TRANSACTIONS
OF THE
ROYAL SOCIETY OF NEW ZEALAND

ZOOLOGY

VOL. 7 No. 15 19 JANUARY, 1966

A New Polychaete from Three Kings Islands

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[*Received by the Editor, 12 July 1965.*]

Abstract

A new species of *Rhamphobrachium* is described from shallow water at Three Kings Islands. It resembles *R. capense* from shallow water in South Africa more than *R. chuni*, found in deeper water off New Zealand.

INTRODUCTION

THE genus *Rhamphobrachium* (Eunicidae) is widely distributed through the oceans with most of its species occurring on the continental slope. A single specimen taken by Mr A. Baker with skin-diving gear at Three Kings Islands in 25 feet of water proved to be a new species. I am indebted to Mr Baker for the opportunity to report on the specimen.

Family EUNICIDAE

Subfamily ONUPHIDINAE

Rhamphobrachium Ehlers, 1887

Type species *Rhamphobrachium agassizi* Ehlers, 1887

Rhamphobrachium maculatum n.sp. (Figs. 1-3)

DESCRIPTION. A single anterior fragment with 42 setigers, 14mm long and 1.5mm wide. Generally colourless, but with black pigment specks in groups between the bases of the occipital tentacles, on the bases of the styles of the occipital tentacles, and on the bases of parapods 1 and 2. Dorsal surface of the peristomium and the lateral parts of the ventral surface between the bases of the modified feet quite darkly pigmented, with traces of pigment on the setal lobes and the dorsal and ventral edges of the modified feet.

The head is ovoid, eyes lacking. Occipital tentacles tapering, the median one shorter than the inner laterals which reach to setiger 4. Their ceratophores are half as long as the styles, cylindrical, with two rings at the base. Because of the angle of view this is not shown clearly in Fig. 1.

Published by the Royal Society of New Zealand, c/o Victoria University of Wellington, P.O. Box 196, Wellington.

The first three pairs of parapodia are directed forwards. Their dorsal and ventral cirri are conical and constricted at the base. Ventral cirri inserted two-thirds of the way along the parapodia, nearer the distal end, each with a conspicuous ventral setal lobe, directed ventrally, similar in size and shape to the ventral cirrus.

Fourth and fifth parapodia similar to succeeding ones, although the padlike ventral cirrus is less developed. Ventral cirri vestigial after setiger 25, dorsal cirri are much reduced posteriorly. Small conical pre- and post-setal lobes on the fourth parapodium but no distinct lobes posteriorly.

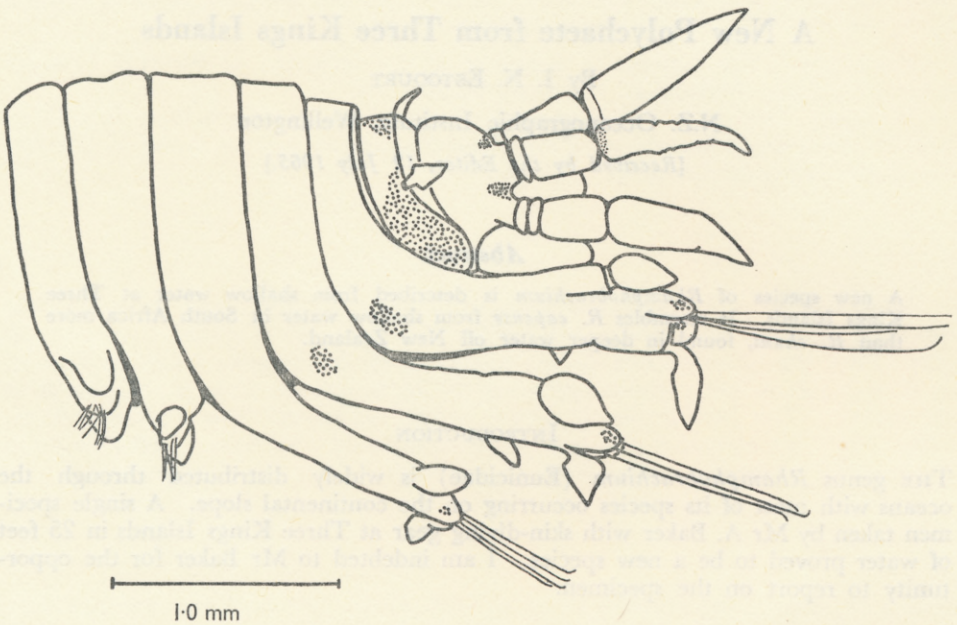

fig. 1

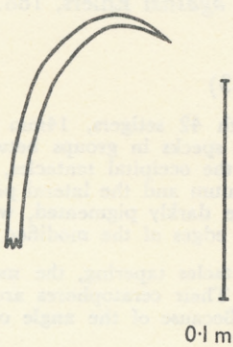

fig. 2

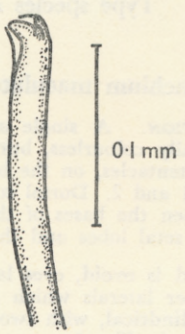

fig. 3

FIG. 1.—Anterior end in dorsolateral view. FIG. 2.—Anterior hook seta. FIG. 3.—Acicular seta from setiger 34.

Gills ligulate, simple, present from setiger 13 to the end of the fragment (setiger 42), long enough to nearly touch across the dorsum.

The long anterior hook setae (Fig. 2) are unidentate, without hood, articulation, or spines along the shaft, four in each modified parapodium. Setiger 5 has from dorsal to ventral three limbate capillaries, two comb setae, one limbate seta, two fine colourless acicular setae with tapering needle points, and six limbate capillaries. Yellow, bidentate, acicular setae (Fig. 3) are first present in setiger 8, continuing, two in each parapodium, to the end of the fragment. A lateral buttress of the apical tooth suggests a third tooth at some angles of view. Setiger 34 has four limbate setae, three comb setae, two limbate setae, and two acicular setae. The comb setae have very fine shafts and almost transparent heads with about 15 indistinct teeth. No compound setae.

HOLOTYPE. The holotype is deposited in the collection of the N.Z. Oceanographic Institute, Wellington, registered number 16.

MATERIAL EXAMINED. One specimen from 25 feet in North-West Bay, Great Island, Three Kings Islands, on a sandy, boulder-strewn bottom, living in the alga *Sargassum johnsonii* Chapman.

DISCUSSION

Most species of *Rhamphobrachium* have branched gills, only *R. maculatum* described here and *R. capense* Day (1960: 355) from South Africa having simple gills. They are differentiated by the character of the anterior hooks, unidentate in *R. maculatum* but pseudo-compound tri- or bi-dentate with clawed hoods in *R. capense*. The Indo-Pacific *R. chuni*, which occurs off New Zealand (Knox, 1960: 126) has branched gills and pseudo-compound tridentate hooded hooks in the modified parapodia when immature, while the adults have smooth hooks.

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