

**Contribution to the knowledge of South African Caddidae, with
description of a new species (Arachnida: Opiliones)¹**

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ABSTRACT. The paper deals with a part of the harvestman material from South Africa in the collection of the Musée royal d'Afrique Centrale. Two species from the family Caddidae were described, among them *Caddella jocquei* as new.

KEY WORDS: Republic of South Africa, Opiliones, Caddidae, endemism, new species.

INTRODUCTION

The family Caddidae is to some extent intermediate between the harvestmen groups (suborders, infraorders?) Dyspnoi and Eupnoi. It is probably a very old, recessive element, possibly of pre-Gondwanian origin. Species classified as Caddidae are known from the Baltic amber (extinct, Eocene), North America and Japan (genus *Caddo* BANKS, 1892) (subfamily Caddinae) on one side and South Africa (*Caddella* HIRST, 1925), North, Central and South America, Japan, Australia and New Zealand (*Acropsopilio* SILVESTRI, 1904), Australia with Tasmania and Chile (*Austropsopilio* FORSTER, 1955), Australia and Chile (*Hesperopilio* SHEAR, 1996), Tasmania (*Tasmanopilio* HICKMAN, 1957) (subfamily Acropsopilioninae) on the other side (SHEAR 1975, PINTO-DA-ROCHA & GRUBER 2007). In Africa it is represented by several species restricted to the West and East Cape Provinces of Republic of South Africa. Their precise number is not known, as all African species have very limited ranges and the differences between them are mostly small and must be examined

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very thoroughly (STARĘGA 1988).

***Caddella africana* (LAWRENCE, 1931)**

Oonopsopilio africanus LAWRENCE, 1931: 470–472, fig. 66.

Cadella [sic!] *africana*: LAWRENCE 1934: 584 (in key).

Cadella africana: ROEWER 1957: 331.

Caddella africana: KAURI 1961: 139–140, figs 77A–E, G, 78A–C.

Caddella africana: SHEAR 1975: 84–85, figs 28–30.

Caddella africana: STARĘGA 1992: 332.

Type locality

Ladismith (West Cape Province, Republic of South Africa).

Material examined

1 ♀ (MRAC 174.958) South Africa, Cape Peninsula, Constantia, Vlakkenberg, fynbos near summit, 25.V.–7.VI.1992 leg. B. HEYDENRYCH; 1 ♀, 2 juv. (MRAC 174.967 – 2 juv., RCWS II/0024 – 1 ♀) same place and collector, 9.–22.VII.1992; 1 ♀ (MRAC 174.985) same place and collector, 2.–16.IX.1992; 1 ♂ (MRAC 177.002) same place and collector.

