

## Spiders (Araneae) from Papua New Guinea. I. *Jocquella leopoldi* gen. n., sp. n. (Telemidae)\*

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### Introduction

During his stay in Papua New Guinea (May-June 1977), Dr J. Van Goethem took various forest litter samples. These were dried in Berlese funnels, and the animals collected in a solution of picric acid and 70% alcohol. A number of minute litter-spiders were caught by this method. This paper is the first of a series of contributions on spiders from Papua New Guinea, collected by Belgian expeditions.

Family TELEMIDAE

*Jocquella* gen. n.

Type species: *Jocquella leopoldi* sp.n.

### Diagnosis of genus

Six eyes; anterior row slightly recurved; laterals contiguous. Denticulation of chelicerae poorly developed; one strong tooth on outer margin; four barely visible granulous denticles on inner margin. Maxillae longer than broad, provided with long bristles lying on shallow tubercles; nearly parallel. Male copulatory organ more "complex" in structure than in other genera of this family; embolus + accessory needle-like apophysis. Colulus somewhat longer than broad, pentagonal in shape.

*Jocquella leopoldi* sp.n. (Figs. 1-11)

### Material

Type locality: Northern coast of Papua New Guinea, Yoro (4°28' S, 145°11'50" E), Madang province.

♂ holotype (I.G. 25681/1) caught with a ♂

paratype (I.G. 25681/3) and ♀ paratype (I.G. 25681/2); forest litter; 13 May 1977; Berlese sample no. 98.

Two ♀♀, Karkar Island (active volcano); forest litter at an altitude of ca 200m; 15 June 1977; Berlese sample no. 364 (I.G. 25681/4).

Collector: Dr J. Van Goethem.

Types in the Koninklijk Belgisch Instituut voor Natuurwetenschappen.

### Etymology

The name of the genus is derived from the name of my araneologist colleague and friend Rudy Jocqué, who initiated me, some years ago, to araneology.

The species is dedicated to His Majesty King Léopold III of Belgium, President of the Léopold III Foundation for exploration and conservation of nature, who largely supported Belgian expeditions to Papua New Guinea.

### Male holotype

Total length: 1.07mm; cephalothorax: 0.44mm long, 0.35mm wide.

*Colour*: Cephalothorax yellowish brown with brownish margins (starting from the cephalic constriction); at centre a dark suffused area from which ill-defined striae diverge; area behind AM eyes and next to L eyes blackened; sternum yellowish brown with brownish margins; legs, chelicerae and palps yellow; abdomen greyish with ill-defined black pattern, at sides light brownish.

