

Three new harvestmen species from southern Africa (Arachnida: Opiliones: Caddidae, Neopilionidae, Assamiidae)

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ABSTRACT

LOTZ, L.N. 2011. Three new harvestmen species from southern Africa (Arachnida: Opiliones: Caddidae, Neopilionidae, Assamiidae). *J. Afrotrop. Zool.* 7: 3-8.

Three new species of harvestmen (Arachnida: Opiliones), *Caddella haddadi* sp. n., *Neopilio inferi* sp. n. and *Cryptopygoplus capriviensis* sp. n., are described from two localities in the western Cape Province, South Africa, and one locality in the Caprivi, Namibia. Notes on distribution and possible further new species are also added on two other *Caddella* species, *C. africana* Lawrence, 1931 and *C. croeseri* Starega, 1988.

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INTRODUCTION

During research for the publication of a new catalogue on the southern African Opiliones (Lotz 2009), three new species were found among the specimens of the National Museum, Bloemfontein, collection (NMBAO) and the Agricultural Research Council – Plant Protection Research Institute, Pretoria, collection (AcAT). Among these are two new species in the suborder Eupnoi (Family Caddidae and Family Neopilionidae) and one new species in the suborder Laniatores (Family Assamiidae). These three new species are described here. Before these descriptions there were five species and one subspecies in the genus *Caddella* Hirst, 1925, the genus *Niopilio* Lawrence 1931 was monotypic and there were four species in the genus *Cryptopygoplus* Lawrence 1931. These numbers are not reflected in Lotz (2009), as a new species had since been added to *Caddella* and *Lawrenciola*, Roewer 1935 had been synonymized with *Cryptopygoplus*. Some notes on the distribution and on the possibility of a further new species of *Caddella*, about which Starega had queries (1988, 1992 & 2008), are added in order to clarify his questions.

Caddidae Banks, 1892
Genus *Caddella* Hirst, 1925
***Caddella haddadi* sp. n.**
Figures 1-8

Type material examined *Holotype* ♂: SOUTH AFRICA: Western Cape Province, Bredasdorp, De Hoop Nature Reserve, Koppie Alleen, 34°28'S

20°31'E, 15.VI.2005, leaf litter on dunes, C.R. Haddad (NMBAO 00087).

Paratype: SOUTH AFRICA: 1 ♂ (smaller specimen together with holotype in same vial) same data as holotype (NMBAO 00087).

Diagnosis Differing from *Caddella capensis* Hirst, 1925 and *C. croeseri* Starega, 1988 in the number of spines on the palpal femur and from *C. africana* Lawrence, 1931 and *C. spatulipilis* Lawrence, 1934 in the structure of the hooked tooth of the male first cheliceral segment. It also differs from *C. spatulipilis* in body coloration and from *C. africana* in the coloration of the palps. A comparison with *C. jocquei* Starega, 2008 could not be made as *C. haddadi* is known only from male specimens and *C. jocquei* only from female specimens.

Etymology The species is named after the collector of the type specimens – Mr. Charles Haddad.

