fringes and mid-dorsal tufts on tibiae; remaining tibiae and patellae similar, but fringes more scanty and interrupted, with the dorsal tufts lacking on tibiae III-IV, spines moderately strong and numerous. *Palp* (Fig. 10D-F): orange to blackish red with white and creamy white hairs; large tibial apophysis similar to that of *P. africana*; the membranous tegular apophysis (arrowed in fig. 10D) is best seen in lateral view.

Dimensions (mm): total length 7.4; carapace length 3.1, breadth 2.84, height 2.16; abdomen length 4.48; eyes, anterior row 2.28, middle row 2.0, posterior row 2.2; quadrangle length 1.6. *Ratios*: AM : AL : PM : PL :: 19 : 9.5 : 6 : 9, AL-PM-PL : 10-10, AM : CL :: 19 : 12.

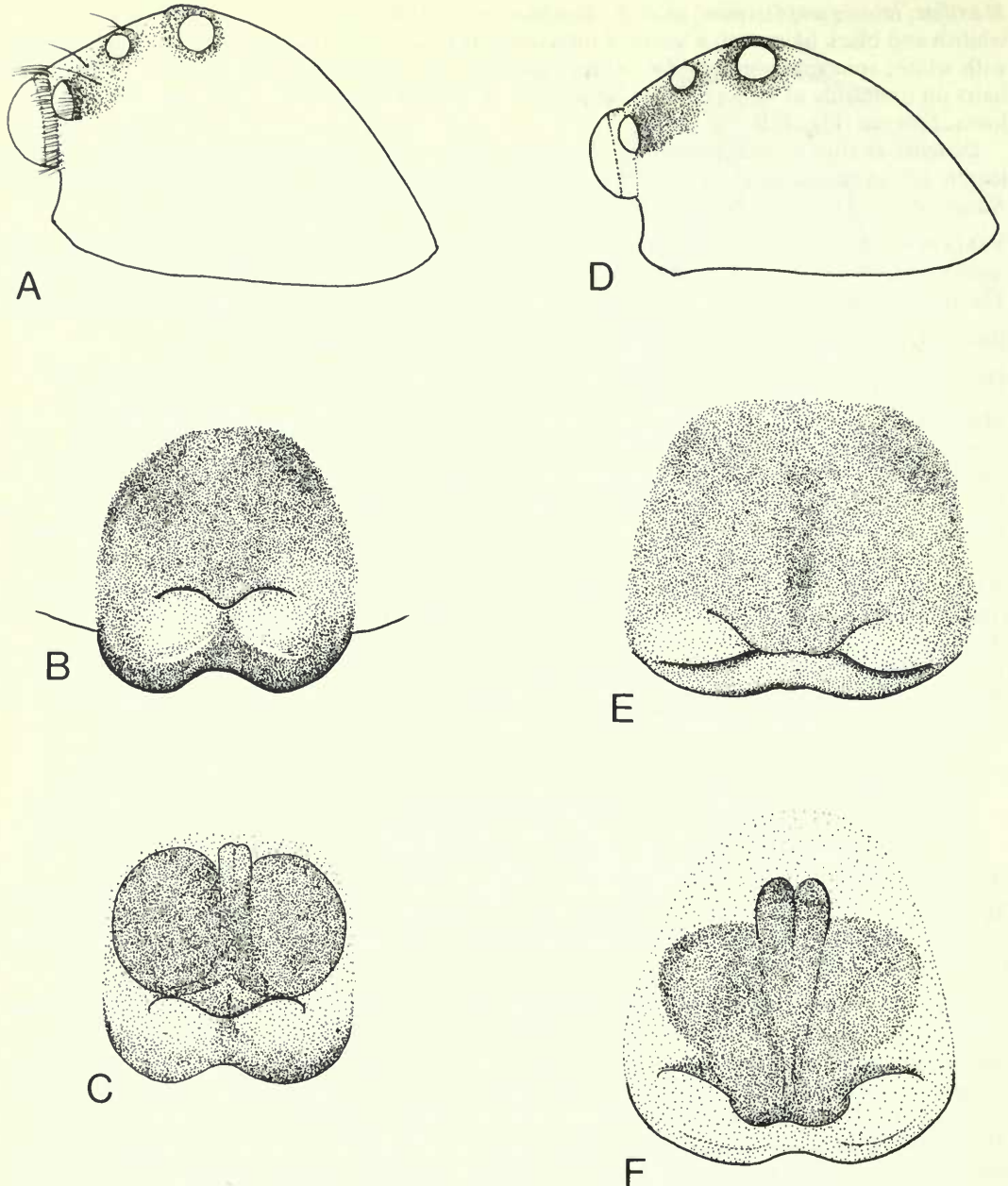


Fig. 11 (A–C) *Portia labiata* (Thorell), ♂ from Malaysia: (A) carapace, lateral view. ♀ from Malaysia: (B) epigyne; (C) vulva, ventral view. (D–F) *Portia assamensis* sp. n., holotype ♂: (D) carapace, lateral view. Paratype ♀: (E) epigyne; (F) vulva, ventral view.

FEMALE FROM NEPAL: *Carapace*: similar to ♂; orange with light sooty markings, thoracic part weakly iridescent; generally clothed in short whitish hairs with several long white hairs behind fovea. *Eyes*: more or less as in ♂; anteriors fringed by orange hairs with orange tufts outside AL and inside PL. *Clypeus*: orange with lower half densely white haired, except for median patch of very fine short hairs. *Chelicerae*: reddish orange with short white lanceolate and long fine hairs; pro- and retromargin with three teeth. *Maxillae and labium*: reddish black, inner margins of

maxillae and labial tip lighter. *Sternum*: similar to ♂; light orange with darker margins; clothed in creamy white hairs with scattered long brownish ones. *Abdomen*: mottled yellow-brown and black; clothed in white, orange and dark brown hairs with tufts composed of dark brown to white hairs; spinnerets brown. *Legs*: dark orange-brown with lighter markings on posterior femora and tibiae, and dark dorsal stripe on metatarsi I–II; tibiae and patellae with long black ventral fringes, interrupted on legs II–IV; tibial mid-dorsal tufts also present; spines moderately strong and numerous. *Palps*: reddish black with yellow-orange markings; fringed with whitish and light brown hairs. *Epigyne* (Fig. 11E, F): clothed with white hairs.

Dimensions (mm): total length 9.0; carapace length 3.84, breadth 3.36, height 2.48; abdomen length 4.96; eyes, anterior row 2.54, middle row 2.34, posterior row 2.42; quadrangle length 1.76. *Ratios*: AM : AL : PM : PL :: 20 : 10 : 7 : 10, AL–PM–PL : 12–12, AM : CL :: 20 : 16.

VARIATION. A paratype ♂ measures 6.8 mm total length, 3.28 mm carapace length. ♀ total length varies from 7.1 to 10.7 mm, carapace length 3.1–3.7 mm (five specimens). The epigyne is sometimes plugged.

BIOLOGY. A female from Maewa Khola, Nepal, was taken with 21 second instar spiderlings from a silken retreat in a curled up dead leaf. Numerous exuvia were still in the nest, and it seems likely that in this species the mother remains with the young until they disperse.

DISTRIBUTION. Assam, Nepal.

MATERIAL EXAMINED. Holotype ♂, ASSAM, no other data (BMNH, reg. no. 1977.9.5.5). Paratypes: ASSAM: 1 ♂, in same vial as holotype. NEPAL: Between Bichipur Khola and Pokhara, on a stone, 3000 ft, 1 ♀, 9.vii.1954 (*K. H. Hyatt*, no. 256, Brit. Mus. Nepal Exped); Mayangdi Khola, west of Beni, on rocky ground, 3000 ft, 1 ♀, 16.vi.1954 (*K. H. Hyatt*, no. 155, Brit. Mus. Nepal Exped); Between Tilhar and Naudhara, 4–5000 ft, 2 ♀♀, 29.vii.1954 (*K. H. Hyatt*, no. 247, Brit. Mus. Nepal Exped); Maewa Khola, Sanghu, 6000 ft, 1 ♀ with young in curled up dead leaf, 10.x.1961 (*K. H. Hyatt*, no. 42a, Brit. Mus. Nepal Exped) (BMNH).

