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Some linyphiid spiders from western Malaysia

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Summary

An account of a collection of linyphiid spiders made by Dr A. D. Blest in western Malaysia is given. Fourteen species are recorded of which thirteen are new to science: *Ceratinopsis orientalis* **sp. n.**, *C. blesti* **sp. n.**, *Pseudomicrocentria simplex* **sp. n.**, *Erigone bifurca* **sp. n.**, *Nasoona prominula* **sp. n.**, *N. chrysanthusi* **sp. n.**, *Kuala versa* **sp. n.**, *Batueta voluta* **sp. n.**, *Johorea decorata* **sp. n.**, *Parameioneta spicata* **sp. n.**, *Theonina tricaudata* **sp. n.**, *Kaestneria minima* **sp. n.**, *Tapinopa vara* **sp. n.**, *Neriene macella* (Thorell).

The following are new genera: *Nasoona, Kuala, Batueta, Johorea* and *Parameioneta.*

Introduction

The spiders here described were collected by Dr A. D. Blest during August and September 1973 in three localities in western Malaysia:

(A) *Seletar reservoir,* just outside Singapore. It is surrounded by second-growth scrubby forest.

(B) *"Batu"*; the area surrounding the Batu caves, 13 km outside Kuala Lumpur. Collecting here was carried out in second-growth forest.

(C) *Fraser's Hill* (*ca* 1300 m) about 110 km from Kuala Lumpur, covered with "mostly" primary forest. Most of the specimens taken here were in marginal, transitory or cleared habitats; very few were found in untouched native forest.

Some more details of localities and habitats, taken from Dr Blest's notes, will be found under descriptions of species, of which the following were taken (A-C indicate localities):

Ceratinopsis orientalis sp. n.	C
C. blesti sp. n.	A
Pseudomicrocentria simplex sp. n.	A
Erigone bifurca sp. n.	C
Nasoona prominula sp. n.	B
N. chrysanthusi sp. n.	C
Kuala versa sp. n.	C
Batueta voluta sp. n.	A, B
Johorea decorata sp. n.	A
Parameioneta spicata sp. n.	B, C
Theonina tricaudata sp. n.	B
Kaestneria minima sp. n.	B
Tapinopa vara sp. n.	C
Neriene macella (Thorell)	B, C

In the descriptions the following abbreviations may be used: Tm, the position of the metatarsal trichobothrium. Male palp: SA = suprategular apophysis, ED = embolic division, RP = radical part, E = embolus, L = lamella.

In recording the relative sizes and disposition of the eyes the following symbols and abbreviations have been used to avoid verbiage: AL, PM, PL are the diameters of those eyes expressed as multiples of the diameter of an anterior median, as are also the distances between the anterior medians (a) and between the anterior medians and laterals (b). The distances separating the posteriors (c, d) are expressed as multiples of the diameter of a posterior median. Thus in the example shown in Fig. 1, AL = PM = PL = 1½; a = ½, b = 1, c = 1, d = ½.

Because eye measurements of individuals of a species often vary considerably, either naturally or owing to shrinkage or distortion, very precise values for size and position are not of much significance; this is emphasised by expressing them as fractions.

All specimens, including holotypes and paratypes of new species, are deposited in the British Museum (Natural History).

Genus *Ceratinopsis* J. H. Emerton, 1882

[*Styloctetor* E. Simon, 1884]

***Ceratinopsis orientalis* sp. n.** (Figs. 2-6)

It is not easy to distinguish this species from Holm's *Entelecara africana,* described originally as the female (Holm, 1962, p. 19), while the male was described, as *Styloctetor africanus* (Holm), by Bosmans (1977, p. 456). It seems, however, to be a separate species since the females can be distinguished by the darkened notch on the anterior margin of the epigynal area present in *africana* (Fig. 6) but absent in *orientalis,* which is also a smaller spider. There is also a slight difference in the carapace outline of the females, that of *africana* rising a little more behind the eyes.

Male holotype

Carapace length: 0.54 mm. *Total length:* 1.04 mm. *Carapace:* Medium brown with a darker patch in the foveal region; some faint radiating darker lines. *Eyes:* AL = PM = 2, PL = 1¾; a = 1, b = 1½, c = d = 1. *Sternum:* Dark brown, a little darker towards the edges. *Abdomen:* Uniform dark grey, with numerous shortish hairs. *Chelicerae:* Coloured as the carapace. Outer margin with 5 teeth (apart from the proximal median one). Inner margin not visible. *Legs:* Uniform light brown. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.36	0.14	0.31	0.28	0.26	1.35
II	0.34	0.14	0.29	0.25	0.25	1.27
III	0.29	0.11	0.24	0.24	0.23	1.11
IV	0.40	0.12	0.35	0.29	0.29	1.45

Position of tibial spines: I = 0.14, II = 0.13, III = 0.19, IV = 0.15. Position of Tm: I = 0.39, II = 0.38, III = 0.39. Tibia I length/breadth = 5. *Male palp:* Figs. 2-4.

Female paratype

Carapace length: 0.48 mm. *Total length* = 1.18 mm. Colouration as in the male. *Eyes:* AL = PL = PM = 1¾; a = 1, b = 1½, c = d = 1. *Chelicerae:* Teeth in outer row as in the male; inner row not seen. *Legs:* Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.42	0.15	0.33	0.28	0.28	1.46
II	0.39	0.14	0.30	0.26	0.26	1.35
III	0.34	0.14	0.22	0.22	0.21	1.13
IV	0.48	0.15	0.33	0.28	0.24	1.48

Position of tibial spines: I = 0.13, II = 0.15, III = 0.22, IV = 0.23. Position of Tm: I = 0.45, II = 0.43, III = 0.47. Tibia I length/breadth = 5. *Epigyne:* Fig. 5.

Material examined: Holotype ♂ (BMNH 1981.10.23.1) and paratype ♀ (BMNH 1981.10.23.2), Fraser's Hill, 10 Sept. 1973, on an exposed vertical sand escarpment. Empty webs in a small depression; spiders nearby at xerophytic plant roots.

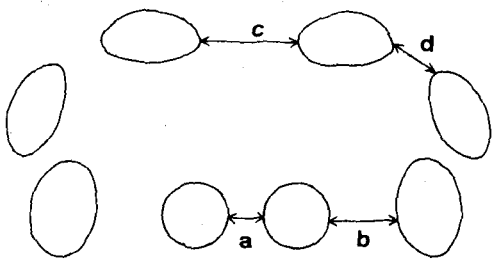


Fig. 1: Diagram to illustrate eye measurements.

Another female (BMNH 1981.10.23.3) found with the male of the following species (*C. blesti*) is probably *C. orientalis* although its Tm values are slightly different. Description of this female as follows:

Carapace length: 0.59 mm. *Total length:* 1.40 mm. *Carapace:* Colouration as in the male, a little paler. *Eyes:* PM not developed, one missing; AL = PL = 1¾; a = ¾, b = 1. *Chelicerae:* Teeth as in the male, anteriors less strongly developed. *Legs:* As in the male. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.48	0.16	0.36	0.33	0.28	1.61
II	0.44	0.15	0.33	0.29	0.26	1.47
III	0.30	0.12	0.26	0.25	0.23	1.16
IV	0.48	0.14	0.40	0.34	0.25	1.61

Position of tibial spines: I = 0.14, II = 0.15, III = 0.21, IV = ? Position of Tm: I = 0.37, II = 0.33, III = 0.35, IV = 0.37. Tibia I length/breadth = 6. *Epigyne:* Not distinguished from that of *C. orientalis* (Fig. 5).

***Ceratinopsis blesti* sp. n.** (Figs. 7-9)

This species differs from others of the genus encountered so far in having a trichobothrium on metatarsus IV.

Male holotype

Carapace length: 0.69 mm. *Total length:* 1.41 mm. *Carapace:* Medium brown lightly suffused with grey; head a little darker. A borderline just distinguishable. *Eyes:* AL = PL = PM = 5/3; a = 2/3, b = 1, c = 3/5, d = 1. *Sternum:* Dark brown mottled with grey. *Abdomen:* Uniform medium grey. No impressed dots; covered thickly with shortish hairs. *Chelicerae:* Coloured as the carapace. Outer margin with 5 teeth (apart from the median proximal one); inner margin with 4 teeth, the apical two small and close together. *Legs:* Uniform light brown, lighter than the carapace. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.50	0.16	0.40	0.35	0.33	1.74
II	0.48	0.16	0.35	0.32	0.30	1.61
III	0.28	0.14	0.28	0.28	0.25	1.23
IV	0.50	0.16	0.43	0.35	0.28	1.72

Position of tibial spines: I and II = 0.16, III = 0.21, IV = 0.22. Position of Tm: I = 0.36, II = 0.42, III and IV = 0.36. Length of Tm IV = 0.014 mm. Tibia I length/breadth = 6½. *Male palp:* Figs. 7-9.

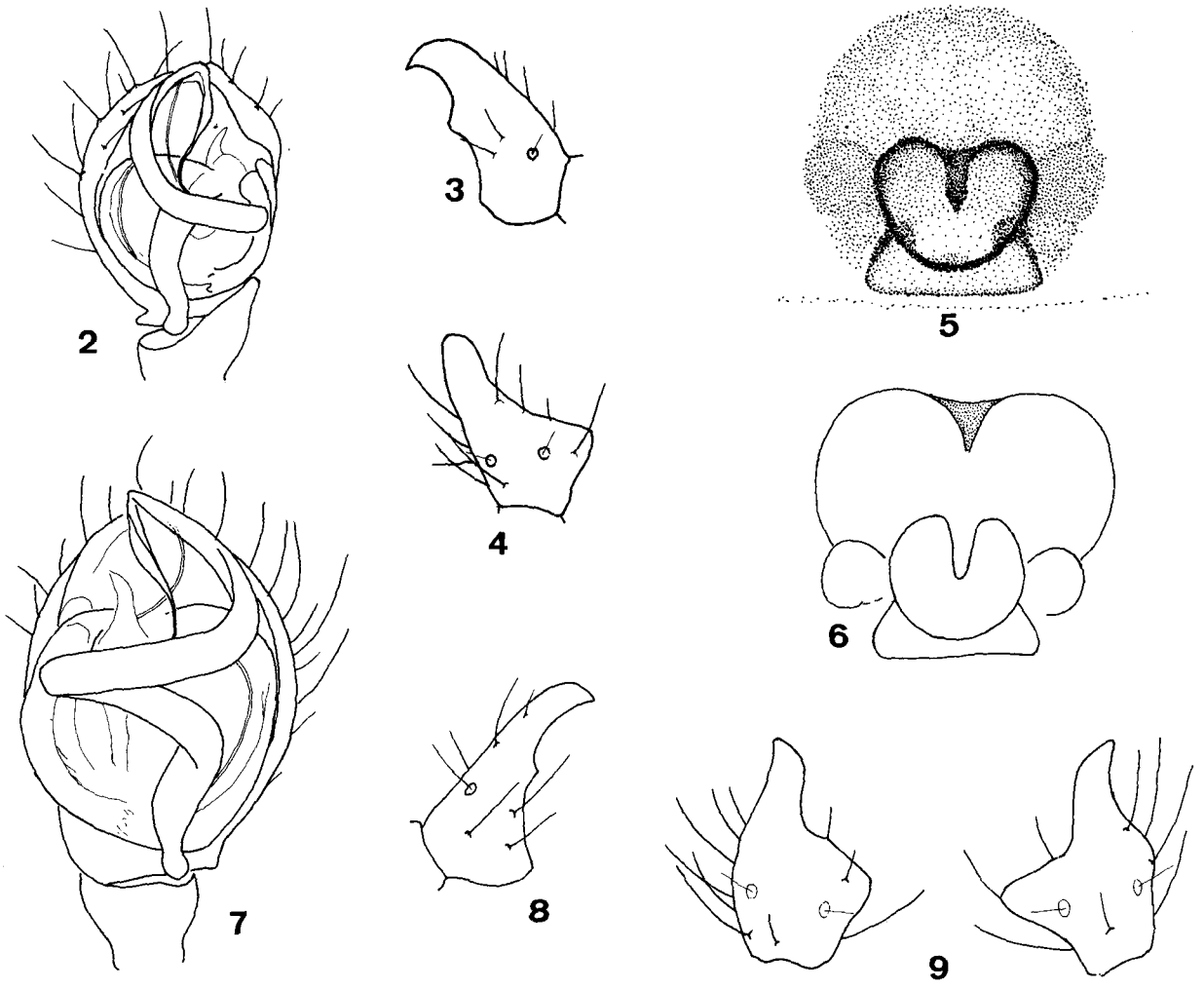
Female: Unknown.

Material examined: Holotype ♂ (BMNH 1981.10. 23.4), Seletar, 16 Sept. 1973, in an exposed thin layer of dead rushes on mud, very liable to flooding.

Genus *Pseudomicrocentria* F. Miller 1970

***Pseudomicrocentria simplex* sp. n.** (Figs. 10-15)

The species resembles *P. minutissima* Miller (Miller, 1970, p. 99) in the male palp, epigyne (Locket & Russell-Smith, 1980, p. 74), general form of the carapace and eyes, chelicerae (disposition of the teeth and absence of stridulating ridges) and the legs (relative lengths of tibiae, metatarsi and tarsi and position of dorsal tibial spines and trichobothria).



Figs. 2-5: *Ceratinopsis orientalis* sp. n. **2** Left palp (ventral); **3** Left palpal tibia (ectal); **4** Ditto (dorsal); **5** Epigyne.

Fig. 6: *Ceratinopsis africana* (Holm). Epigyne (outline).