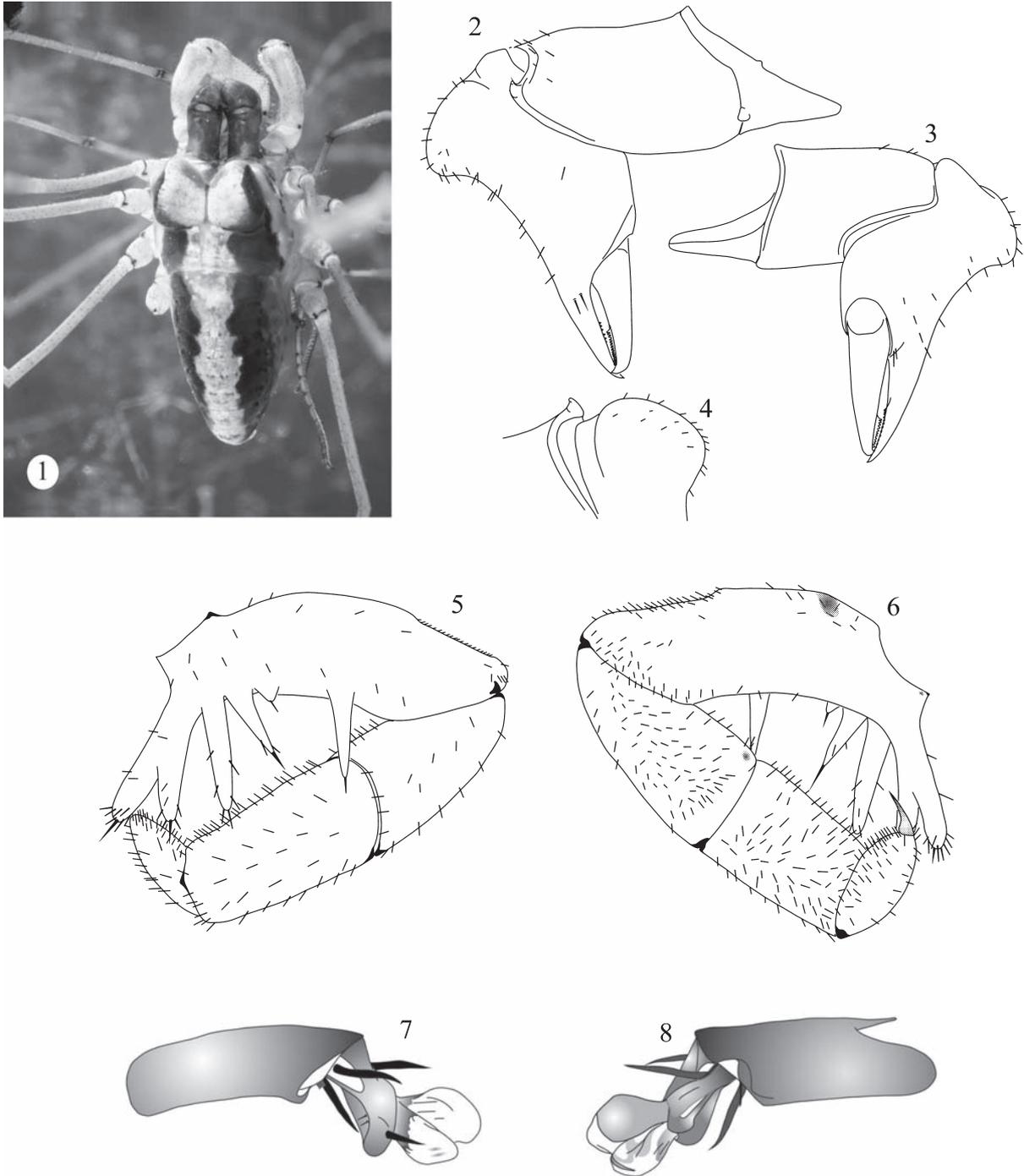
Description Male: body length 3.3 mm, as measured from the front of the eyes to the posterior of the abdomen. The eyes protrude over the anterior margin of the body by 0.2 mm. Paratype with body length 3.1 mm and eyes protruding 0.1 mm over anterior margin. Body shape typical for the genus (Fig. 1). Dorsal dark brown with a white-silver medial band and sides, very similar to that of *C. africana*. Venter white with brownish markings. Chelicerae mostly brown and legs and palps mostly white. Cheliceral first segment with a slightly hooked tooth apical prolateral (Fig. 2, 4), not quite as prominently hooked as in *C. capensis*. Cheliceral second segment smooth, with some stiff bristles and a rounded bump frontally (Figs 2-3). Pedipalps: trochanter ventrally with one finger-like spine; femur with five finger-like spines, the basal one bifurcated and the fourth very

short (Figs 5-6); femur and rest of the joints with simple sharp bristles; tarsus with a relatively strong claw apical (Fig. 6). Penis: (Figs 7-8) 1.9 mm long, bent in a stretched z-shape; maximum width 0.4 mm. Mostly sclerotized, except for the glans, which is only basally sclerotized. Mid region with five strong spines (one broken off at base in Fig. 7). Female: unknown.