REMARKS. It is not known for certain if the females described above are conspecific with the males. They may represent a new taxon or even belong with *P. albimana*, originally described from North West India. The problem should be quickly resolved when additional material becomes available for study.

Portia albimana (Simon) comb. n.

(Fig. 12A–D)

Linus albimanus Simon, 1900 : 33, ♂. LECTOTYPE ♂ (here designated) India, Dehra-Dun (MNHN, Paris, no. 17764) [Examined]. Simon, 1901 : 409. Roewer, 1954 : 936. Bonnet, 1957 : 2482. Prószyński, 1971 : 425.

DIAGNOSIS. *P. albimana* is a fairly distinctive species distinguished from all other species of *Portia* by the relatively short embolus (Fig. 12B) and completely fringed tibiae I.

FEMALE. Unknown.

MALE FROM SRI LANKA. *Carapace* (Fig. 12A): orange-brown with paler eye region; clothed in recumbent light brownish hairs, with a white wedge-shaped band from fovea to posterior margin and broad white marginal bands from AM sides to coxae IV. *Eyes*: anteriors subcontiguous with apices slightly procurved, fringed by white hairs with light brown tufts outside AL. *Clypeus*: densely clothed in white hairs forming a crescent-shaped patch below AM. *Chelicerae*: orange-brown; clothed in long fine hairs and white ones along inner proximal margins (rubbed); promargin and retromargin with three teeth. *Maxillae and labium*: orange-brown, inner margin of maxillae and labial tip paler. *Sternum*: scutiform; orange-brown with darker margin; clothed in white hairs with longer brown ones opposite coxae I–III and between coxae IV. *Abdomen*: yellow-brown with darker markings; rubbed, but clothed in some minute iridescent setae; spinnerets brownish orange. *Legs*: Legs I orange to orange-brown; tibiae completely fringed by dense,

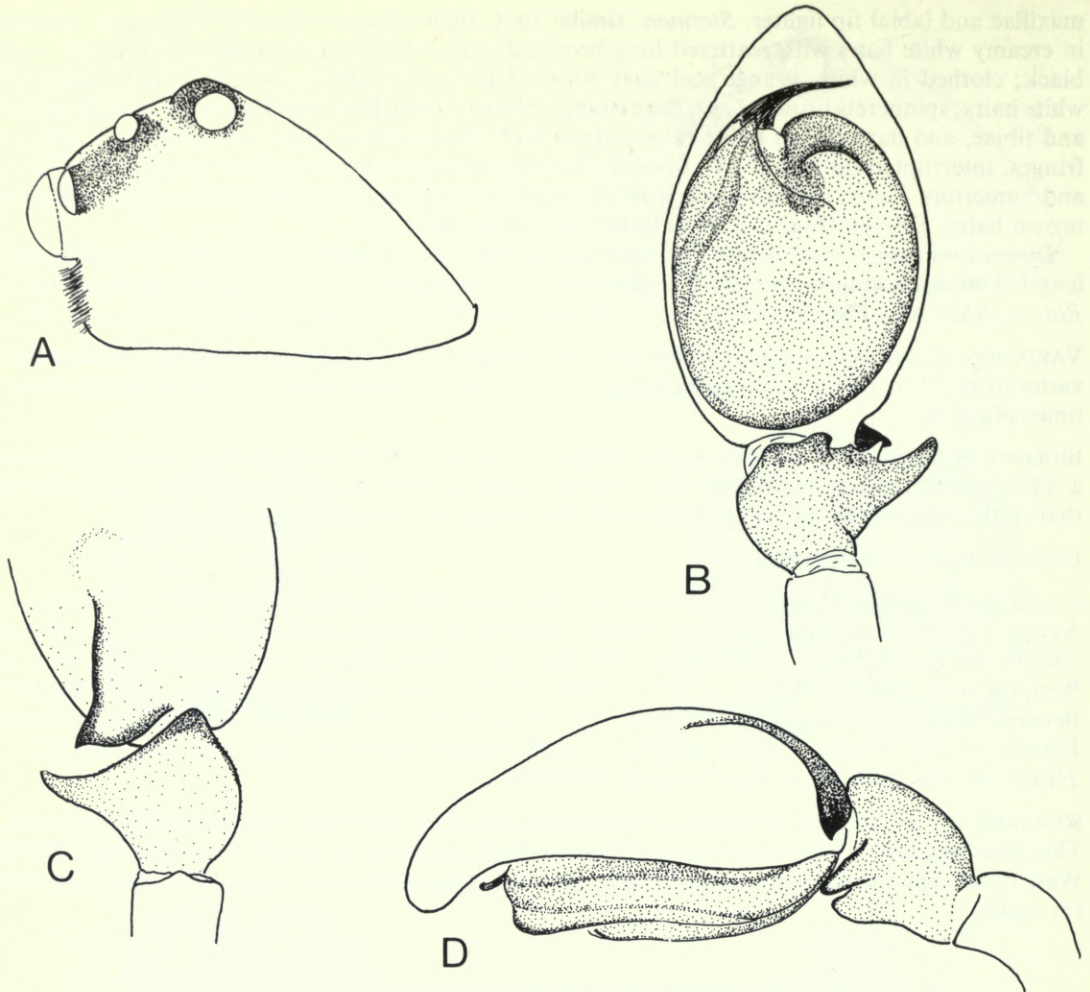


Fig. 12 *Portia albimana* (Simon), ♂ from Sri Lanka: (A) carapace lateral view; (B) palp, ventral view; (C) tibia and cymbial flange from above; (D) palp, lateral view.

stiff brownish hairs, those on venter longest; patellae with ventral fringe only. Remaining legs orange to dark orange, without fringes; spines numerous, moderately robust. *Palp* (Fig. 12B–D): orange-brown to dark brown with long white hairs on inside of tibiae and patellae; embolus short, cymbial flange with a strong downward slope.

Dimensions (mm): total length 6.08; carapace length 2.6, breadth 2.2, height 1.84; abdomen length 3.6; eyes, anterior row 1.83, middle row 1.66, posterior row 1.8; quadrangle length 1.28. *Ratios*: AM : AL : PM : PL :: 15 : 8 : 6 : 8, AL-PM-PL : 10.9, AM : CL :: 15 : 10.5.

VARIATION. Total length of ♂ varies from 4.9 to 7.3 mm, carapace length 2.16–3.0 mm (five specimens).

BIOLOGY. Unknown.

DISTRIBUTION. India, Sri Lanka.

MATERIAL EXAMINED. Type data, given in synonymy. SRI LANKA: Peralena, 1 ♂ (BMNH). 3 ♂ (UM, Oxford).

