

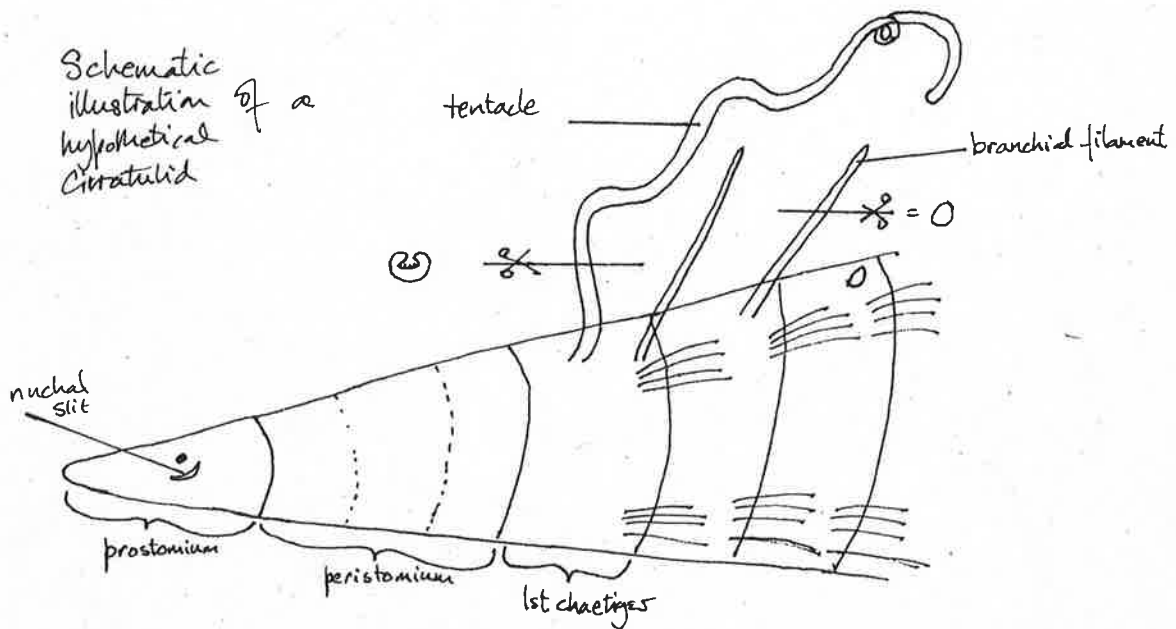
Cirratulidae Workshop

Confident identifications require complete specimens which needs a careful approach to sampling. One of the difficulties of cirratulid identification is that many of the characters are damaged or lost during the fixation and preservation process. Another difficulty is the lack of consistent diagnostic terms. Such as palps, grooved filament, tentacular filament, grooved palps, tentacular palps, tentacle. These terms all refer to the same feeding appendages. We have decided to follow George and Hartmann-Schroeder 1985 and refer to them as tentacles.

On first appearance when all appendages are present the head region of cirratulids looks complicated and it is essential to distinguish between the 2 kinds of appendages. Feeding and branchial appendages.

Feeding appendage - **grooved** with one blood vessel and located dorsally

Branchial appendage - **cylindrical**, no grooves with 2 blood vessels, and located above the notopodium



Some authors (eg Wolf 1983) describe 2 types of feeding appendage both of which are grooved and found on anterior segments.

