A NEW SPECIES OF ANTHURID ISOPOD FROM THE CAPE

BRIAN KENSLEY
South African Museum, Cape Town

ABSTRACT

A new species of anthurid isopod from the west coast is described, and the generic definition of *Haliophasma* is revised.

INTRODUCTION

In the course of identifying marine isopods for the Department of Zoology of the University of Cape Town, numerous specimens of an anthurid were encountered which did not fit any previously described species, and could not be given generic status with any confidence. It was decided to describe this species, and to redefine the genus *Haliophasma*.

My thanks are due to Dr Nigel Christie for making the specimens available.

Family ANTHURIDAE

Haliophasma caecus, sp. n.

Figures 1, 2

Description

Female. Head two-thirds length of first peraeonal segment, with distinct rostral point, eyes lacking. Peraeonal segment I slightly longer than following segments; segments II to VI subequal in length, VIIth about two-thirds length of VIth. Medio-dorsal pit situated in anterior half of peraeonal segments III to VI. Pleonal segments 1 to 5 only laterally distinct, sixth segment free; pleon equal in length to VIth peraeonal segment.

Antennule shorter than antenna, peduncle three-segmented, basal segment longest; flagellum consisting of short basal segment, median segment four times length of basal segment, plus tiny distal segment bearing three aesthetascs.

Antennal peduncle five-segmented, second segment longest and broadest, flagellum two-segmented.

Mandible with strongly chitinized incisor process of three broad teeth, followed by thinner and more finely denticulate portion, molar process apically acute; palp three-segmented, middle segment longer than basal or distal segments; distal segment carrying row of fringed setae.

Maxilla slender, elongate, carrying one strongly chitinized spine plus five shorter curved spines.

