

A NEW SPECIES OF *CLAUSIDIUM* FROM SOUTH AFRICA (COPEPODA,
CYCLOPOIDA, CLAUSIDIIDAE)

BY

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INTRODUCTION

In April 1972, Mr. Charles Griffiths of the Department of Zoology of the University of Cape Town, collected a specimen of *Callianassa rotundicaudata* from Schaapen Island, Saldanha Bay, Cape, which was found to be the host of a cyclopoid copepod parasite. The material was submitted to the South African Museum, and found to be a species of the genus *Clausidium* which could not be reconciled to any of the 9 species so far described. *Clausidium* always parasitises species of the thalassinid decapod *Callianassa*, and has been recorded from North and South America, the Mediterranean, India and West Africa. As 4 species of this mud prawn occur in South Africa, it is hardly surprising that a species of the parasite has eventually been found.

***Clausidium saldanhae* n. sp. (figs. 1, 2)**

Material. — Taken from branchial chamber, attached to gills and body wall of ovigerous female of *Callianassa rotundicaudata* Stebbing, from Schaapen Island, Saldanha Bay, South Africa. Holotype, ovig. ♀, South African Museum A 13177; allotype ♂, SAM A 13177; paratypes 10 ♀, 21 ♂, plus 25 ♀ with attached ♂, SAM A 13178; paratypes 5 ♀, 5 ♂, Dept. of Zoology, University of Cape Town.

Description. — Female. Colour coral-pink. Cephalothorax semicircular, widest posteriorly. Second and 3rd thoracic segments, and plate over 4th and 5th thoracic segments broader than long, posterior corners rounded, posterior margin slightly indented, giving somewhat bilobed appearance. Sixth thoracic segment as long as wide, posteriorly slightly tapered.

Abdomen of 1 segment, about two-thirds length of 6th thoracic segment. Caudal rami equal in length to abdomen, each tipped with 2 stout and elongate, and 3 short and slender setae. Egg-sacs almost spherical, two-thirds covered by dorsal plate of 4th thoracic segment.

First antenna 7-segmented, 2nd segment longest, bearing numerous setae, distal 4 segments subequal in length.

Second antenna 4-segmented, 1st segment longer than distal 3 segments together, bearing fine bristles and single distal seta. Distal two segments together forming foot-shaped lobe bearing 10 elongate setae. Mandible with 2 distal lobes,