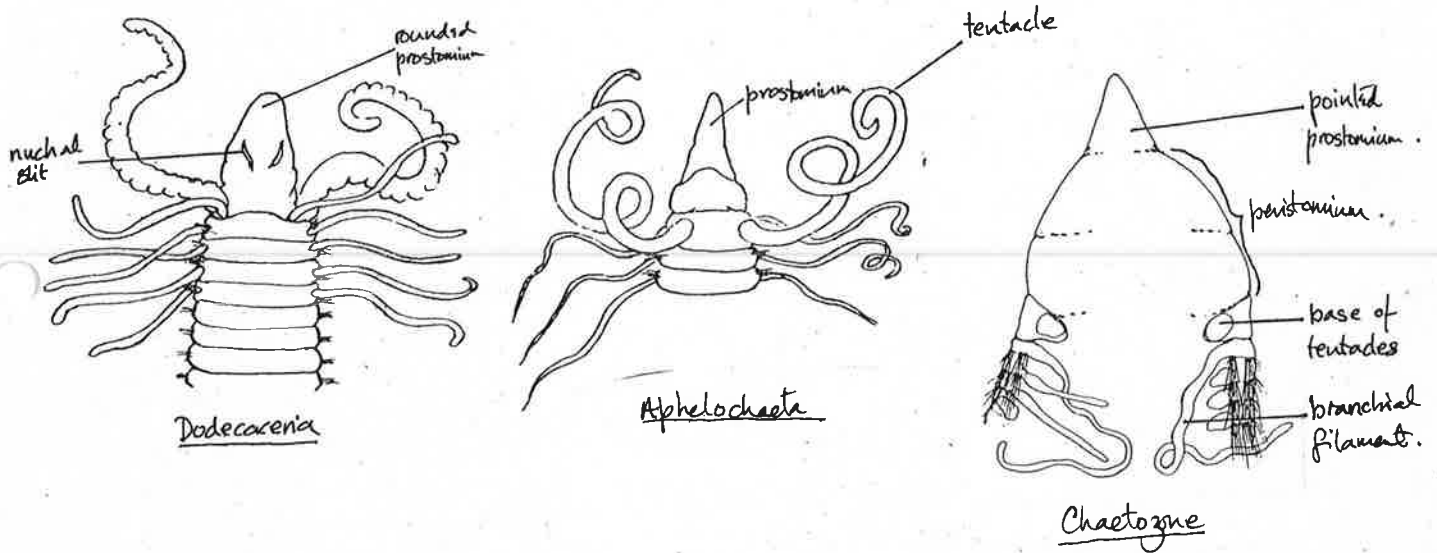
Tentacular palps - arise dorsally or anterodorsally to the first segment, usually a single pair eg *Chaetozone*

Tentacular filaments - arise dorsally, numerous pairs restricted to one segment eg *Cirratulus*

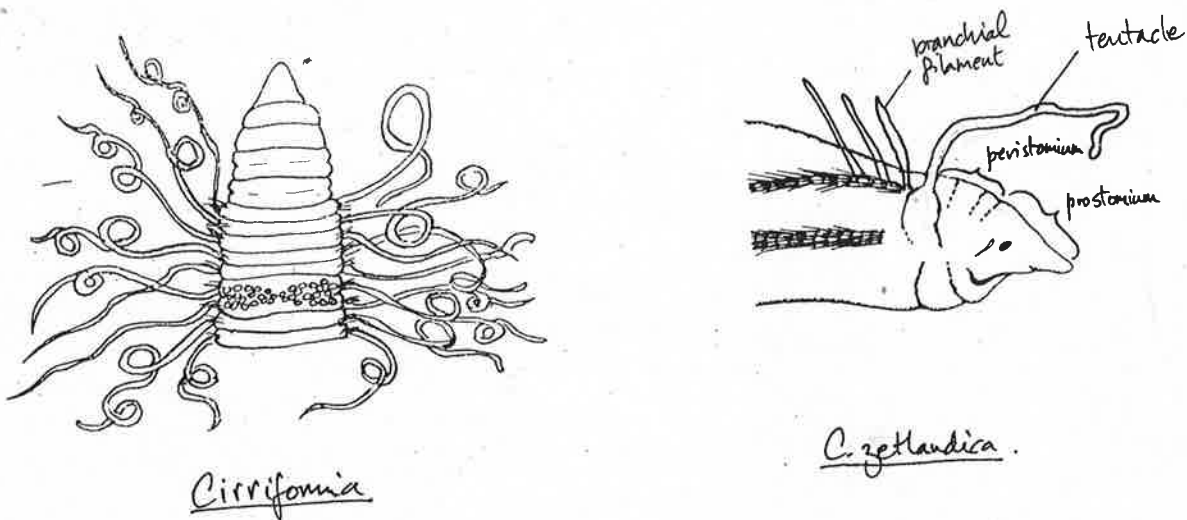
Taxonomic characters:

Body shape: note general shape, pointed at both ends, tapered or spatulate at posterior end, dorso ventrally flattened number of segments, presence of hump iridescent body surface eg *C. zetlandica*. Also note the degree of constrictions in the posterior region.