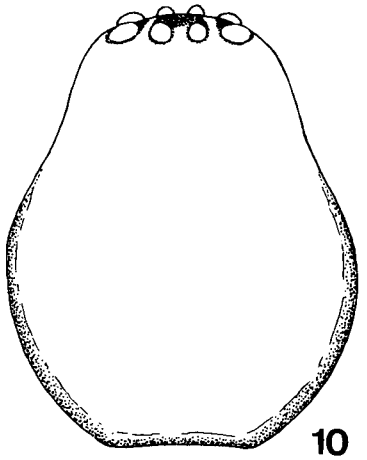
Figs. 7-9: *Ceratinopsis blesti* sp. n. **7** Right palp (ventral); **8** Right palpal tibia (ectal); **9** Left and right palpal tibiae (dorsal).

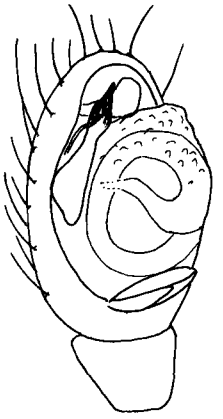
Male holotype

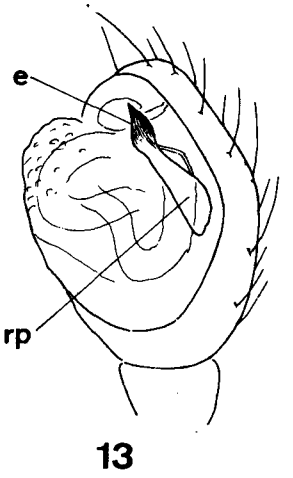
Carapace length: 0.48 mm. *Total length:* 1.10 mm. *Carapace* (Fig. 10): Uniform light brown with a faint dusky borderline and radiating striae. *Eyes:* Fig. 10. *Sternum:* As broad as long (0.28 mm). Light brown with grey reticulations and a dark grey borderline. *Abdomen:* Uniform medium grey, no pattern or impressed dots. *Chelicerae:* Coloured as the carapace. Falces long. The proximal tooth in the outer margin the largest in the row. Inner margin with 3 teeth and a distal rectangular cusp (Fig. 11). *Legs:* Short and stout; uniform light yellow-brown; the ventral margins of each coxa blackened. Measurements:

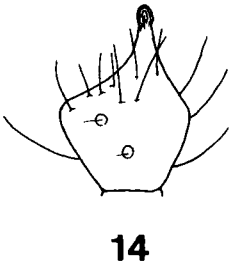
	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.35	0.13	0.28	0.23	0.23	1.22
II	0.33	0.13	0.25	0.23	0.21	1.15
III	0.26	0.11	0.19	0.19	0.19	0.94
IV	0.35	0.13	0.28	0.24	0.21	1.21

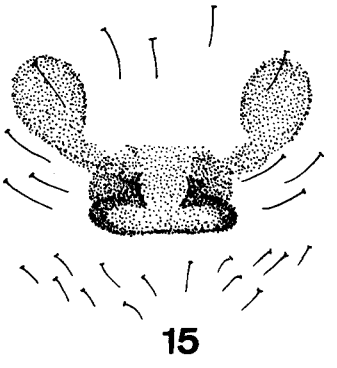
Position of tibial spines: I = 0.1 and 0.82, II = 0.1 and 0.87, III = 0.1 and 0.87, IV = 0.08. Position of Tm: I = 0.36, II = 0.32, III = 0.36. Tibia I length/breadth = 5½. Length of spines less than diam. of tibia. *Male palp* (Figs. 12-14): The embolic division is simple and the structure very similar to that of *P. minutissima* Miller. The anterior surface of the tegulum is rugose.











Figs. 10-15: *Pseudomicrocentria simplex* sp. n. **10** Carapace; ♂; **11** Left chelicera, ♂; **12** Left palp (ventro-mesal); **13** Right ditto; **14** Left palpal tibia (dorsal); **15** Epigyne. (e = embolus, rp = radical part).

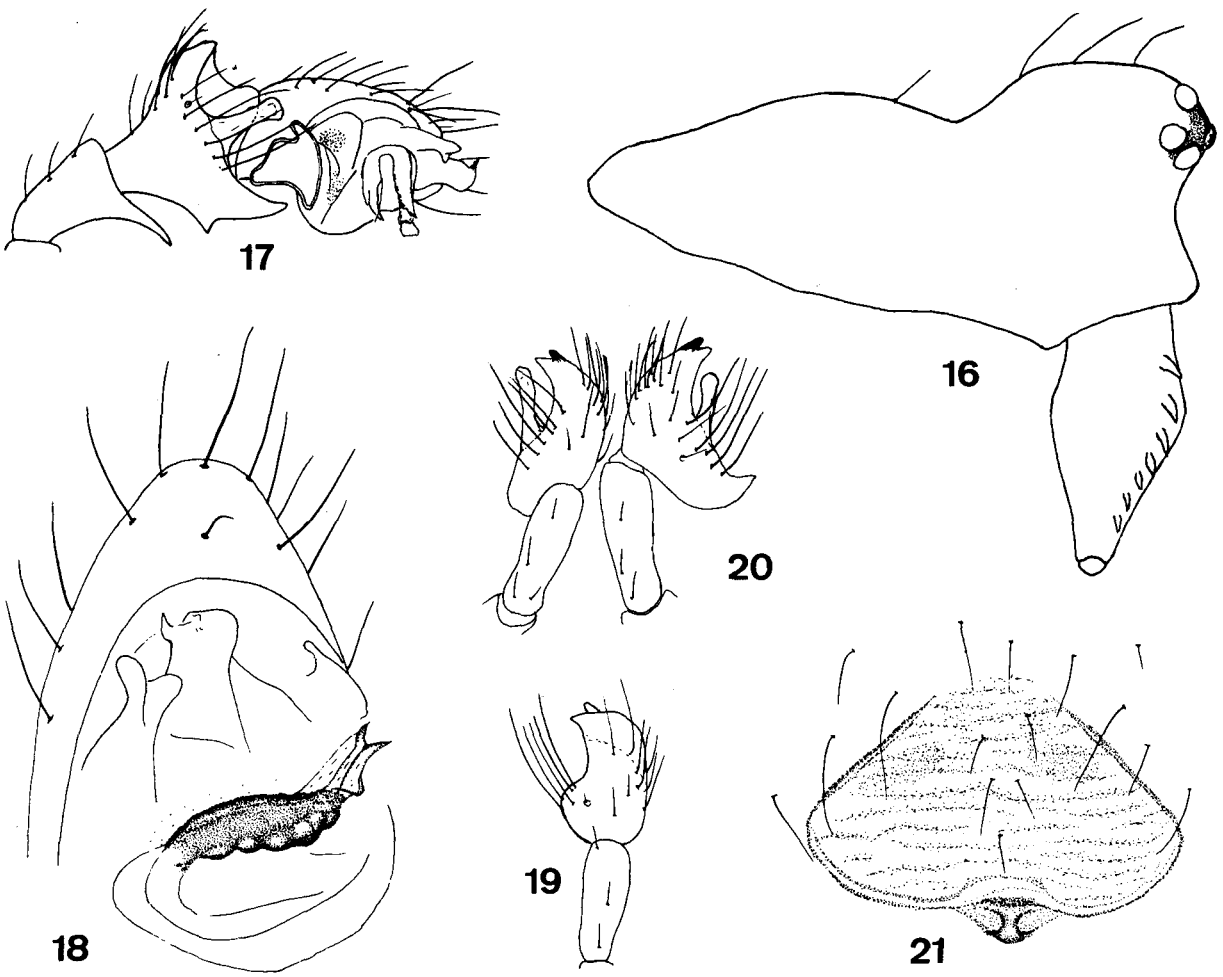
Female paratype

Carapace length: 0.46 mm. *Total length:* 1.41 mm. *Carapace, sternum, abdomen* as in the male, also *chelicerae* (but inner row of teeth not visible). *Legs:* Uniform light yellow. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.31	0.14	0.24	0.20	0.21	1.10
II	0.31	0.13	0.20	0.19	0.20	1.03
III	0.26	0.11	0.16	0.18	0.18	0.89
IV	0.34	0.13	0.28	0.20	0.20	1.15

Position of tibial spines: I = 0.09 and 0.87, II = 0.09 and 0.88, III = 0.11 and 0.84, IV = 0.11. Position of Tm: I = 0.38, II = 0.37, III = 0.36. Tibia I length/breadth = 4. *Epigyne:* Fig. 15.

Material examined: Holotype ♂ (BMNH 1981. 10.23.6), Seletar, 16 Sept. 1973, in exposed marsh vegetation on a sandy base, not liable to flooding. Paratype ♀ (BMNH 1981.10.23.5), Seletar reservoir, 11 Oct. 72, in marsh detritus.



Figs. 16-21: *Erigone bifurca* sp. n. **16** Carapace, ♂; **17** Right palp (ectal); **18** Ditto (ventral); **19** Left palpal tibia (dorsal); **20** Left and right palpal tibiae (dorso-ectal); **21** Epigyne.

Genus *Erigone* V. Audouin 1826

Erigone bifurca sp. n. (Figs. 16-21)

Male

Carapace length: 0.70 mm. *Total length:* 1.45 mm. *Carapace:* Fig. 16. Uniform light reddish brown. *Eyes:* AL = 1¼, PM = PL = 1; a = b = ½, c = 2/3, d = nearly 1. *Sternum:* Darker than carapace, sepia. *Abdomen:* Uniform dark grey. *Chelicerae:* Coloured as the carapace. Outer margin with 5 teeth (the apical two close together); inner with 3. Teeth on the anterior lateral surface 7. *Legs:* Uniform light yellow. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.58	0.20	0.48	0.43	0.37	2.06
II	0.53	0.20	0.43	0.37	0.30	1.83
III	0.38	0.15	0.30	0.32	0.25	1.40
IV	0.47	0.21	0.45	0.40	0.28	1.81

Position of tibial spines: I = 0.16 and 0.72, II = 0.17 and 0.70, III = 0.19 and 0.70, IV = 0.20. Position of Tm: I = 0.38, II = 0.41, III = 0.37. Tibia I length/breadth = 7.5. *Male palp* (Figs. 17-20): Tip of tibia bifid; lateral ectal apophysis membranous apically (Figs. 17, 20). The SA resembles that of *Erigone ourania* Crosby & Bishop, viewed from outside, but it carries a membranous projection apically (Fig. 18).

Female

Carapace length: 0.70 mm. *Total length:* 1.63 mm. Colouration as in the male. *Eyes:* AL = 1¾, PL = PM = 1½; a = b = ½, c = d = ¾. *Chelicerae:* Outer margin with 5 teeth (the apical are very small), inner with 3. *Legs:* Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.58	0.17	0.48	0.43	0.37	2.03
II	0.48	0.17	0.43	0.37	0.33	1.78
III	0.38	0.15	0.32	0.30	0.22	1.37
IV	0.52	0.17	0.43	0.40	0.27	1.79

Position of tibial spines: I = 0.14 and 0.62, II = 0.13 and 0.57, III = 0.18 and 0.58, IV = 0.19. Position of Tm: I = 0.35, II = 0.32, III = 0.30. Tibia I length/breadth = 6. *Epigyne:* Fig. 21.

Material examined: Holotype ♂ (BMNH 1981.10.23.9), Fraser's Hill, 1300 m, 10 Sept. 1973, in xerophyte grass mats. Paratype ♂ (BMNH 1981.10.23.7), same locality, 4 Sept. 73, in papyrus leaves on sand. Paratype ♀ (BMNH 1981.10.23.8), Seletar reservoir, 11 Oct. 72, in marsh detritus.

Genus *Nasoona* gen. n.

It has not been possible to find an existing genus in which the two species here described could be placed satisfactorily.

Carapace: Raised or not raised behind the eyes in the male. *Eyes:* Large. *Sternum:* Separating coxae IV by at least the diameter of a coxa. *Abdomen:* With a pattern, at least in the female. *Chelicerae:* 5-6 teeth in the outer row, 4 in the inner. *Legs:* Dorsal tibial spines: 2.2.1.1. (no lateral tibial spines). Metatarsus IV with a trichobothrium. Tm = 0.5-0.6. *Male palp:* Tibiae with apophyses. Embolus originating towards the posterior end of the radical part, of which the anterior part varies and bears a hinged lamella. *Female palp:* Without a claw. Type species: *Nasoona prominula* sp. n.

