Spiders (Araneae) from Papua New Guinea. IV. Ochyroceratidae, Telemidae, Hadrotarsidae and Mysmenidae*

Léon Baert
Koninklijk Belgisch Instituut voor Natuurwetenschappen, Entomology Section, Vautierstraat 29, 1040 Brussels, Belgium

ABSTRACT: Some new species are described from Papua New Guinea, while additional localities are given for the geographical distribution of a few species, described by the author in earlier papers. A second species is described for the Telemidae, Jocquella boisi sp. nov. A new genus and species is described for the Hadrotarsiidae, Yoraa clypeoglandularis gen. nov., sp. nov. Two new Kekenboschiella species (♂♂), K. rubiae sp. nov. and K. awari sp. nov., are added to the Mysmenid fauna. Five females are described and attributed to this genus, but not matched to one of the known males. The way of sampling did not permit us to do so. For the same reason we withdraw the female described as Kekenboschiella marijkeae Baert, 1982 from that species. A new Mysmenella, M. papuana sp. nov. is described, while Linyphia samoensis Marples, 1955 becomes Mysmenella samoensis (Marples, 1955) comb. nov.

RESUME: Quelques espèces d’araignées nouvelles sont décrites de Papouasie Nouvelle-Guinée; pour d’autres espèces, décrites dans des publications antérieures, une information supplémentaire est donnée au sujet de leur répartition. Une deuxième espèce de Telemidae, Jocquella boisi sp. nov., est décrite. Un genre nouveau et une espèce nouvelle d’Hadrotarsiidae sont décrits; Yoraa clypeoglandularis gen. nov., sp. nov. Deux espèces nouvelles du genre Kekenboschiella de la famille des Mysmenidae sont décrites, K. rubiae sp. nov. et K. awari sp. nov., ainsi que cinq femelles attribuées à ce même genre. La façon dont les captures ont été faites ne nous permet malheureusement pas d’attribuer ces femelles à l’un des mâles connus. Elles ne sont dès lors pas spécifiquement nommées. Pour cette raison, nous retirons la femelle décrite comme K. marijkeae Baert, 1982 de ladite espèce. Une nouvelle Mysmenella, M. papuana sp. nov., est décrite, tandis que Linyphia samoensis Marples, 1955 devient Mysmenella samoensis (Marples, 1955) comb. nov.

* Leopold III Biological Station, Laing Island, Contribution no.36.
1 INTRODUCTION

In three former publications (Baert 1980a, b and 1982) about Papua New Guinean spiders, new representatives of three families (Telemidae, Ochyroceratidae and Mysmenidae) were described (expeditions performed by Dr J.van Goethem in 1977 and 1978). Since then, more araneological material was sampled by Dr J.van Goethem (expeditions of 1978, 1979 and 1981) and Dr P.Grootaert (expedition of 1982) in the course of successive expeditions. In this fourth contribution additional data about the geographical distribution of the former species is given together with the descriptions of a new genus and a number of new species. Interesting was the presence of a Hadrotarsid specimen in one of the samples. All types of the described species are at the 'Koninklijk Belgisch Instituut voor Natuurwetenschappen'.

2 DESCRIPTIONS

FAMILY OCHYROCERATIDAE

Speocera karkari (Baert, 1980)

This species has been described from Karkar Island (Baert 1980b). The following localities can be added to its geographical distribution:

Mainland of Papua New Guinea, Madang province, along the road Bogia to Awar, leaf litter of coconut- and cacao plantages near the Warawarango river, Leg. Dr J.van Goethem, 5.6.1979: 2 ♀♂.


FAMILY TELEMIDAE

Jocquella boisi sp.nov.

Type locality
♀ holotype: Boisa Island (Madang province), bush, leaf litter (Berlèse sample), Leg. Dr J.van Goethem, 10.8.1981.

Description of male holotype (♀ unknown) (Figs.1-2)

Total body length: 0.99 mm; carapace length: 0.43 mm; width: 0.34 mm.

Characteristics as Jocquella leopoldi Baert, 1980, but differing in following respects:

Clpeus: ca. 3.6 times diameter of AM-eye.
Chelicerae: two times height of clypeus, same denticulation as in J.leopoldi.

Legs: Approximate measurements (in mm):

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(Position of tibial spine: I: 0.47; II: 0.48; III: 0.47; IV: 0.47)

Palp (Figs.1 and 2): Ta curved but regular in shape, Ti with trichobothrium.

Abdomen: Anal tubercle strongly protruding.

