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PROGRESS ON THE IDENTIFICATION OF CIRRATULIDAE IN BRITISH AND IRISH WATERS THROUGH THE NMBAQC SCHEME: 1996-2009

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Identification of Cirratulidae in British and Irish waters

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Preface to current compilation

This document represents a compilation of cirratulid identification documents produced for the NMBAQC Scheme by Unicomarine, with help from Scheme participants and external experts. It comprises three sections:

- 1. 1996 Guide. A provisional key and guide produced for a Scheme workshop on the group in 1996, reproduced as presented,

- 2. Additional documents, post 1996. Documents and updates produced after the workshop to incorporate issues raised and suggested improvements,

- 3. 2006 update. A provisional update to taxonomy, with an identification aid in tabular form produced for a workshop in 2006.

The identity of European cirratulids remains uncertain in many cases and all parts of this document remain provisional. The different parts show changes through the years and more are expected. Since the 2006 update (Worsfold, 2006), we have seen a possible additional *Caulleriella* from Scotland (some donated by Peter Garwood of Identichaet) and a *Chaetozone* resembling *C. vivipara* from Northern Ireland that was sent for NMBAQC Scheme Ring Test 32 (Hall & Worsfold, 2007) was found to be distinct (differences first noted by Tim Mackie of NIEA). It is also apparent that there are at least two species of *Monticellina* in British waters, noted in part through methyl green staining during a visit by Irene Malonda (of Universidad Autónoma de Madrid). It is almost certain that there will be additional species of *Aphelochaeta* and *Chaetozone* in the area and current descriptions do not perfectly match all material. Several papers on cirratulid taxonomy have been published since the 2006 update (a selection is listed below), some of which have implications for the identification of British and Irish material.

We would suggest that the 2003 key (Section 2) would be the first resource and that identifications are then checked with the 2006 table and against additional details and illustrations from published literature and the earlier 1996 guide. Reference collections are essential and differences seen between groups of specimens may be more important than differences between current descriptions.

References (additional to those listed in 2006 update)

1. Blake, J.A., 2006. New species and records of deep-water Cirratulidae (Polychaeta) from off Northern California. *Scientia Marina*, 70(S3), 45-57.

2. Chambers, S.J. & Woodham, A., 2007. The distribution of three eyeless *Chaetozone* species (Cirratulidae: Polychaeta) in the north-east Atlantic. *Journal of the Marine Biological Association of the United Kingdom*, 87, 1111–1114.

3. Çinar, M.E., 2007. Re-description of *Timarete punctata* (Polychaeta: Cirratulidae) and its occurrence in the Mediterranean Sea, *Scientia Marina*, 71(4), 755-764.

4. Dean, H.K. & Blake, J.A., 2007. *Chaetozone* and *Caulleriella* (Polychaeta: Cirratulidae) from the Pacific Coast of Costa Rica, with description of eight new species. *Zootaxa*, 1451, 41-68.

5. Doner, S.A. & Blake, J.A., 2006. New species of Cirratulidae (Polychaeta) from the northeastern United States. *Scientia Marina*, 70(S3), 65-73.

6. Elías, R. & Rivero, M.S., 2008. Two new species of *Caulleriella* (Polychaeta, Cirratulidae) from Argentina. *Iheringia, Série Zoologia*, 98(2), 225-230.

7. Elías, R. & Rivero, M.S., 2009. First new *Dodecaceria* (Polychaeta: Cirratulidae) species from the SW Atlantic (38ºS - 57ºW, Argentina). *Revista de Biología Marina y Oceanografía*, 44(1), 131-136.

8. Hall, D.J. and Worsfold, T.M., 2007. *National Marine Biological Analytical Quality Control Scheme. Ring Test Bulletin: RTB#32.* Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCrtb#32, December 2007.

9. Worsfold, T.M., 2006. *A provisional update to the identification of UK Cirratulidae*. Unpublished report for the BEQUALM/NMBAQC 2006 Taxonomic Workshop, Dove Marine Laboratory, 6-10 November 2006.

Section 1:
1996 GUIDE

Cirriformia tentaculata (RT3020)

A GUIDE TO THE FAMILY CIRRATULIDAE INCLUDING A KEY TO ANTERIOR PORTIONS

UNICOMARINE LTD.

Version 1.00 (RT09)

SEPTEMBER 1996

Cirratulidae - Key to Anterior Portions

Tim Worsfold, Unicomarine Ltd.

RT09 (Version 1.00)

September, 1996.

Introduction

This is a key to those taxa recognised as occurring in British waters, after discussion with Susan Chambers, Peter Garwood, and Annette Woodham, who have also contributed to the key. Emphasis has been placed on features visible in front halves of animals (usually all that is available), with notes given on additional features, including those from the posterior, as confirmatory characters for some species. However, there are some splits for which posterior features are still necessary and these features are included in brackets in the key. It may be more useful to refer to these features first, if complete specimens are available. Please note also that many of the features used are subtle recognition features rather than absolute taxonomic features and that both routes should be followed where there is doubt. Comparison with reference material is always recommended when carrying out identifications. Brief notes on distribution and habitat have also been included, where possible.