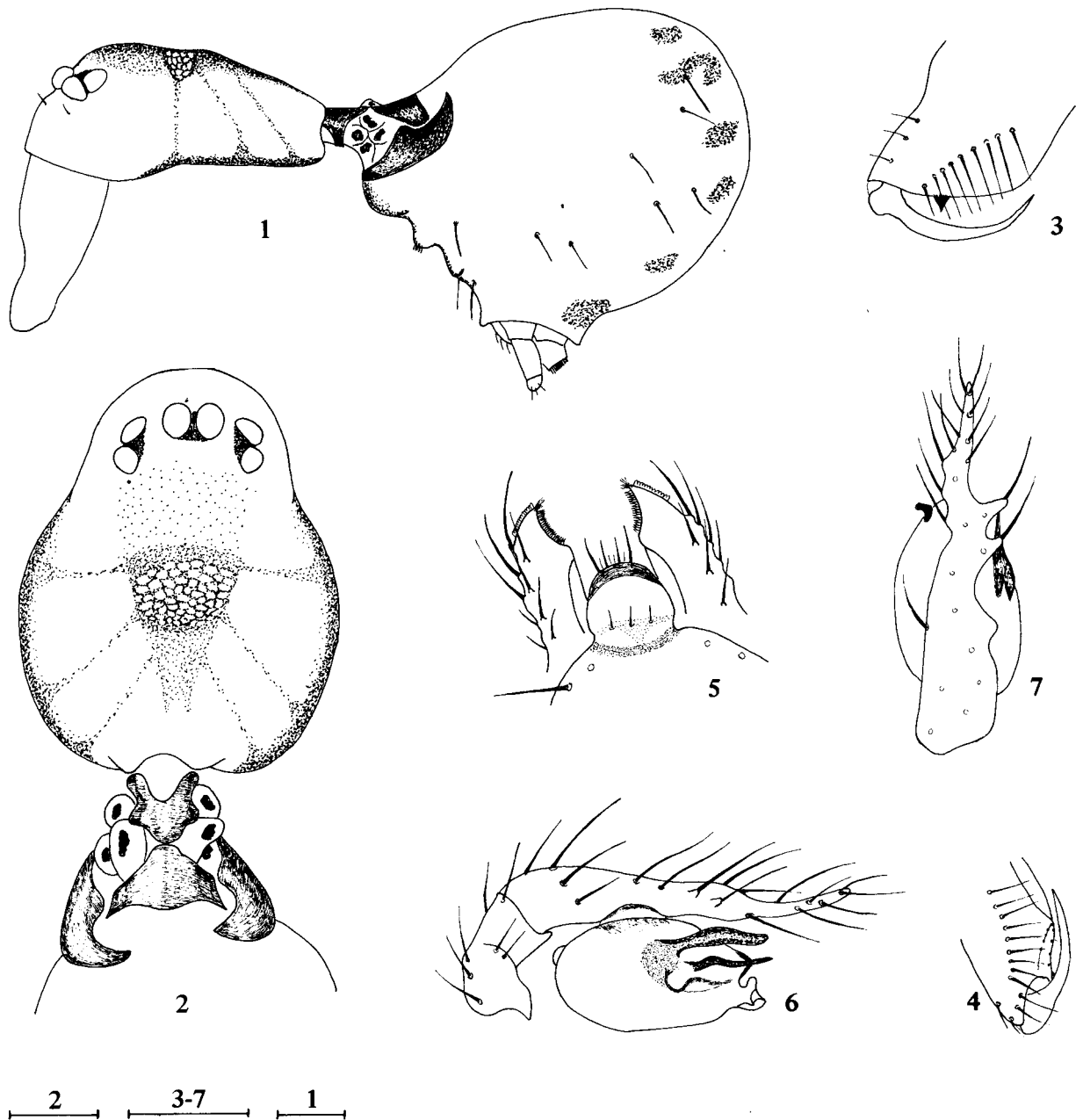
*Cephalothorax* (Figs. 1-2): No fovea; in dorsal view evenly rounded at sides; constriction between cephalic and thoracic region marked; in lateral view hardly curved, descending in an obtuse angle just behind AM eyes.

*Clypeus*: Wide, 2.5x diam. of AM eye; convex at base of ocular area; slightly sloping forwards.

*Eyes* (Figs. 1-2): Six nocturnal eyes; anterior row of four eyes slightly recurved; AM close together, nearly touching, separated from AL by half diam. of AL; laterals contiguous.

*Chelicerae* (Figs. 3-4): Long, ca 2.5x clypeus; divergent; fangs long and slender. Outer margin, seen from in front, with a large tooth near base of fang; inner margin with four barely visible granulous

\* Léopold III Biological Station, Laing Island. Contribution no. 16.



Figs. 1-7: *Jocquella leopoldi* gen.n., sp.n., male holotype. 1 lateral view; 2 cephalothorax, dorsal view; 3 right chelicera, frontal view; 4 left chelicera, from below; 5 labium and maxillae; 6 left palp, lateral view; 7 left palp, dorsal view. Scale lines: 0.1mm.

denticles. When chelicerae viewed from below, five little granulous denticles are visible within a groove between inner and outer margins.

*Sternum*: Smooth with some strong bristles.

*Labium* (Fig. 5): Rebordered and not movable.

*Maxillae* (Fig. 5): 2.5x longer than broad, with long bristles arising from shallow tubercles; serrula present on outer sides. The outer side bends inwards forming a sharp-angled apex; distal part of inner side strongly concave (with a row of short tooth-like structures?); nearly parallel.

