

ON TWO NEW SPECIES OF PELAGIC POLYCHAETES
FROM THE INDIAN OCEAN

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(With 4 Text-figures)

INTRODUCTION

A study on the systematics and zoogeography of pelagic polychaetes of International Collections is in progress. Our knowledge of these worms in the Indian Ocean is very limited and is mainly based on the work of Fauvel (1953). The purpose of this paper is to describe two new species of pelagic polychaetes.

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1. ***Lopadorhynchus panikkarii*** sp. n.

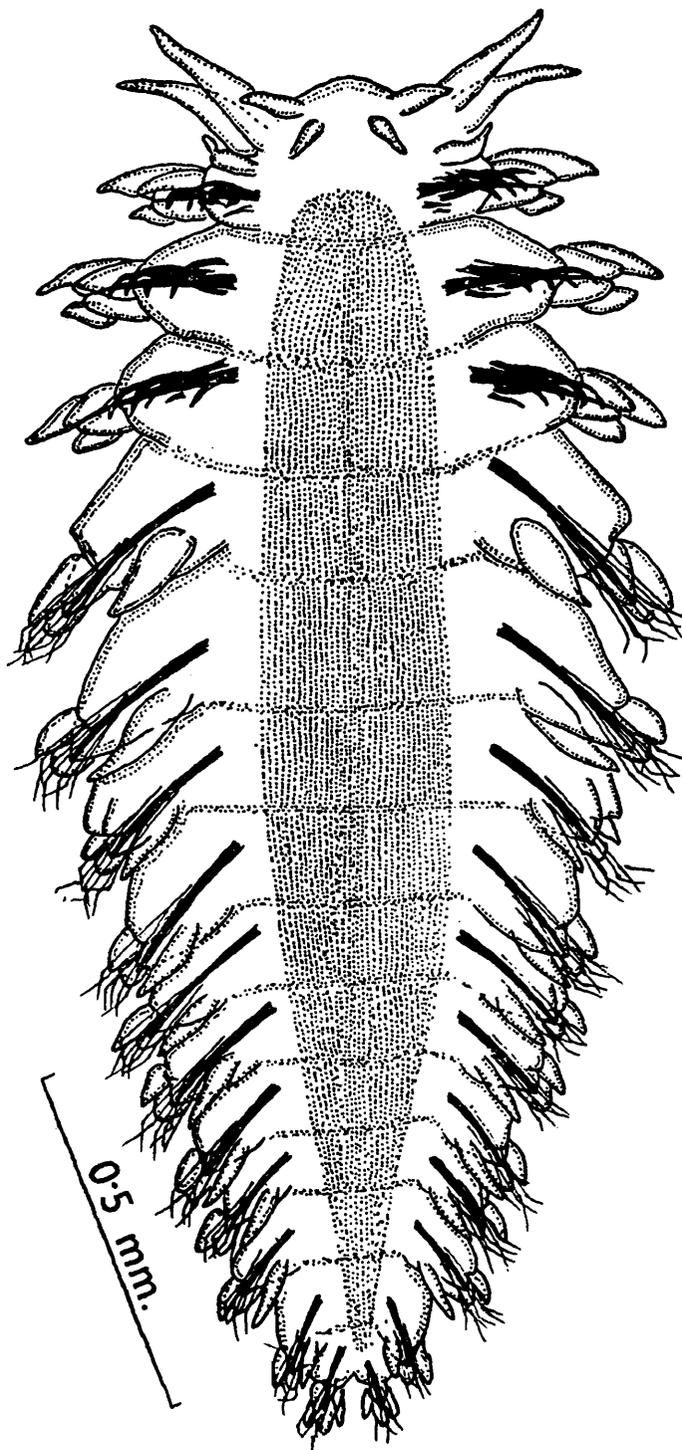
(Text-fig. 1, 2)

Material.—*Holotype* : Arabian Sea, Lat. 17°36' N. Long. 68°00' E., Stn. No. 12A of Anton Bruun, Cruise A. *Paratypes* : 1 ex., Lat. 16°37' N. 41°09' E., Stn. No. 73 of Meteor, Cruise I. 1 ex., Lat. 08°11' N. 50°57' E., Stn. No. 115 of Meteor, Cruise I. 2 exs., Lat. 16°19' N. 68°52' E., Stn. No. 205 of Meteor, Cruise I.