Prostomium: Shape is important, sharply pointed or rounded, eyes present or absent, nuchal slits present or absent.

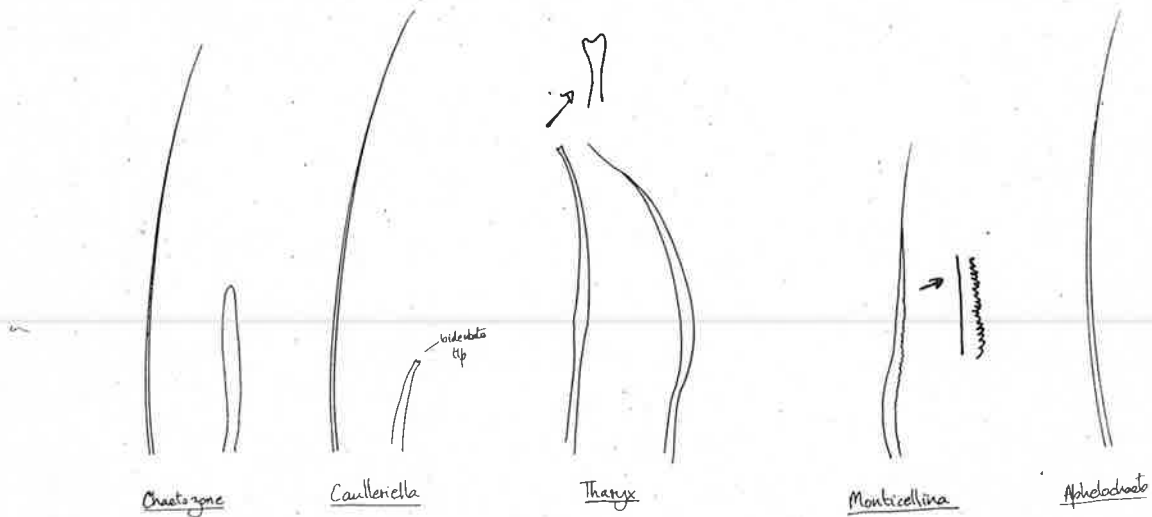


Peristomium: (= buccal segment) Bears the mouth, non eversible proboscis, feeding and branchial appendages. It is thought that the peristomium is fused with 2-3 anterior segments which gives the region an annulated appearance. This fusion obscures the developmental origin of the tentacles which in some species appear to arise before the first chaetiger. The position of the tentacles in relation to the first segment and the branchial filaments is an important character in some groups. However, the origin of tentacles is not always easy to see with a light microscope especially on small specimens.



Parapodia: All biramous but the ligules are greatly reduced so that the chaetae appear to arise directly from the body wall. The branchial filaments arise above the notopodium and there is usually one pair per segment. These are restricted to anterior segments eg *Dodecacecaria* or along whole body eg *Tharyx*, *Cirratulus*. The relative position of the branchial filaments to the tentacles and the chaetae is important.

Chaetae: These are characteristic for some bitentaculate genera.



Tharyx - knob-tipped spines

Monitcellina - serrated capillaries

Aphelochaeta - simple capillaries

Caulleriella - spines in neuropodia only

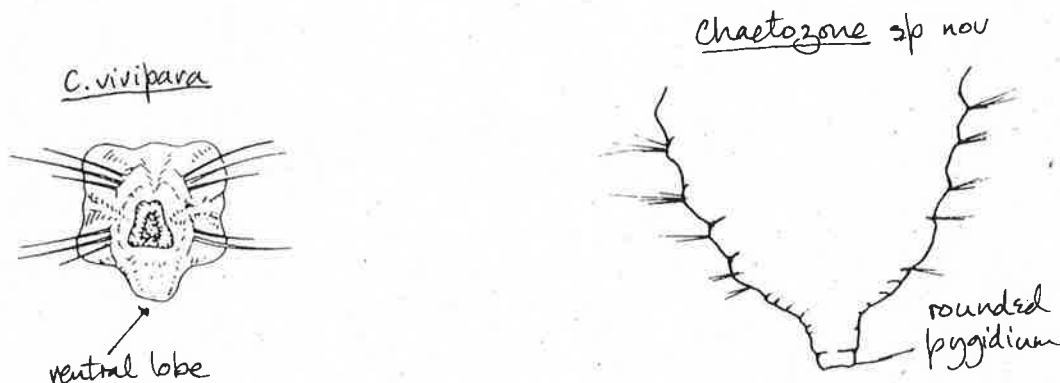
Chaetozone - spines in noto and neuropodia

