

Some spiders from the Comoro Islands

G. H. Locket

Atners Tower,
Stockbridge,
Hants., SO20 6JF

Summary

An account of part of a collection made on the island of Grande Comore during the International Coelocanth Expedition of 1972 is given. Ten species are recorded of which five are new to science: *Latrodectus geometricus* C. L. Koch, *Achaearanea alboinsignita* sp. n., *Theridion puellae* sp. n., *Coleosoma floridanum* N. Banks, *Argyrodes minax* O. P.-Cambridge (Theridiidae); *Leucauge russellsmithi* sp. n. (Tetragnathidae); *Cyclosa insulana* (Costa), *Polys horridus* sp. n. (Araneidae); *Labullula annulipes* Strand, *Neriene comoroensis* sp. n. (Linyphiidae).

Introduction

The spiders described in this paper form part of a collection made by Dr N. A. Locket during the International Coelocanth Expedition of 1972 on the island of Grande Comore. This is the largest of the Comoro group situated in the northern part of the Mozambique Channel about 300 km from East Africa, 400 km from Madagascar and 400 km SW of Aldabra. They are of volcanic origin and comparatively recent compared with, for instance, the Seychelles. The spiders are mostly small species found mainly in litter and on plants at ground level in four localities:

(A) *Itsandra*, at sea level. Collection was made from round about the hotel, on bushes and among herbage; some specimens were from ground level, some from under bits of rubbish.

(B) *M'Lima Manda*, above Boboni (alt. 1070 m). The habitat is degraded forest and contains cattle. Collecting was from apparently undisturbed leaf litter, mostly at the roots of trees. Ground layer plants were at or just above the ground surface.

(C) *la Grille*. This was eucalyptus plantation at the north of the island and was not like the forest, being much flatter and with long grass and bracken between the trees, which were all young, 10-20 cm in diameter. Spiders were collected from the ground

layer by pulling clumps of grass apart and searching among the roots. "There was a thin soil layer and the spiders were either in or on that or among grass stems." Few if any were seen in webs.

(D) *M'De*. Around the laboratory; low bushes and flowering plants (of the species described only *Coleosoma floridanum* comes from here).

The following species were taken:

	Locality
Theridiidae	
<i>Latrodectus geometricus</i> C. L. Koch	A
<i>Achaearanea alboinsignita</i> sp.n.	C
<i>Theridion puellae</i> sp. n.	C
<i>Coleosoma floridanum</i> N. Banks	D
<i>Argyrodes minax</i> O. P.-Cambridge	B
Tetragnathidae	
<i>Leucauge russellsmithi</i> sp. n.	A, B
Araneidae	
<i>Cyclosa insulana</i> (O. Costa)	B
<i>Polys horridus</i> sp. n.	C
Linyphiidae	
<i>Labullula annulipes</i> E. Strand	C
<i>Neriene comoroensis</i> sp. n.	C

All specimens including the holotypes are deposited in the British Museum (Natural History).

In describing the size of and distances between eyes the following symbols have been used to avoid verbiage: AL, PM, PL are the diameters of those eyes as multiples of the diam. 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 in multiples of the diameter of a posterior median. In the example shown in Fig. 1, AL = PM = PL = 1½; a = ½, b = 1, c = 1, d = ½.

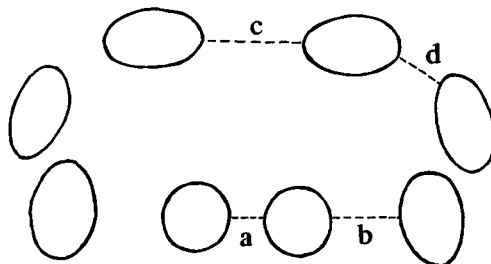


Fig. 1: Diagram to illustrate eye measurements.

Family THERIDIIDAE

Genus *Latrodectus* C. A. Walckenaer*Latrodectus geometricus* C. L. Koch

Latrodectus geometricus C. L. Koch, 1841, p. 117.

Levi (1967, p. 185) says "... is widespread in tropical America, but always associated with man, in porches, opuntia cacti in gardens, where it makes its webs. It probably has been carried all over the world by man. It is common in Hawaii and is found in New Guinea and probably other areas in the Pacific."

Material examined: Locality A, Itsandra, at sea level, 1 ♀.

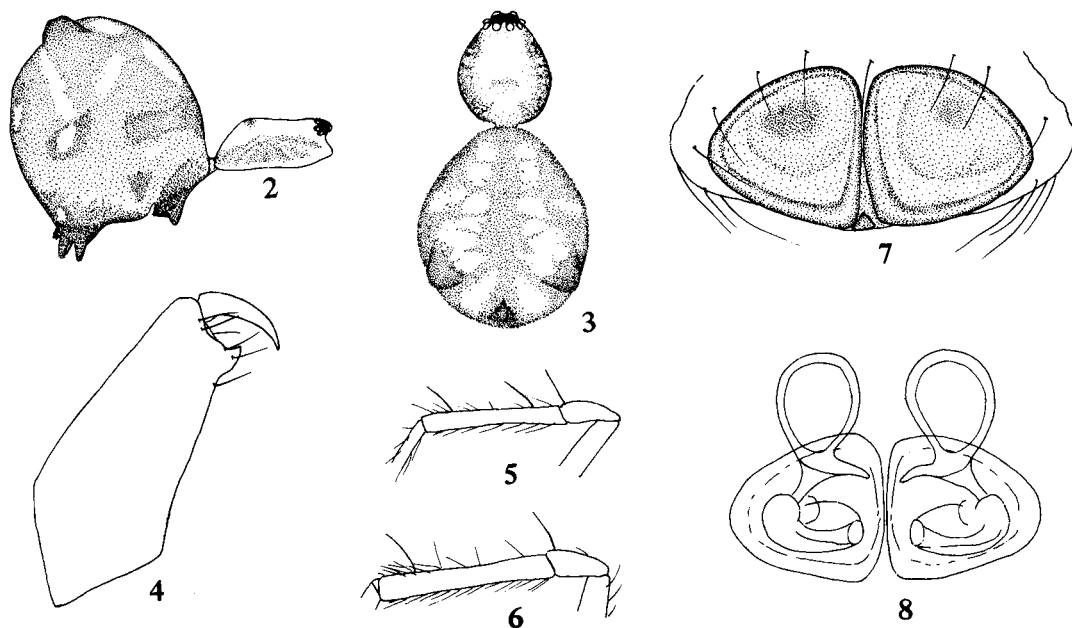
Genus *Achaearanea* E. Strand*Achaearanea alboinsignita* sp. n. (Figs. 2-8)

It is not possible to assign this species certainly to a genus without the male. The shape of the abdomen, the single tooth on the outer cheliceral margin and the presence of leg spines are consistent with *Achaearanea* (see Levi, 1955). The epigyne is unusually large.