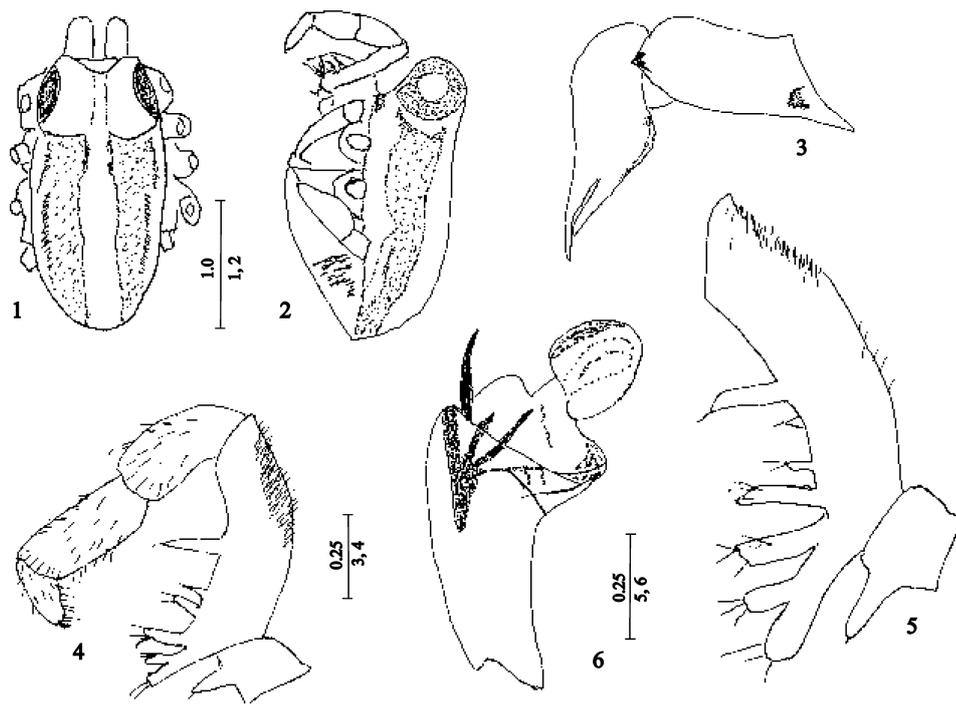
Description

Male. Body 2.1 mm long, shape typical for the genus, with great, protruding eyes (Figs 1, 2). Sides dark brown, medial part of the dorsum with longitudinal white-silvery stripe. Visible lateral parts of carapace silvery, strongly shining. Venter white, coxae with brownish shades. Basichelicerite with a conical subbasal tooth medially. Second joint smooth, with some stiff bristles frontally (Fig. 3). Pedipalps (Figs 4, 5). Trochanter ventrally with one finger-like spine. Femur 0.67 mm long, with five similar spines. The first (basal) spine bifurcated, with dorsal branch shorter than the ventral; the fourth much shorter than the others. Four basal spines with several setae on the tops, the apical one as well as that on trochanter with only one seta. The basal spine equals 1.5 diameter of the joint, the others shorter. Femur subapically on the dorsal side with large dark brown spot (nearly half its length) bearing many bristles inserted on contrasting yellow dots. It is slightly elevated and with reticular cuticle – it looks like a glandular area. Other joints of pedipalps unarmed, only with numerous bristles.

All legs lacking in the specimen examined (material from Barber traps!).

Penis (Fig. 6) 0.88 mm long, maximal width 0.27 mm. Shaft in shape of an elongate vase, 0.64 mm long, up to 0.27 mm wide. Glans 0.27 mm long, basally armed with three elongate (0.16–0.23 mm) sclerites and with sclerotized margins. Its ventral margin with two long, pointed spines. Stylus nearly round. ca. 0.22 mm in diameter, slightly sclerotized ventrally and laterally.

Female. Body length 1.92 mm. Coloration uniformly greyish-brown, without the dorsal stripe. Some traces of silver colour on the upper and back surface of the eye mound.
 Juveniles similar to the female, also without any pattern.



Figs 1-6. *Caddella africana* (LAWRENCE) male (MRAC 177.002): 1 – body pattern, dorsal view, 2 – body, lateral view, 3 – right chelicera, mesal view, 4 – left palpus, lateral view, 5 – trochanter and femur of the left tarsus, lateral view, 6 – penis, lateral view.

Distribution

West Cape Province of Republic of South Africa. The species is known from the nearest vicinity of Cape Town. The other localities cited by LAWRENCE (1931) (Caledon, Ashton, St Helena Bay, Addo Bush) must be checked, as all species of *Caddella* are very similar and distributed in very restricted areas. For instance, the locality in KwaZulu-Natal given in the original description of *C. croeseri* is most probably wrong – an error in labeling (?); the species is known from the vicinity of Knysna only (STAREGA 1988).

Caddella jocquei sp. n.**Etymology**

The species is named after one of its collectors and the person who enabled me to study the present material – Dr Rudy JOCQUÉ.

Type locality

Sederberg [Mountains], West Cape Province, Republic of South Africa.

Material examined

Type material. 1 ♀ holotype (MRAC 124.982), 1 ♀ paratype (MRAC 124.983 = RCWS II/0047) „Afrique du Sud, Prov. du Cap, Distr. de Clanwilliam, Sederberg, dans humus sous buissons ou grosses pierres, [leg.] J. SMITH VII-1966 n.99”; 2 ♀ paratypes (MRAC 200.771), 1 ♀ paratype (200.850) South Africa, Cederberg, Dwarsrivier, Sanddrif, Wolvekraal, under rock, 15.VIII.1994 leg. R. JOCQUÉ; 1 ♀ paratype (MRAC 200.814) South Africa, Cederberg, Sederhoutkloof, 900–1200 m, 12.VIII.1994 leg. J. JOCQUÉ, F. JOCQUÉ & E. TYBAERT.

Other material. 1 juv. (MRAC 130.028) „Afrique du Sud, Prov. du Cap, Distr. de Clanwilliam, Sederberg, 500–1100 m, dans humus sous buissons ou grosses pierres, [leg.] N. LELEUP VII-1966 n.99”.