Dodecacecaria - spoon shaped hooks

The position where they occur on the parapodia and the body is important as well as the direction in which they point eg in *Chaetozone* spines in posterior segments point forwards

In multi tentaculate species eg *Cirratulus* chaetae are less diverse as they have only smooth capillaries and stout chaetae.

Pygidium: This character has not been well described as many observations are based on anterior fragments only. It is generally a small rounded lobe, although one species in UK waters with a ventral lobe eg *C. vivipara*



Notes on British Species of Chaetozone

The application of the name *Chaetozone setosa* Malmgren, 1867 to British specimens may be in doubt. A redescription of material from the type locality, Spitzbergen, is required. After looking at records of *C. setosa* from British waters we can identify 2 forms of *Chaetozone* which we will call A and B. We do not know if either of these are the same as *C. setosa*, Malmgren 1867.

A description of *Chaetozone* n.sp. Woodham and Chambers is in press and can easily be separated from *Chaetozone* A, B.

Key to British Chaetozone

- 1. Eyes present, anterior dorsum arched
. *Chaetozone* n.sp. Woodham & Chambers

- 2. Eyes absent, anterior dorsum rounded2

- Intersegmental annulations in posterior region obviously constricted to give concertina shape; very long capillaries present in mid-body region
. *Chaetozone* type B

- Intersegmental annulations in posterior region slightly constricted to give a more tapered shape; all capillaries of medium length
. *Chaetozone* type A

If you have material you would like identified please send it to us and we will try and answer your enquiry as soon as possible.

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capillary chaeta
 medium oval-shaped chaeta
 spine with undulate tip

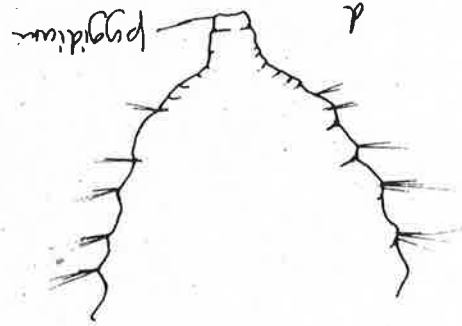
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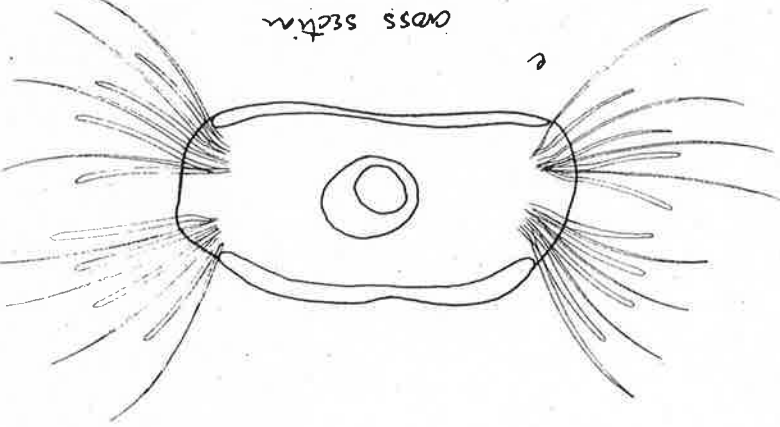
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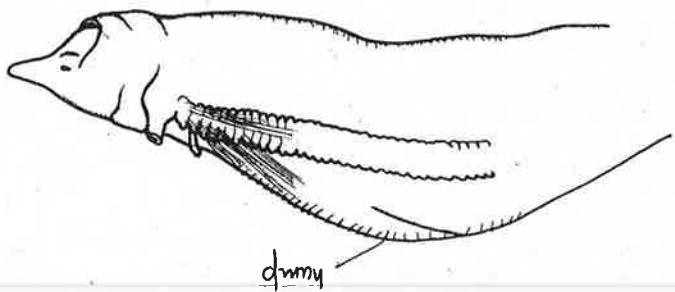
posterior region