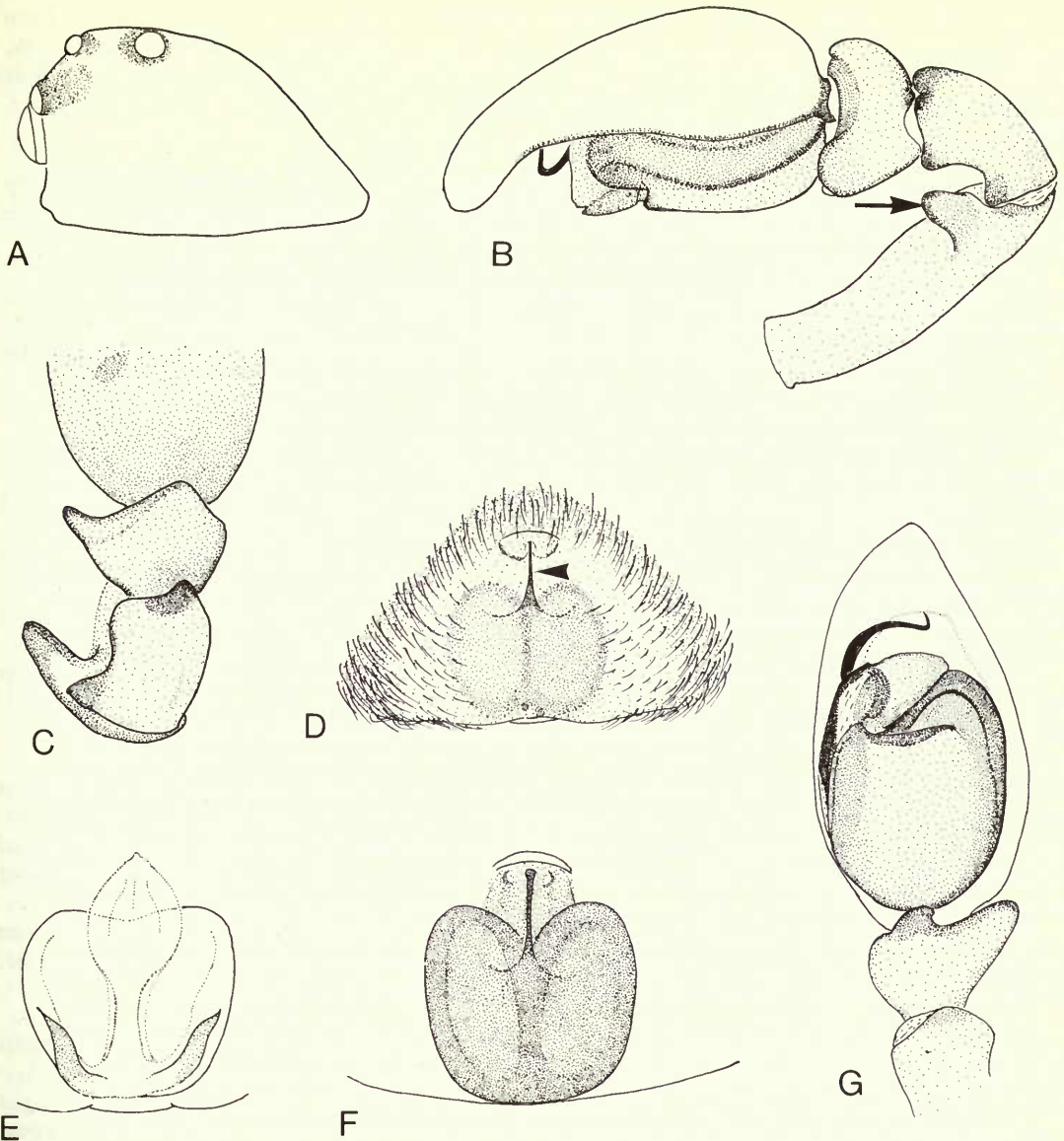


Fig. 13 *Portia durbanii* Peckham & Peckham, neotype ♂: (A) carapace, lateral view; (B) palp, lateral view; (C) tibia from above; (G) palp, ventral view. ♀ from Umkomas River: (D) epigyne; (E) vulva outline, dorsal view; (F) vulva, ventral view.

Species sola

Portia durbanii Peckham & Peckham

(Fig. 13A-G)

Portia durbanii Peckham & Peckham, 1903 : 183, figs 2, 2a, 2b, ♂♂. Neotype ♂ (here designated) South Africa, Durban (MCZ, Harvard) [Examined]. Warren, 1928 : 58. Lawrence, 1947 : 36. Roewer, 1954 : 933. Cutler, 1976 : 133.

P. durbanensis: Bonnet, 1958 : 3766 [Unjustified emendation]. Prószyński, 1971 : 461.

P. durbani: Roewer, 1965 : 12, fig. 11 [Unjustified emendation].

REMARKS. The Peckhams' (1903) state in their original description: 'we have three males from Durban, sent by Mr Quekett'. The vial labelled '(28) *Portia durbanii* Peck. Durban. Type. G. W. & E. G. Peckham Coll' contains six males, three subadult males and one female. Some of these specimens are probably syntypes, but as they cannot be positively recognized a neotype is designated.

DIAGNOSIS. *P. durbanii* is a species of uncertain affinities, but can be easily recognized by the presence of the palpal femoral spur in males (Fig. 13B) and slender epigynal septum in females (Fig. 13D).

MALE NEOTYPE. *Carapace* (Fig. 13A): orange-brown, clothed in fine recumbent white hairs, with scattered long brownish hairs in eye region. *Eyes*: with brown-black surrounds except AM; anteriors subcontiguous with apices recurved, fringed by whitish hairs. *Clypeus*: orange-brown clothed in fine whitish hairs. *Chelicerae*: light orange-brown with blackish markings; clothed in mixed lanceolate and normal long whitish hairs; promargin with three teeth, retromargin with four. *Maxillae and labium*: orange-brown, but inner distal margins of maxillae and labial tip paler. *Sternum*: elongate scutiform; pale-orange brown tinged blackish with clear orange margins, shiny; clothed in light orange hairs. *Abdomen*: pale yellowish orange with blackish ventral band and four impressed dorsal spots; sparsely clothed in long brownish hairs with very scanty longitudinal band composed of very fine iridescent setae; tufts apparently lacking; spinnerets light yellow-brown. *Legs*: generally orange-brown to light orange-brown; light brown ventral fringes present on femora, patellae and tibiae of legs I, also legs II but very scanty. Spines strong and numerous. *Palp* (Fig. 13B, C, G): orange-brown with light brown hairs.

Dimensions (mm): total length 5.8; carapace length 2.8, breadth 2.3, height 1.68; abdomen length 3.2; eyes, anterior row 1.68, middle row 1.38, posterior row 1.56; quadrangle length 1.2. *Ratios*: AM : AL : PM : PL :: 13 : 7.5 : 5.5 : 6, AL-PM-PL : 9-10, AM : CL :: 13 : 8.

FEMALE FROM LOWER UMKOMAAS RIVER, SOUTH AFRICA. General body form and colour similar to male. *Carapace*: orange-brown with eye region paler; clothed in very fine recumbent white hairs. *Abdomen*: pale yellow with black ventral band and four impressed dorsal spots; sparsely clothed in long orange hairs. *Palps*: whitish yellow with long white hairs. *Epigyne* (Fig. 13D-F): slender anterior septum distinctive.

Dimensions (mm): total length 5.2; carapace length 2.4, breadth 2.0, height 1.56; abdomen length 2.7; eyes, anterior row 1.56, middle row 1.3, posterior row 1.48; quadrangle length 1.08. *Ratios*: AM : AL : PM : PL :: 13 : 7.5 : 5 : 6, AL-PM-PL : 9-10, AM : CL :: 13 : 7.

VARIATION. Male total length varies from 5.12 to 6.4 mm, carapace length 2.32-2.8 mm (eight specimens). Females range from 5.1 to 6.5 mm total length, 2.3-2.8 mm carapace length. Hair tufts on the carapace and abdomen are apparently lacking. The fine carapace hairs appear light brownish under some angles of illumination and some males have vague abdominal chevrons, but iridescent hairs are usually rubbed.

BIOLOGY. A juvenile collected from bushes in Pietermaritzburg, S. Africa, by the author and Mr A. Russell-Smith was reared through several moults by Mrs Frances Murphy. There was no evidence of web spinning activity as was the case with *P. schultzei*, unfortunately the specimen did not reach adulthood and died during moulting.

DISTRIBUTION. South Africa.

MATERIAL EXAMINED. Neotype data given in synonymy. SOUTH AFRICA: Durban: 1 ♂ (*G. P. Staunton*); 1 ♂, 1 ♀ (*J. F. Quekett*); 1 ♀ (*J. P. Crezoe*); Natal, Lower Umkomaas River, 3 ♀♀ (*G. F. Leigh*); Pietermaritzburg, low bushes, 1 juvenile, iv.1976 (*A. Russell-Smith & F. Wanless*) (BMNH). Natal, 1 ♀, 6 immatures (*C. Martin*, Simon coll, no. 19618) (MNHN, Paris). Maritzburg: 1 ♂ (*R. A. Holliday*, NM, 4236); xii.1959, 1 ♂ (*R. F. Lawrence*, NM. 6350); xii.1957, 1 ♀ (NM. 6749) (NM, Pietermaritzburg).