Distribution Known only from the type locality.

Caddella africana (Lawrence, 1931)

Note: Starega (1988) mentions that the specimens from 'Addo Bush', Eastern Cape Province, [ca. 33°32'S 25°50'E], collected by J. Drury, July 1919,



Figs 1-8. *Caddella haddadi* sp. n. male. 1. body dorsal view, slightly lateral; 2. right chelicera, prolateral view; 3. right chelicera, retrolateral view; 4. right chelicera, prolateral hooked tooth; 5. right pedipalp, prolateral view; 6. right pedipalp, retrolateral view; 7, 8. penis, lateral views.

South African Museum (Iziko) (SAM) collection, could be *C. capensis* or *C. croeseri*. Staręga (1992) states that it is doubtful that they are *C. africana*. On closer examination of these two specimens, it was found that they could be a new species close to *C. spatulipilis*, as the palps seem to have spatulate setae. At present the two specimens are in separate vials with the number SAM B1294, with one renumbered SAM C3530. On examination the two specimens seem to be a ♂ (C3530) and ♀ (B1294) and it also seems as if they may have been in copulation when collected, as it seems as if the ♂ penis may have broken off in the ♀ on separation of the specimens. Both of these two specimens are not in a very good state and to determine if they do represent a new species, more specimens will have to be collected at Addo Bush. At present the ♂ is labeled *C. spatulipilis* and the ♀ *C. africana*. Unfortunately it is unknown who separated and relabeled the two specimens.

Caddella croeseri Staręga, 1988

Note: Staręga (2008) mentions that locality data on the label of the ♀ specimen from KwaZulu-Natal Province, South Africa, Karkloof Forest, 25 km NNW Howick, Geekie's Farm (Benvie) [29°16'S 30°22'E] (Natal Museum, South Africa, collection, No. 14843) is most probably wrong. In the meantime another ♀ specimen was collected from Eastern Cape Province, South Africa, Maclear, Prentjiesberg [31°07'S 28°11'E] (NMBAO 00192). This locality lies between the type locality for *C. croeseri* (Western Cape Province, South Africa, Diepwalle Forest Station, 22 km NE Knysna [33°57'S 23°10'E]) and the KwaZulu-Natal locality and suggests that this species could have a much wider distribution than thought by Staręga (2008).

Neopilionidae Lawrence, 1931
Genus *Neopilio* Lawrence, 1931
***Neopilio inferi* sp. n.**
Figures 9-15

Type material examined Holotype ♂: SOUTH AFRICA: Western Cape Province, Gamkaskloof, Swartberg Nature Reserve [33°21'S 21°34'E], 1 Aug. 2000, fynbos, Z. van der Walt (AcAT 2002/207).

Other material One immature, SOUTH AFRICA: George, Bergplaas next to Dieprivier [33°55'S 22°40'E], 1.II.1994, sweeping mixed grass, E. van den Berg (AcAT 94/243).

Diagnosis Differing from *Neopilio australis* Lawrence, 1931 in the structure of the penis tip (Fig. 15)

and the structure of the movable finger of the chelicerae.

Etymology The species name is a latinification of "Hell", as the type locality is also known.

Description Male: body length 3.2 mm, maximum width 2.1 mm in the area between cephalothorax and abdomen. Dorsal (Fig. 9) and ventral with mottled brown pattern, though ventral more white than dorsal. Legs, chelicerae (Figs 10-11) and palps (Figs 12-13) with brown banding. Anterior margin of cephalothorax smooth, eyemound low, rounded and smooth with only a few spicules above. Abdominal tergites with a few minute setae, otherwise smooth. Coxae and genital operculum with setae. Chelicerae (Figs 10-11) small, smooth, second segment with a few setae mostly anterior; small teeth on fingers, one row on immovable finger and two rows on movable finger; the groove between two rows of teeth on movable finger not as noticeable as depicted for *N. australis* by Kauri (1961, 82B-C). Pedipalps (Figs 12-13) with numerous setae; claw at end of tarsi relatively prominent compared to that of *N. australis* and not bent back, without teeth; femur 1.1 mm, patella 0.9 mm, tibia 0.8 mm, tarsus 0.9 mm; Patella/Tibia ratio = 1.13, Patella/Tarsus ratio = 1.00. Legs unarmed, femora and tibia with short setose spines, metatarsi and tarsi with a few minute setae; tarsal formula 34:65:34:44; femur I 2.3 mm, II 4.3 mm, III 2.2 mm, IV 3.3 mm; tibia I 2.3 mm, II 4.3 mm, III 2.1 mm, IV 2.9 mm. Penis (Figs 14-15) unscerotized; shaft broad at base with a deep notch, lengthening to apex, a slight narrowing neck near apex, notched at apex beneath glans bend; glans short and bent, stylus not coiled; no bristles or barbs at shaft-glans junction.