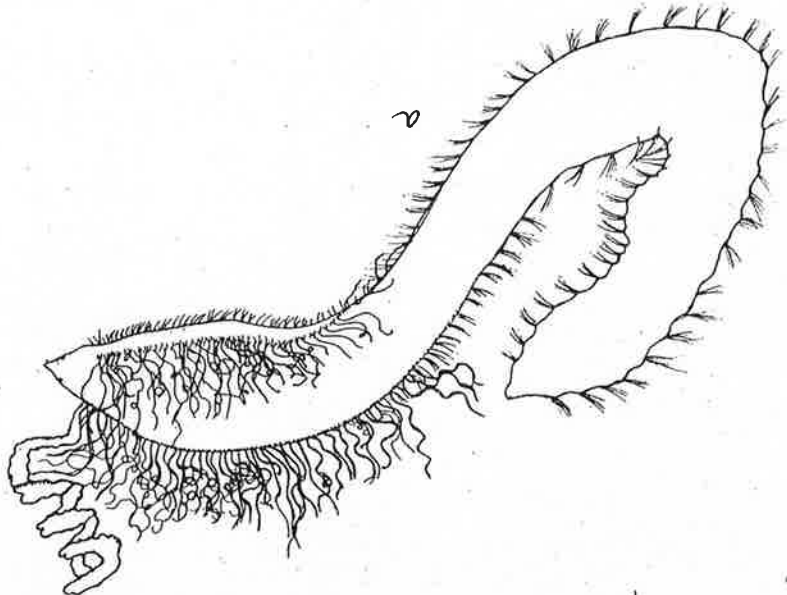
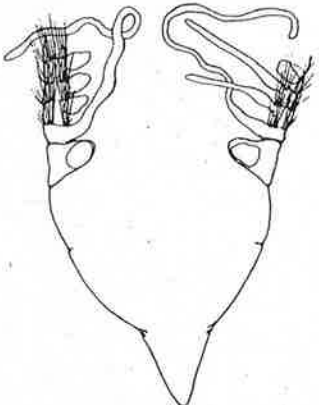
cross section posterior region



lateral nerve anterior region



dorsal nerve anterior region



Chaetopone sp. nov.

Description.- Length of body up to 20 mm for approximately 200 segments. Body surfaces smooth; dorsal surface swollen anteriorly between chaetigers 7-30 approximately, giving a characteristic hump-backed appearance (Figures 1c and 3a); ventral surface flattened with a longitudinal groove; posterior region bluntly tapered, dorso-ventrally compressed with lateral surfaces somewhat flattened giving almost rectangular shape in cross section (Figure 1e). Segments broad, short and crowded in anterior region, becoming narrower and longer posteriorly, without intersegmental constrictions. Colour of preserved material (in alcohol) creamy white.

Prostomium conical with acutely pointed tip. Pair of subdermal eyes, round to elongate, near lateral posterior margins; shallow nuchal groove below and behind each eye (Figure 1c).

Peristomium achaetous, smooth, partially divided into 3 annuli; pair of grooved palps originating from dorsal surface of posterior annulus, measuring approximately 1/3 of body length. First pair of branchiae arising immediately posterior to palps, on first chaetiger (Figure 1b). Mouth ventral (Figure 1c).