In addition, some extra species from the literature (for Europe) are included, either as possibilities for our unnamed taxa, or as additional species with different key features given as indented “sub-keys” below the species which they most resemble. Taxa which are definitely known from British waters are in boldface in the main key, those which we have not yet found or recognised are in normal italics, usually in “sub-keys”.

This key is tentative and subject to improvement. Any suggestions on easier ways to split certain species, records of species we have not found, or notice of flaws in the key would be very welcome.

For the purposes of RT09, taxa in boldface in this key will be regarded as the current check-list of British cirratulids.

Family Cirratulidae

Species List

Currently Recognisable British Taxa

These are the taxa currently recognised as having reliable British records. The generic names used below are those from the most recent published opinions. Some species will probably be moved to different genera in due course and these are listed with their generic names in inverted commas. Recognisable taxa which cannot yet be assigned to described species names are given letters, "A", "B" etc. This taxon list has been revised to accompany version 2.00 of the cirratulid key.

Cirratulus cirratus (O.F. Muller, 1776)
***Cirratulus* "A"**
***Cirratulus* juveniles** - includes 2-eyed juvs. of *C. cirratus* and eyeless regenerates
Cirratulus cf. ***caudatus*** Levinsen, 1893
Cirriformia tentaculata (Montagu, 1808)
Protocirrineris chrysoderma (Claparede, 1868)
Caulleriella bioculata (Keferstein, 1862)
Caulleriella cf. ***viridis*** (Langerhans, 1880) - British records dubiously distinct from *C. bioculata*.
Caulleriella alata (Southern, 1914)
Caulleriella "A"
"Caulleriella" zetlandica (McIntosh, 1911)
Chaetozone gibber Woodham & Chambers, 1994
Chaetozone setosa agg. Malmgren, 1867 - May be used to include types A to D
Chaetozone setosa ss. - = *Chaetozone setosa agg.* "A" of Christie; *Chaetozone* "B" of Chambers
***Chaetozone setosa agg.* "B"** - of Christie; included in *Chaetozone* "A" of Chambers
***Chaetozone setosa agg.* "C"** - of Christie; included in *Chaetozone* "A" of Chambers
***Chaetozone setosa agg.* "D"** - = *Chaetozone* "C" of Chambers
Tharyx killariensis (Southern, 1914)
***Tharyx* "A"**
Aphelochaeta marioni (Saint-Joseph, 1894) - Estuarine form may not be this species
***Aphelochaeta* "A"**
***Aphelochaeta* "B"** - May not be reliably separable from other *Aphelochaeta* spp.
"Aphelochaeta" vivipara (Christie, 1984) - Transferred from *Tharyx* by Hartmann-Schroder (1996)
Monticellina dorsobranchialis (Kirkegaard, 1959) - British material may not be this species
Dodecaceria concharum Oersted, 1843 - *Dodecaceria* may be left at generic level
Dodecaceria ater (Quatrefages, 1865) - *Dodecaceria* may be left at generic level
Dodecaceria diceria Hartman, 1951 - *Dodecaceria* may be left at generic level

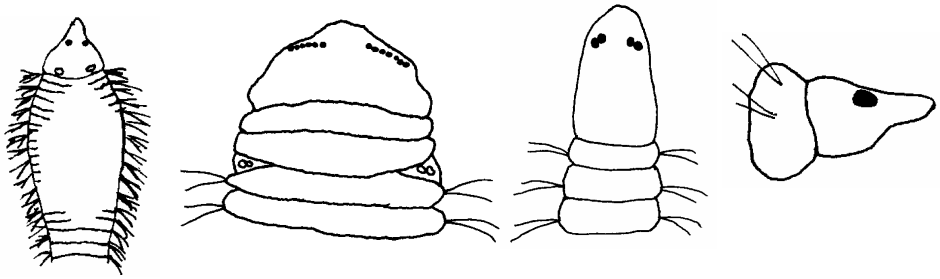
Species of Uncertain Identity

These names from the literature may represent additional British species but their identity is unclear.

Cirratulus borealis Lamarck - Confused with *C. cirratus*
Cirratulus incertus McIntosh, 1923 - Confused with *C. cirratus*
Cirriformia norvegica (Quatrefages, 1865) - Confused with *C. tentaculata*
"Caulleriella" caputesocis (Saint-Joseph, 1894) - Nothing quite like the descriptions has been seen. Type specimen poor. Illustrated by Hartmann-Schroder (1996). Could be a *Cirratulus*.
Aphelochaeta multibranchis (Grube, 1863) - Confused with other *Aphelochaeta* spp. Transferred from *Tharyx* (and illustrated) by Hartmann-Schroder (1996).
"Cirratulus" filiformis (Keferstein, 1862) - Confused with *Aphelochaeta marioni*. Could be *Aphelochaeta* "A" or "B"
"Caulleriella" serrata Eliason, 1962 - Nothing quite like the descriptions has been seen.
Caulleriella parva Gillandt, 1979 - Illustrated by Hartmann-Schroder (1996). Does not seem very distinctive.