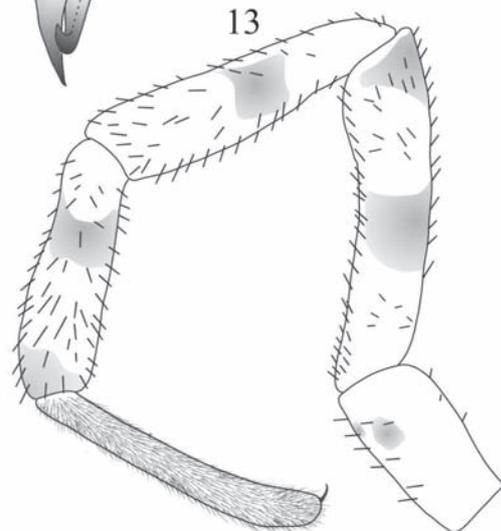
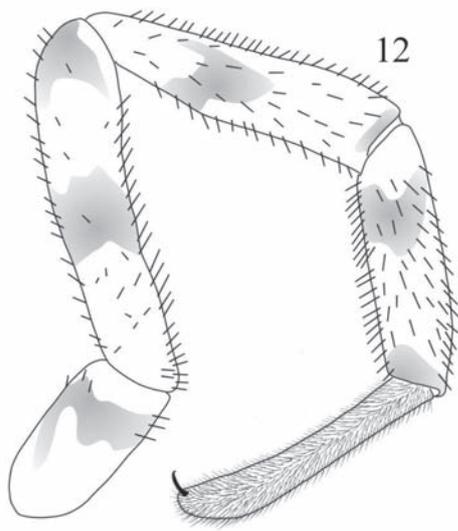
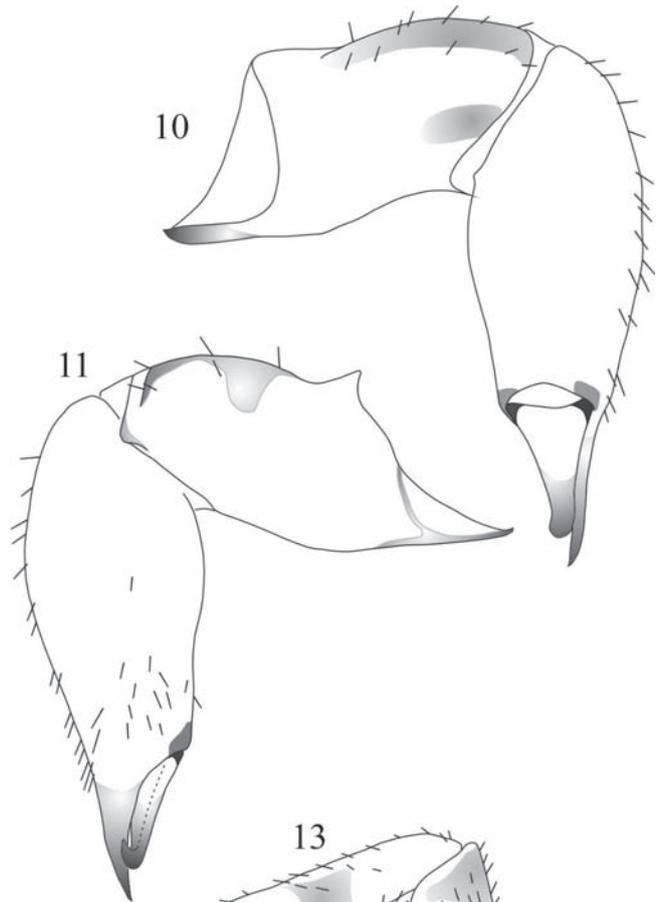
Female unknown.