The *kenti*-group

The *kenti*-group, known only from males, is comprised of three species, *P. madagascarensis* sp. n. from Madagascar, *P. kenti* Lessert and *P. falcifera* sp. n. both from Africa.

The species appear to form a good monophyletic group which can be readily separated from the *schultzi*-group by the recurved anterior eye row and the membraneous joint of the palpal tibial apophysis (Figs 14C, F; 16B). In *P. kenti* the tibial apophysis shows some flexibility, but it is not known if the tibial apophysis can be moved naturally. *P. falcifera* and *P. madagascarensis* also appear to have flexible apophyses, but movement has not been demonstrated in the specimens at hand. In the ant-like genus *Belippo* (see Wanless, 1978) the male palpal tibial apophysis could be easily moved (by hand) and its membraneous base clearly allowed for flexibility. However, in this case I am not sure that the apophyses can be correctly described as moveable although their appearance suggests that there may be a limited degree of flexibility.

Portia kenti Lessert (Figs 14A, C, D; 15A)

Portia kenti Lessert, 1925: 339, fig. 8, ♂. Holotype ♂, South Africa, Natal, Umbilo (NM, Pietermaritzburg) [Examined]. Roewer, 1954: 934. Bonnet, 1958: 3766. Roewer, 1965: 11, fig. 10. Prószyński, 1971: 461. Cutler, 1976: 133.

DIAGNOSIS. *P. kenti* is very closely related to *P. falcifera* sp. n., but can be separated by the shorter embolus, less robust tibial apophysis and shallow membraneous depression on the proximal ectal margin of the cymbium (Fig. 14A, C, D).

FEMALE. Unknown.

MALE FROM DURBAN. *Carapace* (Fig. 15A): yellow-brown, clothed with short, recumbent creamy white hairs that are iridescent under some angles of illumination. *Eyes*: anteriors subcontiguous with apices strongly recurved, fringed by whitish hairs with a tuft of light yellow-brown hairs behind PM. *Clypeus*: with several long stiff orange hairs. *Chelicerae*: yellowish orange, thinly covered in long pale hairs; promargin with three teeth, retromargin with four. *Maxillae and labium*: light yellowish brown. *Sternum*: elongate scutiform; yellowish faintly tinged with black; shiny, sparsely clothed in light orange-brown hairs. *Abdomen*: light yellow with obscure chevrons dorsally and a longitudinal blackish band ventrally; clothed in minute yellowish/iridescent hairs; spinnerets light yellow. *Legs*: yellowish orange to light yellow-orange; legs I with dense brown fringes on dorsum and venter of tibiae, venter of patellae and distal venter of femora; legs II with similar, but less dense fringes. Spines moderately strong and numerous. *Palp* (Fig. 14A, C, D): light yellow-brown to yellow-brown. Embolus short, conductor apparently lacking; tibial apophysis moveable (?); proximal ectal margin of cymbium with a shallow, somewhat membraneous triangular depression.

Dimensions (mm): total length 6.3; carapace length 2.9, breadth 2.5, height 1.76; abdomen length 3.56; eyes anterior row 1.54, middle row 1.55, posterior row 1.44; quadrangle length 1.16. *Ratios*: AM : AL : PM : PL :: 12.5 : 7 : 5 : 6.5, AL-PM-PL : 7.5-10, AM : CL :: 12.5 : 7.

VARIATION. The holotype measures 5.0 mm total length, 2.5 mm carapace length.

BIOLOGY. Unknown.

DISTRIBUTION. South Africa.

MATERIAL EXAMINED. Holotype ♂, data given in synonymy. SOUTH AFRICA: Durban, 1 ♂ (*G. P. Staunton*) (BMNH).

Portia falcifera sp. n. (Figs 14B, E, F; 15B-D)

DIAGNOSIS. *P. falcifera* is closely related to *P. kenti* Lessert, from which it may be separated by

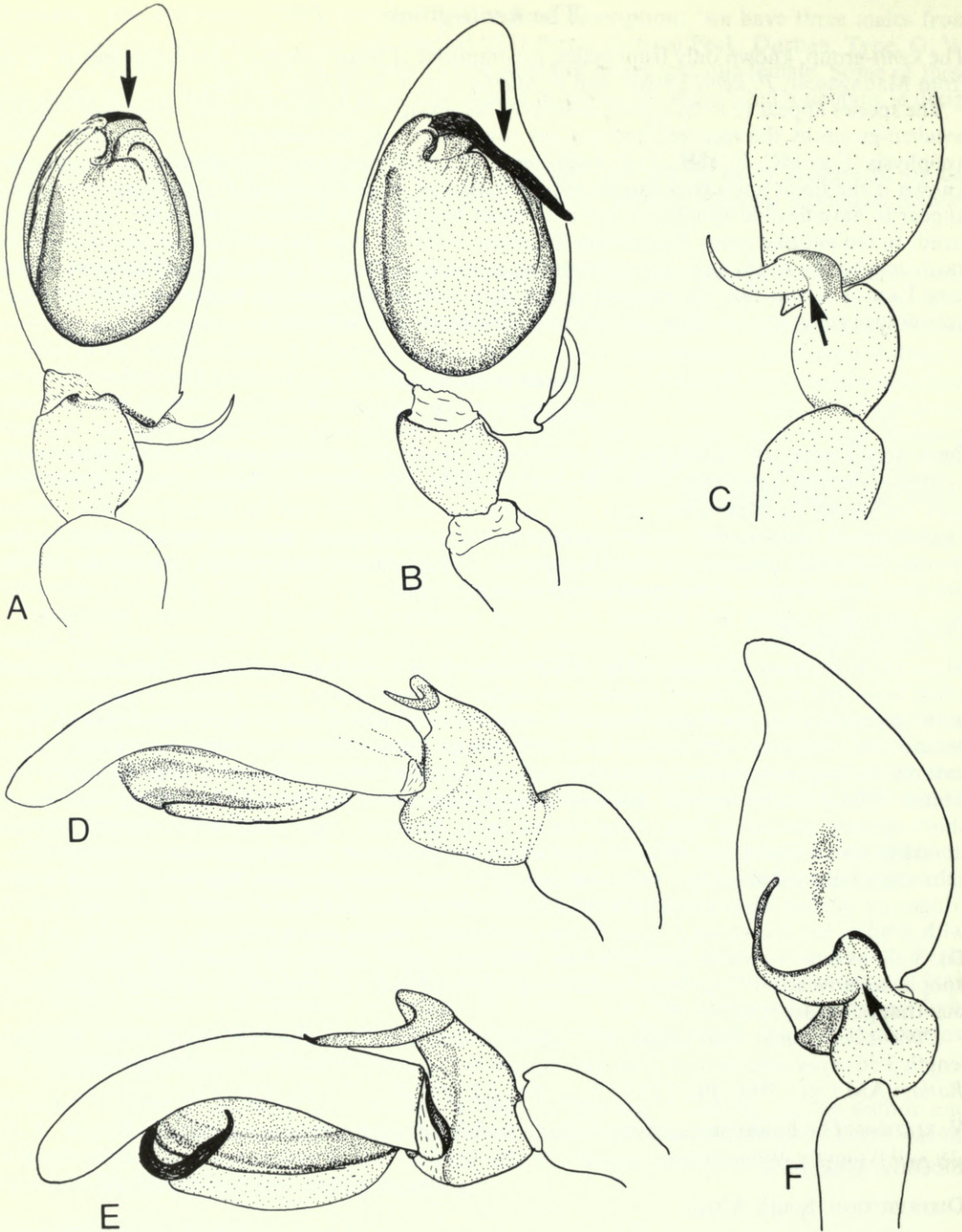


Fig. 14 (A, C, D) *Portia kenti* Lessert, ♂ from Durban: (A) palp, ventral view; (C) tibia from above; (D) palp, lateral view. (B, E, F) *Portia falcifera* sp. n., holotype ♂: (B) palp, ventral view; (E) palp, lateral view; (F) tibia from above.