Measurements.—*Holotype* : Length 2.1 mm. for 14 segments ; width 0.5 mm. excluding parapodia and 1.0 mm. including parapodia and bristles.

Description.—Prostomium broad, bearing two pairs of frontal antennae : dorsal pair larger, appear to be anterolateral extensions of prostomium ; ventral pair smaller, located closer to the mouth. Eyes obscure. Three pairs of tentacular cirri,

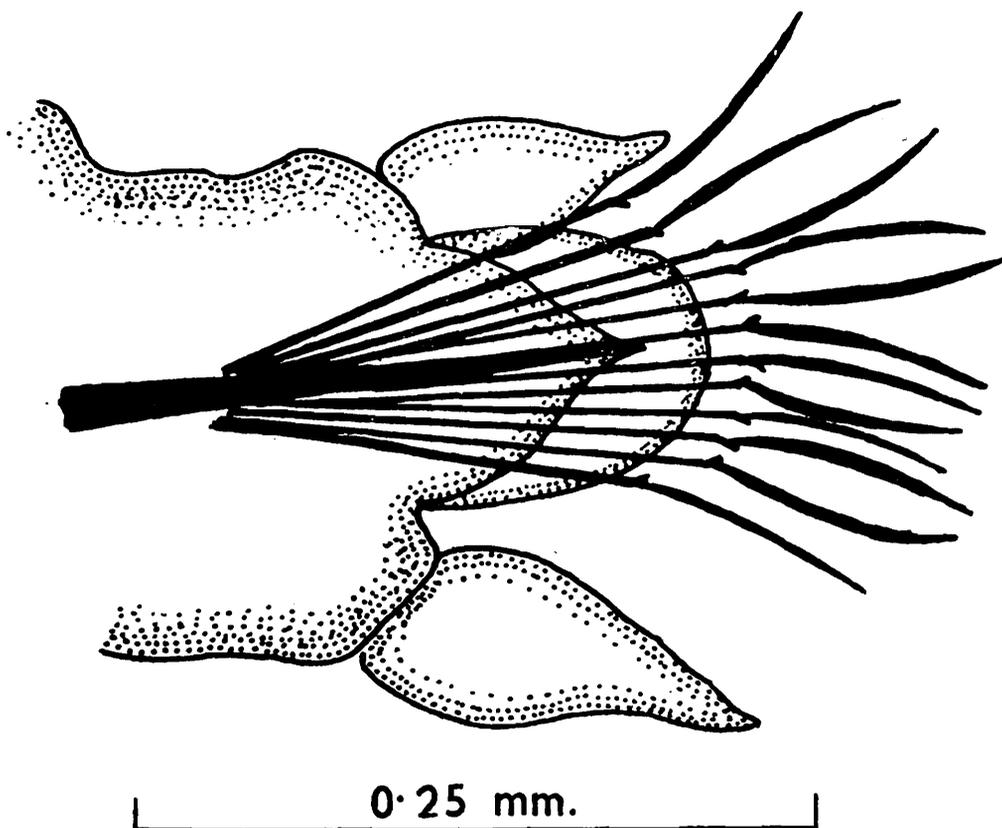
anterior two pairs long and of equal length, third pair very short (Text-fig. 1).



Text-fig. 1. *Lopadorhynchus panikkari* sp.n. Ventral view.

Parapodia uniramous, anterior three pairs modified, shorter and directed sideways. The parapodial lobes in these parapodia are bifid at the distal end. Dorsal cirri longer than ventral and both cirri longer than parapodial lobe and parapodial lamella absent.

All parapodia from fourth segment onwards directed obliquely to posterior side; parapodial lobe conical with rounded lamella; dorsal cirri smaller than ventral; cirri lanceolate. All parapodia provided with strong aciculum (Text-fig. 2).



Text-fig 2. *Lopadorhynchus panikkari* sp.n. 7th parapodium, magnified view.

Two types of chaetae : 1. Four to five simple heavy acicular chaetae with curved ends occur on three anterior pairs of modified parapodia only. 2. Long compound capillary chaetae with slightly flattened end pieces, occurring in bunch on the rest of parapodia. Compound capillary chaetae absent in the anterior modified parapodia and acicular chaetae not present on the rest of the parapodia.