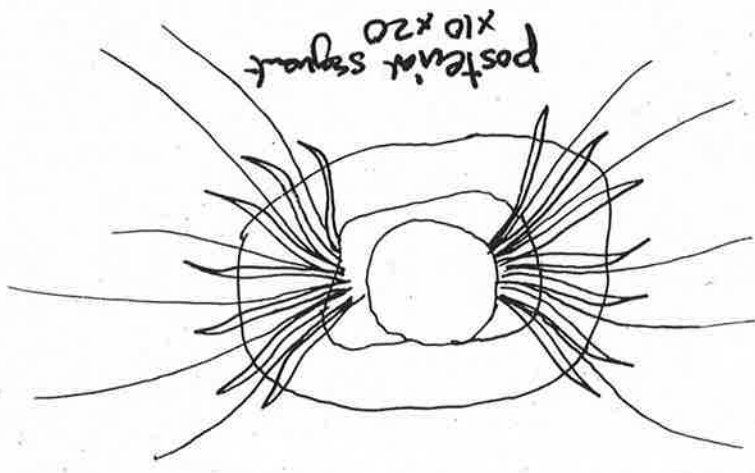
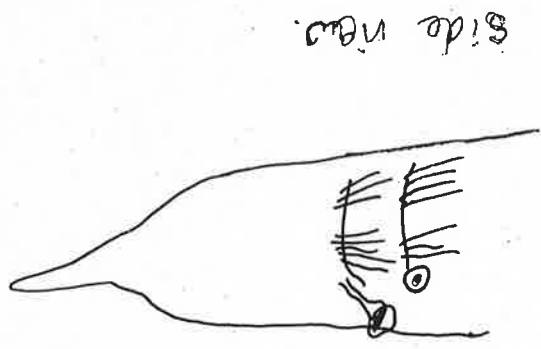
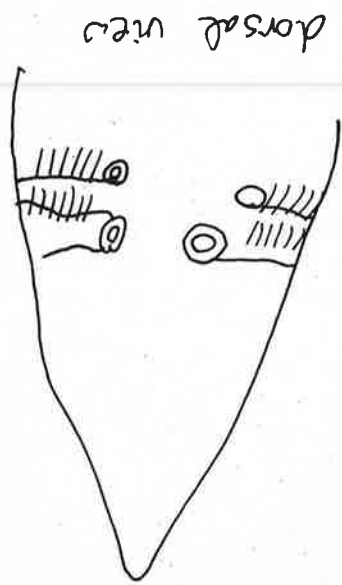
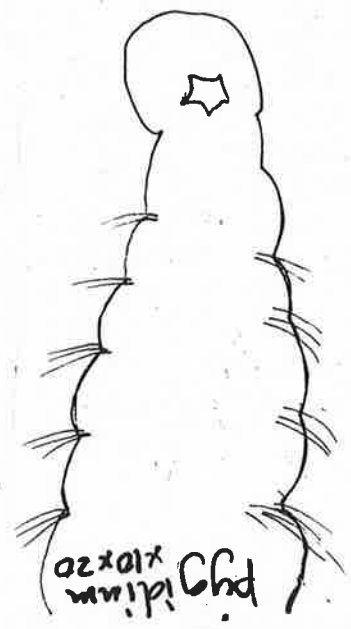
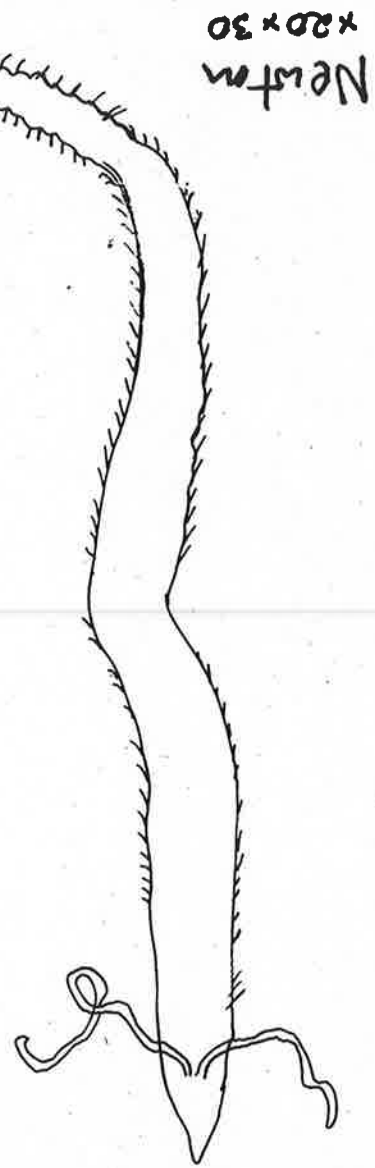
Parapodia all biramous with notochaetae and neurochaetae; parapodial lobes flattened mounds, extending further from the body posteriorly. Pair of branchiae arising dorsal to notopodial lobes (Figures 1b,c and 3b) on every chaetiger in anterior region, occurring less regularly in mid-body region and absent posteriorly (precise occurrence of branchiae uncertain as frequently only scars remain in preserved specimens); branchial filaments simple, cylindrical and smooth, of variable length up to approximately 2 mm, thickest and longest in anterior region.