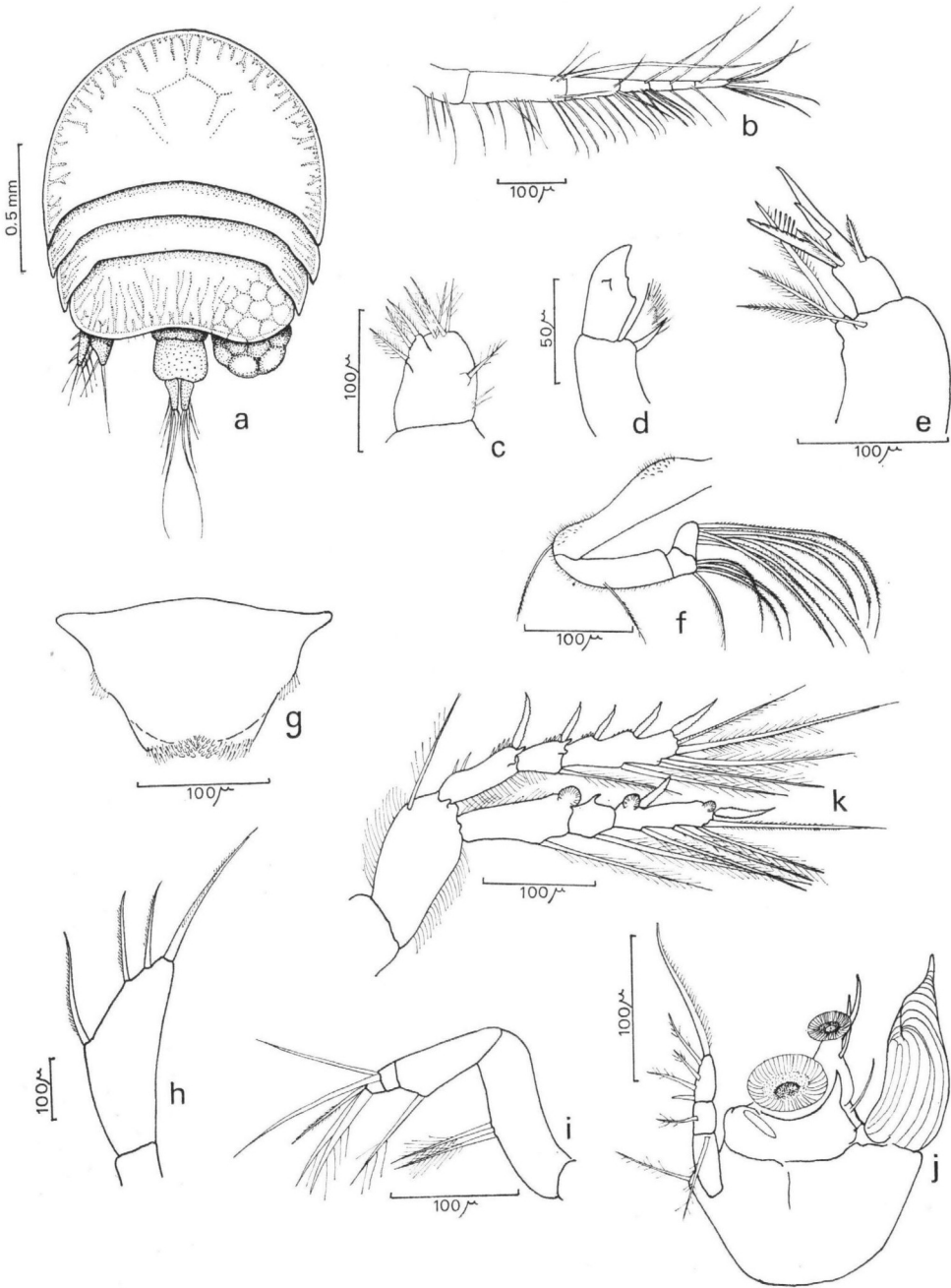


Fig. 1. *Clausidium saldanhae* n. sp., female. a, ovigerous female in dorsal view; b, 1st antenna; c, 1st maxilla; d, mandible; e, 2nd maxilla; f, 2nd antenna; g, labrum; h, 5th thoracic leg; i, maxilliped; j, 1st thoracic leg; k, 2nd thoracic leg.

larger lobe apically pointed, bearing 3 small teeth, smaller lobe bearing numerous setae, plus slender lateral process.

First maxilla short, consisting of single rounded lobe bearing 7 terminal setae plus single setae at about midpoint. Second maxilla 2-segmented, basal segment bearing 3 distal setae, one being spine-like; 2nd segment bearing 2 setae and 2 spines, one being serrate, the other carrying a secondary shorter spine. Maxilliped 4-segmented, basal segment equal in length to distal 3 segments together, bearing 2 setae at about midpoint, 2nd segment distally slightly expanded, bearing single seta, 3rd segment unarmed, terminal segment with 3 slender and 2 stout setae.

First thoracic leg, exopod 3-segmented, basal segment with single distal seta, 2nd segment bearing single seta, terminal segment with 1 elongate and 4 short stout setae, endopod with pointed basal process, distally tapering, bearing 2 distal setae and single slender lower spine, plus 2 sucking discs, lower one larger; strongly developed blade-like seta internal to endopod apically acute.

Second to 4th thoracic legs spination and setation as follows:

Segment no.	2nd leg		3rd leg		4th leg	
	exopod	endopod	exopod	endopod	exopod	endopod
1	0,I	S,1,0	0,I	S,1,0	0,I	S,1,0
2	1,I	1,0	1,I	1,0	1,I	1,0
3	5,III	2S,4,II	5,III	2S,4,II	5,III	2S,3,II

(S = sucking discs, setae in arabic numerals, spines in roman numerals.)