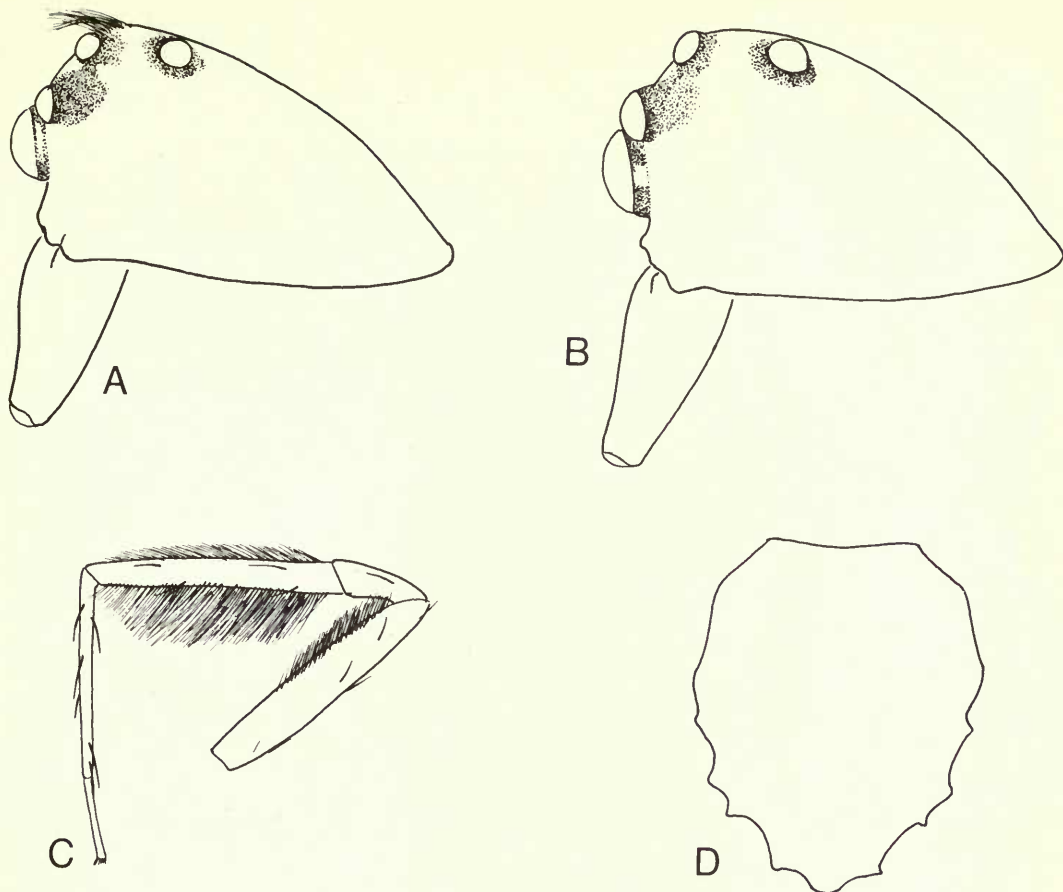


Fig. 15 (A) *Portia kenti* Lessert, ♂ from Durban: (A) carapace, lateral view. (B-D) *Portia falcifera* sp. n., holotype ♂: (B) carapace, lateral view; (C) leg I; (D) sternum.

the longer embolus, more robust tibial apophysis and deep excavation on the proximal ectal margin of the cymbium (Fig. 14B, E, F).

FEMALE. Unknown.

MALE HOLOTYPE. *Carapace* (Fig. 15B): orange-brown; clothed in fine recumbent whitish/iridescent hairs. *Eyes*: anteriors subcontiguous with apices strongly recurved, fringed by whitish hairs. *Clypeus*: thinly clothed in fine white hairs with long yellowish ones marginally. *Chelicerae*: orange-brown with obscure sooty markings; a scanty transverse white haired fringe proximally, elsewhere sparsely covered in long fine yellowish hairs. *Maxillae and labium*: yellow-orange tinged black, but inner margins of maxillae and labial tip lighter. *Sternum* (Fig. 15D): light yellow-orange with orange margins, shiny; thinly clothed in pale orange hairs. *Abdomen*: light yellow-brown with obscure blackish dorsal chevrons and a longitudinal black band ventrally; clothed in fine yellow-brown/iridescent hairs; spinnerets light yellow. *Legs*: light orange to orange-brown; dense black fringes present on venter and dorsum of tibiae I, and on distal venter of femora I and tibiae IV. Spines strong and numerous. *Palp* (Fig. 14B, E, F): yellow-brown to orange-brown. Embolus relatively long, conductor apparently lacking; tibial apophysis moveable (?); proximal ectal margin of cymbium clearly modified.

Dimensions (mm): total length 5.36; carapace length 2.52, breadth 2.12, height 1.52; abdomen length 2.8; eyes anterior row 1.46, middle row 1.04, posterior row 1.28; quadrangle length 1.12. *Ratios*: AM : AL : PM : PL :: 13 : 8 : 6 : 7, AL-PM-PL : 8-10, AM : CL :: 13 : 6.

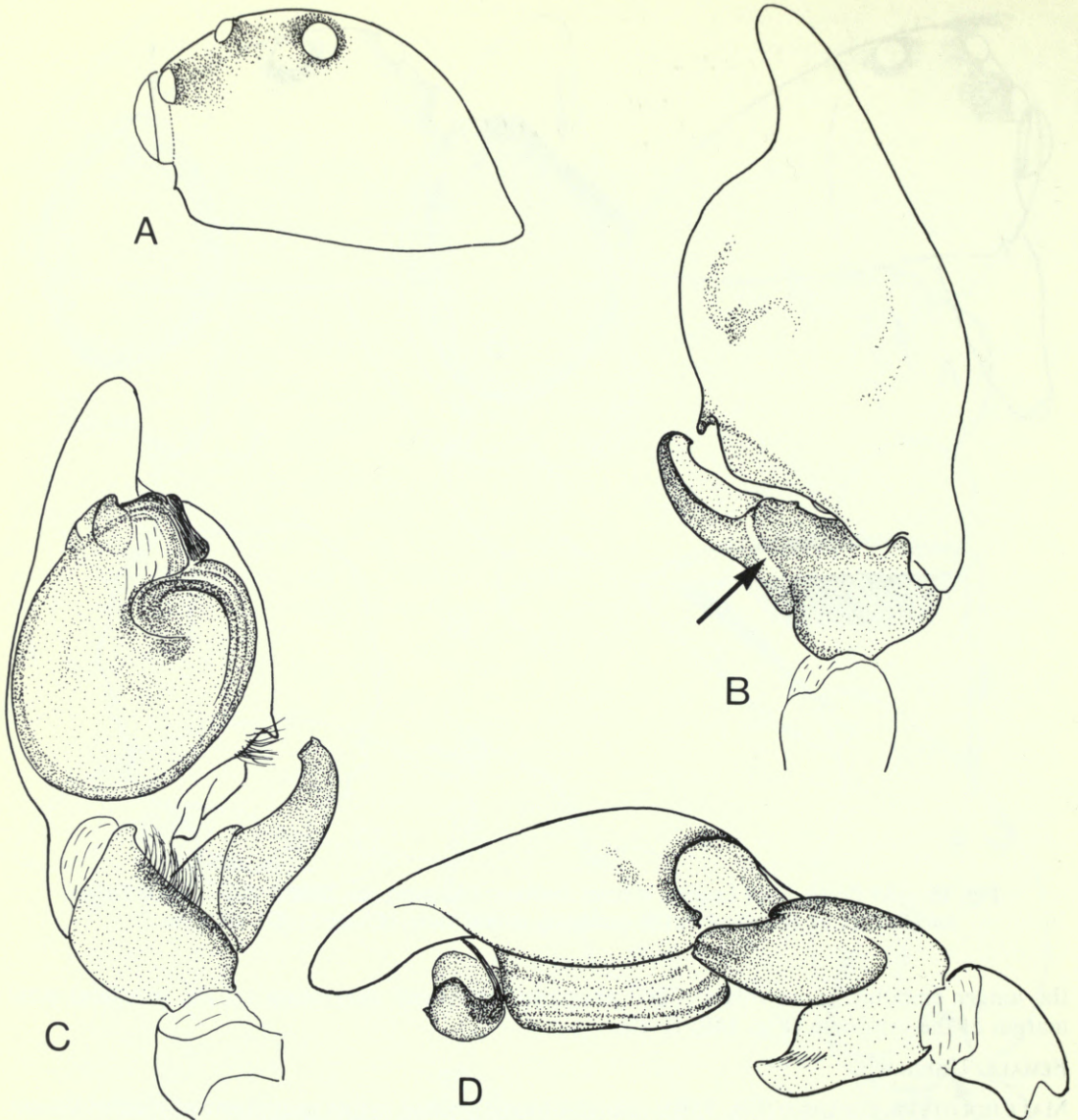


Fig. 16 *Portia madagascarensis* sp. n., holotype ♂: (A) carapace, lateral view; (B) palp, dorsal view; (C) palp, ventral view; (D) palp, lateral view.