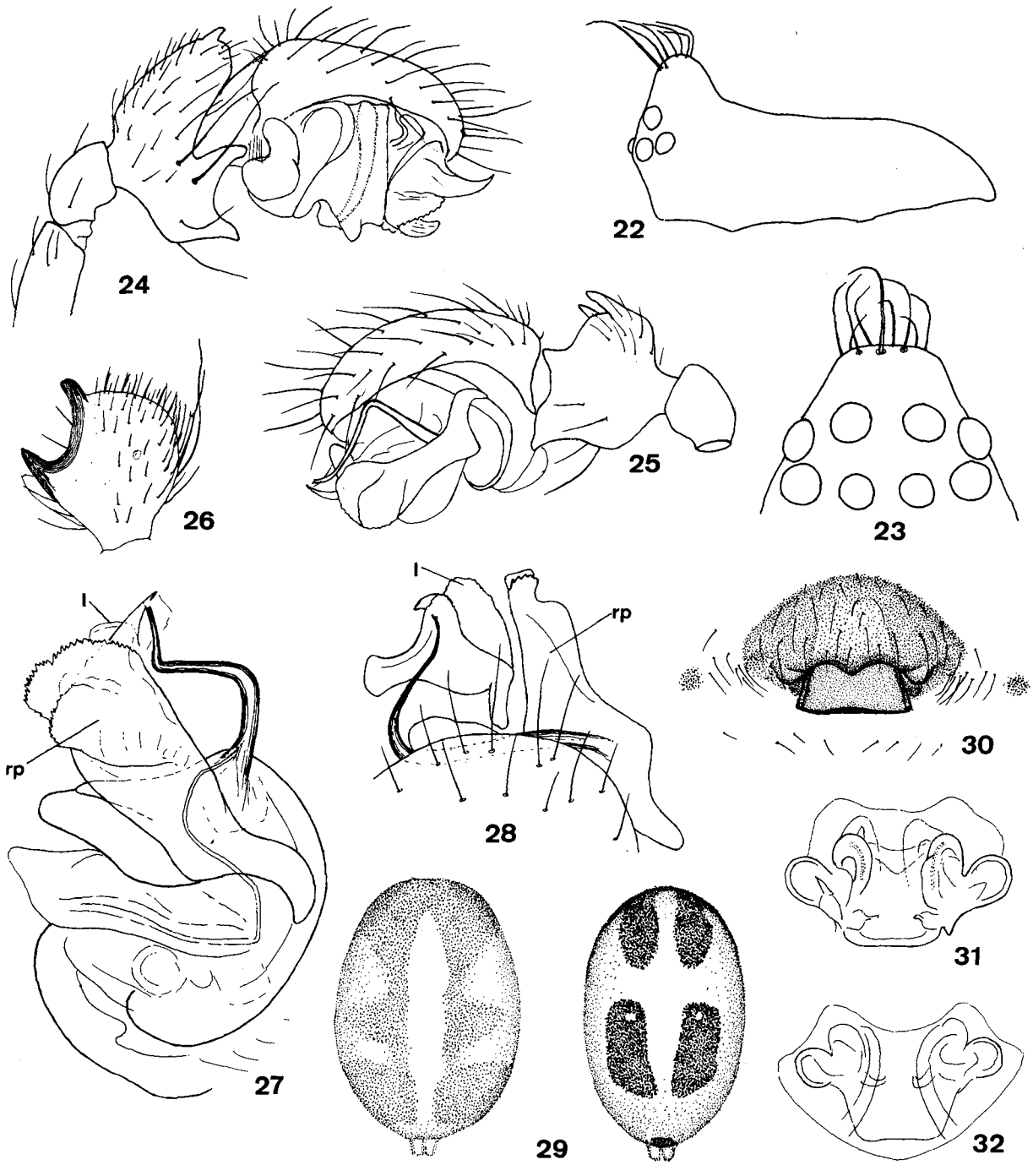
The interest lies in the structure and conformation of the male palp, in which the embolus originates towards the posterior end of the radical part. The anterior apophysis of this is blunt and serrated in *N. prominula,* pointed in *N. chrysanthusi,* but in each species there is a hinged lamella (Figs. 27, 28, 40, 41). (This is seen for *N. prominula* in Fig. 28, where the embolic division has been pushed out by expansion in NaOH and is here viewed dorsally over the tip of the palp.) This might suggest a linyphiine affinity or a resemblance to *Hilaira* (see Merrett, 1963, p. 388, fig. 48) but the tibial spines, 2.2.1.1, do not support this, nor do the male tibial apophyses (Figs. 25, 26), the female epigyne and absence of a palpal claw.

N. chrysanthusi has no sign of a modification of the male carapace as in *N. prominula,* but such differences occur within accepted genera, e.g. *Hilaira* and *Oedothorax.*

Nasoona prominula sp. n. (Figs. 22-32)

Male

Carapace length: 0.78 mm. *Total length:* 1.97 mm. *Carapace:* Uniform dark brown with very faint striae. Caput raised abruptly behind the eyes and bearing a prominent forward-directed spine, behind which is a collection of bent bristles (Fig. 22). *Eyes:* Fig. 23. *Sternum:* Uniformly coloured as the carapace. Coxae IV separated by about 1 diam. of a coxa. *Abdomen:* Dark grey to black with long silky hairs; no pattern. Ventrally uniform, coloured as the rest. *Chelicerae:* Dark sepia, or sometimes coloured as the carapace.



Figs. 22-32: *Nasoona prominula* sp. n. **22** Carapace, ♂; **23** Facies, ♂; **24** Right palp (ectal); **25** Ditto (mesal); **26** Right palpal tibia (dorsal); **27** Right palp expanded (mesal); **28** Ditto, embolic division (viewed dorsally beyond tip of cymbium); **29** Two examples of abdomen pattern, ♀; **30** Epigyne; **31** Vulva outlines (dorsal view); **32** Ditto (ventral view). (l = lamella, rp = radical part).

Not strongly divergent; with 5 anterior teeth and 4 posterior. *Legs:* Deep orange-brown, lighter than the carapace. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.78	0.20	0.73	0.67	0.47	2.85
II	0.74	0.20	0.67	0.60	0.43	2.64
III	0.57	0.18	0.50	0.47	0.33	2.05
IV	0.78	0.19	0.75	0.72	0.42	2.86

Position of tibial spines: I = 0.20 and 0.69, II = 0.18 and 0.70, III = 0.28, IV = 0.29. Position of Tm: I = 0.53, II = 0.55, III = 0.50, IV = 0.53. Tibia I length/breadth = 9. *Male palp* (Figs. 24-28): Tibia very large (Figs. 24, 26). The embolus (seen with difficulty, when the palp is viewed ventrally, along the mesal side) originates from a radix which has a prominent "tail" posteriorly and which extends anteriorly to a roughened heavily sclerotised region (Figs. 25, 27, 28). Separated from this part by a membrane is another sclerite, also deeply sclerotised, regarded as the lamella. (A very similar situation exists in *Nasoona chrysanthusi.*) The embolus is flat and ribbon-shaped.

Female

Carapace length: 0.75 mm. *Total length:* 2.07 mm. *Carapace:* Coloured as in the male. Hardly raised behind the eyes, where there is one stout forward-curved spine (not as strong as in the male). *Eyes:* AL = 6/5, PL = 1½, PM = 4/3; a = ½, b = 1/3, c = d = ¾. *Sternum:* As in the male; coloured as the carapace. *Abdomen:* With rather long silky hairs. Light areas creamy white, the dorsal pattern very variable (two examples are given in Fig. 29); the colour varies from light coffee to dark grey and almost black. Ventrally a pair of dark patches immediately posterior to the epigyne are present in all specimens examined (including juveniles), usually followed by a larger median patch. *Chelicerae:* Coloured as the carapace; with 6 anterior teeth (the apical often very small) and 5 posterior. *Legs:* Uniform light whitish yellow or light brown. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.73	0.20	0.62	0.55	0.43	2.53
II	0.60	0.18	0.57	0.50	0.40	2.25
III	0.52	0.17	0.40	0.40	0.30	1.79
IV	0.70	0.20	0.65	0.65	0.38	2.58

Position of tibial spines: I = 0.22 and 0.73, II = 0.20 and 0.73, III = 0.25, IV = 0.33. Position of Tm: I = 0.52, II = 0.52, III = 0.54, IV = 0.58. Tibia I length/breadth = 7½. *Epigyne* (Fig. 30): There is a good deal of variation in the appearance of the posterior plate, largely accounted for by a change in its angle with the anterior portion. The ducts can often be seen and, corresponding to the ribbon-shaped embolus, are wide (Figs. 31, 32).

Material examined: Holotype ♂ (BMNH 1981.10.23.10), 6 paratype ♂♂ (BMNH 1981.10.23.11-16), 11 paratype ♀♀ (BMNH 1981.10.23.17-27), Batu, Zone I, 1 Sept. 1973, in a 30-120 cm layer of exposed creepers overgrowing scrub on cleared forest (transitional to secondary growth if left alone, but probably cleared fairly frequently).

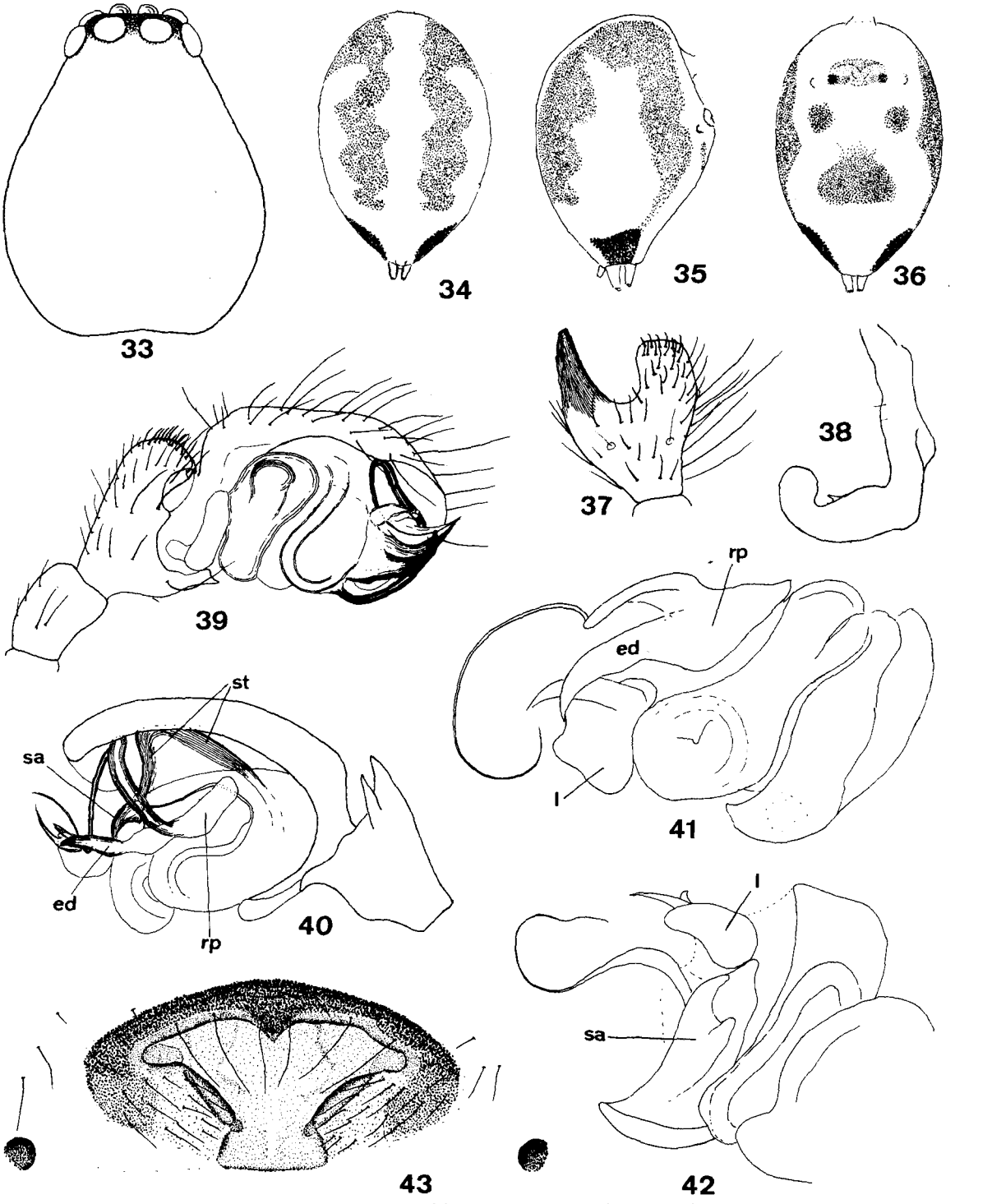
***Nasoona chrysanthusi* sp. n.** (Figs. 33-43)

Male

Carapace length: 0.85 mm. *Total length:* 1.89 mm. *Carapace* (Fig. 33): Dark olive brown, sooty grey laterally, with ill-defined striae. Ocular area black. Caput raised a little, not modified, sloping evenly. *Eyes:* AL = PL = PM = 1¾; a = 1/3, b = ¼, c = ½, d = 1/3 (there is some variation). *Sternum:* Dark olive brown to black. Wide posteriorly, coxae IV separated by 1-1½ times the width of a coxa. *Abdomen:* A dark grey pattern on a greyish white ground as in the female (Figs. 34, 35). Ventrally as in Fig. 36, the median dark areas sometimes fused. *Chelicerae:* Robust, with strong, evenly curved falces. Anterior row with 6 teeth, the basal the largest, posterior row with 4 teeth. *Legs:* Orange-yellow (more brightly coloured than in the female). Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.80	0.23	0.83	0.75	0.45	3.06
II	0.75	0.23	0.75	0.70	0.40	2.83
III	0.68	0.20	0.55	0.55	0.40	2.38
IV	0.80	0.23	0.75	0.80	0.43	3.01

Position of tibial spines: I = 0.27 and 0.83, II = 0.27 and 0.83, III = 0.34, IV = 0.27. Position of Tm: I = 0.57, II = 0.59, III = 0.58, IV = 0.61. Tibia I length/breadth = 12. Length tibia I spine = 0.27 mm. *Male palp* (Figs. 37-42): The radical part (rp) has a pointed apophysis directed forward originating from near the junction with the embolus. Anteriorly is a hinged lamella, also with a point (Figs. 40-42).



Figs. 33-43: *Nasoona chrysanthusi* sp. n. **33** Carapace, ♂; **34** Abdomen pattern, ♀ (dorsal); **35** Ditto (lateral); **36** Ditto (ventral); **37** Right palpal tibia (dorsal); **38** Right paracymbium (from in front); **39** Right palp (ectal); **40** Ditto (mesal); **41** Right palp expanded (meso-ventral); **42** Ditto (ecto-dorsal); **43** Epigyne. (ed = embolic division, l = lamella, *rp* = radical part, sa = suprategular apophysis, st = suprategulum).