Fifth thoracic leg 2-segmented, basal segment about one-quarter length of distal segment, latter expanded, bearing 4 setae on outer margin.

Male. Colour coral-pink, cephalothorax elliptical rather than semi-circular as in female, widest posteriorly, 2nd and 3rd segment, and plate over 4th segment becoming progressively narrower than cephalothorax. Plate over 4th segment distinctly bilobed, lobes broadly rounded. Abdomen 3- or possibly 4-segmented, segments subequal. Caudal rami as in female.

First and 2nd antennae, mandibles, maxillae similar to those of female. Maxilliped forming a stout grasping appendage, consisting of broad basal portion, plus 2 distal portions, anterior one being tapered, distally curved towards posterior process, with 2 blunt apical teeth. Posterior process shorter than anterior, bearing single apical and 2 lateral cusp-like teeth. Base of processes lobose, bearing 2 short setae.

First pair of legs modified, lacking blade-like setae found in female, endopod with finger-like process on inner side, 2 sucking discs, lower one larger, 2 apical spines, plus single spine originating near base of finger-like process.

Second to 4th thoracic legs as in female. Fifth thoracic leg 2-segmented, basal segment short, distal segment elongate, almost 6 times longer than broad, bearing 4 setae on outer margin.

Dimensions (in mm for 5 mature ♀♀ and 5 ♂♂). —

	Female	Male
Total length including caudal rami	1.39 — 1.56	0.76 — 0.86
Median dorsal length of cephalothorax	0.58 — 0.64	0.31 — 0.33
Greatest cephalothorax width	0.94 — 1.04	0.42 — 0.46
Median dorsal length of 2nd thoracic segment	0.12 — 0.14	0.06
Median dorsal length of 3rd thoracic segment	0.12 — 0.14	0.06
Median dorsal length of plate over 4th thoracic segment	0.26 — 0.30	0.10 — 0.11
Length of 6th thoracic segment + abdomen (including rami)	0.40 — 0.44	0.20 — 0.24
Length of ovisac	0.38	—