VARIATION. Unknown.

BIOLOGY. Unknown.

DISTRIBUTION. Uganda.

MATERIAL EXAMINED. Holotype ♂, UGANDA, Mpanga forest, beaten from trees, 20.iii.1966 (A. E. Squires, Loughborough Naturalist's Club) (BMNH, reg. no. 1977.8.12.1).

Portia madagascarensis sp. n.

(Fig. 16A–D)

DIAGNOSIS. *P. madagascarensis* is a fairly distinctive species separated from other species in the *kenti*-group by the large palpal tibial apophysis (Fig. 16B) and lack of leg fringes.

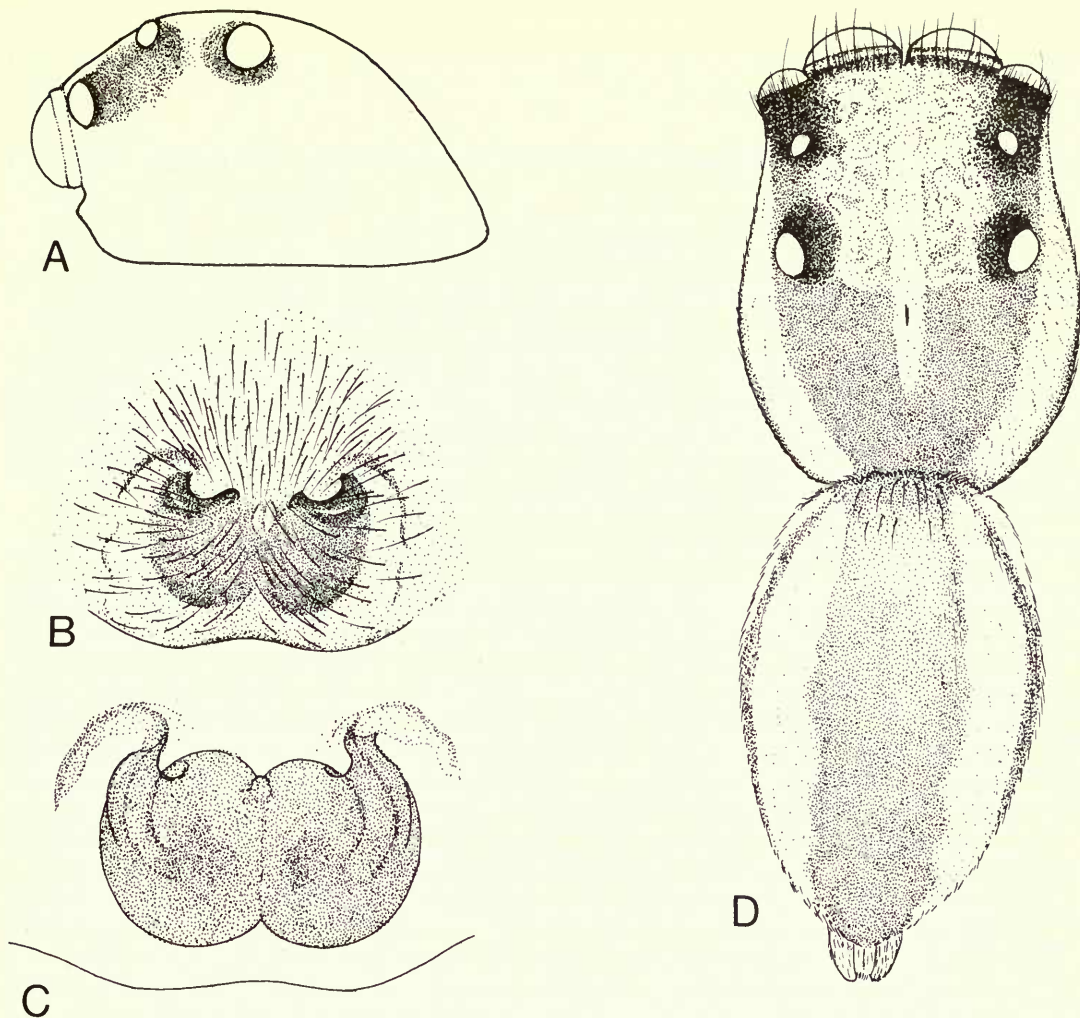


Fig. 17 *Portia oreophila* sp. n., holotype ♀: (A) carapace, lateral view; (B) epigyne; (C) vulva, ventral view; (D) dorsal view.

FEMALE. Unknown.

MALE HOLOTYPE. *Carapace* (Fig. 16A): light orange with yellowish guanin in eye region; clothed in fine recumbent whitish/iridescent hairs. *Eyes*: anterior subcontiguous with apices slightly recurved, fringed by whitish hairs. *Clypeus*: sparsely fringed by whitish hairs. *Chelicerae*: light orange, shiny with fine long pale hairs; promargin with three teeth, retromargin with five. *Maxillae and labium*: light yellow-orange, but inner margins of maxillae and labial tip whitish. *Sternum*: scutiform; light yellowish orange, shiny. *Abdomen*: pale yellow; covered in fine iridescent hairs; spinnerets yellow-orange. *Legs*: light yellow-orange grading to dark orange distally especially legs I-II; fringes lacking. Spines numerous, moderately strong. *Palp* (Fig. 16B-D): yellowish with tibiae and cymbium orange to orange-brown. Embolus short, curved, originating from distinct base; conductor apparently lacking; tibial apophysis moveable (?); proximal ectal margin of cymbium clearly modified.

Dimensions (mm): total length 4.7; carapace length 2.2, breadth 1.8, height 1.4; abdomen length 2.5; eyes, anterior row 1.5, middle row 1.2, posterior row 1.4; quadrangle length 1.1. *Ratios*: AM : AL : PM : PL :: 13 : 7 : 4 : 6, AL-PM-PL : 9.9.5, AM : CL :: 13 : 6.

VARIATION. Unknown.

BIOLOGY. Unknown.

DISTRIBUTION. Madagascar.

MATERIAL EXAMINED. Holotype ♂, MADAGASCAR, Mt Ambohisanga, i.1951 (*A. Pierrard*, MT 142917) (MRAC, Tervuren).

Species sola

Portia oreophila sp. n.

(Fig. 17A–D)

DIAGNOSIS. *P. oreophila* is a fairly distinctive species which can be distinguished from other *Portia* species by the white longitudinal bands on the carapace and abdomen (Fig. 17D), and the epigyne structure (Fig. 17B, C). It may belong in the *kenti*-group, but I am unable to comment further on its affinities until the male is discovered.

MALE. Unknown.

FEMALE HOLOTYPE. *Carapace* (Fig. 17A, D): yellow-orange with yellow guanin in eye region; clothed in short, recumbent yellow to orange hairs; from AM to just beyond fovea a central narrow white haired band, also from clypeus to coxae IV a broad submarginal band of short, recumbent white hairs, somewhat silky under some angles of illumination. *Eyes*: anterior row subcontiguous with apices recurved, fringed by light yellowish hairs. *Clypeus*: sparsely fringed with white laceolate hairs. *Chelicerae*: light yellow-orange, shiny; sparsely covered in fine, yellowish hairs; promargin with three teeth, retromargin with five. *Maxillae and labium*: light yellow. *Sternum*: scutiform; light yellow, shiny; thinly clothed in fine yellowish hairs. *Abdomen* (Fig. 17D): whitish yellow; clothed in orange hairs, with lateral longitudinal white haired bands; spinnerets light yellow. *Legs*: pale yellow-orange with vague light yellowish bands on tibiae I–II; tibiae I ventrally fringed by short orange hairs with a region of white hairs medially; femora I scantily fringed by short white hairs. Spines strong and numerous. *Palp*: creamy white with white hairs. *Epigyne* (Fig. 17B, C).