Distribution Known only from the type locality.

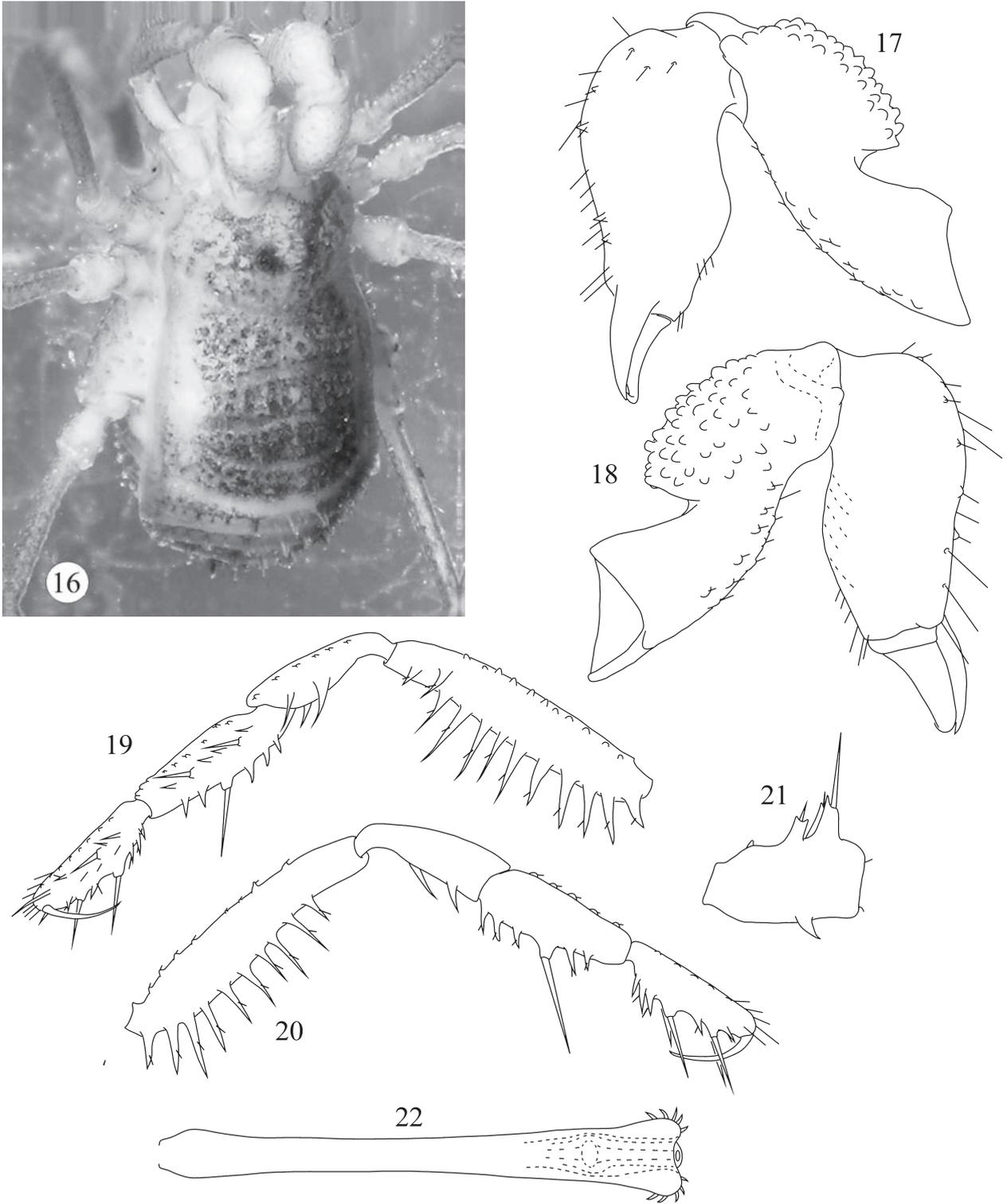
Assamiidae Sørensen, 1884
Genus *Cryptopygoplus* Lawrence, 1931
***Cryptopygoplus capriviensis* sp. n.**
Figures 16-22

Type material examined Holotype ♂: NAMIBIA: Caprivi strip, 10 km E of Divungu, 18°06'S 21°39'E, 30.XI.2006, under rocks, C.R. Haddad (NMBAO 00268).