*Legs*: Rather long and slender. Measurements in mm (approximate values):

	Fe	Pa	Ti	Mt	Ta	Total
I	1.07	0.12	0.85	0.52	0.36	2.92
II	0.63	0.11	0.57	0.42	0.30	2.03
III	0.43	0.11	0.36	0.28	0.25	1.43
IV	0.65	0.10	0.54	0.40	0.30	1.99

formula: I > IV = II > III

*Chaetotaxy*: Fe I with two pro- and two retrolateral spines at distal end. On each ventrolateral side of Fe I a row of bristles; these have a tendency to be hair-like at the proximal end, becoming stronger distally (this feature is less visible on Fe II, III and IV); both rows end with a spine. Position of long stout dorsal tibial spine: I:0.45; II:0.48; III:0.49; IV:0.45. Distal end of each patella bears a long stout spine, about the same length (or somewhat longer) as patellae.

*Palp* (Figs. 6-7): Tarsus in lateral view long and slender; broad at base but narrow at distal end. In dorsal view, very irregular in shape; length of tarsus twice length of bulbus. Bulbus more "complex" in structure than in other genera of this family; consisting of an embolus and a needle-like structure; apex with strong chitinised tooth-like structure and curved extension.

*Pedice* (Figs. 1-2): With well developed lorum, consisting of two chitinised plates, the frontal one of unusual shape, the second somewhat triangular.

*Abdomen* (Figs. 1-2): Globular; each side bears a sickle-shaped chitinous plate; both plates connect with each other ventrally. Between lorum and sickle-shaped plates, 3-4 grape-shaped organs (?) protrude, each bearing a black grainy structure (function?). Gonopore on shallow elevation, surrounded by a tuft

of hairs. Stigmata sclerotised.

*Colulus* (Fig. 11): Pentagonal in shape (large and rhomboidal in *Telema* Simon, 1882, *Usophila* Keyserling, 1891 and *Apneumonella* Fage, 1921).

*Spinnerets*: Six; anterior ones the longest; posterior ones the best developed, laterally compressed; medians long and slender.

#### Female paratype

As male except for the following characters:

Total length: 0.92mm; cephalothorax 0.40mm long, 0.32mm wide.

*Colour*: Abdominal pattern more conspicuous.

*Chelicerae*: The four denticles on inner margin less conspicuous.

*Cephalothorax* (Fig. 8): No fovea; in lateral view strongly curved.

*Legs*: Measurements in mm (approximate values):

	Fe	Pa	Ti	Mt	Ta	Total
I	0.66	0.11	0.64	0.49	0.34	2.24
II	0.57	0.10	0.46	0.33	0.30	1.76
III	0.41	0.10	0.33	0.26	0.30	1.40
IV	0.54	0.10	0.52	0.41	0.30	1.87