Dimensions (mm): total length 4.64; carapace length 2.32, breadth 1.9, height 1.44; eyes, anterior row 1.58, middle row 1.27, posterior row 1.44; quadrangle length 1.16. *Ratios*: AM : AL : PM : PL :: 13 : 7 : 4.8 : 7, AL–PM–PL : 8–9, AM : CL :: 13 : 5.

VARIATION. A ♀ from Antongil measures 5.0 mm total length, 2.4 mm carapace length.

BIOLOGY. Unknown.

DISTRIBUTION. Madagascar.

MATERIAL EXAMINED. Holotype ♀, MADAGASCAR: Mt Ambohisanga (*A. Pierrard*, MT. 142913) (MRAC, Tervuren). Paratype ♀, MADAGASCAR: Antongil (*A. Mocqueries*) (MNHN, Paris, No. 10257a).

Species Incertae Sedis

Portia deciliata Strand

Portia (*Boethus* ?) *deciliata* Strand, 1907 : 745, ♂. Madagascar, Nossi Bé. Strand, 1908a : 182. Roewer, 1954 : 933. Bonnet, 1958 : 3766.

The type of this species is believed to have been deposited in the Museum of Natural History, Lübeck, which was destroyed during the 1939–45 war. The species cannot be positively identified from the original description.

Linus nigrolineatus Strand

Linus nigrolineatus Strand, 1908 : 482, subadult ♂. LECTOTYPE ? subadult ♂ (here designated) Madagascar, St Marie de Marovoay, 21.ix.1906 (NR, Stockholm) [Examined]. Roewer, 1954 : 935. Bonnet, 1957 : 2483.

This species was originally described from an immature specimen, and adults cannot be positively recognized at the present time.

Linus subvexus Thorell

Linus subvexus Thorell, 1890 : 79, ♂. Indonesia, Nias Island. Simon, 1901 : 410. Reimoser, 1925 : 90; 1929 : 130. Roewer, 1954 : 936. Bonnet, 1957 : 2483.

I have been unable to examine the type of this species and the original description is inadequate for its certain identification. Material labelled *L. subvexus* in RNH, Leiden (vials 5424, 5425), NM, Wien (2 ♂♂, 2 ♀♀, det. Reimoser) and FS, Frankfurt am Main (vial 1120, det. Reimoser; det. Roewer) are all *P. labiata* (Thorell).

Portia strandi Caporiacco

Portia strandi Caporiacco, 1941 : 136, fig. 58, ♂, subadult ♀. Ethiopia Caschei. Roewer, 1954 : 934.

The type of this species has not been examined, but the original description, which is accompanied by a good figure, suggests that *P. strandi* may be a synonym of *P. africana* (Simon).

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Plate 1 *Portia schultzei*, ♂. Note slender metatarsi and leg fringes characteristic of the genus.



Plate 2 (a, b) *Portia schultzei*, male on female's web.

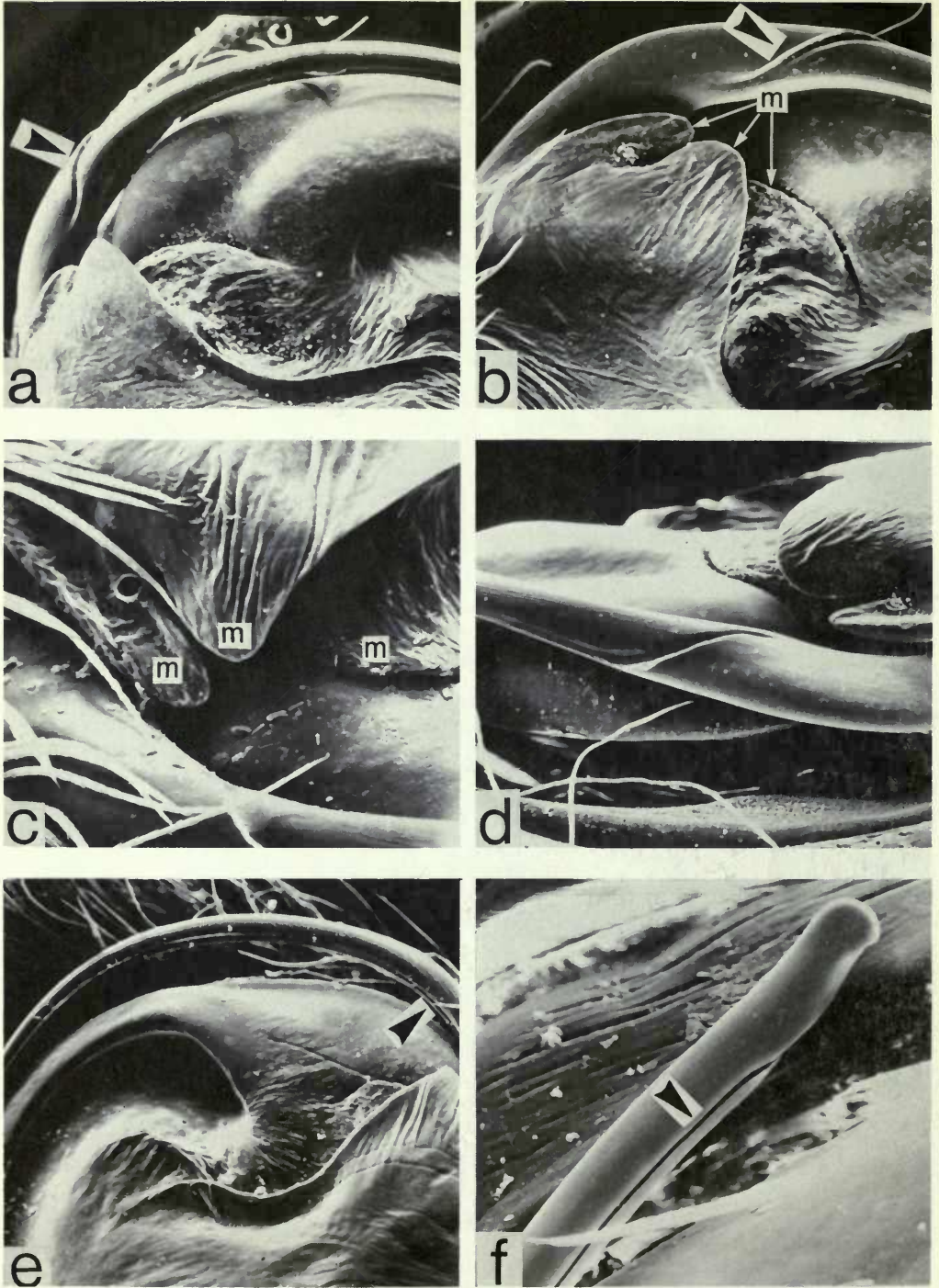


Plate 3 *Portia fimbriata* palp structure. (a, b) tripartite membrane and poorly developed conductor. $\times 200$. (c) tripartite membrane in front view. $\times 500$. (d) conductor in lateral view. $\times 200$. (e) tegular furrow and embolic groove. $\times 200$. (f) embolus tip, showing groove. $\times 2000$.