Notopodia and neuropodia slightly separated with chaetae arranged in single dorsal-ventral rows (Figure 1e). Chaetae directed laterally in anterior and mid-body regions and more anteriorly in posterior third of body. Chaetae of 3 types: i) slender capillaries (Figure 1f) in both rami of all chaetigers; ii) stout awl-shaped capillaries (Figures 1g and 3d) in notopodia between approximately segments 40 and 90; iii) spines with unidentate tips (Figures 1h and 3c) in notopodia from mid-body (segments 90-100) to end of body and in neuropodia from anterior region (segments 50-80) to end of body; number of spines in each ramus increasing posteriorly from 1 to 4; each ramus in posterior region of body typically with 4 unidentate spines and 4 slender capillaries alternating with each other (Figure 1e); left and right chaetal rows well-separated, spines not forming complete rings around segments.

Pygidium with small ventral lobe (Figure 1d).

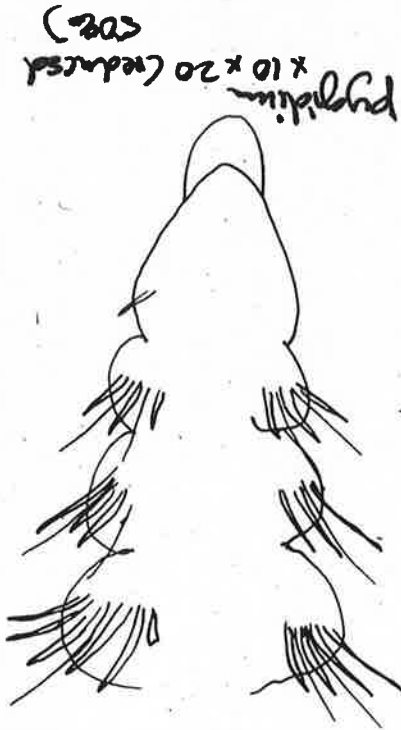
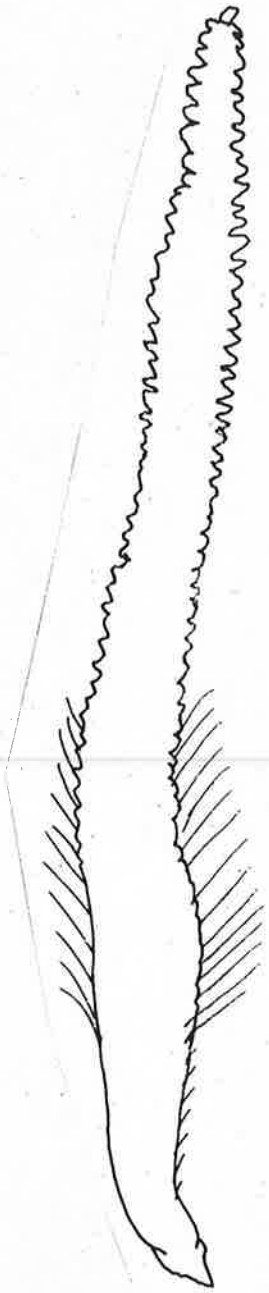
Remarks.- *Chaetozone gibber* can be readily recognised by its characteristic shape (a dorsal hump anteriorly and a tapering, dorso-ventrally flattened posterior end) and by its distinct eyes.

Chaetogone sp. Type A



Chaetogone sp Type 3

8 p
x20x3
(reduced
50%)



posterior segment
(x10x20)