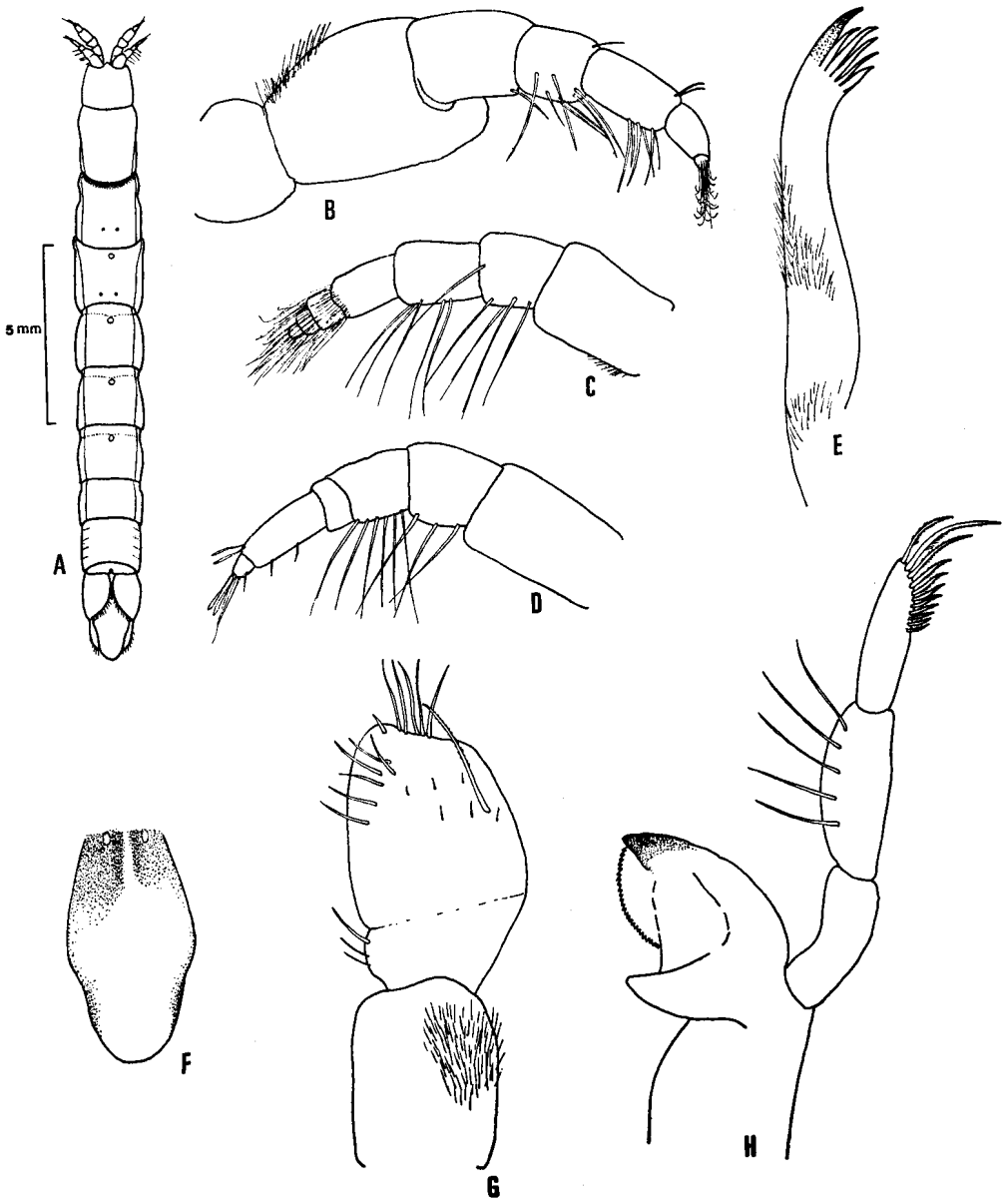

FIGURE 1

Haliophasma caecus sp. n. A, adult female in dorsal view. B, antenna, ♂. C, antennule, ♂. D, antennule, ♀. E, maxilla. F, telson. G, maxilliped. H, mandible.

Maxilliped broad, three- (four) segmented, terminal segment of palp not distinct, bearing cluster of five stout setae; second segment not distinctly separated from third.

Peraeopod I, unguis almost half length of dactylus, palm of propodus convex, armed with setae of varying lengths; posterior portion of propodus elongate, extending to proximal margin of merus; carpus forming small rounded protuberance at base of palm, triangular, carrying several setae on exposed margin.

Peraeopods V to VII with propodus, carpus, merus, and ischium fringed with elongate simple setae; dactylus one-third length of propodus; latter subequal in length to carpus, both slender; carpus not underriding propodus.

Exopod of pleopod 1 operculiform, covering following pleopods, with longitudinal groove on outer face near median margin; endopod shorter and about half width of exopod.

Uropodal exopod distally acute, curved, proximally rounded, outer margin finely denticulate, fringed with short setae; basis longer than endopod, with strong ridge on outer margin; endopod distally broadly rounded.

Telson with blunt medio-dorsal ridge only discernible proximally, flanked by two statocysts, distal margin broadly rounded.

Male. Antennule with three-segmented peduncle, flagellum four-segmented, basal segment equal in length to three distal segments, all four segments bearing numerous setae.

Peraeopod I, unguis slightly less than half length of dactylus; palm of propodus with flat-topped tooth in middle, entire palm armed with numerous setae; distal rounded protuberance of carpus more pronounced and triangular than in female.

Stylet on endopod of pleopod 2 extending well beyond apex of ramus, distally slightly expanded, apically acute.

Material

HOLOTYPE	SAM-A13626	♂	18,2 mm	Lambert's Bay
ALLOTYPE	SAM-A13626	♀	16,0 mm	Lambert's Bay
PARATYPES	SAM-A13627	1 ♂ 5 ♀♀		Langebaan
99 ♀♀	range of total length	6,0 mm–19,0 mm		
7 ♂♂	range of total length	13,0 mm–21,6 mm		

Of the 106 specimens examined, only seven were males. This is in keeping with Barnard's observation that males are much rarer in this family than in other isopod families (1925: 116).

Specimens were recorded from Lambert's Bay, Saldanha Bay, and Langebaan Lagoon on the west coast, and from False Bay to Mossel Bay on the south-east coast. All were taken from sandy or muddy substrates, usually with a bottom-grab, or a suction sampler, indicating that the species forms part of the in-fauna. Depth of water from which the species was collected ranged from 2–68 metres.