formula: I > IV > II > III

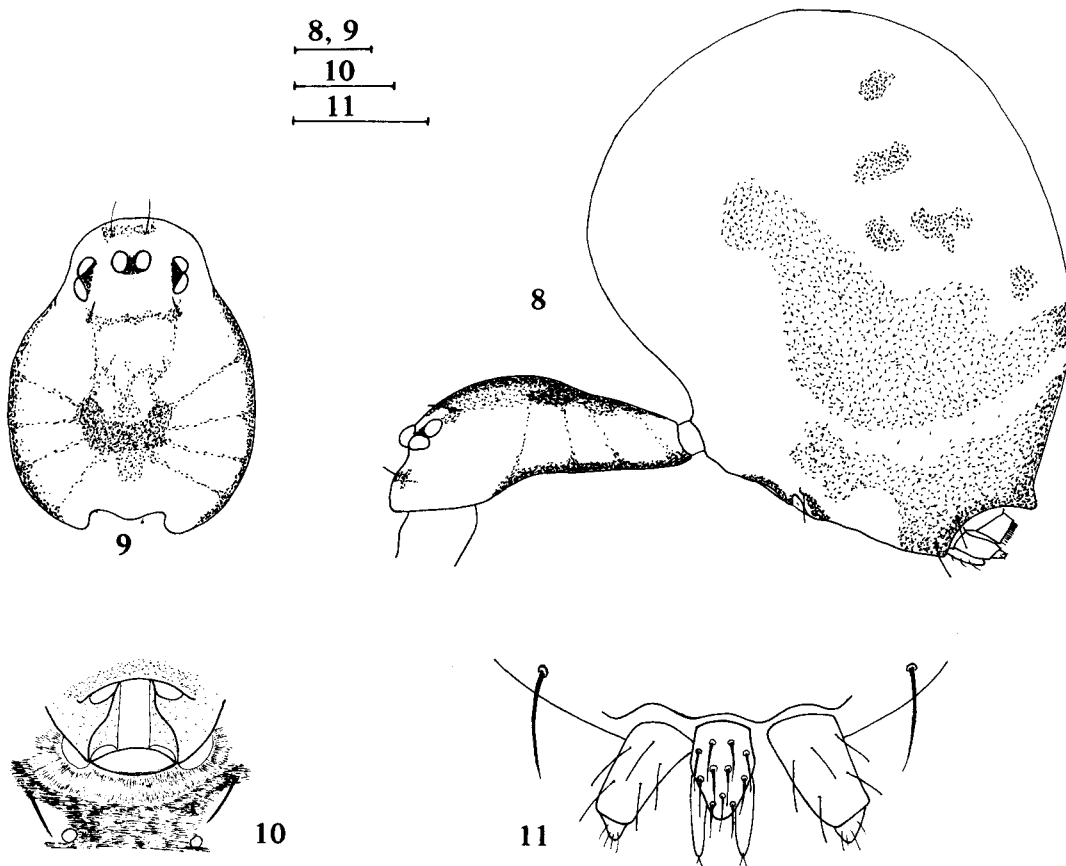
Position of dorsal tibial spine: I:0.46; II:0.48; III:0.47; IV:0.49.

*Abdomen*: More globular; epigastric area not bulbous; stigmata not sclerotised and barely visible; no lorum or frontolateral chitinised plates.

Genital region (Fig. 10), as far as visible: small atrium communicating with a long broad unpaired funnel-like spermatheca (more material is needed).

#### Discussion

This is the first record of a telemid spider from the Australian region (see Brignoli, 1977). This new genus can be readily distinguished from the other genera (*Telema* Simon, 1882, *Usophila* Keyserling, 1891, *Apneumonella* Fage, 1921 and *Seychellia* Saaristo, 1978) belonging to the Telemidae by the more "complex" structure of the male bulbus, the pentagonal shaped colulus, the denticulation of the chelicerae and the general form of the maxillae. I think, judging from these characters, that the description of a new



Figs. 8-11: *Jocquella leopoldi* gen.n., sp.n., female paratype. 8 lateral view; 9 cephalothorax, dorsal view; 10 genital area; 11 colulus. Scale lines: 0.1mm.

genus is justified. In comparison with the bulbus of the other telemids, the more "complex" bulbus of this species reminds us of the general appearance of the bulbus of some leptonetids, but the presence of some typical telemid characters (as e.g. the respiratory apparatus consisting of tracheae with four separated stigmata, the well developed colulus, the general appearance of the chelicerae) clearly demonstrates that the species belongs to the Telemidae. While the members of the genera *Telema*, *Usophila* and *Apneumonella* are cave-dwellers or live in rock beds, this species was caught, as was *Seychellia wiljoi* Saaristo, 1978, in leaf litter. *Jocquella* seems to be closest to *Seychellia*. The male bulbus of *J. leopoldi* sp.n. reminds us of that of *S. wiljoi*, but the bulbus of the latter is somewhat less "complex" in structure.

There is also a shift of the chitinised bulbus structures from a ventral position (as in *S. wiljoi*) to a lateral position in *J. leopoldi* sp.n.

#### Acknowledgements

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#### References

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