

AUSTRALIAN MUSEUM SCIENTIFIC PUBLICATIONS

Hartman, Olga, 1963. *Reteterebella queenslandia*, a new genus and species of polychaetous annelid from Queensland, Australia. *Records of the Australian Museum* 25(16): 355–358. [1 August 1963].

doi:10.3853/j.0067-1975.25.1963.668

ISSN 0067-1975

Published by the Australian Museum, Sydney

nature culture **discover**

Australian Museum science is freely accessible online at
<http://publications.australianmuseum.net.au>
6 College Street, Sydney NSW 2010, Australia



VOL. XXV, No. 16

SYDNEY,

1st August, 1963

RECORDS
of
The Australian Museum

(*World List* abbreviation: Rec. Aust. Mus.)

Printed by order of the Trustees

Edited by the Director,
J. W. EVANS, Sc.D.



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By

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Registered at the General Post Office, Sydney, for transmission by post as a periodical

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RETETEREBELLA QUEENSLANDIA, A NEW GENUS AND SPECIES OF POLYCHAETOUS ANNELID FROM QUEENSLAND, AUSTRALIA

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Manuscript received 14.8.62

(Figs 1-3)

The collection on which this description is based was received from Miss Isobel Bennett, of the University of Sydney, Australia, whom I thank for the privilege of examining these materials. Mr. Anker Petersen prepared the plate of figures. The holotype specimen is deposited in the Australian Museum, Sydney, New South Wales (Australian Museum Registered Number, W. 3755); a cotype is in the Allan Hancock Foundation, University of Southern California, Los Angeles, California.

Reteterebella, new genus

Type *R. queenslandia*, new species

Reteterebella belongs to the subfamily AMPHITRITINAE Hesse, 1917. Thoracic uncini are in simple rows in five, and in double alternating rows in 11, segments. All uncini are avicular, have a short base and a main fang surmounted by two (or few) smaller teeth. Thoracic setae are first present in the first postbranchial (= fourth) segment, together with uncini in single rows. The setae are entirely smooth along the cutting edge and narrowly limbate along the free length. The thorax consists of a smooth peristomium, three branchial segments and 16 thoracic setigerous segments. Branchiae number three pairs; each one has a basal stalk and terminates in dendritic branches. Lateral lappets are present on the first few segments, but inconspicuous. Nephridial papillae number three pairs, present on the second and third branchial, and first setigerous, segments; gonadial papillae, resembling the nephridial, occur on three successive segments, or setigerous 2 to 4. Ventral scutes are present from the third branchial, and through most thoracic, segments.

Reteterebella is allied to *Eupolymnia* Verrill (as *Polymnia* in Hesse, 1917, p. 174) from which it differs in: (1) thoracic setigerous segments number 16 instead of 17; (2) thoracic uncini are first present from the first, instead of second, setigerous segment, and (3) the first appearance of alternating rows of uncini is in the sixth, instead of eleventh, segment.

The generic name refers to the method of feeding, or casting out its tentacles as a seine, to capture micro-organisms.

Reteterebella queenslandia, new species

Plate 1, figs. 1-3

Collection.—Two specimens come from Heron Island flat, Queensland, Australia, intertidal zone, under dead coral boulders.

Length of a male specimen is 83 mm. without the tentacles, and width is 15 mm. in the middle thoracic, or widest part. A mature female is somewhat larger and has similar proportions. Preserved specimens are drab pale-yellow and have no colour except for the minute black eyespots; they encircle the peristomium as a narrow band behind the insertion of the numerous tentacles. In life the branchiae are brownish red and the body is dull white (Miss Bennett, in litt.).

The anterior end has many slender, longitudinally grooved tentacles (some are shown in fig. 1); they form a tangled mass and comprise a bulk nearly two to three times the size of the body. The latter is massive and tumid in the thorax, then tapers rapidly in the abdomen to a slender pygidial end. The thorax consists of a complete peristomial ring and three branchial, followed by 16 setigerous, segments. The abdomen includes at least 75 segments and brings the total to about 95 segments. The peristomial ring is followed by three branchial segments, each of which forms a complete ring. The first branchiae are much the longest, the second about half as large as the first, and the third considerably smaller. Each has a large, long trunk and is richly divided into many branchlets. There are no brown specks or spots on either trunk or branchiae, such as occur in some terebellids.

Lateral lappets are inconspicuous. The first branchial segment has a foliaceous process at its anterior end; this extends across the ventrum to join a similar process on the opposite side. The second branchial segment has a similar, but smaller, lobe, mainly lateral in position, and the third branchial segment lacks lappets.

Ventral scutes are first present from the third branchial segment; this one and that on the first setiger are the broadest; thereafter scutes are narrower, but extend across the ventrum to the inner bases of the uncinigerous tori.

Uncini are first present from the first setigerous segment, disposed in a single, transverse row about as long as the other thoracic tori; they occur in double, alternating rows from the sixth through sixteenth setigers. Abdominal tori are much shorter, their length about a third or fourth that of thoracic tori, and they decrease in size posteriorly.

Thoracic setae are of one kind, all long, with smooth margin and very slightly (fig. 3) or not at all limbate along their free distal part; those in the superiormost part of the fascicle are largest and those farther down are gradually smaller. Thoracic uncini are broadly avicular, and have a large basal fang surmounted by two slender teeth in a transverse row (fig. 2). Abdominal uncini are similar but slightly smaller, and may have an occasional third or fourth, much smaller distal tooth.