Female

Carapace length: 0.78 mm. *Total length*: 1.86 mm. *Carapace*: Light yellow-brown with grey lateral bands (Figs. 2, 3). Ocular area dark, projecting somewhat over the clypeus (Fig. 2). *Eyes*: Anterior medians the largest. $AL = PM = PL = 2/3$; $a = 1$, $b = 1/3$, $c = 1\frac{1}{4}$, $d = 2/3$. *Sternum*: Uniform black. *Abdomen*: Ground colour light yellow-brown with white patches which become conspicuous on preservation, disposed as in Figs. 2 and 3. There is a pair of dark coloured lumps dorsally. Spinners on darkened prominence surrounded by a dark area. No colulus. *Chelicerae*: Fig. 4. Darkened anteriorly. *Legs*: Light yellow-brown. Apical half of femur IV, patella IV and tibia IV with dark grey sides. Tibiae with quite strong erect dorsal spines (Figs. 5, 6) (these and the numerous bristles are readily lost). Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	1.60	0.28	1.00	1.52	0.72	5.12
II	1.06	0.26	0.56	0.86	0.50	3.24
III	0.60	0.20	0.36	0.50	0.44	2.10
IV	1.20	0.26	0.70	0.90	0.50	3.56



Figs. 2-8: *Achaearanea alboinsignita* sp. n., ♀. 2 Carapace and abdomen (lateral); 3 Ditto (dorsal); 4 Left chelicera (outer); 5 Tibia II; 6 Tibia IV; 7 Epigyne; 8 Vulva.

Position of metatarsal trichobothria: I = 0.22, II = 0.24, III = 0.27. Dorsal tibial spines: 2.2.1.1; position: I = (missing?) and 0.80, II = 0.11 and 0.71, III = 0.23, IV = 0.77. Tibia I length/breadth = 13. *Palp*: With a claw and with some thickened curved bristles apically. *Epigyne*: Fig. 7. Large and projecting; orange-red sclerotization. *Vulva*: Fig. 8.

Material examined: Holotype ♀, locality C, la Grille, in grass clumps in a eucalyptus plantation (BM (NH) 1980. 3. 18. 1).

Genus *Theridion* C. A. Walckenaer

Theridion puellae sp. n. (Figs. 9-11)

Female

Carapace length: 0.63 mm. *Total length*: 1.56 mm. The ground colour of the whole body and limbs a light yellow-brown. *Carapace*: The head a V-shaped darker area. *Eyes*: AL = 1 1/5, PL = PM = 1 1/3; a = 1 1/4, b = c = d = 3/4. *Sternum*: As the rest of the body, uniform. *Abdomen*: With six black patches disposed as in Fig. 9; the remaining area with white patches in the prevailing ground colour. An additional black patch on each side is divided into 2 or 3 parts. Ventrally: uniform ground colour. No colulus. *Chelicerae*: Apparently lacking teeth. *Legs*: Uniform light yellow-brown. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.60	0.20	0.39	0.39	0.31	1.89
II	0.47	0.20	0.28	0.31	0.26	1.52
III	0.35	0.15	0.21	0.24	0.23	1.18
IV	0.47	0.20	0.35	0.33	0.26	1.61

Position of metatarsal trichobothria: I = 0.3, II = 0.3, III = ?, IV = 0.4. Dorsal tibial spines: 1.1.?;1; position: I = 0.1, II = 0.17, III = (?), IV = 0.1. Tibia I length/breadth = 5. Length tibia IV spine = 0.15 mm. Palp with a claw. *Epigyne*: Fig. 10. Rather featureless, a small circular opening.

Male

Carapace length: 0.56 mm. *Total length*: 1.29 mm. Colouration and markings as in the female. *Eyes*: AL = PL = PM = 1; a = 1 1/4, b = 1/2, c = 1, d = 3/4. *Legs*: Coloured as in the female. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.60	0.19	0.47	0.46	0.35	2.07
II	0.51	0.19	0.36	0.35	0.29	1.70
III	0.37	0.14	0.22	0.25	0.22	1.20
IV	0.55	0.20	0.35	0.36	0.26	1.72

Position of metatarsal trichobothria: I = 0.22, II = 0.28, III and IV missing. Dorsal tibial spines: 1.1.1.1; position: I = 0.13, II = 0.12, III = 0.14, IV = 0.09. Tibia I length/breadth = 6.3. *Male palp*: Fig. 11. With a long embolus (seen in clove oil).

Material examined: Holotype ♂ and paratype ♀, locality C, la Grille, in grass clumps in eucalyptus plantation (BM (NH) 1980. 3. 18. 2-3).

The name acknowledges the help of a very young volunteer who insisted on collecting and understood, without the aid of language, that small spiders were required.

Genus *Coleosoma* O.P.-Cambridge

Coleosoma floridanum N. Banks

Coleosoma floridanum N. Banks, 1900, p. 98.

Levi (1959, p. 7) describes the species as cosmopolitan and gives a map of its distribution, which shows one African locality. He tells me (in litt.) that this is Ho, Togo, and that more recently specimens have been collected in Accra, Ghana. There seem to be no other African records. Levi considers that the species has been distributed by man owing to its habit of clinging to vegetation. Most records are from Central America, where it may be native; it has also been recorded from India and the New Hebrides (Levi, 1967, p. 182).

Material examined: Locality D, M'De, low plants around the laboratory, 1 ♀.

Genus *Argyrodes* E. Simon

Argyrodes minax O. P.-Cambridge (Figs. 12-14)

Argyrodes minax O. P.-Cambridge, 1880, p. 336, pl.xxix, fig. 150.