Differential diagnosis

This species is very close to J.leopoldi, but is easily distinguished by the position of the styli upon the bulbus and especially by the shape of the palpal tarsus. The tibiae of leg I and II are longer than the respective femora, which is not the case in J.leopoldi. Important to note is the presence of the same grape-shaped organs protruding from between the lorum and the sickle-shaped lateral abdominal plates, as is the case in J.leopoldi.

Derivatio nominis

The species name is derived from the type-locality: Boisa Island.
FAMILY HADROTARSIDAE

Till now five species were known from the Australian Region, spread over two genera, Hadratosaurus Theorell, 1881 and Gymnula Keysarling, 1890: H.bahirussa Theorell, 1881 from Yule Island, Papua New Guinea, H.ornatus, H.fulvus, H.setosus Hickman, 1942, from Tasmania and G.scarabaea Keysarling, 1890 from Sydney, Australia.

A new genus and species can be added to this family:

Yoroa gen. nov.

Diagnosis of genus
Type species: Yoroa clypeoglandularis sp. nov. Eight eyes, only AM-eyes well outlined; PM-eyes normal in shape (poorly outlined) and far apart; carapace not highly elevated; very short embolus, cymbium spoon-shaped; abdomen without dorsal scutum, but covered with numerous small oval sclerites, epigastric scutum present.

Yoroa clypeoglandularis sp. nov.

Type material
Northern coast of Papua New Guinea (Madang province), Yoro (4° 28'S, 145° 11'E), forest litter (Berlièse sample I.G. 25681/98), Leg. Dr. J. van Goethem, 13.5.1977: ♀ holotype.

Description of male holotype (♀ unknown) (Figs.3-8)
Total body length: 1.23 mm.

Colour: Carapace yellow brown, dorsally somewhat suffused with black; abdomen with four dorsal brown spots, followed caudally by a pattern of white spots (see Fig.4); legs white.

Carapace (Figs.3 and 4): Length: 0.53 mm; width: 0.45 mm; height: 0.18 mm. Longer than wide, moderately elevated, bordered with small spinelike hairs; clypeus prominent with two slitlike openings at the base of small half oval flat elevations; chelicerae as in other genera of the family; maxillae converging with anterolateral serrula; labium small, much broader than long (nearly as twice as broad; rostrum notched at top; sternum (Fig.7) shield-shaped, longer than wide, sparsely covered with setae, posteriorly truncated.

Eyes: Eight with only the prominent AM's well outlined, PM-eyes of normal rounded shape (cf. reform in Hadratosaurus and Gymnula) and far apart (nearly 1 diameter apart).

Legs: Approximate measurements (in mm):
Keekenboschiella vangoethemi Baerl, 1982

This species was first described from Yoro. The following records can be added to its geographical distribution:

Awar airstrip, grasses, ♂, Leg. Dr P.Grootaert, 18.6.1982; Awar bush, secunder wood, Leg. Dr P.Grootaert, 5.5.1982: 4 ♀; Laing Island, litter, ♂, Leg. Dr P.Grootaert, 29.4.1982.

It was found that the abdominal colour pattern, with the creamy bar-pattern inside the white circular band, resembles much the one of *K. marijkeae*.

Keekenboschiella nabiai sp.nov.

**Material examined**


**Description of male (♂ unknown)** (Figs.9-11)

Total body length: 0.63 mm.

**Colour**: Carapace yellow-brown, suffused with black at sides; eye-area suffused with black; chelicerae yellowish; sternum yellowish with central U-shaped black mark; legs yellowish-grey with distal segments dusky; abdomen greyish with a circular white band running laterally and posteriorly, dorsum with four fairly big creamy spots, rest of abdomen scattered with numerous small creamy spots.

**Carapace** (Fig.11): Length: 0.30 mm, width: 0.27 mm; height: 0.14 mm.

**Chelicerae**: Hairy, basic spine not so strongly pronounced as in *K. marijkeae* and *K. vangoethemi*, three promarginal teeth and numerous small ones between pro- and retromargins.

**Eye-area**: AM-eyes approximately two diameters apart; PM-eyes approximately 0.6 diameters apart, ocular quadrangle broader than long (width to length = ca.1.8); clypeus length to diameter of AM-eye = ca.1.3.

**Legs**: Approximate measurements (in mm):

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**Pulp**: See Figures 9 and 10.

**Differential diagnosis**

Cymbium complex, resembling closely the one of *K. marijkeae*, but clearly dis-
Figures 9-11. *Kekeboschiella nubiai* sp. nov. ♂ 9 & 10. Palpus; 11. Carapace, lateral view. (Scale lines = 0.1 mm)

Figures 12-15. *Kekeboschiella awari* sp. nov. ♂ 12 & 13. Palpus; 14. Carapace, dorsal view; 15. Carapace, lateral view. (Scale lines = 0.1 mm)

Distinguishable from it by its outgrowths having a blunter shape and by the position of the spines on them.