Female

Carapace length: 0.83 mm. *Total length:* 2.05 mm. *Carapace:* As in the male. *Eyes:* AL = PL = PM = 2; a ⩾ ¾, b = ½, c = d = 2/3 (there is some variation). *Sternum:* As in the male. *Abdomen* (Figs. 34-36): Covered with rather long silky hairs. *Chelicerae:* As in the male; the falces less long and slender. The basal tooth in the anterior row the smallest. *Palp:* With no claw. *Legs:* Uniformly light yellow to light olive. Spines strong. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.90	0.23	0.75	0.78	0.52	3.18
II	0.80	0.23	0.70	0.70	0.48	2.91
III	0.63	0.18	0.58	0.54	0.38	2.31
IV	0.88	0.23	0.78	0.80	0.48	3.17

Position of tibial spines: I = 0.27 and 0.83, II = 0.27 and 0.82, III = 0.28, IV = 0.29. Position of Tm: I and II = 0.63, III = 0.59, IV = 0.60. Tibia I length/breadth = 10. Length patella spine = 0.33 mm. Length tibia IV spine = 0.30 mm. *Epigyne:* Fig. 43.

Material examined: Holotype ♂ and paratype ♀ (BMNH 1981.10.23.28-29), Fraser's Hill, 5 Sept. 1973, in deep broad-leaf litter. Paratypes: 2 ♂♂, 1 ♀ (BMNH 1981.10.23.30-32), Fraser's Hill, 1330-1500 m, 4 Sept. 73, in papyrus leaves on sand mixed with dead bracken; 1 ♂, 2 ♀♀ (BMNH 1981.10.23. 33-35), Fraser's Hill, Jerian waterfall, about 800 m, 8 Sept. 73, in broad-leaf litter at side of track.

Derivatio nominis: The species is named in affectionate memory of the late Father Chrysanthus and in admiration of his work on New Guinea spiders.

Genus *Kuala* gen. n.

Carapace: Raised behind the eyes, with sulci in the male. *Eyes:* Large. *Abdomen:* With a pattern. *Chelicerae:* Outer margin with 6 teeth (4 in the male), inner with 4. *Legs:* Dorsal tibial spines: 2.2.1.1. (no lateral tibial spines). Metatarsus IV with a trichobothrium. Tm = 0.6-0.7. *Male palp:* Tibia divided (Fig. 52) but with no well-defined apophysis. The embolic division displaced to the outside of the palp; embolus long, turning in a counter-clockwise direction; RP reduced (Figs. 50, 51); SA large and prominent. *Female palp:* Without a claw. Type species: *Kuala versa* sp. n.

Kuala versa sp. n. (Figs. 44-54)

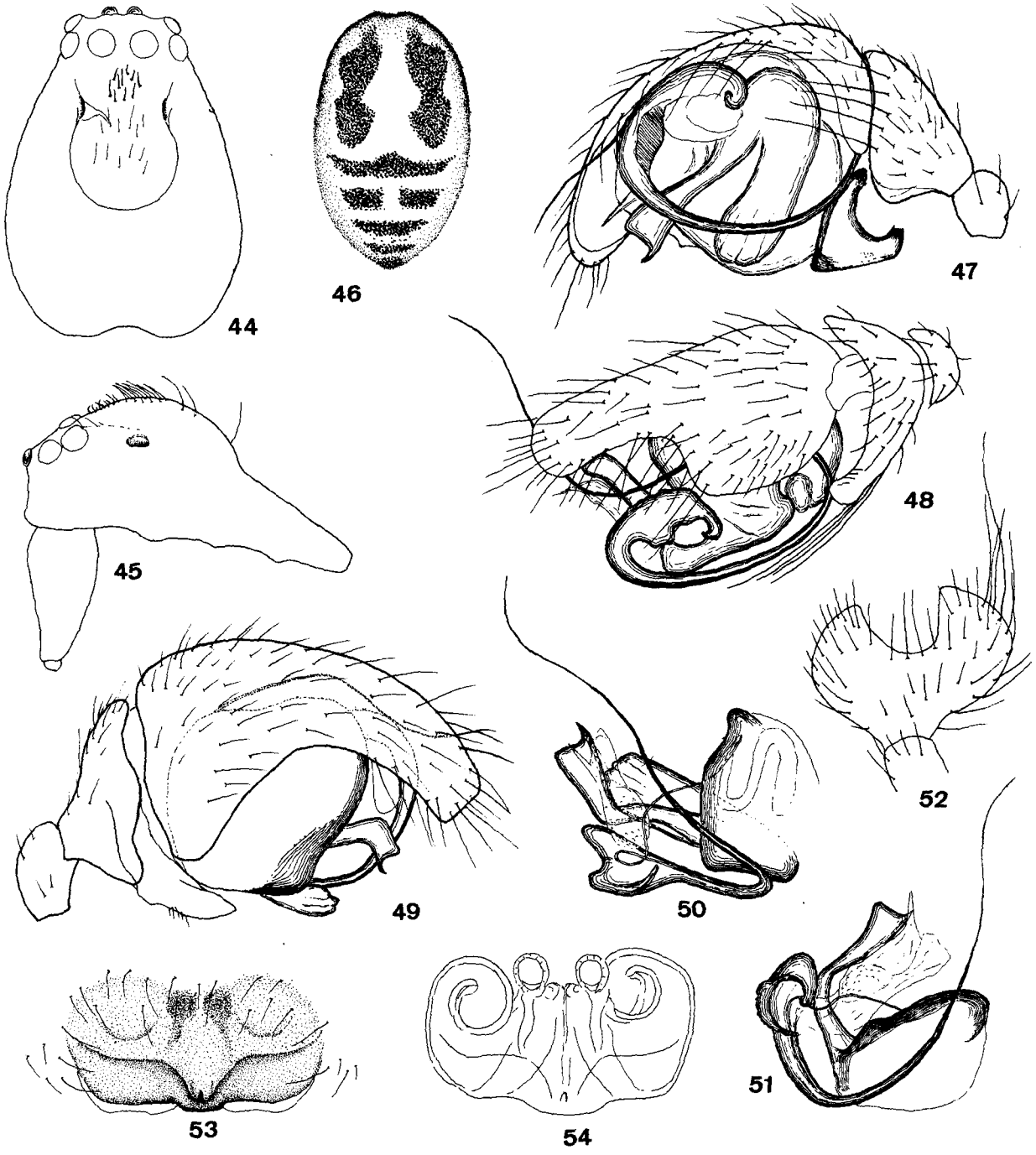
It is difficult to classify this species in view of the structure and conformation of the male palp. In some respects, such as the form of the male carapace with its sulci and tufted hairs, abdomen with long silky hairs, dorsal tibial spines 2.2.1.1., Tm greater than 0.5, epigyne and, in some ways, the general structure of the male palp and its tibia, there is a definite resemblance to *Lasiargus* (Kulczynski, 1895) or *Acanthophyma* (Locket, Millidge & Merrett, 1974). However, the palpal conformation is very peculiar in that the embolic division is displaced to the outer side of the palp and the long embolus is accommodated as almost a circle, turning in a counter-clockwise direction. The radical part, deeply sclerotised and almost black on its dorsal side, is quite small. Attached to the "stalk" between the ED and suprategulum is a nearly transparent weakly sclerotised membranous part directed forward and mesally with a forward-directed point (Fig. 51). The suprategulum is deeply sclerotised and black and the SA has two parts, one forward-projecting with a prominent hook, the other a broad plate, with apical striations, attached near the base of the first part.

Male

Carapace length: 0.87 mm. *Total length:* 2.00 mm. *Carapace:* Medium sepia brown with darker radiating striae. The region sloping upwards behind the eyes lighter; here is a group of short stout bristles followed by a group of finer ones. Post-ocular pits as in Figs. 44, 45. *Eyes:* Figs. 44, 45. *Sternum:* Uniform dark brown to black. *Abdomen:* Covered thinly with rather long silky hairs. A grey to black pattern on a whitish grey ground (Fig. 46). The general pattern is constant but the outline of the dark parts varies considerably; the transverse bars on the posterior half are sometimes distinct, sometimes fused completely. Ventrally uniformly dark. *Chelicerae:* Coloured as the carapace; not specially developed. Anterior teeth 4, posterior teeth 4. *Legs:* Uniform rather light orange-brown. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.97	0.25	0.90	0.83	0.57	3.52
II	0.83	0.25	0.78	0.77	0.48	3.11
III	0.69	0.21	0.58	0.62	0.40	2.50
IV	0.87	0.23	0.82	0.83	0.48	3.23

Position of tibial spines: I = 0.17 and 0.69, II = 0.18



Figs. 44-54: *Kuala versa* sp. n. **44** Carapace, ♂ (dorsal); **45** Ditto (lateral); **46** Abdomen pattern, ♂; **47** Left palp (ecto-ventral); **48** Ditto (ecto-dorsal); **49** Ditto (mesal); **50** Ditto, embolic division, suprategulum and SA (displaced by expansion); **51** Ditto (from more outside); **52** Right palpal tibia (dorsal); **53** Epigyne; **54** Vulva outlines.

and 0.66, III = 0.29, IV = 0.27. Position of Tm: I, II and III = 0.62, IV = 0.70. Tibia I length/breadth = 10. Length tibia IV spine = 0.37 mm. *Male palp:* Described above. Figs. 47-52.

Female

Carapace length: 1.00 mm. *Total length:* 2.25 mm. *Carapace:* Coloured as in the male, but with no lighter region. Raised slightly behind the eyes, this region bearing some long bristles. *Eyes:* AL = PL = 2½, PM = 2; a = ½, b = 2/3, c = d = ½. *Sternum* and *abdomen* as in the male. *Chelicerae:* Similar to the male, but anterior teeth 6, posterior 3 and 4. *Legs:* Coloured as the male. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.88	0.25	0.83	0.78	0.50	3.24
II	0.83	0.23	0.72	0.72	0.47	2.97
III	0.73	0.23	0.52	0.60	0.38	2.46
IV	0.90	0.25	0.78	0.80	0.35	3.08

Position of tibial spines: I = 0.20 and 0.66, II = 0.21 and 0.65, III = 0.29, IV = 0.24. Position of Tm: I = 0.68, II, III and IV = 0.72. Tibia I length/breadth = 8½. *Epigyne:* Fig. 53. *Vulva:* Fig. 54.

Material examined: Holotype ♂ (BMNH 1981. 10.23.36) with paratypes 11 ♂♂ (BMNH 1981.10. 23.37-49), Fraser's Hill, about 1000 m, 8 Sept. 1973, in dense vines, exposed, near running water, *ca* 120-150 cm from the ground. Paratypes 7 ♂♂ (BMNH 1981.10.23.50-56), Fraser's Hill, 5 Sept. 73, beaten from dense succulent vegetation in the open, 60-120 cm from the ground.

Genus *Batueta* gen. n.

It has not been possible to accommodate the single species here described in an existing genus.

Carapace: Covered with deep impressions in the male, none in the female. *Sternum:* With similar impressions in the male. *Eyes:* Large and closely grouped. *Abdomen:* No definite pattern. *Chelicerae:* With 2 teeth on each margin. *Legs:* Dorsal tibial spines: 1.1.1.1. Tibia I with 1 prolateral spine. Each tibia with a long trichobothrium at just under 0.5. Tm = 0.2-0.3. *Male palp:* Tibia with no apophysis, patella with a prominent spine. Cymbium with a basal apophysis. Paracymbium large. Embolus coiled distally, originating in a membranous bulb. Type species: *Batueta voluta* sp. n.

***Batueta voluta* sp. n.** (Figs. 55-63)

Male

Carapace length: 0.60 mm. *Total length:* 1.22 mm. *Carapace* (Fig. 55). Yellow-brown with deep impressions arranged more or less in radiating lines. *Eyes:* Large and closely grouped (Fig. 55); AL = 1¼, PM = 1¼, PL = 1; a = 1/3, b = 1/2, c = 2/3, d = ½. *Sternum:* With punctuations like the carapace; with or without a grey pigmentation. *Abdomen:* Whitish grey with a dark patch laterally just anterior to the spinners. *Chelicerae* (Fig. 56): Coloured as the carapace; not specially modified in shape. Teeth small, 2 on the posterior margin, 2 on the anterior; a larger blunt tooth lies proximally to these near the mesal margin. *Legs:* Uniform light yellow-brown. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.60	0.16	0.54	0.46	0.36	2.12
II	0.52	0.14	0.46	0.40	0.32	1.84
III	0.38	0.14	0.32	0.32	0.28	1.44
IV	0.50	0.12	0.50	0.40	0.30	1.82

Position of dorsal tibial spines: I = 0.7, II = 0.75, III = 0.3, IV = 0.35 (proximal spines were not identified on any specimen). The single tibia I prolateral spine = 0.7. Position of Tm: I = 0.17, II = 0.19. Tibia I length/breadth = 9. There is a large trichobothrium (length 0.14-0.15 mm) on each tibia at just under 0.5. *Male palp* (Figs. 57-60): An erect pointed apophysis arises from the base of the cymbium (Figs. 59, 60). Paracymbium large (Fig. 60). The coiled embolus originates in a membranous bulb (Fig. 57). The SA is dark and prominent. Tibia without an apophysis; patella with a thick prominent spine.