Nephridial papillae number three pairs, and are externally visible as a slightly pedunculate papilla below the base of the second and third branchial pairs, and on the first setigerous segment, below the notopodial fascicle. Three gonadial papillae, resembling the nephridial papillae, but without a peduncle, are visible on the second to fourth setigerous segments, slightly below the level of the nephridial papillae. In the female specimen the gonadial papillae are more diffuse and somewhat elevated. A noteworthy study of these papillae for sexual differentiation has been made by Benham (1927). The posterior end terminates in a constricted, longitudinally wrinkled ring without processes.

Reteterebella queenslandia is at present known only from Heron Island reef flat, Queensland, Australia, and is "common all over the inner, sandier parts of the flat, usually under dead coral boulders. For an area up to 2 or 3 ft. square the thin, white tentacles spread over the sand, coming out from among the dead coral. When one is touched, all contract and disappear from sight. If the boulder is turned over, one can generally find the worm and its tube which is loosely attached somewhere in the crevice on the under side of the boulder." (Isobel Bennett, in litt.)

Footnote—*Reteterebella queenslandia* is illustrated as *Terebella*, in Gillett and McNeill, "The Great Barrier Reef and Adjacent Isles", plate 110, 1959. Coral Press, Sydney, Australia.

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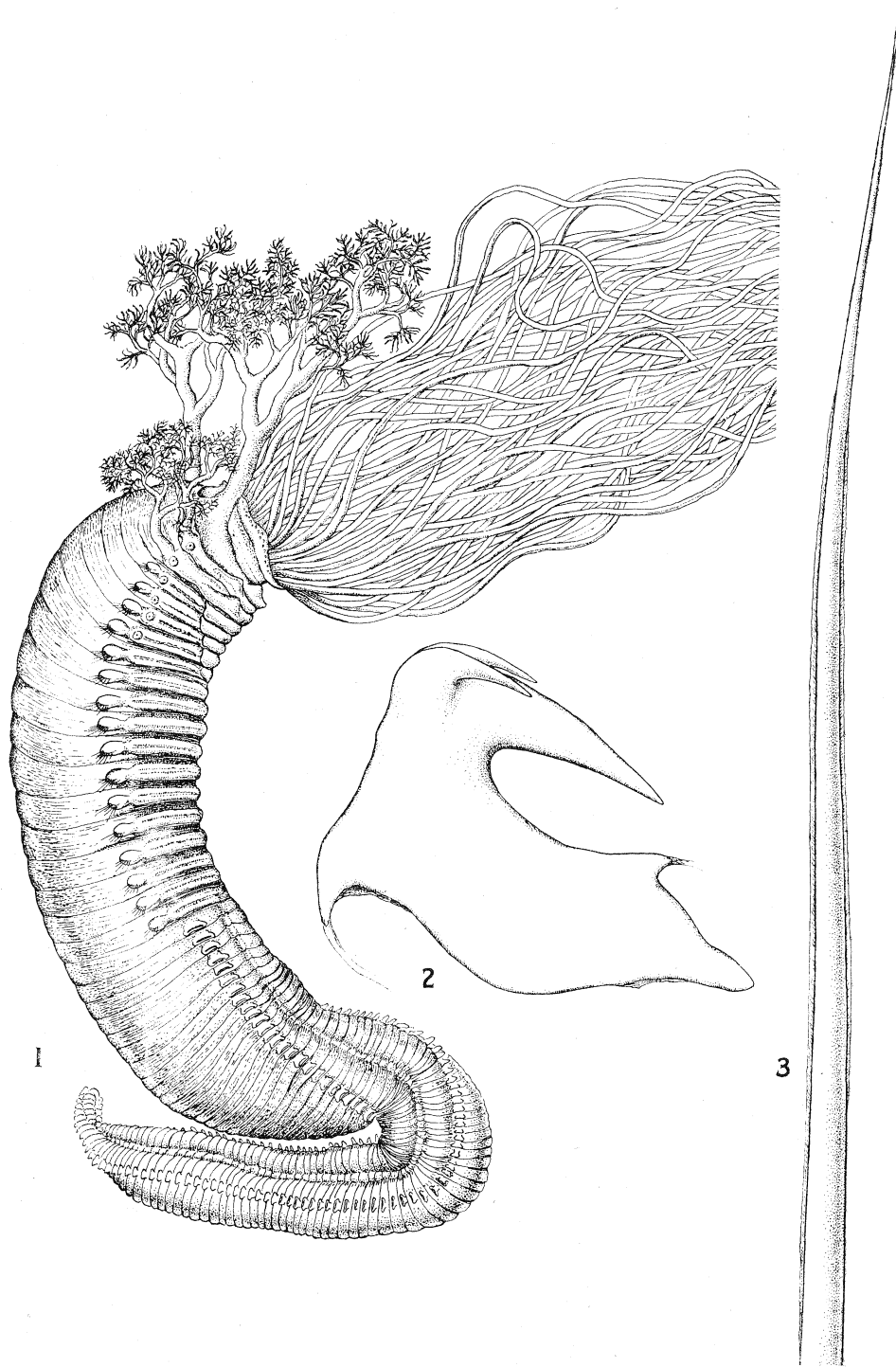
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EXPLANATION OF FIGURES

Fig. 1. Entire individual with only a few of the long tentacles shown, in right lateral view, x 2.

Fig. 2. Thoracic uncinus from sixth setigerous segment, in lateral view, x 7,150.

Fig. 3. Thoracic seta with a slight limbate margin, from sixth setigerous segment, x 7,150.



Sydney: V. C. N. Blight, Government Printer—1963