Male

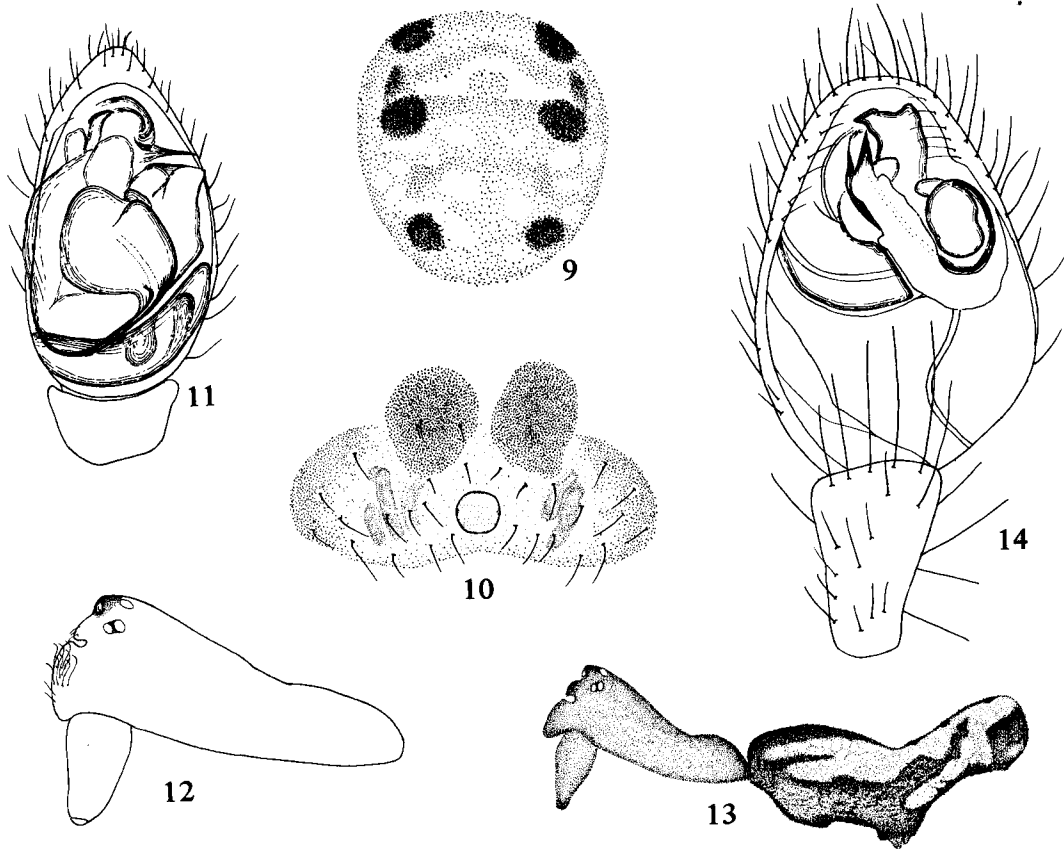
Carapace length: 1.45 mm. *Total length*: 3.30 mm. *Carapace*: Medium brown with slightly darker markings. Transverse fovea and a transverse groove in the clypeus (Fig. 12). *Sternum*: Black. *Abdomen*: Black with lighter, nearly white, regions containing

silver blotches (Fig. 13). Ventrally black with a long oval light patch between spinners and epigastric fold. Two more light patches lie each side of and just posterior to spinners. *Legs*: Dark olive. Tibia I darkened apically and metatarsus I wholly, except at base. Tarsi not darkened. Other legs hardly darkened, but femora lighter than the rest. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	3.90	0.45	3.60	3.80	1.60	13.35
II	1.70	0.35	1.30	1.30	0.80	5.45
III	0.80	0.25	0.50	0.45	0.35	2.35
IV	1.40	0.30	0.80	0.85	0.55	3.90

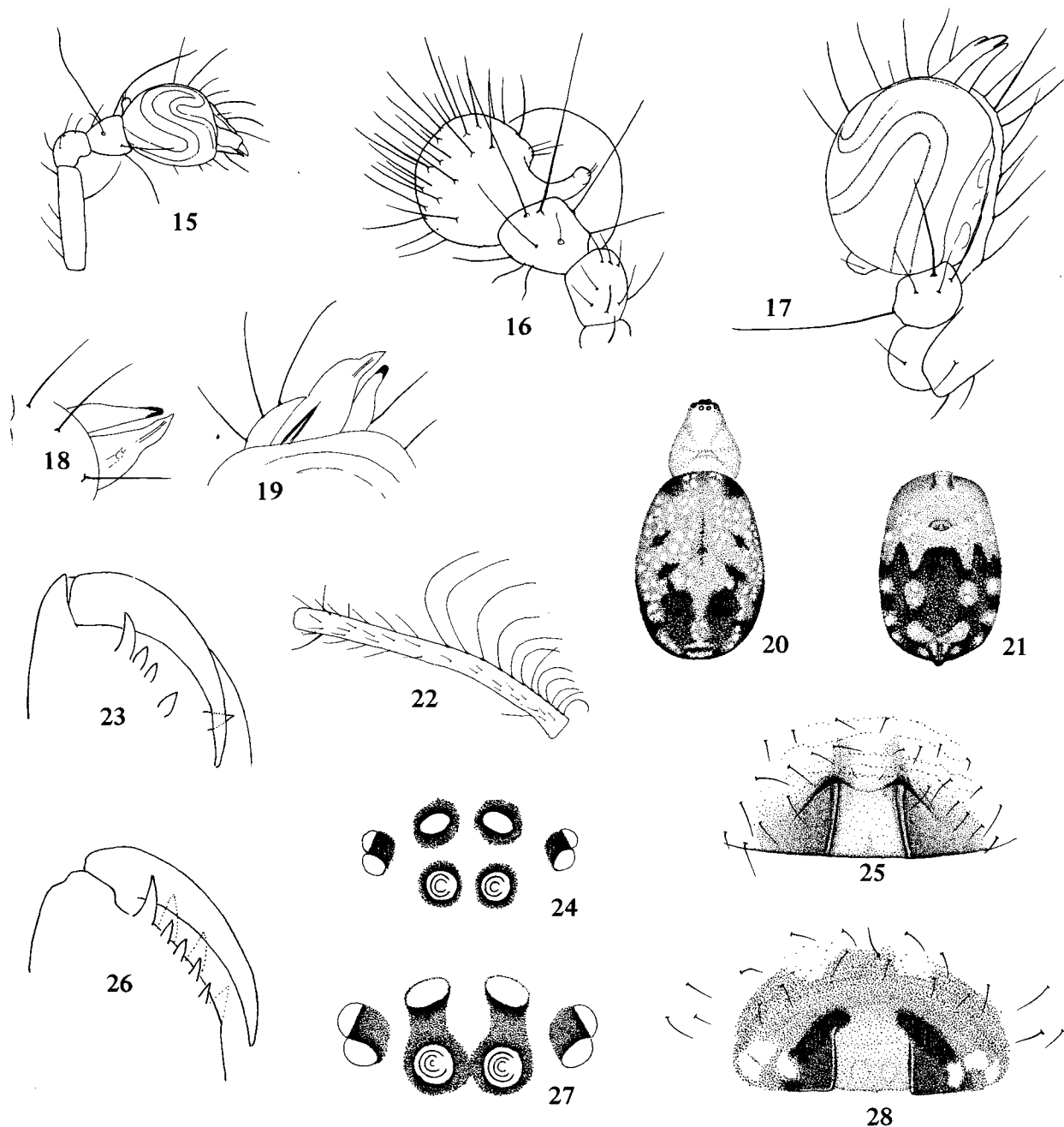
Breadth tibia I = 0.16 mm. *Male palp*: Fig. 14. O. P.-Cambridge gives no figure of this. The species seems to belong to Exline & Levi's *cancellatus* group (Exline & Levi, 1962, p. 147) but is not close to the described American species.