**Derivatio nominis**
The species-name is derived from the type-locality of the holotype.

**Kekenboschiella awari** sp. nov.

**Material examined**

**Description of male** (♀ unknown) (Figs.12-15)
Total body-length: 0.60 mm.

**Colour**
Carapace yellowish-grey with eye-area suffused with black; chelicerae and palpus yellowish; sternum as *K.nubiai* sp. nov.; legs yellowish-grey with distal Ti-, Mt- and Ta-ends dusky; abdomen as in *K.nubiai*, but in some specimens posteriorly with creamy bars between spinnerets and circular abdominal white ring (see also *K.marikaeae* and *vangothemi*).

**Carapace** (Figs.12 and 15): Length: 0.27 mm, width: 0.25 mm, height: 0.17 mm. Chelicerae without basic spine, three promarginal and two retromarginal teeth, with many small ones in between.

**Eye-area**
AM-eyes approximately 1.3 diameters apart; PM-eyes half their diameter apart; ocular quadrangle: width to length: 1.3; clypeus length to diameter AM-eye: 3.6.
**Description**

**Colour:** Carapace brownish with dusky marks, eye-area suffused with black; sternum yellowish with U-shaped black mark; legs brownish with Ti, Mt and Ta distally dusky (annulation); abdomen greyish with dorsally four great creamy spots, sides provided with numerous small creamy spots, white circular ring (laterally, caudally) with inside a creamy bar-pattern.

**Carapace:** Length: 0.31 mm, width: 0.30 mm, height: 0.16 mm. Promargin of chelicerae with three teeth, retromargin with two, numerous tiny denticles between both margins.

**Eye-area:** AM-eyes approximately 1.5 diameters apart, PM-eyes approximately 0.6 diameters apart, ocular quadrangle: width to length: ca. 1.3, clypeus length to AM-eye diameter: 2.3.

**Legs:** Fe I and II with femoral organ. Approximate measurements (in mm):

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**Vulva (Fig.16):** Distal end of sperm duct slightly sclerified, short oviducti.

**Kekenboschiella ♀ species b**


**Description**

**Colour:** Carapace brownish-yellow with dusky margins; eye-area dusky; legs brownish-yellow with distal ends of Ti, Mt and Ta dusky; sternum and abdomen as in former ♀.

**Carapace:** Length: 0.31 mm, width: 0.29 mm; height: 0.17 mm.

**Eye-area:** AM-eyes one diameter apart, PM-eyes approximately two diameters apart, ocular quadrangle: width to length: ca. 1.3, clypeus length to AM-eye diameter: 1.2.

**Legs:** As former ♀. Approximate measurements (in mm):
Vulva (Fig. 17): Well-developed inner vulval plate, long oviducti with central exit in the middle of the plate.

Kekenboschiella ♀ species c

Material examined
♀ from Awar bush, swamp, leg. Dr P. Grootaert (I.G. 26480/1062), 10.5.1982.

Description

Colour: Carapace with head region and sides black, sloping backside yellow; sternum yellow suffused with black; legs yellowish suffused with black, Ti (especially Ti III and IV) and Mt distally dusky, Ta yellow; pedipalpus with yellow Ta; abdomen greyish with four dorsal creamy-white spots, caudal part totally white, with in the middle a brown bar-pattern, extending to venter.

Carapace: Length: 0.39 mm, width: 0.37 mm, height: 0.17 mm.

Eye-area: AM-eyes approximately one diameter apart, PM-eyes slightly less than one diameter apart, ocular quadrangle as long as broad, clypeus length to diameter AM-eye: slightly more than one diameter of AM-eye.

Legs: Fe I and II with femoral organ, approximate measurements (in mm):

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Abdomen: With a hump.

Vulva (Fig. 18): Strong sclerified inner vulval plate, oviducti incrusted in the plate in a lateral position.

Kekenboschiella ♀ species d

In a previous paper (Baert 1982), this ♀ was described as being Kekenboschiella marikatea, but according to the upper explained reasons it is now withdrawn from it. The vulva (Fig. 19) has been cleared up. The distal end of sperm duct surrounded by a strong sclerified inner vulval plate. The following records can be added to its

GROUP II
Kekenboschiella ♀ species c

Material examined
2 ♀♀ from Awar bush, secundar forest, leg. Dr P. Grootaert (I.G.26480/1033 and 1396), 5.5.1982 and 21.6.1982.