Female

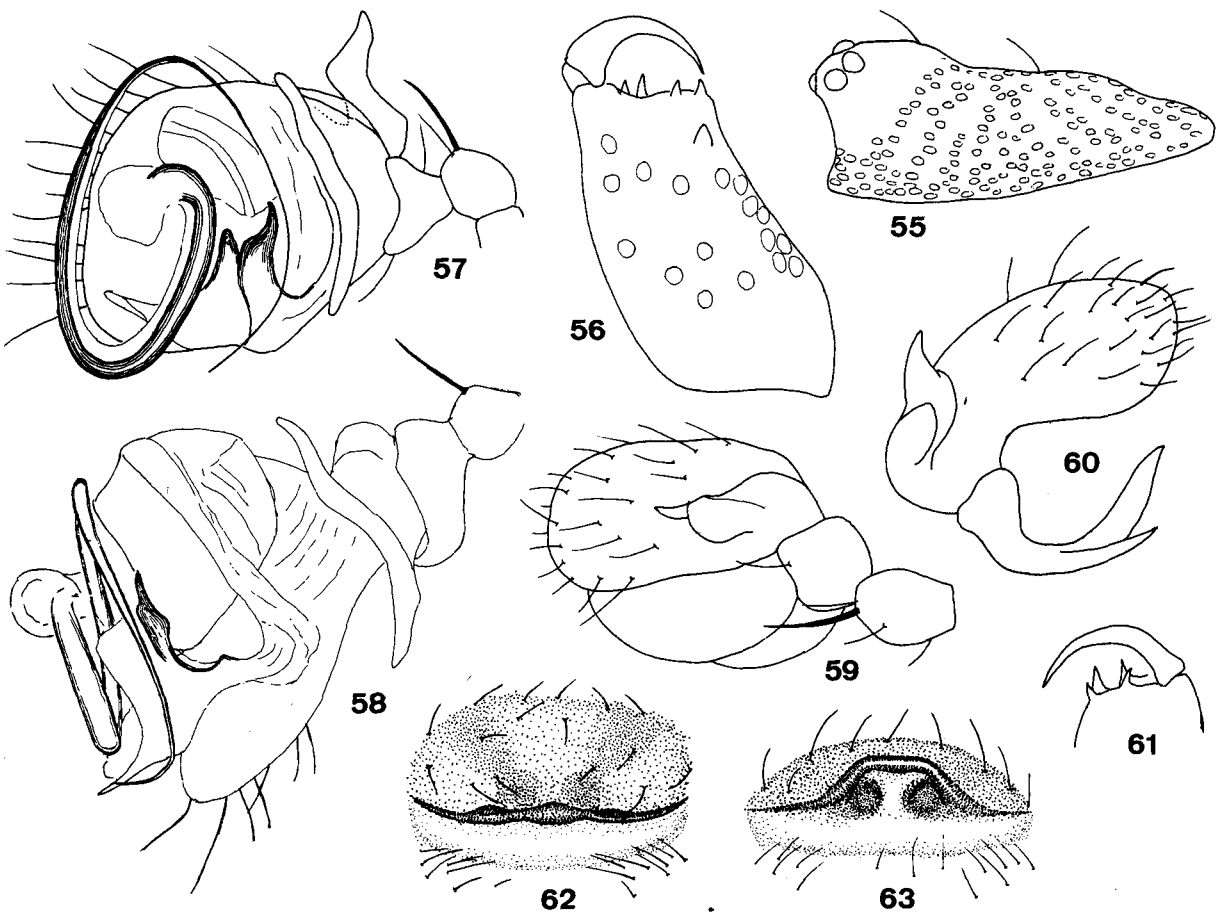
Carapace length: 0.49 mm. *Total length:* 0.79 mm. Sclerotisation generally very weak, the specimens having a waxy appearance. *Carapace:* Very light brown with some faint dusky radiating striae; a faint darker border round the head. No punctuations. *Eyes:* Large; AL = PM = PL = 1½; a = b = 1/3, c = ½, d = ¼. *Sternum:* Medium grey. *Abdomen:* Almost white, a little darker round the spinners. *Chelicerae:* Coloured as the carapace; 2 teeth on the anterior margin, 2 on the posterior disposed as in Fig. 61. *Legs:* Coloured as the carapace. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.41	0.15	0.38	0.33	0.30	1.57
II	0.39	0.14	0.35	0.31	0.28	1.47
III	0.35	0.13	0.25	0.25	0.24	1.22
IV	0.43	0.14	0.38	0.35	0.31	1.61

Position of dorsal tibial spines: I and II = 0.6 (no other dorsal spines were found). Tibia I prolateral spine = 0.53. Position of Tm: I = 0.25, II = 0.21, III = 0.23 (none found on IV). Tibia I length/breadth = 7. As in the male a large trichobothrium on each tibia at just under 0.5, its length 0.14-0.15 mm. *Palp:* Tarsus slightly swollen; no claw. *Epigyne:* Figs. 62, 63.

Material examined: Holotype ♂ (BMNH 1981.10.23.57), Seletar, 18 Sept. 1973, in litter on absorbent sand, in shade, side of lake. Paratypes: 1 ♂ (BMNH 1981.10.23.58), Seletar, same data as holotype; 3 ♀♀ (BMNH 1981.10.23.59-61), Seletar, 16 Sept. 73, in deep broad-leafed litter, exposed marsh vegetation on a sandy base, not floodable; 1 ♂ (BMNH 1981.10.23.58), Seletar, same data as holotype; 73), from thin layer of small thin-leafed litter overlying granular soil, probably from the existence of "runnels" subject to periodic flooding.

It seems almost certain that these males and females are the same species. The following are the points of resemblance and difference:



Figs. 55-63: *Batueta voluta* sp. n. **55** Carapace, ♂; **56** Left chelicera, ♂; **57** Left palp (ecto-ventral); **58** Ditto (slightly expanded); **59** Left palp (dorsal); **60** Right cymbium and paracymbium (ecto-dorsal); **61** Tip of right chelicera, ♀; **62** Epigyne; **63** Ditto (from behind).

	Male	Female
Carapace length:	0.60 mm	0.49 mm
Carapace, chelicerae and sternum:	Punctate	Not punctate
Eyes:	Not very different	
Legs:	Not very different	
	No proximal tibial spines	
Tibia I dorsal spine:	0.75	0.6
Prolateral spine:	0.70	0.53
Trichobothrium:	A little less than 0.5	
Length of above:	0.09 mm	0.14 mm
Tibia I length/breadth:	9	7
Tm I and II:	0.2 to 0.25	

Genus *Johorea* gen. n.

Carapace and abdomen as in Fig. 64, having a pattern. *Chelicerae:* Outer margin with 4 teeth. *Legs:* Dorsal tibial spines: 2.2.2.2. Tibia I with 1 prolateral and 1 retrolateral spine. Femur I with 1 prolateral spine. Metatarsus IV without a trichobothrium. Tm about 0.2. *Male palp:* Tibia with apophyses (Fig. 67). Embolus long and coiled, with a U-shaped cross section. *Female palp:* Without a claw. Type species: *Johorea decorata* sp. n.

***Johorea decorata* sp. n.** (Figs. 64-70)

This species presents another problem. Leg spines suggest a linyphiine, but the rather complicated male palpal tibia, the epigyne and the female palp without a claw are erigonine characters. The structure of the male palp has not been entirely elucidated with the material available, but the species does not seem to conform to an existing genus. The long free embolus is folded along its basal and medial length to give a U-shaped cross section. How much of this is accommodated in the vulva is not clear.

Male holotype

Carapace length: 0.61 mm. *Total length:* 1.35 mm. *Carapace* (Fig. 64): Sepia lateral bands on a light brown ground. *Eyes:* Anterior medians slightly the largest and contiguous; AL = PL = PM $\lessapprox$ 1; a = $\rightarrow$ 0, b = ¼, c = 1, d = 2/3 (the sizes and distances differ from those of the female). *Sternum:* A little darker than the carapace. *Abdomen:* A very little darker than the carapace, with a pattern (Fig. 64). *Chelicerae:* Not modified, coloured as the carapace, a little darker at the base. Anterior margin with 4 teeth (posterior margin not seen; chelicerae close against maxillae). *Legs:* Ground colour as the carapace with sooty annulations, all segments light at the base. Tibiae with 2 dorsal spines; tibia I with 1 prolateral and 1 retrolateral spine. Femur with 1 prolateral spine. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.58	0.15	0.56	0.59	0.41	2.29
II	0.55	0.15	0.47	0.50	0.38	2.05
III	0.36	0.14	0.37	0.35	0.26	1.48
IV	0.51	0.15	0.43	0.48	0.30	1.87

Position of dorsal tibial spines: I = 0.11 and 0.67, II = 0.13 and 0.66, III = 0.14 and 0.59, IV = 0.13 and 0.64. Position of femur I prolateral spine = 0.64. Tibia I prolateral spine = 0.62, retrolateral = 0.58. Position of Tm: I = 0.16. Tibia I length/breadth = 9. *Male palp:* Figs. 65-68 (see above. The SA has a wide semi-membranous portion apically.

Female paratype

Carapace length: 0.53 mm. *Total length:* 1.05 mm. *Carapace:* As in the male. *Eyes:* AL = PL = PM = 5/3; a = ½, b = 1, c = 1, d = 1/3. *Sternum* and *abdomen:* As in the male. *Chelicerae:* Slightly darker than the carapace, darker again towards the base. Anterior margin with 4 teeth, posterior with 3. *Legs:* Coloured as in the male, the annulations wider; spines the same also. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.69	0.15	0.52	0.60	0.44	2.40
II	0.62	0.15	0.50	0.55	0.40	2.22
III	0.40	0.14	0.32	0.40	0.24	1.50
IV	0.51	0.15	0.41	0.52	0.33	1.92

Position of dorsal tibial spines: I = 0.12 and 0.64, II = 0.12 and 0.65, III = 0.15 and 0.62, IV = 0.15 and 0.65. Position of femur I prolateral spine = 0.58. Tibia I prolateral = 0.62, retrolateral = 0.62. Position of Tm: I, II and III = 0.2. Tibia I length/breadth = 9. *Epigyne* (Figs. 69, 70): Hardly sclerotised externally. The spermathecae conspicuous as 2 dark patches.

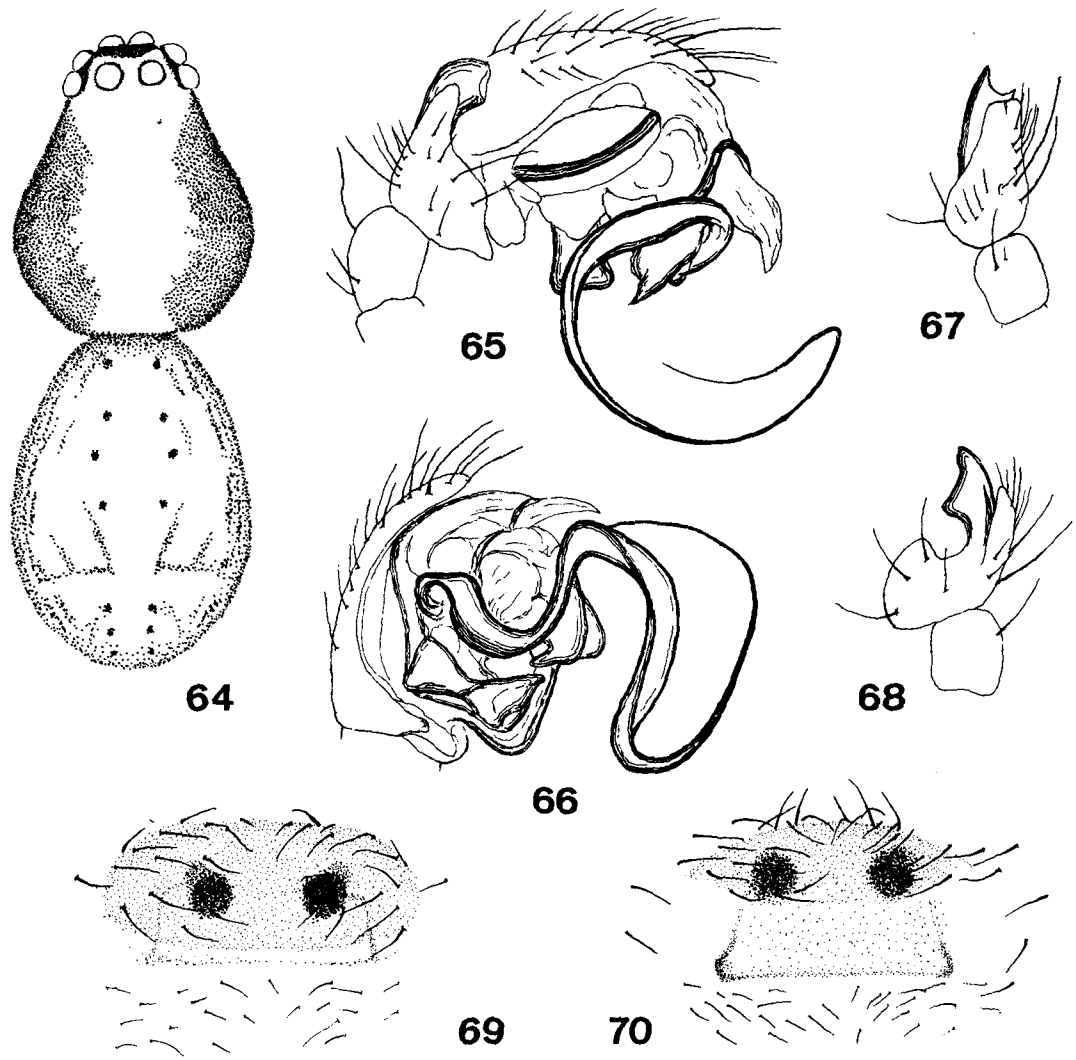
Material examined: Holotype ♂ with paratype ♀ (BMNH 1981.10.23.63-64), Seletar, 18 Sept. 1973, side of lake, litter on watershed.

Genus *Parameioneta* gen. n.

Carapace: Not different from *Meioneta. Eyes:* Large and closely grouped. *Chelicerae:* With 4-5 teeth on the outer margin, 3-4 on the inner. *Legs:* Dorsal tibial spines: 2.2.2.2. No lateral tibial spines. No metatarsal spines. Metatarsus IV without a trichobothrium. Tm 0.2-0.3. *Male palp:* Tibia with an apophysis. Paracymbium different from *Meioneta.* Embolic division with a lamella and large terminal apophysis. Embolus shaped differently from that of *Meioneta,* the duct opening terminally. Type species: *Parameioneta spicata* sp. n.