Diagnosis Differing from *Cryptopygoplus rhodesiana* (Lawrence, 1931) in the second cheliceral segment being without a stout tooth near its distal apex, from *C. africanum* Lawrence, 1931 in the free tergites having one complete row of granules and the pedipalp femur having two teeth near the prolateral apex, from *C. coronatus* Staręga & Snegovaya, 2009



Figs 9-15. *Neopilio inferi* sp. n. male. 9. body dorsal view; 10. right chelicera, prolateral view; 11. right chelicera, retrolateral view; 12. right pedipalp, prolateral view; 13. right pedipalp, retrolateral view; 14. penis, ventral view; 15. penis tip, ventral view, slightly lateral at glans.



Figs 16-22. *Cryptopygopus capriensis* sp. n. male. 16. body dorsal view, slightly lateral; 17. right chelicera, prolateral view; 18. right chelicera, retrolateral view; 19. right pedipalp, prolateral view; 20. right pedipalp, retrolateral view; 21. right pedipalp trochanter; 22. penis, ventral view.

and *C. damarana* (Lawrence, 1931) in having three teeth ventrally on the pedipalp trochanter.

Etymology The species is named after the type locality.

Description Male: body and appendages yellowish brown, dorsum with darker brown indistinct pattern and granules (Fig. 16). Body length 3.1 mm. Anterior margin of carapace with five finger-like strong denticles, central three pointing horizontally and the outer two pointing slightly upwards. Carapace with large granules at the sides and on top of the eyemound, those on the eyemound forming a similar crown as in *C. coronatus*. Eyemound broader than long. The first four areas of the scutum with more than one transverse row of larger and smaller granules, fifth area and free tergites with one complete transverse row of granules and one incomplete row. Venter finely to coarsely granular, sternites with one row of coarse granules, first sternite on each side with four stump denticles opposite corresponding denticles on the posterior side of coxa IV (concealing the spiracles). Cheliceral segment I coarsely granular and with a posterior protruding knob dorsocentrally (Figs 17-18). Pedipalps (Figs 19-21): trochanter (Fig. 21) (0.5 mm) with one thorn dorsally and three (two on left palp) spines ventrally, ventral spines with setae and short apical extensions, basal and distal a large granule with terminal hair; femur (1.4 mm) with 10-11 ventral spines and distal prolateral one long and one shorter spines, dorsal surface with several denticles (Figs 19-20); patella (0.75 mm) prolateral distal ventral one spine (Fig. 20), retrolateral ventral two spines (Fig. 19); tibia (0.75 mm) prolateral (from proximal to distal) spines iliili, retrolateral (from proximal to distal) spines iiiiii (Figs 19-20), tibia also with some hair, mostly dorsally but also a few ventrally; tarsus (0.7 mm) prolateral (from proximal to distal) spines iliil, retrolateral (from proximal to distal) spines iil-iiili (Figs 19-20); long apical smooth claw. Legs: all femora granular; patellae and tibiae slightly granular; false articulation tibia II – 1 (over whole length),

tibia IV – 0, metatarsus I – 7, metatarsus II – 15, metatarsus III – 5, metatarsus IV – 6; tarsal segments 5(3): 7-8(3):6:4-5. Penis (Fig. 22) 0.85 mm long, shaft 0.07-0.1 mm wide, tip 0.12 mm wide, base 0.1 mm wide; apex with 5 short hooks on each side (Fig. 22). Glans did not expand and can therefore not be described.

Female unknown.

Distribution Known only from the type locality.

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