Material examined: Locality B, M'Lima Manda, in forest above Boboni, at ground level, 2 ♂♂. These have been compared with the holotype male from Madagascar (leg. R. H. Meade. Hope Department, Oxford, Bottle No. 555, tube 50). No other specimens appear to have been identified. *Leg measurements of the holotype male*:



Figs. 9-11: *Theridion puellae* sp. n. 9 Female abdomen (dorsal); 10 Epigyne; 11 Left male palp (ventral).

Figs. 12-14: *Argyrodes minax* O. P.-Cambridge, ♂. 12 Carapace (lateral); 13 Carapace and abdomen (lateral); 14 Left palp (ventral).



Figs. 15-25: *Leucauge russellsmithi* sp. n. 15 Right male palp (ventral); 16 Ditto (postero-dorsal); 17 Ditto (meso-ventral); 18 Embolus and accompanying apophysis (dorsal); 19 Ditto (ventral); 20 Carapace and abdomen, ♀ (dorsal); 21 Abdomen, ♀ (ventral); 22 Left femur IV, ♀ (ventral); 23 Cheliceral teeth, ♀ (inner row); 24 Eyes, ♀; 25 Epigyne.

Figs. 26-28: *Leucauge argyrescens* Benoit, ♀. 26 Cheliceral teeth (inner row); 27 Eyes; 28 Epigyne.

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	4.00	(missing)				
II	1.60	0.37	1.30	1.20	0.80	5.27
III	0.75	0.28	0.50	0.50	0.25	2.28
IV	1.30	0.28	0.80	0.83	0.48	3.69

Family TETRAGNATHIDAE

Genus *Leucauge* White

Leucauge russellsmithi sp. n. (Figs. 15-25)

This little species was found on low bushes and plants at ground level in three places. Mr. A. Russell-Smith points out to me that it bears a very close resemblance to *Leucauge argyrescens* Benoit (Benoit, 1978, p. 671) (of which only the female is known) from the Seychelles both in colouration and in leg measurements, but differs in the following respects: (a) The sternum in *L. argyrescens* is uniformly dark brown but in *L. russellsmithi* it is light brown, sometimes with a dark borderline; (b) in *L. argyrescens* the inner margin of the chelicera bears a large apical tooth followed by 4 small teeth (Fig. 26), but in *L. russellsmithi* only 3 teeth accompany the large apical one (Fig. 23) (it was possible to examine 2 paratypes of each species for this character); (c) the size and spacing of the eyes and pigmentation of the ocular areas are different (Figs. 24, 27); (d) in the epigyne of *L. argyrescens* the square median septum is flanked by deeply sclerotized dark areas (clearly shown in Benoit's fig. 3e) and there is a deeply pigmented area beyond these (Fig. 28). In *L. russellsmithi* these areas are hardly sclerotized or pigmented, but the dark "eye-brows" anteriorly (see Fig. 25) are present in all the paratypes and seem to be characteristic. (4 paratypes of *L. argyrescens*, available through the kindness of Professor Benoit, and 5 of *L. russellsmithi* were used in these comparisons.)

Male

Carapace length: 1.08 mm. *Total length*: 2.05 mm. *Carapace*: Light yellow. *Sternum*: Ground colour as the carapace, but with dusky radiations and a thin black borderline. *Abdomen*: Darkened posteriorly; light silver patches dorso-laterally and ventrally. *Legs*: Femora coloured as the carapace. Tibiae I and II darkening gradually to the apex; metatarsi the same

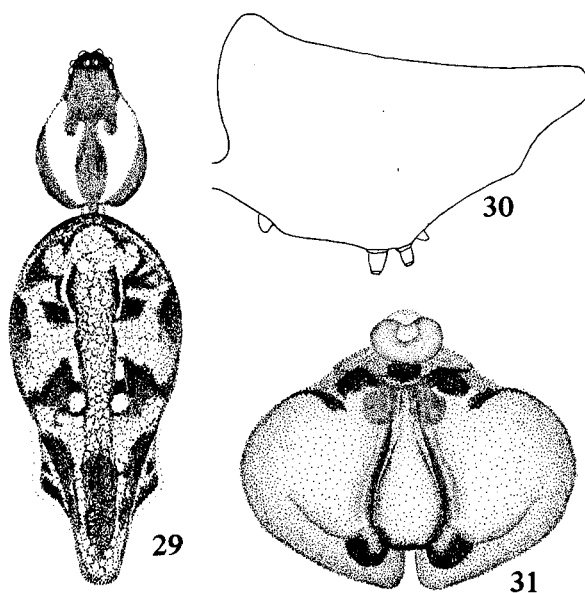
colour. Some darkening also on III and IV. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	2.50	0.50	2.25	2.05	0.80	8.10
II	1.90	0.45	1.65	1.50	0.70	6.20
III	0.80	0.25	0.55	0.55	0.45	2.60
IV	1.60	0.25	1.15	1.40	0.55	4.95

Tibia I length/breadth = about 18. *Chelicerae*: 3 strong teeth in outer row; inner row with one strong apical tooth and three smaller teeth. *Male palp*: Figs. 15-19.

Female

Carapace length: 1.25 mm. *Total length*: 3.5 mm. *Carapace*: Uniform whitish yellow. *Sternum*: Whitish yellow, with long hairs. *Abdomen*: As carapace, but slightly darker, with silver patches and dark markings as in Fig. 20. Ventrally as in Fig. 21. *Legs*: Coxae and femora coloured as carapace; tibiae, metatarsi and tarsi darkened. Measurements:



Figs. 29-31: *Cyclosa insulana* (Costa), ♀. 29 Carapace and abdomen (dorsal); 30 Abdomen profile; 31 Epigyne.

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	2.40	0.55	2.08	2.25	0.75	8.03
II	1.88	0.48	1.50	1.62	0.70	6.18
III	1.05	0.28	0.55	0.70	0.43	3.01
IV	1.75	0.40	1.13	1.38	0.50	5.16

Tibia I length/breadth = 14. Trichobothria on femur IV: Fig. 22. *Chelicerae*: 3 strong equal teeth in outer row; inner row with one strong apical tooth and three smaller teeth (Fig. 23). *Epigyne*: Fig. 25.

Material examined: Holotype ♂, paratypes 2 ♀♀, locality B, M'Lima Manda, shrub layer, 18 March 72 (BM (NH) 1980. 3. 18. 7-9); paratypes 2 ♀♀, locality A, Itsandra, shrub layer at sea level (BM (NH) 1980. 3. 18. 10-11); paratype ♀, locality B, forest above Boboni (BM (NH) 1980. 3. 18. 12).