***Parameioneta spicata* sp. n.** (Figs. 71-79)

For the following reasons it has seemed necessary to create a separate genus for this species, which has the palpal conformation of *Meioneta* Hull but whose sclerites differ in some important respects. Whereas in



Figs. 64-70: *Johorea decorata* sp. n. **64** Carapace and abdomen pattern, ♂; **65** Right palp (ectal); **66** Left palp (mesal); **67** Right palpal tibia (dorsal); **68** Ditto (mesal); **69** Epigyne; **70** Ditto (from behind).

Meioneta the paracymbium is remarkably constant in form, the outer arm tapering to a blunt extremity, in the present species it is quite different (Figs. 74, 76). The embolus is also different in shape and has a terminal duct opening (Fig. 75), whereas in *Meioneta* species and those of related genera, synonymised by Saaristo (1973) with *Agyneta* Hull, it is a large arched sclerite with the duct opening not terminal. (In speaking of *Meioneta* as a genus distinct from *Agyneta* I am far from ignoring the excellent analysis of Saaristo (loc. cit.) but, apart from some reservations about the interpretation of his data, the use of *Meioneta* (including *saxatilis*), in view of his Table 1 (1973, p. 458), is very convenient, especially as the form occurs frequently in tropical climates.)

In the female the epigyne and vulva, although not far from *Meioneta*, are not typical of that genus (Figs. 77-79).

Male

Carapace length: 0.69 mm. *Total length:* 1.6 mm. *Carapace:* Uniform sepia with faint darker striae. *Eyes:* Fig. 71. *Sternum:* A little darker than the carapace. *Abdomen:* Light grey to white with grey or black darker parts (Fig. 72). Sometimes the darker regions contain light areas of variable size. Ventrally uniformly as the light parts of the darker regions on the anterior dorsal surface. *Chelicerae* (Fig. 71): With 4 teeth in the outer margin, the apical very small; 3 small teeth on the inner margin. *Legs:* Light yellow-brown, uniformly coloured. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.60	0.17	0.60	0.60	0.40	2.37
II	0.55	0.17	0.54	0.50	0.38	2.14
III	0.48	0.15	0.37	0.40	0.27	1.67
IV	0.63	0.17	0.55	0.52	0.38	2.25

Position of dorsal tibial spines: I = 0.22 and 0.75, II = 0.21 and 0.72, III = 0.23 and 0.68, IV = 0.24 and 0.79. No lateral spines on tibiae; no metatarsal spines. Position of Tm: I = 0.21, II = 0.20, III = 0.21. Tibia I length/breadth = 9. *Male palp:* The tip of the outer arm of the paracymbium is bifid; there is a prominent black blunt tooth at the base of the outer arm. Within the arm is a semi-membranous flange (Figs. 74, 76). The embolus is inconspicuous, and bears 2 small terminal membranes; terminal apophysis well developed but smaller than in *Meioneta*; the lamella is a long narrow spike. Tibia with a short sharp hooked apophysis (Fig. 73).

Female

Carapace length: 0.70 mm. *Total length:* 1.73 mm. *Carapace, eyes, sternum, colouration of legs:* As in the male. *Abdomen:* Colouration as in the male but the lighter areas can replace some or all of the darker areas, which can have light centres. The dorsal surface sometimes uniformly light; ventral surface as in the male. *Legs:* Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.63	0.17	0.63	0.57	0.40	2.40
II	0.58	0.17	0.52	0.50	0.37	2.04
III	0.49	0.14	0.40	0.45	0.30	1.78
IV	0.65	0.18	0.58	0.55	0.38	2.34

Position of dorsal tibial spines: I = 0.24 and 0.71, II = 0.22 and 0.68, III = 0.28 and 0.71, IV = 0.31 and 0.83. Position of Tm: I, II, and III = 0.31. Tibia I length/breadth = 9½. *Chelicerae:* 5 teeth on the outer and 4 on the inner margin. *Epigyne:* Figs. 77-79.

Material examined: Holotype ♂ and paratype ♀ (BMNH 1981.10.23.65-66), Fraser's Hill, 6 Sept. 1973, in roots of vine round a derelict hut, moist transient habitat. Paratypes: 1 ♂, 9 ♀♀ (BMNH 1981.10.23.82, 84-92), Batu, 3 Sept. 73, from broad-leaf litter at foot of cliffs, overlying mud where the soil is clearly subject to intermittent flooding; 1 ♀ (BMNH 1981.10.23.83), Fraser's Hill, 8 Sept. 73, in broad-leaf litter at side of track; 1 ♀ (BMNH 1981. 10.23.93), Batu, 13 Sept. 73, in coarse "islands" of flood-surrounded litter at foot of cliffs.

Genus *Theonina* E. Simon 1929

***Theonina tricaudata* sp. n.** (Figs. 80-89)

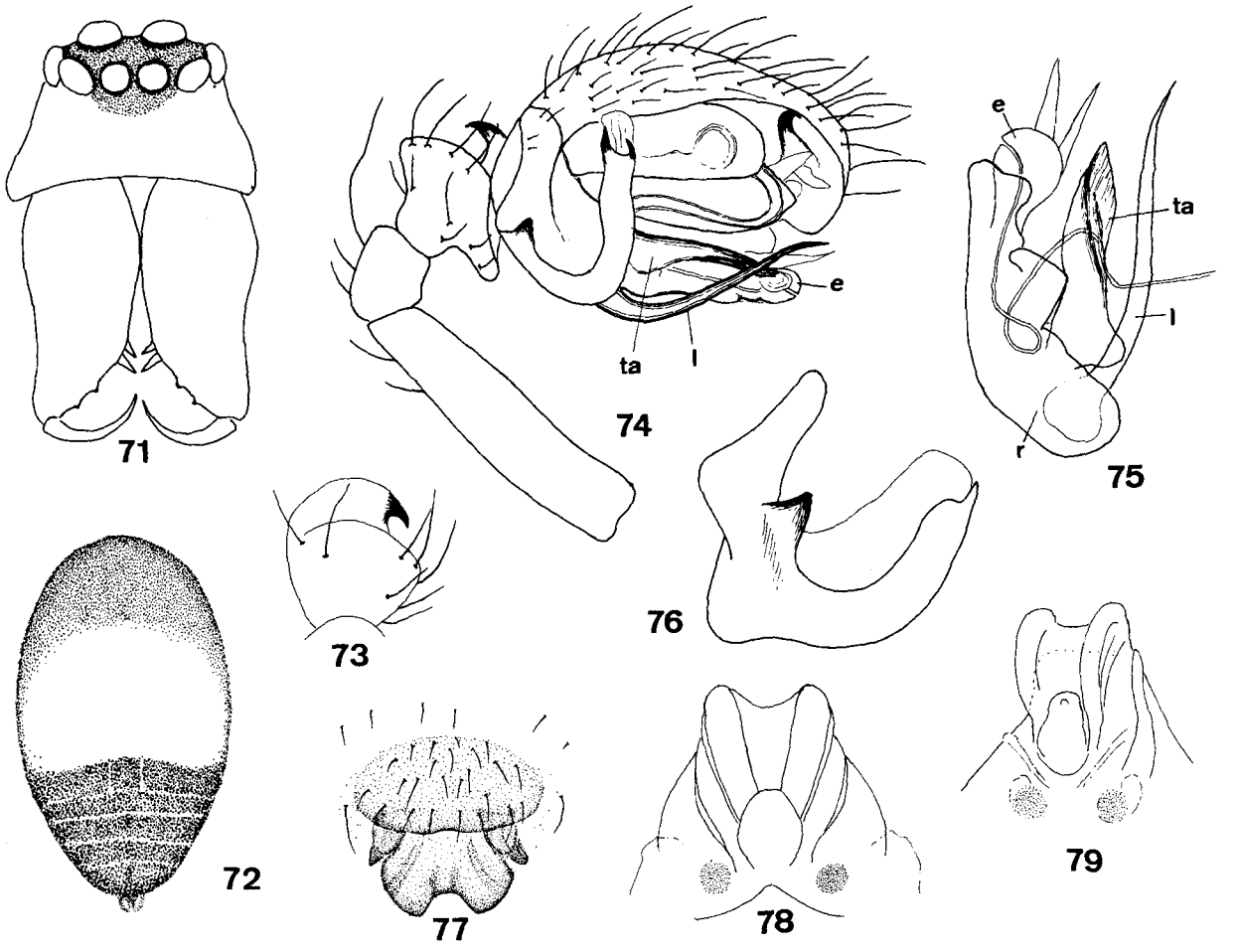
This species can probably be placed in *Theonina*. It differs from *Meioneta* in having the opening of the embolus duct at the tip of the sclerite and in having no separate terminal apophysis (Fig. 87). It differs from *Troglohyphantes* in not having the characteristic groove on the cymbium, in having a different shaped knob on the radix, which is remarkably constant in *Troglohyphantes* (see for instance Deeleman-Reinhold, 1978), and in having no lateral tibial spines or any metatarsal spines. It differs from

Theonina Simon in having no lateral spines on tibiae I and II (but cf. *Meioneta* in this respect) and no trichobothrium on metatarsus IV and a different knob on the radix (see Saaristo, 1974, fig. 12 B). It is closer to *Theonina* than to any other genus, one may note especially the male palpal structure, the cymbial projections, the long legs and broad carapace.

Male

Carapace length: 0.62 mm. *Total length:* 1.24 mm.

Carapace (Figs. 80, 81): Uniform light yellow-brown, no markings or borderline. *Eyes* (Fig. 82): AM much the smallest. *Sternum:* Coloured as the abdomen, very lightly chagrined, with long sparse hairs. Obtusely pointed; coxae IV separated by ½ diam. of a coxa. *Abdomen:* With sparse hairs; uniform light grey, no pattern. *Chelicerae:* Hardly divergent; anterior margin with 4 teeth (Fig. 83) the apical 2 much smaller, posterior margin with 2. *Legs:* Uniformly coloured as the carapace. No proximal



Figs. 71-79: *Parameioneta spicata* sp. n. **71** Facies and chelicerae, ♂; **72** Abdomen pattern, ♂; **73** Right palpal tibia (dorsal); **74** Right palp (ectal); **75** Ditto, embolic division (ectal and expanded); **76** Paracymbium (from behind); **77** Epigyne; **78, 79** Ditto (from behind). (e = embolus, l = lamella, r = radix, ta = terminal apophysis).

dorsal tibial spines found nor lateral spines, nor metatarsal spines. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.80	0.18	0.80	0.64	0.46	2.88
II	0.72	0.18	0.70	0.58	0.40	2.58
III	0.62	0.16	0.52	0.50	0.34	2.14
IV	0.72	0.18	0.70	0.60	0.44	2.64

Position of dorsal tibial spines: I = 0.70, II = 0.80, III = 0.81. Position of Tm: I = 0.14, II = 0.16, III = ?0.12. Tibia I length/breadth = 10. (In no specimen, male or female, were proximal tibial spines found. The loss of spines in this lot of specimens had been severe but it seems unlikely that all such proximal spines could have been lost.) *Male palp* (Figs. 84-87): A long strong apophysis, trifid at its apex, extends from the dorso-mesal side of the cymbium (Fig. 86). The embolus is of the curved type found in *Troglohyphantes* and *Theonina* with the duct opening at the tip and having an enlargement like a Fickert's gland about half way along (Fig. 87). A large and complicated lamella is attached further along the radix, there being no separate terminal apophysis.

Female

Carapace length: 0.54 mm. *Total length:* 1.14 mm. *Carapace, eyes, sternum, abdomen* as in the male. *Chelicerae:* Fig. 88. *Legs:* Coloured as in the male. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.78	0.20	0.74	0.64	0.52	2.88
II	0.68	0.18	0.64	0.56	0.44	2.50
III	0.60	0.14	0.46	0.50	0.34	2.04
IV	0.78	0.18	0.68	0.64	0.44	2.72

Position of dorsal tibial spines: I and II = 0.7, III = 0.77, IV = 0.81. Position of Tm: I = 0.14, II = ?, III = 0.18. Tibia I length/breadth = 11. *Epigyne* (Fig. 89): Weakly sclerotised, having a waxy appearance. Spermathecae very large.

Material examined: Holotype ♂ (1981.10.23.94), Batu, Zone I, 13 Sept. 1973, from coarse litter at cliff foot (liable to flooding). Paratypes: 3 ♂♂, (BMNH 1981.10.23.95-97), 3 ♀♀, same data as holotype; 1 ♂, same place as holotype, 12 Sept. 73, big-leaf litter at foot of cliff, spiders concentrated (due to flooding) in an area 90-120 cm from the foot of the cliff.

Genus *Kaestneria* H. Wiehle 1956

Kaestneria minima sp. n. (Figs. 90-95)

Both somatic characters and the structure of the male palp seem to justify placing this small species in *Kaestneria.* Sclerotisation is very weak and it has not been possible to establish the structure of the epigyne and vulva of the single female available.