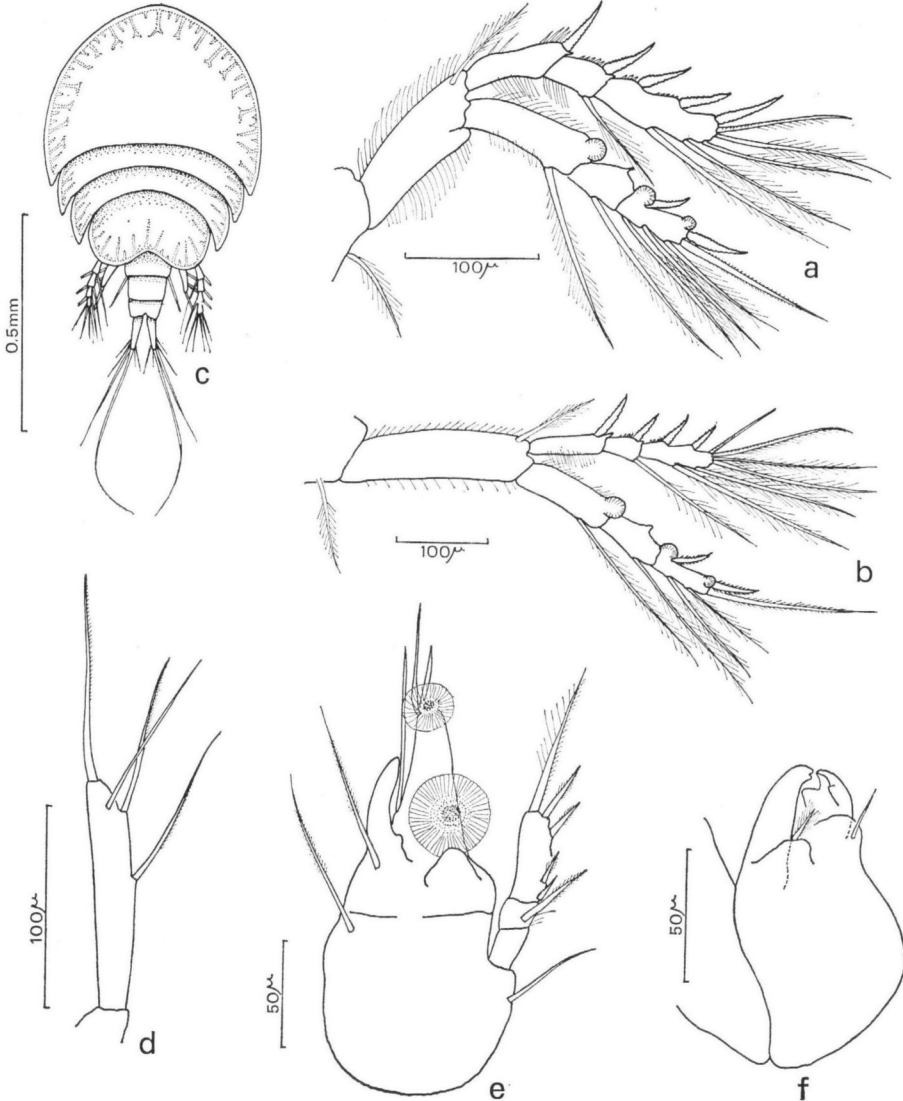


Fig. 2. a-b, *Clausidium saldanhae* n. sp., female: a, 3rd thoracic leg; b, 4th thoracic leg. c-f, *Clausidium saldanhae* n. sp., male: c, male in dorsal view; d, 5th thoracic leg; e, 1st thoracic leg; f, maxilliped.

Discussion. — Vervoort & Ramirez (1966: 205) define the genus *Clausidium* in their key to the genera of the family Clausidiidae as possessing sucking discs exclusively on the legs, the endopod of the 1st leg being modified, bearing 2 large sucking discs, small sucking discs on endopods of legs 2 to 4, the 2nd endopod segment of legs 2 and 3 bearing 2 internal setae, the 2nd endopod segment of 4th leg with 1 internal seta, and 4 spines on 3rd exopod segment of legs 1-4. The present material agrees with all these characters except for the setation of the 2nd endopod segment of legs 2 and 3.

From Humes' key (1949: 103), however, the present species, with a single seta on the 2nd endopod segment of the 3rd thoracic leg in the female, resembles *C. caudatum* and *C. tenax*. The attenuated tip to the blade-like seta of the 1st thoracic leg in the female would place the present material closest to *C. tenax* Humes. Thus from the key, the present species is excluded from *C. searsi*, *C. apodiforme*, *C. vancouverense*, *C. dissimile* and *C. caudatum*. *C. saldanhae* can immediately be separated from *C. tenax* (and indeed from all the other described species) by the shape of the dorsal plate of the 4th thoracic segment, being triangular in the latter species, and broadly bilobed in the former. The size of the present species (♀ 1.39-1.56 mm total length) is somewhat larger than that of *C. tenax* (1.175 mm).

C. senegalense Humes, 1957, also possesses a subtriangular dorsal plate on the 4th thoracic segment in the female, and elongate egg-sacs. *C. travancorensis* Pillai, 1959, and *C. chelatum* Pillai, 1959, possess a subtriangular and elliptical 4th dorsal plate respectively, as well as elongate egg-sacs. *C. saldanhae* would seem to be intermediate in size between these two Indian species.

Apart from these differences, the present species is distinctive regarding the appendages, especially the first thoracic legs of both the male and female, and the maxilliped of the male.

ZUSAMMENFASSUNG

Eine neue Art der Copepodengattung *Clausidium* wird beschrieben, welche mit *Callianassa rotundicaudata* aus Süd Afrika assoziiert lebt.

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