Relationship and Differential Diagnosis.—The genus *Lopadorhynchus* was created by Grube in 1855. It is clear from his description that he never gave importance to the presence or absence of ventral cirri in the anterior two pairs of parapodia. Subsequently Bergstrom (1914) divided this genus into two subgenera based on the solitary character of the presence (*Prolopadorhynchus*) or absence (*Lopadorhynchus*) of ventral cirri in the anterior parapodia. Hartman (1959) raised them to

the generic level. But recent authors like Tebble (1960) disagree with this division.

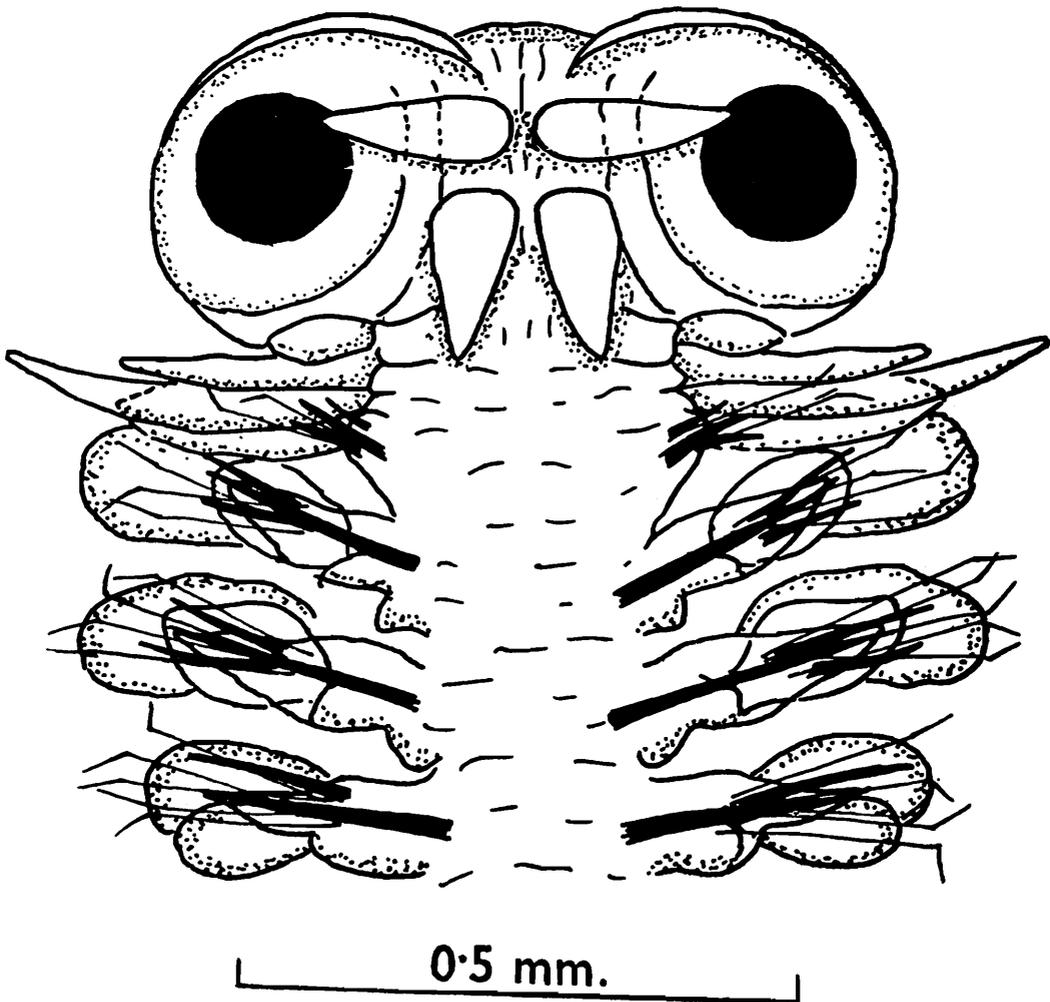
The present species differs from its allied species, *Lopadorhynchus nationalis* Reibisch mainly in the absence of simple acicular chaetae in the midbody region. The bifid nature of the parapodial trunk and the longer cirri on the anterior three pairs of parapodia are unique among the species assigned to *Lopadorhynchus*.