Male holotype

Carapace length: 0.95 mm. *Total length:* 1.90 mm. The single specimen is almost uniform very light yellow to creamy white, sclerotisation being very weak. *Carapace:* With faint dusky radiating striae. *Eyes* (Fig. 90): Large and closely grouped. *Sternum:* A very light whitish grey. *Abdomen:* Creamy white, no pattern. *Chelicerae* (Figs. 90, 91): Coloured as the carapace. With an excrescence posteriorly near the base. There are 3 small teeth in the inner row. *Legs:* Creamy white, lighter than the carapace. Femora I and II with a dorsal spine; tibia I with a prolateral and a retrolateral spine, tibia II with one retrolateral spine. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	1.05	0.22	1.05	0.98	0.68	3.98
II	1.05	0.22	1.00	0.90	0.62	3.79
III	0.90	0.20	0.70	0.70	0.48	2.98
IV	1.10	0.22	1.03	0.95	0.63	3.93

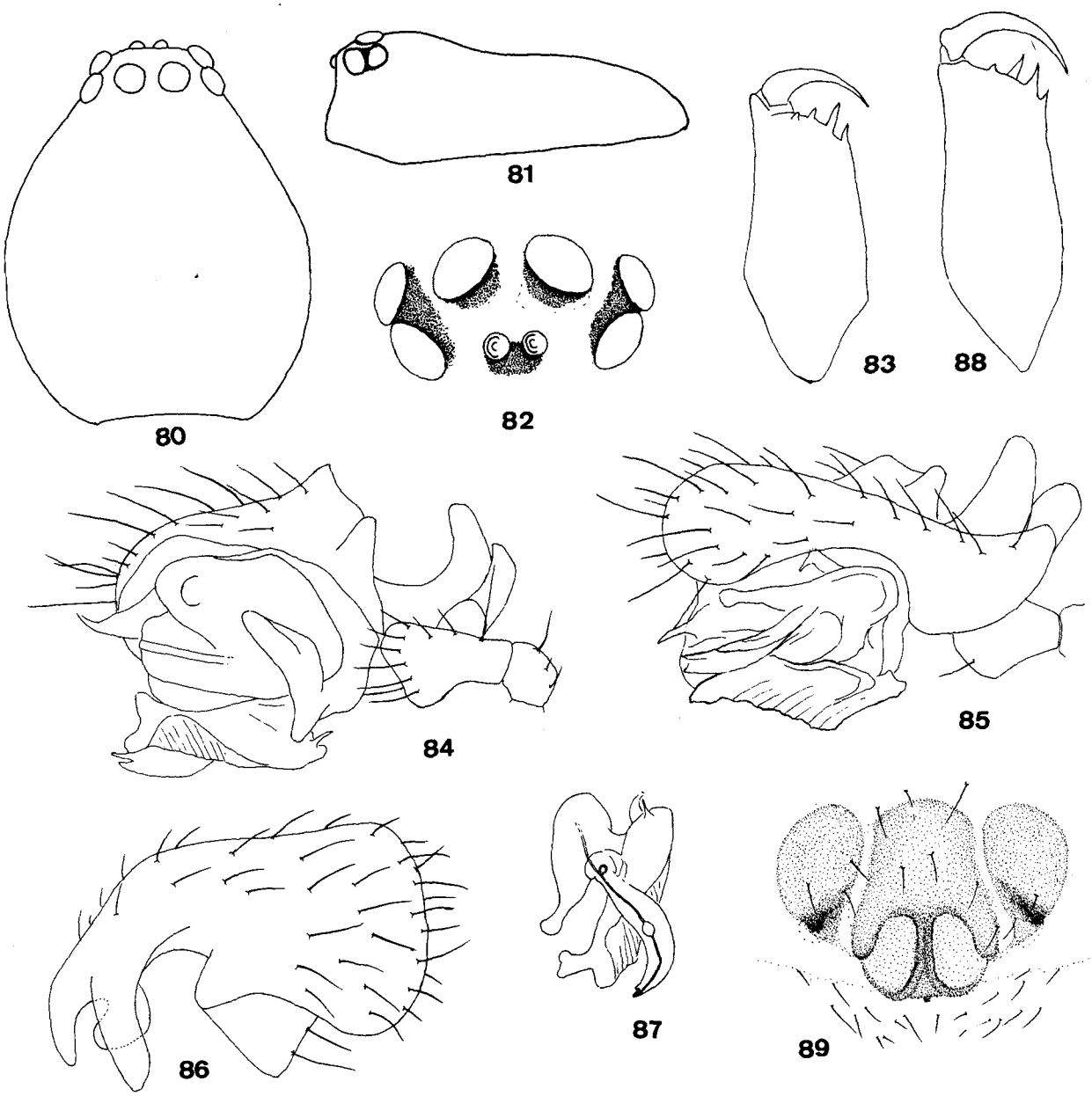
Position of dorsal tibial spines: I = 0.25 and 0.72, II = 0.27 and 0.79, III = 0.32 and 0.79, IV = 0.31 and 0.82. Position of tibia I prolateral spine = 0.62, retrolateral = 0.68. Position of tibia II retrolateral spine = 0.61. Position of Tm: I = 0.22 (trichobothria on the other metatarsi lost). Tibia I length/breadth = 9. *Male palp* (Figs. 92, 93): The conformation of the parts is characteristic. The suprategular apophysis is membranous and scarcely sclerotised.

Female paratype

Carapace length: 0.70 mm. *Total length:* 1.55 mm. *Carapace, sternum, chelicerae* and *legs:* Coloured as in the male, sclerotisation again being very weak. *Eyes:* As in the male. *Chelicerae* (Fig. 94): With 2 strong teeth close to one another in the outer row; 3 smaller teeth in the inner row. *Legs:* Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.85	0.20	0.78	0.73	0.52	3.08
II	0.75	0.18	0.73	0.68	0.50	2.84
III	0.55	0.18	0.55	0.50	0.40	2.18
IV	0.80	0.20	0.78	0.73	0.48	2.99

Position of dorsal tibial spines: I = 0.26 and 0.71, II = 0.38 and 0.69, III = 0.32 and 0.73, IV = 0.37 and 0.81. Position of tibia I prolateral spine = 0.65, retrolateral = 0.61. Position of tibia II retrolateral



Figs. 80-89: *Theonina tricaudata* sp. n. **80** Carapace, ♂ (dorsal); **81** Ditto (lateral); **82** Eyes, ♂; **83** Left chelicera, ♂; **84** Left palp (ectal); **85** Right palp (mesal); **86** Ditto (dorsal); **87** Embolic division (in clove oil); **88** Left chelicera, ♀; **89** Epigyne.

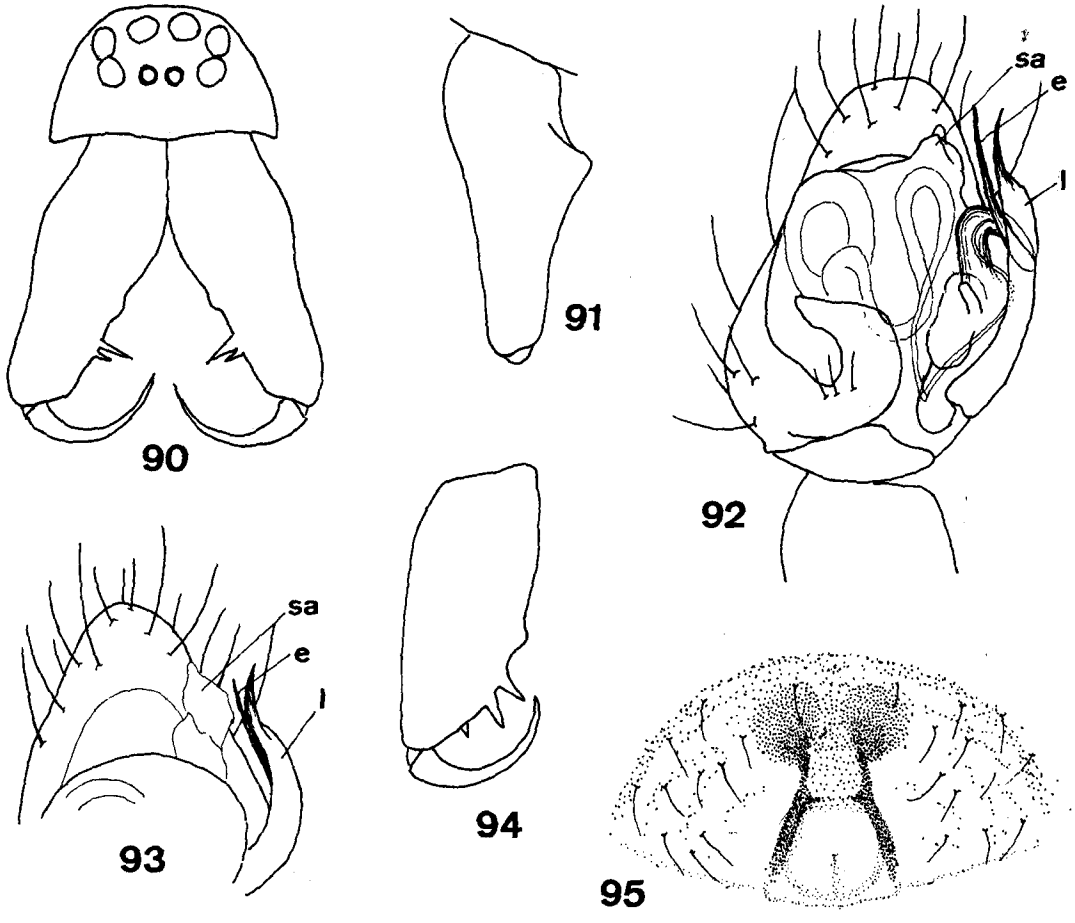
spine = 0.70. Position of Tm: III = 0.28 (trichobothria on other metatarsi lost). Tibia I length/breadth = 9½. *Epigyne* (Fig. 95): Sclerotisation was so weak that it was not possible to make out its structure.

Material examined: Holotype ♂ and paratype ♀ (BMNH 1981.10.23.98-99), Batu, 2 Sept. 1973, among rotting rushes overgrown with vines. (Although the female is smaller than the male, there seems little doubt that they are the same species, especially as they were found together).

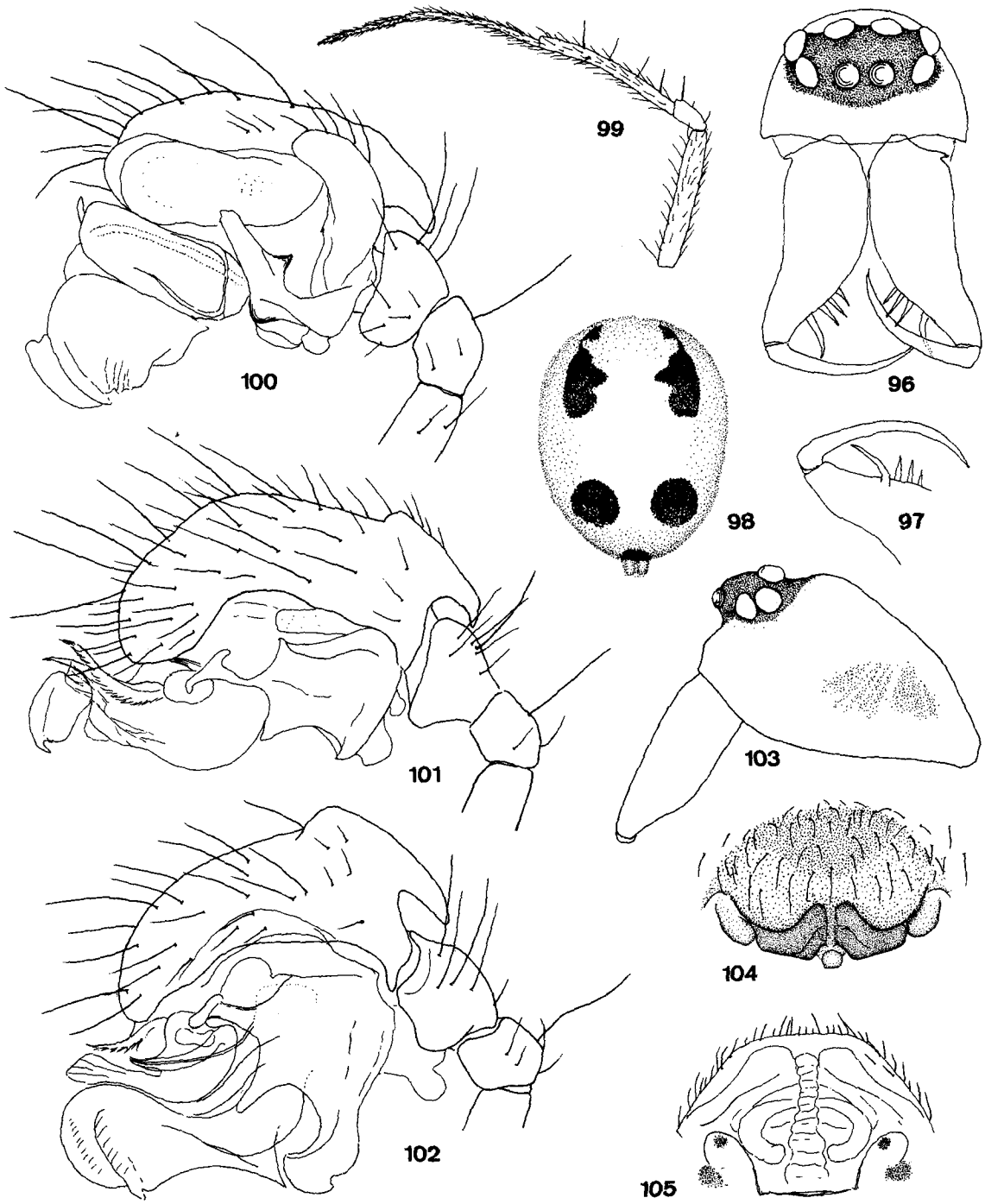
Genus *Tapinopa* N. Westring 1851

Tapinopa vara sp. n. (Figs. 96-105)

The placing of this species in *Tapinopa,* considering the male palpal organs, which are remarkably close to those of *T. longidens* (Wider), the backward extension of the cymbium and the form of the chelicerae and their teeth, seems to be justified in spite of the absence of spines on the femora and metatarsi.