Family ARANEIDAE

Genus *Cyclosa* A. Menge

Cyclosa insulana (O. Costa) (Figs. 29-31)

Epeira insulana O. Costa, 1834, p. 65; P. Bonnet, 1956, p. 1317; Fr Chrysanthus, 1961, p. 199.

There is little doubt of the identity of the single female taken. The species is very variable and occurs from the Mediterranean to the Pacific including Africa (see Bonnet, 1956, 2 (2): 1317 and Chrysanthus, 1961, p. 199). In view of its variability the body and epigyne are figured (Figs. 29-31).

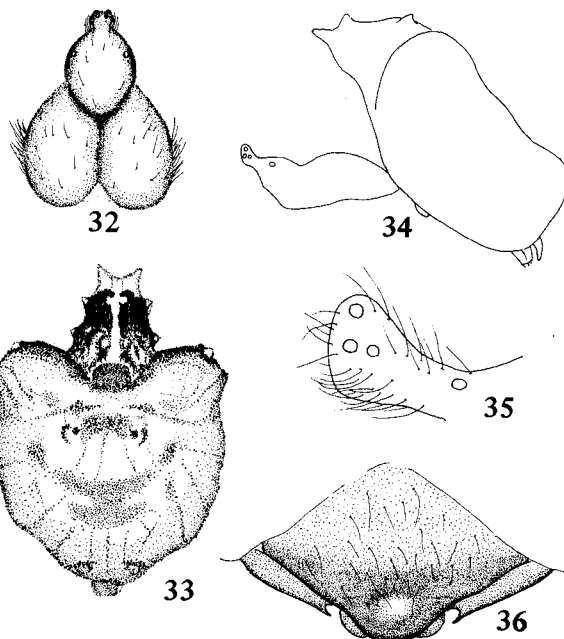
Carapace length: 1.7 mm. *Total length*: 6.8 mm. *Carapace*: Fig. 29. The pattern dark chocolate brown on a white ground. *Sternum*: Coloured as carapace; a light patch opposite coxae I, II, III, the anterior pair joined. *Abdomen*: Figs. 29, 30. Light parts silver, darkest nearly black. *Legs*: Femora white, apical half dark brown and one brown annulation in the middle of the basal half. Tibiae and metatarsi with annulations apically and at about the middle. Patellae with a dark patch. *Epigyne*: Fig. 31.

Material examined: Locality B, M'Lima Manda, shrub layer, 18 March 72, 1 ♀.

Genus *Poltys* C. L. Koch

Poltys horridus sp. n. (Figs. 32-36)

No description could be found applicable to the single female belonging to this genus and one must assume that it is a new species.



Figs. 32-36: *Poltys horridus* sp. n., ♀. 32 Carapace (dorsal); 33 Abdomen (dorsal); 34 Carapace and abdomen, profile; 35 Eyes (lateral); 36 Epigyne.

Female

Carapace length: 4.1 mm. *Total length*: 7.2 mm. *Carapace*: Fig. 32. Light yellow-brown, the hairs light and silky. Grooves deep and coloured red-brown. *Eyes*: Fig. 35. *Sternum*: Medium brown with faint lighter herring-bone pattern. *Abdomen*: Figs. 33, 34. Length: 7.4 mm. Creamy white with the markings various shades of chocolate brown. The anterior protuberance black with white markings. *Chelicerae*: Dark brown. *Maxillae*: Darker than sternum, the inner half, and also the rebordering of the labium, white. *Legs*: Light yellow-brown with irregular chocolate-coloured blotches on most segments. Apical end of metatarsus I and all of tarsus I darkened. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	4.07	2.03	3.40	2.69	1.37	13.56
III	2.94	1.31	1.75	1.63	0.75	8.38

Tibiae and metatarsi I and II curved and with numerous thickened spines typical of the genus. *Epigyne*: Fig. 36.

Material examined: Holotype ♀, locality C, la Grille (BM (NH) 1980. 3. 18. 13).

Family LINYPHIIDAE

Few representatives of this family were found but they were quite interesting.

Genus *Labullula* E. Strand*Labullula annulipes* E. Strand (Figs. 37-40)

Labullula annulipes E. Strand, 1913, p. 353: *L. annulipes* forma *pallipes* G. H. Locket, 1968, p. 118; 1974, p. 173.

Labullula annulipes Strand was first described from a male specimen taken in "central Africa" (Strand, 1913, p. 353). Locket (1968, p. 118) described a specimen from Angola which was compared with Strand's holotype and which differed from it only in lacking the annulations on the legs: he called this form "*Labullula annulipes* forma *pallipes*"; not knowing how much importance to assign to the absence of annulations on the legs (which were still present in the holotype of *annulipes*). A third male (forma *pallipes*) has now been taken in Grande Comore and is described below. Three females were taken with this male and it has already been suggested (Locket, 1974, p. 173) that they are "*Meioneta* (?) *demissa*" Locket (1968, p. 87) which is thus conspecific with *Labullula annulipes* Strand (forma *pallipes*). Looking back, it is seen that one female (as "*Meioneta* (?) *demissa*") was taken in a garden at Dundo (Angola) at the same time as the male of *L. annulipes pallipes*, so this is the second time that males and females have been taken together.

Male

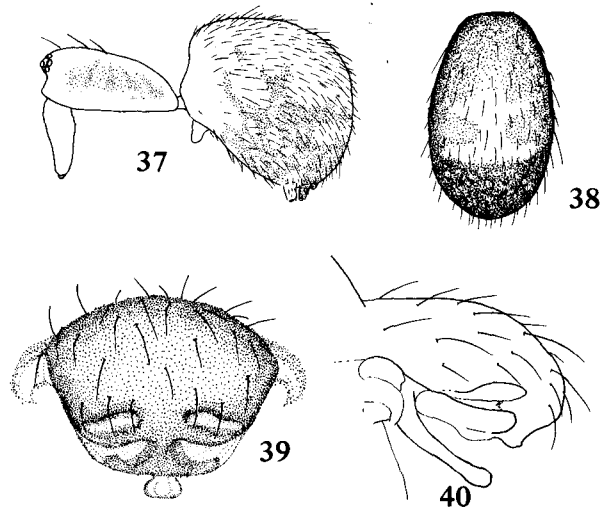
Carapace length: 0.82 mm. *Total length*: 1.75 mm. *Carapace*: Medium rusty brown with lighter median area and borders, the latter not well defined and more greyish brown. Intermediate areas sooty grey with some darker radiant striae (Fig. 37 is of the female). *Sternum*: Coloured as lighter areas of carapace, darker towards edges. *Eyes*: Anterior slightly recurved. AL = 1 1/5, PM = PL = 1; a = 1/3, b = 1/2, c = nearly 1, d = 3/4. *Abdomen*: Dark grey to black, covered with hairs. There are two rows of three ill-defined light spots with light bars between them, giving a pattern. Posterior third almost black. *Ventrally*: almost uniform grey-brown (lighter than dorsal side); a pair of dark patches (not well defined) lie anterior to spinners, about 1/3 of the way to the epigastric fold (they are also present in the female). *A