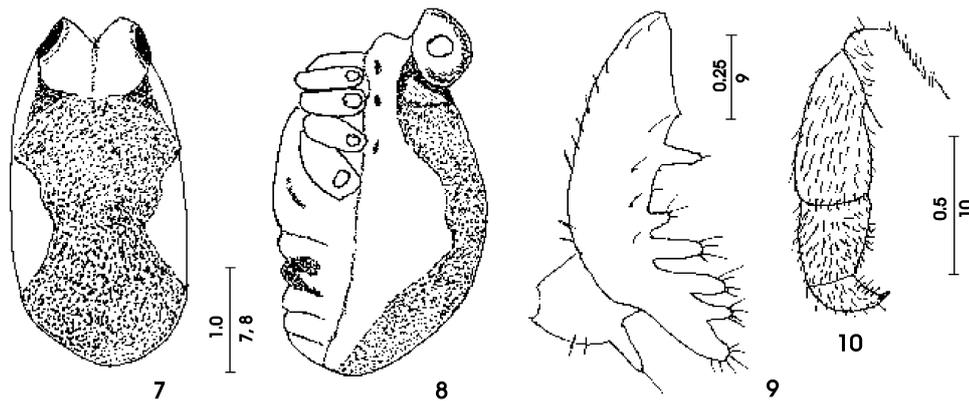
Description

Female. Body (Figs 7, 8) typical for the genus, egg-shaped, 1.9–3.2 mm long, entirely smooth. Some minute bristles only on coxal surfaces, genital operculum and in vicinity of mouth. Eye mound huge, 1.00 mm wide and 0.42 mm high, very deeply furrowed, occupying nearly whole carapace width and overhanging the frontal margin. The borderline between carapace and abdomen nearly invisible. Dorsal pattern simplified: a darker, brownish „saddle” begins with dark brown lines on the carapace below the sides of the eye mound, and with constriction on the 3rd abdominal segment extends nearly to the body end (narrowing gradually). The lowest part of carapace silvery, sometimes even with golden gleam, strongly shining. Body sides and venter silvery-white with dark brown spots and shadows (mainly venter). Chelicerae brownish-yellow. Palps (Figs 9, 10). Trochanter with one pointed spine ventrally, slightly shorter than joint diameter. Femur ventrally with a row of long, finger-like (that means with rounded tips) spines: the first is divided into two lobes, the second connected to its base, the third separated from them by its diameter. All these spines form a fan-like structure. Next to it, again separated by its own diameter is a spine twice as short than the other. Further apically is one more, sharply pointed, longer spine, separated from the short one by its 2.5 basal diameters. Subapically, on the prolateral edge of dorsal side, a longitudinal „brush” of dense bristles. Patella, tibia and tarsus with dense

bristles on ventral and pro-lateral surfaces. Trochanter 0.22 mm, femur 0.89 mm, patella 0.58 mm, tibia 0.26 mm and tarsus (with claw) 0.42 mm long; the longest spine 0.25 mm. Palps brownish-yellow with irregular brown spots, particularly on dorsal and pro-lateral surfaces of three distal joints. Legs uniformly brownish-yellow.

Affinities

Caddella jocquei seems to be closely related to *C. africana*. Similar is the armature of palpal femur (six spines and most of them finger-like). That is a character which differentiates it from the other species of the genus: the basal spines are finger-like and there are altogether six tips against four or five in the others (STAREGA 1988). An additional character is the body coloration, different in comparison to *C. africana* or *C. croeseri* (the only species known in that respect earlier).



Figs 7-10. *Caddella jocquei* sp. n. female (paratype, MRAC 200.814), 7 – body pattern, dorsal view, 8 – body, lateral view, 9 – trochanter and femur of the right palpus, lateral view, 10 – patella, tibia and tarsus of the right palpus, mesal view.

Distribution

The species is most probably endemic in Sederberge Mts (about 200 km N from Cape Town), in an area, where nobody earlier has collected (or exactly worked out) any harvestmen. The other species are known from different parts of the coastal mountains between Cape Town and Knysna. It is living (or hiding) in litter under stones or logs (in forests?) in the height zone between 500 and 1200 m a.s.l. The species can be parthenogenetic, anyway no males have been found.

Acknowledgements

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The major part of the material is stored in the Musée royal d'Afrique Centrale in Tervuren (MRAC), some duplicates were left in the reference collection of the author (RCWS).

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