Description
Colour. Carapace yellowish with dusky margins, eye-area suffused with black; sternum yellowish-brown with blackish central mark; legs I and II yellowish-brown, dusky, Fe lighter in colour, legs III and IV more yellowish with distal ends of Ti, Mt and Ta dusky; abdomen greyish with four great dorsal creamy spots, sides clothed with numerous small creamy spots, white abdominal ring with no inside bar-pattern.

Carapace. Length: 0.40 mm, width: 0.29 mm, height: 0.18 mm.

Eye-area. AM-eyes approximately 1 diameter apart, PM-eyes approximately half their diameter apart, ocular quadrangle nearly as broad as long, clypeus length to diameter AM-eye: 1.3.

Legs. No femoral organ. Approximate measurements (in mm):

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Vulva (Fig.20): With specific inner vulval plate, oviducti short.

Kekenboschiella ♀ species f

Material examined
♀ from Awar bush (secundar forest, leg. Dr P. Grootaert (I.G.26480/1033), 5.5.1982.

Description
In all respects as Kekenboschiella ♀ species c, but in the following characteristics:

Carapace. Length: 0.34 mm, width: 0.30 mm, height: 0.19 mm.

Vulva (Fig.22). Spermathecae exteriorly visible at the antero-lateral sides of abdomen, trumpetlike with two ducti. Oviduct starting from widened apical top
of spermathecae and running straight towards the lateral sides of epigastric fold. Epigastrum with a pair of apertures.

**Mysmenella Brognoli, 1980**

This genus, created by Brognoli in 1980, is clearly distinguishable from all other Mysmenidae by its more specialised bulbus with very long coiled large embolus, which terminal part is of a very complex structure. The female genitalia have relatively long broad sperm ducts, preceded by a somewhat 'spherical' spermatheca. The bulbus is apically covered with a kind of bulbal shield, the cymbium is provided with a cymbial thorn.

To this genus can be added the species described by Marples 1955 as *Linyphia samoensis* from Western Samoa. This species was transferred to *Mysmena* by Forster (1959). From the superficial drawings made by Marples one could suppose it belongs to *Mysmenella* (cfr. Brignoli 1980:729). The examination of the male palpus under compound microscope revealed the exactness of Brignoli's supposition. I take the opportunity to include in this paper more accurate drawings of the δ palpus and Ψ vulva.

**Mysmenella samounsis** (Marples, 1955) comb.nov.

A fairly detailed morphological description of the species is given by Marples (1955). I only add to this description the drawings I made (Figs.26 and 27).

**Mysmenella papuana** sp.nov.

**Material**

δ holotype from Nubia Mission, near river, bush, UV-light trap at night, leg. Dr J. van Goethem (L.G.26373/546), 1.8.1981.

**Description** (δ, Ψ unknown) (Fig.28)

**Colour**. Carapace light brown, slightly dusky; so with chelicerae; sternum yellow-brown with dusky sides; legs with dusky yellow-brown Fe, Ti, Mt and Ta yellow but with distal ends suffused with black; abdomen greyish (in bad state).

**Carapace**. Length: 0.45 mm, width: 0.44 mm, height: 0.41 mm. Highly elevated, clypeus slightly more than six-tenths of carapace height. AM-eyes separated by once their diameter, PM-eyes separated by approximately half their diameter, ocular quadrangle: width to length: 1.4. L-eyes contiguous, anterior and posterior eye-rows strongly procurred.

**Legs**. All Ti with one spine, Ti I with two claspers, spurs. Approximate measurements (in mm):

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**Pulp**. Cymbium divided in a small and greater lobe. The greater lobe carries a cymbial thorn and a adjacent thornlike spine.

The bulbus is apically covered with a bulbal shield of specific structure (cfr. with basal bulbal shield in some other genera). Long flat and broad strongly coiled embolus with a very complex terminal structure.
Figures 26-27. *Mysmenella samoensis* (Marples, 1955): 26. δ palp; 27. Vulva. (Scale lines = 0.1 mm)

Figure 28. *Mysmenella papuana* sp. nov.: δ palp. (Scale line = 0.1 mm)

**Differential diagnosis**

In general appearance (carapace and legs) very close to the other *Mysmenella* species (*M. illetrix* (Simon, 1895), *M. joji* (Kraus, 1967) and *M. samoensis* (Marples, 1955)), but easily distinguishable by 1° the structuration of the complex apical portion of embolus, 2° the way in which the embolus is coiled and 3° the shape of the apical bulbial shield.
ACKNOWLEDGEMENTS

I wish to express my thanks to M. Hubert (Muséum d'Histoire Naturelle de Paris) and P.D. Hillyard (British Museum of Natural History) for the loan of type-material. I also wish to thank Mrs K. de Pierpont-Bockaert who made the final drawings.

REFERENCES