very dark region lies between the opercula and anterior to the epigastric fold. *Chelicerae*: Red-brown. Falces more elongated than in female. Outer margin with 2 separate pairs of teeth (cf. Locket, 1968, fig. 40 A). *Legs*: Femora coloured as lighter part of carapace; other segments sooty greyish brown, a little darker, especially III and IV. No annulations. *Measurements*:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	1.02	0.20	1.02	1.20	0.70	4.14
II	0.92	0.18	0.85	1.05	0.62	3.62
III	0.60	0.18	0.45	0.68	0.42	2.33
IV	0.88	0.18	0.70	0.90	0.50	3.16

Position of metatarsal trichobothria: I = 0.14, II = 0.13, III = 0.21. Position of dorsal tibial spines: I = 0.1 and 0.7, II = 0.1 and 0.7, III = 0.15 and 0.55, IV = 0.1 and 0.7 Lateral tibial spines: I = 0.51 (pro-) and 0.66 (retro-); II = (pro- absent) and 0.6 (retro-). Tibia I length/breadth = 14. *Maxillae and labium*: As fig. 40 B in Locket, 1968. *Male palp*: This appears not to differ from that of *L. annulipes* forma *pallipes* (Locket, 1968, fig. 41) except that it is more sclerotized and the parts are easier to see.

The identification of this male is based on the description of *L. annulipes* forma *pallipes* Locket, the



Figs. 37-40: *Labullula annulipes* Strand, ♀. 37 Carapace and abdomen (lateral); 38 Abdomen (dorsal); 39 Epigyne; 40 Ditto (lateral).

holotype of which is at Dundo and not at the moment available, but which had been compared with the holotype of *annulipes* Strand. In spite of the lack of annulations on the legs in *pallipes* there seems to be no doubt about the identity of those two forms and of the Comoro male, but there is some difference in the length of the segments of the first legs relative to the carapace length, as shown in Table 1.

Female

Carapace length: 0.72 mm. *Total length*: 1.50 mm. Very much lighter than the male, large areas of the body being light creamy brown. *Carapace*: A wide light region and wide light margins are separated by light grey regions with darker radiant striae (Fig. 37). *Eyes*: AL = PL = $1 \frac{1}{3}$, PM = $1 \frac{1}{4}$; a = $\frac{1}{4}$, b = $\frac{1}{3}$, c = d = $\frac{3}{4}$. *Sternum*: Uniform light brown. *Abdomen*: Light creamy-brown with traces of a pattern posteriorly and anteriorly, dorsally almost clear (Fig. 38); the whitish transverse band anterior to the spinners stands out. Covered with hairs of about the density indicated in Fig. 37. Ventrally: Light ground colour; a pair of dark patches $\frac{1}{3}$ of the distance from spinners to epigastric fold are separated by just over the width of the epigyne. These are preceded by a pair of white spots spaced similarly. The posterior spinners are darkened. *Chelicerae*: Outer margin with 5 evenly spaced teeth and with one very small tooth apical to these; inner row with 5 teeth. *Maxillae and labium*: As in the male. *Palp*: With no claw. *Legs*: I and II with femora light yellow-grey; other segments light grey, a little darker apically. No definite annulations. III and IV a little lighter (all segments), otherwise the same. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.87	0.17	0.80	0.80	0.55	3.19
II	0.80	0.17	0.67	0.72	0.50	2.86
III	0.55	0.15	0.40	0.50	0.35	1.95
IV	0.80	0.17	0.57	0.67	0.40	2.61

Position of metatarsal trichobothria: I = 0.15, II and III = 0.17. Position of dorsal tibial spines: I and II = 0.1 and 0.55, III = 0.1 and 0.6, IV = 0.1 and 0.65. Lateral tibial spines: I = 0.61 (pro-) and 0.58 (retro-), II = (pro- absent) and 0.55 (retro-). Tibia I length/breadth = 13. *Epigyne*: Figs. 39, 40.

Two further females are satisfactorily covered by the above description; some of the data on proportions of leg I segments are summarized in Table 1.

Material examined: Locality C, la Grille, in plants at ground level in eucalyptus plantation, 13 March 72, 1 ♂ 3 ♀♀.

Genus *Neriene* J. Blackwall

Neriene comoroensis sp. n. (Figs. 41, 42, 44, 46-51)

This is a very small species close to *N. redacta* (Chamberlin), which occurs in Florida, U.S.A. and is described by Van Helsdingen (1969, p. 112), and also close to the very similar *N. obtusa* (Locket). The differences between the males of *N. comoroensis* and *N. redacta* are indicated in the description, and the female epigynes and vulvae are distinct, but the close resemblance of these two small species which are so far apart geographically is striking.

Van Helsdingen described and figured *N. obtusa* (1969, p. 118) including the vulva, and it will be seen that there is a difference in the proportions of the

	Carapace length (Cp)	Length I Cp	Tib. I Cp	Tars. I Cp	Tib. I length breadth
<i>L. annulipes</i> forma <i>pallipes</i> ♂ (Angola)	0.68 mm	4.8	1.2	0.80	11
<i>L. annulipes</i> forma <i>pallipes</i> ♂ (Angola)	0.64 mm	5.1	1.3	0.81	11
<i>L. annulipes</i> forma <i>pallipes</i> ♂ (Comoros)	0.82 mm	5.1	1.3	0.85	13
" <i>M. demissa</i> " ♀ (Angola)	0.64 mm	5.4	1.3	0.91	10
" <i>M. demissa</i> " ♀ (Angola)	0.51 mm	5.0	1.3	0.81	11
<i>L. annulipes</i> forma <i>pallipes</i> ♀ (Comoros)	0.68 mm	4.3	1.1	0.77	12
<i>L. annulipes</i> forma <i>pallipes</i> ♀ (Comoros)	0.72 mm	4.4	1.1	0.77	13
<i>L. annulipes</i> forma <i>pallipes</i> ♀ (Comoros)	0.65 mm	4.8	1.2	0.80	12

Table 1: *Labullula annulipes*, proportions of leg segments and carapace length.

latter from that of *N. comoroensis* which is unlikely to be affected by change in viewing position. (It must be noted too that his fig. 131 of the epigyne differs somewhat from mine (1968, fig. 48A) and from Fig. 49 of *N. comoroensis* below.) There is also a difference in the profile of the abdomen in females of *N. obtusa* and *N. comoroensis* (cf. Fig. 51 with Lockett, 1968, fig. 48B). Van Helsdingen (1969, p. 124) has tentatively ascribed a male (which I have not seen) found in the Transvaal to *N. obtusa*. It is very close to the Comoro specimen but differs notably in the form of the palpal femur. It is difficult to know what to do with new forms so closely related but all things considered it seems best for the moment to describe and regard them as separate species.