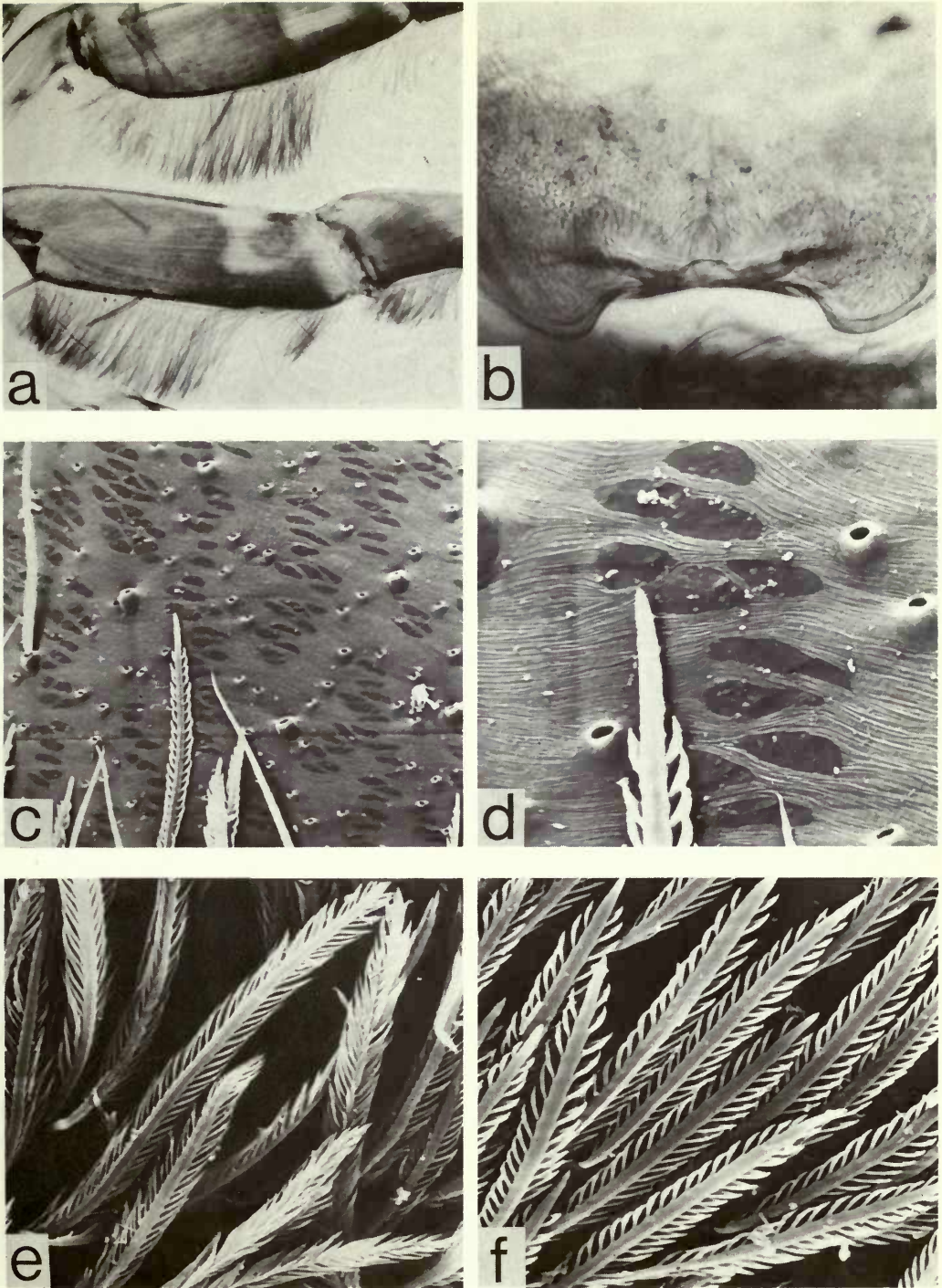


Plate 4 (a, b) *Portia schultzei*, holotype ♀. (a) legs, showing interrupted fringes; (b) vulva, dorsal view, ? subadult. (c-f) *Portia fimbriata*, ♀. (c, d) thoracic region below fovea, showing cuticle structure (striate with smooth spots) considered to be responsible for the weak iridescent sheen of many species. $\times 500$, $\times 2000$; (e) refractile white setae from thoracic marginal band. $\times 1000$; (f) setae below and between PM and PL. $\times 1000$.

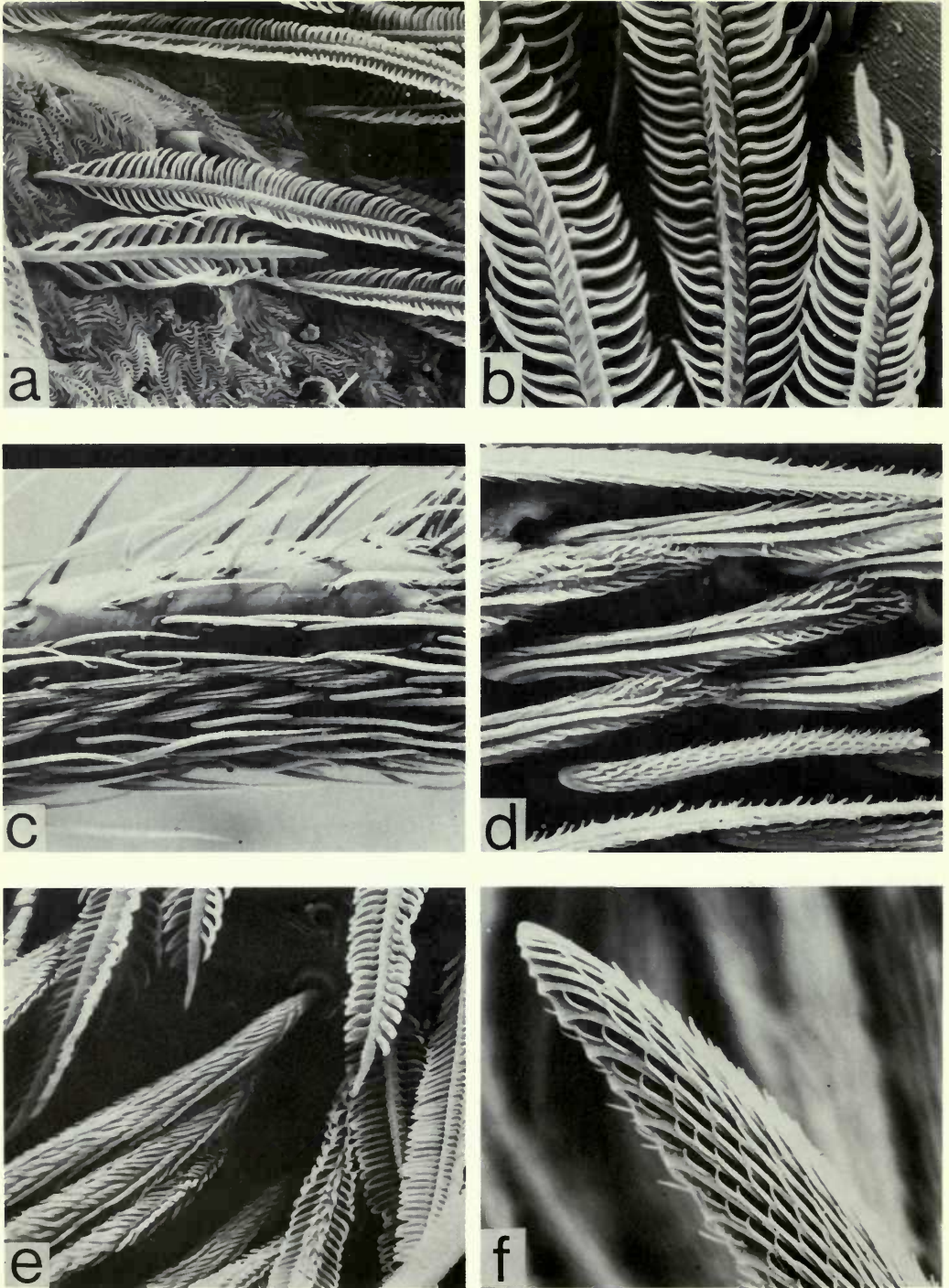


Plate 5 Examples of setae from several species of *Portia*. (a) *P. crassipalpis*, ♀ abdomen. $\times 1000$. (b) *P. africana*, between PL. $\times 2000$. (c, d) *P. fimbriata*, ♀ tarsi I, showing row of specialized setae. $\times 500$, $\times 2000$. (e) *P. crassipalpis*, base of abdominal hair tuft. $\times 1000$. (f) *P. fimbriata*, tip of metatarsal spine, $\times 2000$.