The species is named after Dr. N. K. Panikkar, Director of National Institute of Oceanography, India.

2. *Plotohelmis sumatransis* sp. n.

(Text-fig. 3, 4)

Material.—*Holotype* : Off the coast of Sumatra, Lat. 03°58' S. Long. 97°46' E ; 27.xii.1964 ; *Japanese Research Vessel "Oshromaru"* Coll.

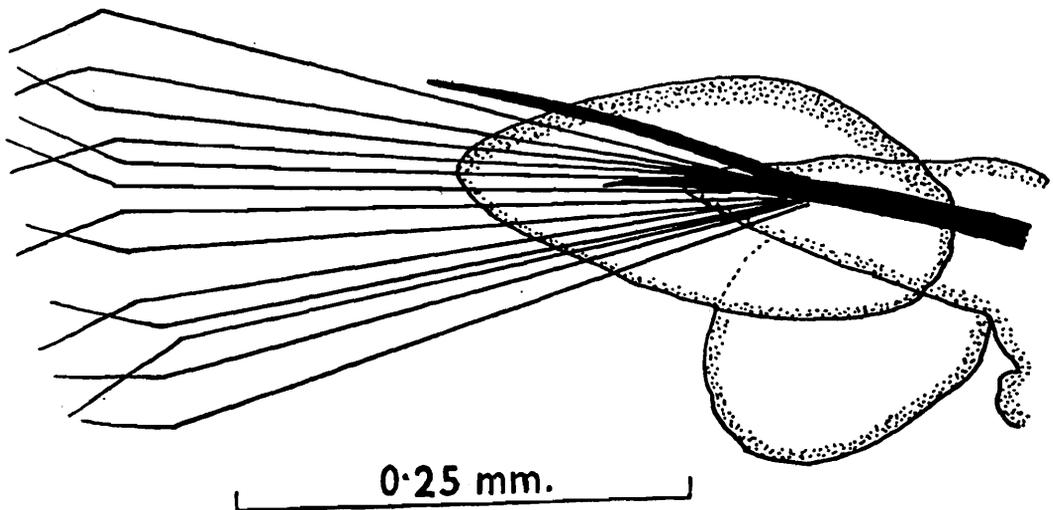


Text--fig. 3. *Plotohelmis sumatransis* sp. n. Anterior region, ventral view.

Measurements.—*Holotype* incomplete : length 2.7 mm. including a head fragment with 13 segments ; width 0.5 mm. excluding parapodia and 1.4 mm. including parapodia and bristles.

Description.—The presence of compound capillary chaetae and the reduction in number of the simple acicular chaetae in the anterior parapodia ; intermittantly arranged segmental glands provided with extensions on to the body surface.

Relationship and Differential Diagnosis.—The aforementioned characters distinguish *Plotohelmis sumatransis* sp.n. from other members of the genus, viz., *P. tenuis*, *P. capitata*, and *P. alata*. In all these species the first few parapodia are totally devoid of compound capillaries and the acicular chaetae occur in fairly good numbers (10-11). The segmental glands in the existing species of *Plotohelmis* occur on every segment starting from ninth, but in this new form they occur on segments six to ten. These glands, quite contrary to what is found in the other species, extend over the body surface, dorsally and ventrally. This glandular area is followed by a non-glandular region, thereby giving the body surface a striped appearance.



Text-fig. 4. *Plotohelmis sumatransis* sp.n. Fifth parapodium.

Présence of only three pairs of tentacular cirri is an added difference of specific value shown by the material on hand. The fat frontal antennae is quite in contrast with the thin ones of other described species of this genus.

The genus *Plotohelmis* was created by Chamberlin in 1919 and is characterised by the presence of both simple acicular chaetae and compound capillary chaetae, and the absence of a

cirriform appendage at the distal end of the parapodial trunk. The three existing species of *Plotohormis*, as Dales (1957) observes, closely resemble one another, the interspecific difference being confined to the variation in the relative length of the tentacular cirri. From this standpoint the difference noticed in *Plotohormis sumatransis* in characters like the disposition of compound capillaries, marked reduction in the number of simple acicular chaetae in the anterior parapodia are especially noteworthy. The species is named after the type locality which is off Sumatra.

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