Male

Carapace length: 1.28 mm. *Total length*: 2.70 mm. *Carapace*: Sooty grey-brown, sepia striations not well defined. *Eyes*: AL = 1 1/5, PM = PL = 1 1/3; a = 1, b = 1 3/4, c = 2, d = 1 1/4. *Abdomen*: Projecting a little over the spinners (Fig. 47). Rather darker than carapace; a white longitudinal mark on anterior half, which stops at about mid-point; a continuous white band extends along the sides and front and over the spinners. *Ventrally*: coloured as dorsally; one pair of white spots just behind epigastric fold, another pair mid-way between these and spinners. *Chelicerae*: Differing a little in profile from *N. redacta* (Figs. 44, 45). Teeth as in Fig. 46. One very small tooth on inner margin. *Legs*: Coloured and marked as in the female, but femur IV with 2 wide annulations, one in the basal and one in the apical half. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	1.23	0.23	1.13	1.43	0.68	4.70
II	1.13	0.23	1.03	1.23	0.60	4.22
III	0.80	0.23	0.65	0.70	0.43	2.81
IV	1.13	0.25	0.95	1.23	0.53	4.09

Position of metatarsal trichobothria: I = 0.19, II = 0.21, III = 0.32. Position of dorsal tibial spines: I = 0.16 and 0.7, II = 0.2 and 0.7, III = 0.3 and 0.74, IV = 0.18 and 0.75. Femora I and II with very short spines: Fem. I (dorsal) = 0.5, Fem. I (prolateral) = 0.68, Fem. II (dorsal) = 0.49 (no other femoral spines found). All spines very short; length of tibia I dorsal

spine = 0.74 times width of segment at the point of insertion. *Male palp*: This is very close to that of *Neriene redacta* (Chamberlin) as figured by Van Helsdingen (1969, p. 112 and figs. 124, 126-130). It differs in the relative length of the femur (Fig. 41) and in the absence of the small tooth "t" on the lamella (Fig. 42) which is present in *redacta* (Fig. 43) (it is partially obscured but clearly indicated in Van Helsdingen's fig. 124).

Female

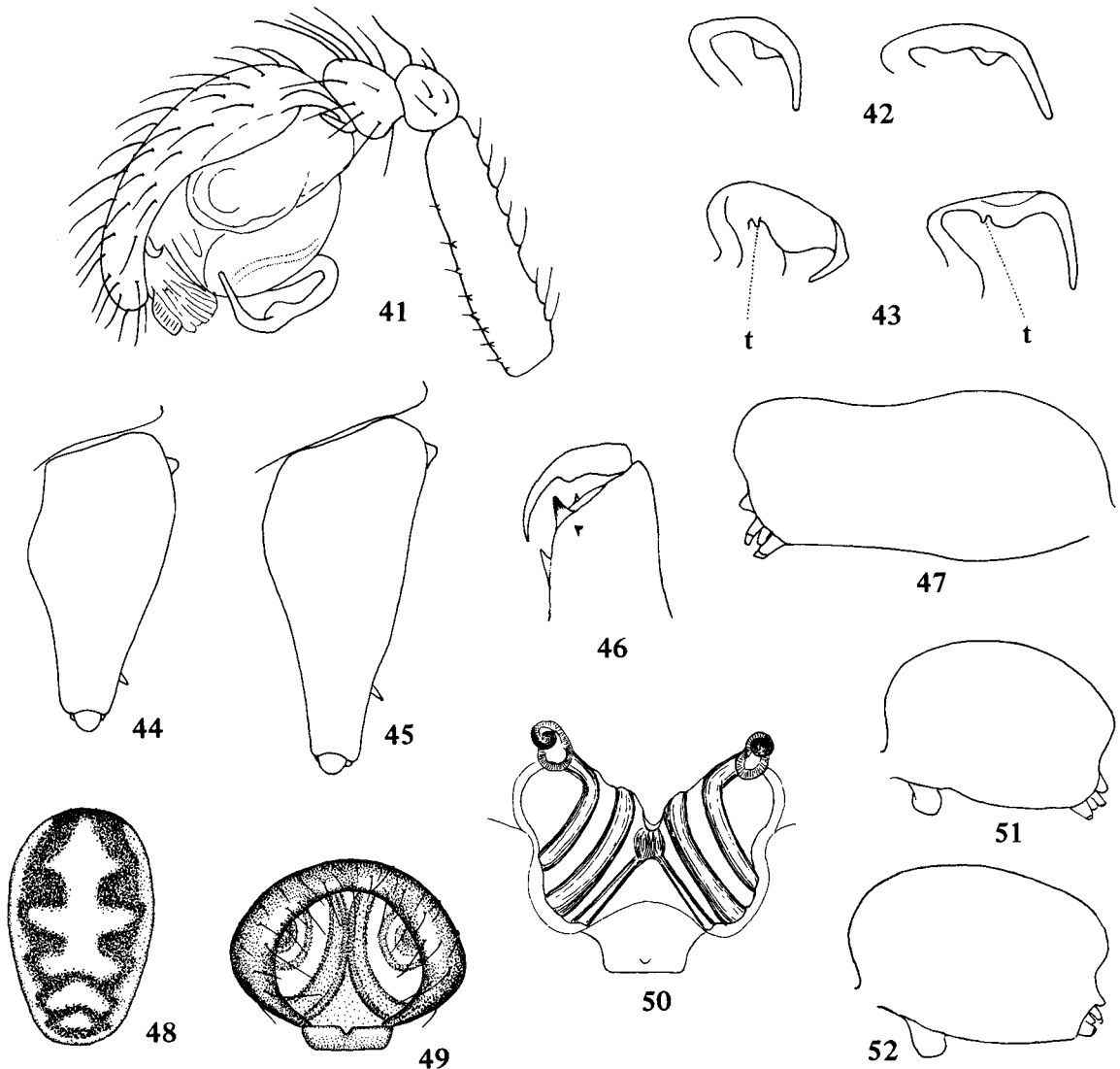
Carapace length: 0.85 mm. *Total length*: 1.88 mm. *Carapace*: Sepia with darker radiating striations; there are slightly lighter marginal bands and a thin dark borderline. The V of the head region lighter. *Eyes*: AL = 1 1/4, PM = 1 1/3, PL = 1 1/4; a = a little more than 1, b = 1 1/3, c = 2 1/2, d = 1 1/4. *Abdomen*: Not projecting much over the spinners (Fig. 51). Dorsally dark sepia with a well defined light grey pattern (Fig. 48) on which are some white spots. A light band, coloured similarly, extends along the sides and round the front and back. There are white spots in this band and in another female it is to some extent invaded by patches of the darker ground colour. *Ventrally*: a uniform brown area with 3 pairs of distinct white spots at the edges. One pair is just behind the epigastric fold, as far apart as the branchial opercula, a second pair a little closer together just posterior to the mid-point, and a third pair, separated a little more just anterior to the spinners. These are distinct and characteristic. *Chelicerae*: Light yellow-brown, with an oblique darker band from near the base mesally to about 1/3 laterally. *Legs*: IV with dark markings on a dull yellow ground amounting to annulations. Femur with dark mark from about 0.3 to 0.7; tibia and metatarsus with dark marks apically and from 0.2 to 0.5, patella with two dark marks. Tarsus uniform. Other legs with no defined annulations, but darkenings disposed similarly. Measurements:

	Fem.	Pat.	Tib.	Met.	Tars.	Total
I	0.93	0.20	0.88	0.93	0.55	3.49
II	0.85	0.20	0.75	0.80	0.50	3.10
III	0.63	0.20	0.45	0.55	0.35	2.18
IV	0.93	0.21	0.70	0.78	0.42	3.04

Position of metatarsal trichobothria: I = 0.19, II =

0.21, III = 0.23. Position of dorsal tibial spines: I = 0.17 and 0.66, II = 0.17 and 0.60, III = 0.14 and 0.59, IV = 0.20 and 0.68 and prolat. spine at 0.52. Tibia I length/breadth = 9.5. Femoral dorsal spines: I = 0.46, II = 0.44, III = 0.60, IV = 0.34. Femur I with a prolat. spine: 0.66 and two very short additional

spines close to it on one side only. (Left Fem. II with 2 more (proximal) stout spines, but none on right Fem. II.) Length of tibia I and II basal dorsal spines = 0.19 mm; length of patella III spine = 0.16 mm. *Epigyne*: Fig. 49. Protruding (cf. Van Helsdingen, 1969, figs. 125, 127, 128). The vulva (Fig. 50) as seen



Figs. 41, 42, 44, 46-51: *Neriene comoroensis* sp. n. 41 Left male palp (lateral); 42 Distal part of lamella; 44 Right chelicera, ♂, profile; 46 Cheliceral teeth, ♂ (outer); 47 Abdomen profile, ♂; 48 Abdomen, ♀ (dorsal); 49 Epigyne; 50 Vulva; 51 Abdomen profile, ♀.

Figs. 43, 45, 52: *Neriene redacta* (Chamberlin). 43 Distal part of lamella (t = tooth); 45 Right chelicera, ♂, profile; 52 Abdomen profile, ♀.

in clove oil appears like Van Helsdingen's fig. 123, but the proportions are somewhat different.

Material examined: Holotype ♂ and paratypes 2 ♀♀, locality C, la Grille, in plants at ground level in eucalyptus plantation (BM (NH) 1980. 3. 18. 4-6).

Conclusion

In so far as the specimens collected are of known species it is clear that the population has been influenced from Africa (*Labullula annulipes*) and Madagascar (*Argyrodes minax*) and from further afield (*Latrodectus geometricus* and *Coleosoma floridanum*), which is not surprising in view of the position and volcanic origin of the islands. Some affinity with the Seychelles may be indicated by *Leucauge russellsmithi* being so close to *L. argyrescens*.

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References

BANKS, N. 1900: Some new North American spiders. *Can. Ent.* **32**: 96-102.

- BENOIT, P. L. G. 1978: Contributions a l'étude de la faune terrestre des îles granitiques de l'archipel des Seychelles. Tetragnathidae et Araneidae-Nephilinae (Araneae). *Revue Zool.af.* **92**: 663-674.
- BONNET, P. 1956: *Bibliographia Araneorum* **2** (2): 919-1925. Toulouse.
- CAMBRIDGE, O. P.- 1880: On some new and little known spiders of the genus *Argyrodes*. *Proc.zool.Soc.Lond.* **1880**: 320-334.
- CHAMBERLIN, R. V. 1925: New North American spiders. *Proc.Calif.Acad.Sci.* (4) **14**: 105-142.
- CHAMBERLIN, R. V. & IVIE, W. 1944: Spiders of the Georgia region of North America. *Bull.Univ.Utah biol. Ser.* **35** (9): 1-267.
- CHRYSANTHUS, Fr 1961: Spiders from South New Guinea. IV. *Nova Guinea* (N.S., Zoology) **10**: 195-214.
- COSTA, O. 1834: Cenni Zoologici, ossia descrizione sommaria delle specie nuove di animali scoperti in diverse contrade del Regno nell'anno 1834. *Annuar. zool., Napoli* **1834**: 1-90.
- EXLINE, H. & LEVI, H. W. 1962: American spiders of the genus *Argyrodes* (Araneae, Theridiidae). *Bull.Mus. comp.Zool.Harv.* **127** (2): 75-202.
- GERTSCH, W. J. 1951: New American linyphiid spiders. *Am.Mus.Novit.* **1514**: 1-11.
- HELSDINGEN, P. J. Van 1969: A reclassification of the species of *Linyphia* Latreille based on the functioning of the genitalia (Araneida, Linyphiidae), I. *Zool.Verh., Leiden* **105**: 1-103.
- KOCH, C. L. 1841: *Die Arachniden* **8**: 1-131. Nürnberg.
- LEVI, H. W. 1955: The spider genera *Coressa* and *Achaearana* in America north of Mexico (Araneae, Theridiidae). *Am.Mus.Novit.* **1718**: 1-33.
- LEVI, H. W. 1959: The spider genus *Coleosoma* (Araneae, Theridiidae). *Breviora* **110**: 1-8.
- LEVI, H. W. 1967: Cosmopolitan and pantropical species of theridiid spider. *Pacif.Insects* **9** (2): 175-186.
- LOCKET, G. H. 1968: Spiders of the family Linyphiidae from Angola. *Publicões cult.Co.Diam.Angola* **71**: 63-144.
- LOCKET, G. H. 1974: Notes on some African linyphiid spiders. *Publicões cult.Co.Diam.Angola* **88**: 167-176.
- STRAND, E. 1913: Arachnida. I. *Wiss.Ergebn.dt.ZentAfr. Exped.* **4** (Zool. 2): 324-474.