Figs. 90-95: *Kaestneria minima* sp. n. **90** Facies and chelicerae, ♂; **91** Left chelicera, ♂ (ectal); **92** Right palp (ecto-ventral); **93** Ditto (ventral); **94** Right chelicera, ♀; **95** Epigyne. (e = embolus, l = lamella, sa = suprategular apophysis).



Figs. 96-105: *Tapinopa vara* sp. n. **96** Facies and chelicerae, ♂; **97** Tip of right chelicera, ♂, showing single long inner tooth; **98** Abdomen pattern, ♂; **99** Leg I, ♂; **100** Left palp (ectal); **101** Right palp (mesal); **102** Ditto (meso-ventral, in clove oil to show embolus); **103** Carapace, ♀; **104** Epigyne; **105** Ditto (from behind).

Position of Tm: I = 0.16, II = 0.14 (no other trichobothria were visible). Tibia I length/breadth = 12½. *Male palp* (Figs. 100-102): Cymbium with a projection posteriorly. There is a close resemblance to *Tapinopa longidens.* The radix has a fixed lamella and a very large terminal apophysis extends forwards; embolus small and inconspicuous (Fig. 102).

Female paratype

Carapace length: 0.70 mm. *Total length:* 1.65 mm. *Carapace:* Lighter than the male, almost white, the dark patches somewhat larger. Profile as in Fig. 103, humped a little behind the eyes, which are prominent. *Eyes:* AL = 1½, PL = PM = 1¼; a = b = ½, c = 2/3, d = ½ (differing therefore a little from the male). *Sternum:* Black with a wide median light wedge reaching the whole length, a little wider in front. *Abdomen:* Dorsally as in the male except for another pair of dark patches between the other pairs. Laterally and ventrally as in the male. *Chelicerae:* Long, but only slightly divergent apically; falces not very long. Outer margin with 4 teeth, inner with 3-4. *Legs:* Uniform light sepia. Tibiae and metatarsi not curved as in the male. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.77	0.20	0.70	0.67	0.48	2.82
II	0.67	0.19	0.62	0.60	0.43	2.51
III	0.48	0.19	0.40	0.47	0.35	1.89
IV	0.73	0.19	0.55	0.65	0.40	2.52

Position of dorsal tibial spines: I = 0.14 and 0.64, II = 0.14 and 0.64, III = 0.17 and 0.54, IV = 0.15 and 0.67. Position of tibia I prolateral spine = 0.55, retrolateral = 0.53. Position of tibia II retrolateral spine = 0.57. Position of Tm: I = 0.18, II = 0.17, III = 0.13. Tibia I length/breadth = 9½. *Epigyne* (Figs. 104, 105): The structure has not been elucidated. A scape is seen if viewed posteriorly.

Material examined: Holotype ♂ (BMNH 1981.10.23.100), Fraser's Hill, 5 Sept. 1973, in deep broadleaf litter ("N.B. similarity of colour pattern to common Seletar theridiids"). Paratypes 2 ♀♀ (BMNH 1981.10.23.101-102), declivity by road out of Fraser's Hill, 9 Sept. 73, in deep litter (same place where ♂ was found earlier).

Genus *Neriene* J. Blackwall 1833

Neriene macella (Thorell) (Figs. 106-111)

Linyphia macella T. Thorell, 1898, p. 319.
Linyphia passercula E. Simon, 1901, p. 54.
Neriene macella; P. J. van Helsdingen, 1969, p. 186.

Two males and two females were taken on Fraser's Hill at about 1000 m in dense vines 30-120 cm from the ground. The females were in small sheet webs, the males solitary, close to running water. Van Helsdingen (1969, p. 186) describes the species, which is recorded from Burma and from the southern tip of Thailand in the Malay Peninsula, and gives excellent figures of the genitalia. He discusses the differences from *N. sundaica* (Simon) which occurs in Java (ibid. p. 192). There is no doubt, considering the vulva, especially the disposition of the spermathecae (Figs. 109, 110) and measurements of the epigynal aperture, and the terminal apophysis of the male palp that the present species is *Neriene macella* (Thorell), of which only two males and a female have been recorded previously (see Van Helsdingen, loc. cit.).

Material examined: 2 ♂♂, 2 ♀♀, Fraser's Hill, 1000 m, 8 Sept. 73 (see above). By the courtesy of Dr C. B. Goodhart I was able to compare the males with the holotype of *Linyphia passercula* (in possession of the Department of Zoology, Cambridge University) which was taken on the Skeat Expedition in 1899 and identified by Dr Van Helsdingen with *N. macella,* of which the holotype is in bad condition.

Acknowledgements

I wish to express my cordial thanks to Dr Åke Holm and Mr F. Wanless (British Museum (Natural History)) for help with specimens for comparison and to Dr C. B. Goodhart for access to material in the Department of Zoology, Cambridge University. I am grateful also to Dr A. F. Millidge for useful discussion after reading the MS and looking at some of the specimens. Dr A. D. Blest has examined the specimens and from the beginning has discussed with me matters of structure and classification (neither he nor Dr Millidge are responsible for views now expressed). These collections in western Malaysia were made with the assistance of a Grant-in-Aid to Dr A. D. Blest from the Royal Society in 1973.

References

BOSMANS, R. 1977: Spiders of the subfamily Erigoninae from Mount Kenya. *Revue Zool.afr.* **91**(2): 449-472.

DEELEMAN-REINHOLD, C. L. 1978: Revision of the cave-dwelling and related spiders of the genus *Troglohyphantes* Joseph (Linyphiidae), with special reference to the Jugoslav species. *Razpr.slov.Akad.Znan. Umet.* (Prirod.Ved.) **23**: 1-221.

HELSDINGEN, P. J. van 1970: A reclassification of the species of *Linyphia* Latreille based on the functioning of the genitalia (Araneida, Linyphiidae). Part I. *Linyphia* Latreille and *Neriene* Blackwall. *Zool.Verh. Leiden* **105**: 1-303.

HOLM, Å. 1962: The spider fauna of the East African mountains. Part I. Fam. Erigonidae. *Zool.Bidr.Upps.* **35**: 19-204.

LOCKET, G. H. & RUSSELL-SMITH, A. 1980: Spiders of the family Linyphiidae from Nigeria. *Bull.Br.arachnol. Soc.* **5**(2): 54-90.

MERRETT, P. 1963: The palpus of male spiders of the family Linyphiidae. *Proc.zool.Soc.Lond.* **140**: 347-467.

MILLER, F. 1970: Spinnenarten der Unterfamilie Micryphantinae und der Familie Theridiidae aus Angola. *Publçoes cult.Co.Diam.Angola* **82**: 75-166.

MILLIDGE, A. F. 1977: The conformation of the male palpal organs of linyphiid spiders and its application to the taxonomic and phylogenetic analysis of the family (Araneae; Linyphiidae). *Bull.Br.arachnol.Soc.* **4**: 1-60.

SAARISTO, M. I. 1973: Taxonomical analysis of the type-species of *Agyneta, Anomalaria, Meioneta, Aprolagus* and *Syedrula* (Araneae, Linyphiidae). *Ann.Zool.Fenn.* **10**: 451-466.

SAARISTO, M. I. 1974: Taxonomical analysis of *Theonina cornix* (Simon, 1881), the type-species of the genus *Theonina* Simon, 1929 (Araneae, Linyphiidae). *Ann.Zool.Fenn.* **11**: 240-243.

SIMON, E. 1901: On the Arachnida collected during the "Skeat Expedition" to the Malay Peninsula. *Proc. zool.Soc.Lond.* **1901**(2): 45-84.

THORELL, T. 1898: Viaggio di Leonardo Fea in Birmania e regioni vicine. LXXX. Secondo saggio sui ragni birmani. II. Retitelariae et Orbitelariae. *Annali Mus. civ.Stor.nat.Giacomo Doria* **39**: 271-378.

Nomenclatural Note

The International Commission on Zoological Nomenclature gives six months' notice of the possible use of its plenary powers in the following cases, published in *Bull.zool.Nom.* **39** (1), 11 March 1982, and welcomes comments and advice from interested zoologists.

Case No. 2169 *Phrynus* Lamarck, 1801 (Amblypygi): proposed conservation.

Case No. 2355 *Attus otiosus* Hentz, 1846 (Araneae, Salticidae): proposed conservation under the plenary powers.

Correspondence should be addressed to R. V. Melville, Secretary ICZN, c/o British Museum (Natural History), Cromwell Road, London SW7 5BD, if possible within six months of the original date of publication of this notice.

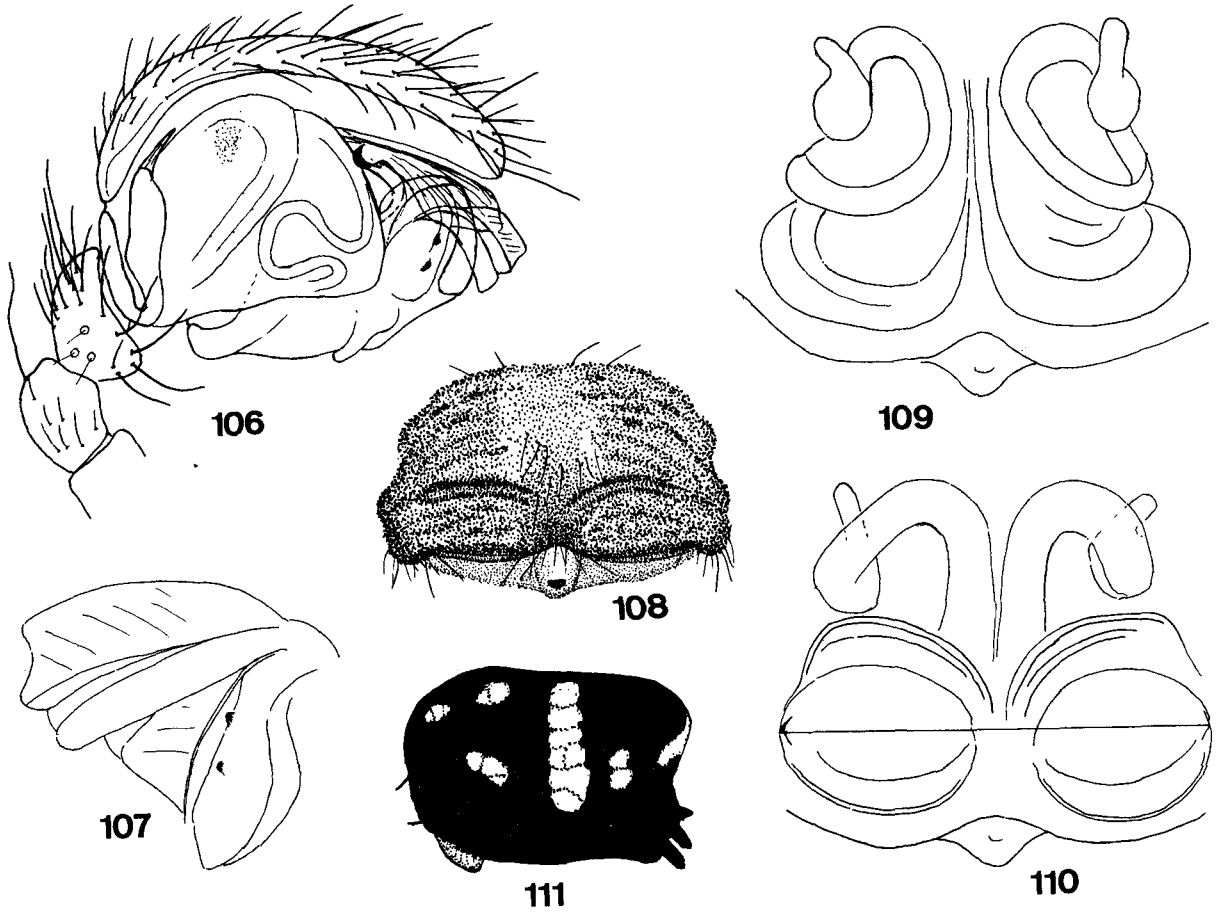
Editor

Male holotype

Carapace length: 0.73 mm. *Total length:* 1.53 mm. *Carapace:* Orange-yellow with some ill-defined radiating sooty patches near the margins at the widest part. Ocular area black. *Eyes:* Fig. 96. *Sternum:* Length: 0.38 mm, breadth: 0.42 mm. Black, lighter posteriorly and opposite the labium. Broadly truncated behind, widely separating the coxae (by about 1 diam. of a coxa.) *Abdomen:* Pale delicate coral pink (the colour fades in spirit) with conspicuous black patches (Fig. 98). Laterally a pair of wide black bands extend along the ventral half. Ventrally nearly uniform dark grey. *Chelicerae* (Figs. 96, 97): Divergent apically with very long falces. Three rather long teeth on the outer margin, a single long curved tooth on the inner margin (Fig. 97). Colour as the carapace. *Legs:* Coxae coloured as the carapace, the remaining segments a dark grey-brown. Tibiae and metatarsi I and II curved, the convexity outwards (Fig. 99). Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.80	0.20	0.83	0.75	0.54	3.12
II	0.77	0.19	0.77	0.70	0.48	2.91
III	0.58	0.19	0.38	0.48	0.35	1.98
IV	0.75	0.19	0.57	0.60	0.40	2.51

Position of dorsal tibial spines: I = 0.12 and 0.68, II = 0.09 and 0.66, III = 0.13 and 0.65, IV = 0.09 and 0.65. Position of tibia I prolateral spine = 0.59, retrolateral = 0.60. Position of tibia II retrolateral spine = 0.54. No femoral or metatarsal spines.



Figs. 106-111: *Neriene macella* (Thorell). **106** Right palp (ectal); **107** Left palp, terminal apophysis; **108** Epigyne; **109** Vulva outlines (dorsal); **110** Ditto (ventral); **111** Abdomen, ♀.