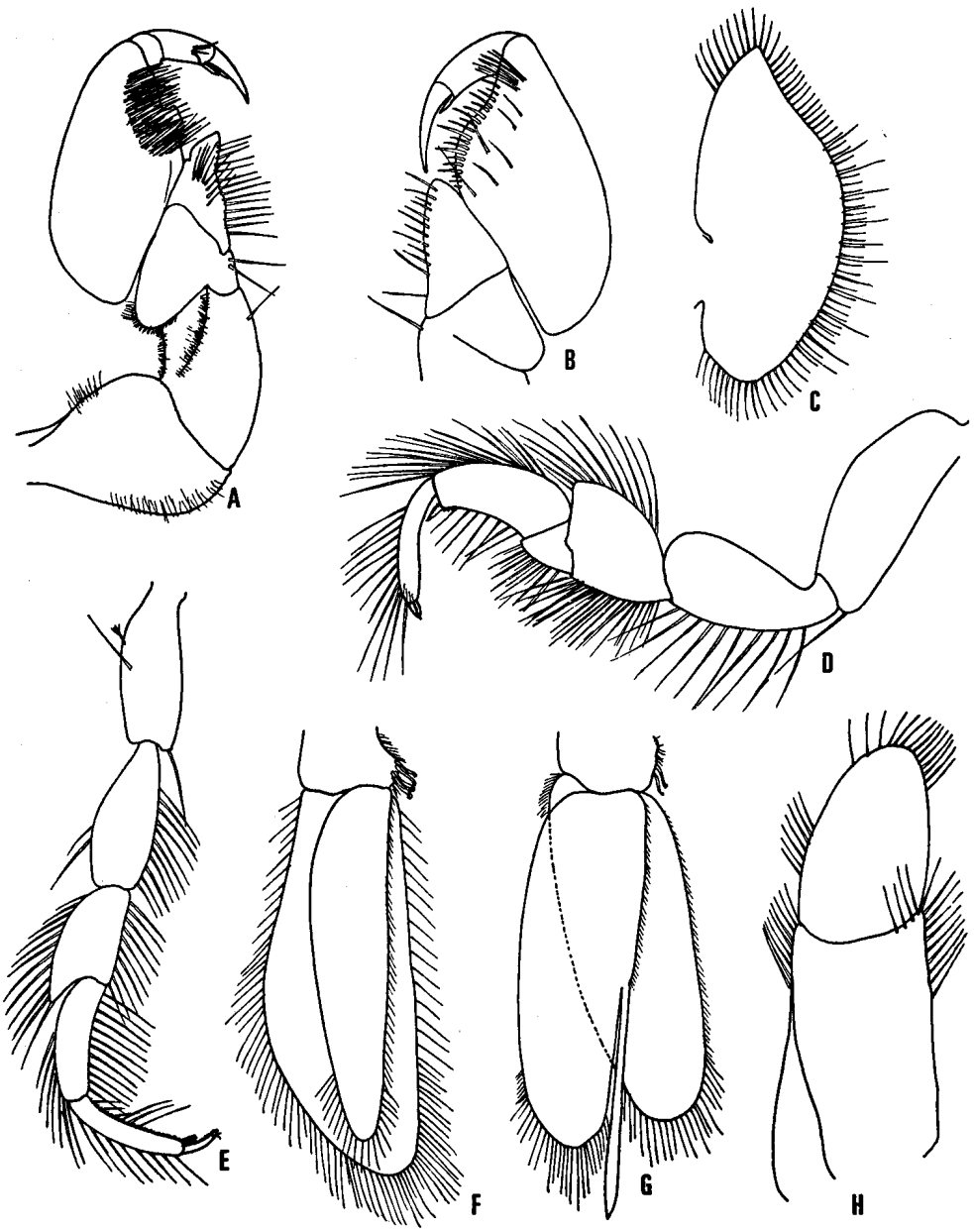

FIGURE 2

Haliophasma caecus sp. n. A, peraeopod I, ♂. B, peraeopod I, ♀. C, uropodal exopod. D, peraeopod II. E, peraeopod VII. F, pleopod 1. G, pleopod 2, ♂. H, uropodal basis and endopod.

DISCUSSION

In the structure of the mandibles, maxillae, and especially the maxillipeds, the present species agrees well with the genus *Haliophasma*. This agreement is further seen in the fused pleonal segments, the carpi of the peraeopods V–VII which do not underride the propodi, the indurated telson, uropods, and grooved exopod of the operculiform first pleopod.

From Barnard's discussion of the genus (1925: 131) three differences emerge in the present material. These are the absence of eyes (all the known species of *Haliophasma* possess well-developed eyes), the long propodal unguis of the first peraeopod (short in *Haliophasma*), and the short antennular flagellum of the male (*Haliophasma* usually possesses a multi-articulate antennular flagellum in the male).

How much weight can be given to these three characters in deciding the generic position of this species, is debatable. As all the specimens were recovered from fine sand or mud, it may be argued that both lack of eyes and the pauci-articulate antennular flagellum of the male are a reflection of the specialized habitat. If this is the case, the generic diagnosis of *Haliophasma* must be revised.

Genus *Haliophasma* Haswell

Diagnosis

Eyes well developed or absent. Peraeonal segments unkeeled or slightly keeled, dorsal pits present or absent. Pleon short, segments indistinct. Telson more or less indurated, dorsally sculptured. Antennal flagellum with varying number of segments. Antennular flagellum multi-articulate or pauci-articulate in male, in either case, bearing numerous fine setae. Mandibular palp three-segmented, first and third segments subequal, distal segment bearing setal comb. Maxilliped broad, three- or four-segmented, segments often indistinct. Peraeopod I stout, unguis of propodus long or short. Peraeopods V to VII with dactylus not underriding propodus. Pleopod 1 operculiform, more or less indurated. Uropodal exopod folding over telson.

REFERENCES

BARNARD, K. H. 1925. A revision of the family Anthuridae (Crustacea Isopoda) with remarks on certain morphological peculiarities. *J. Linn. Soc.* (*Zool.*) 36:109–160.