Key

1. ➔ Prostomium with eyes (faded eyes are allowed for in the key).



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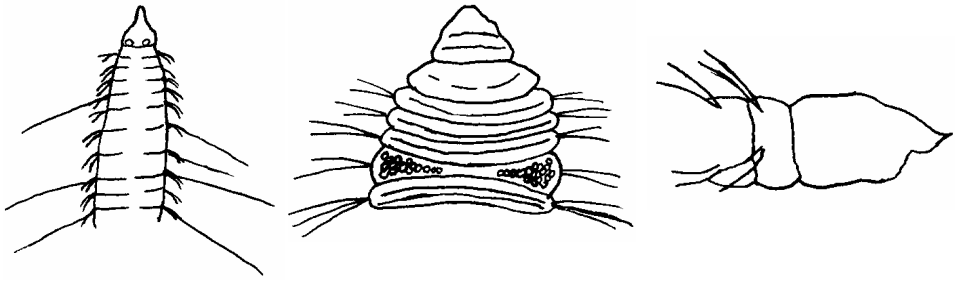
➔ Prostomium without eyes.



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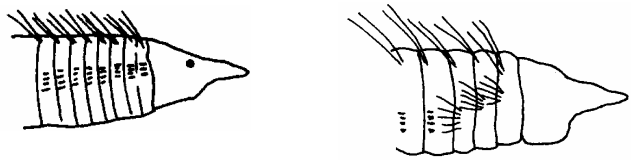
2. ➔ Acicular chaetae in anterior (1st 5 chaetigers) as well as posterior parapodia.



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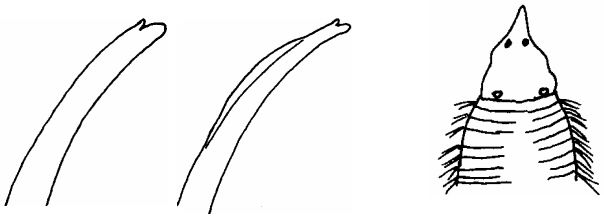
➔ Acicular chaetae absent from anterior parapodia, may or may not be present in posterior parapodia. 6

3. ➔ Acicular chaetae all strongly bidentate and strongly curved.
Prostomium distally pointed
Capillary chaetae short, less than 1/4 of body width.
Eyes fairly large, positioned about half way along length of prostomium.



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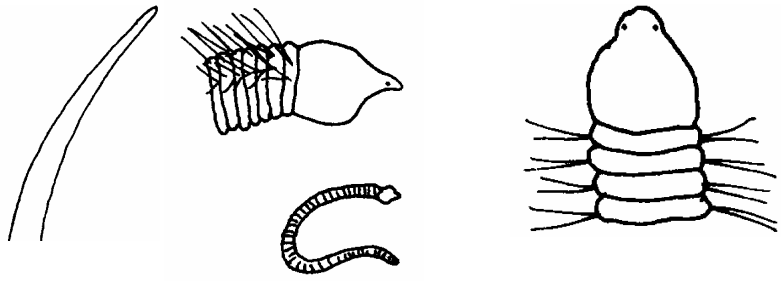
➔ Acicular chaetae mainly unidentate. (A few may be faintly bidentate).
Prostomium distally broadly rounded.
Capillary chaetae about 1/2 of body width.
Eyes very small, positioned on front half of prostomium.

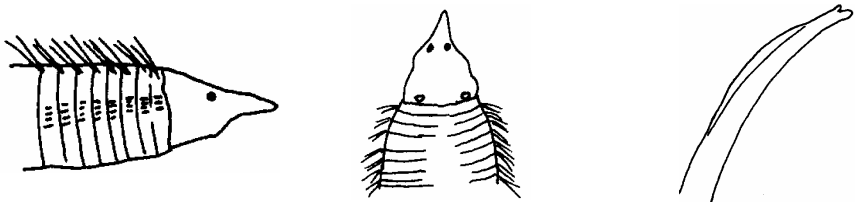


.....***Cirriformia*** (juv.)
[Common in many habitats, ubiquitous in British waters]

4 ➔ First two neuropodia with capillaries as long as those in notopodia (much shorter after the third chaetiger).
Bidentate chaetae without flange.
Bidentate chaetae start on third neuropodium.

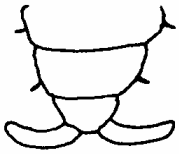
.....5

➔.All neuropodia with capillaries much shorter than those in notopodia, almost as short as bidentate chaetae and difficult to see.
Bidentate chaetae with narrow flange on convex side.
Bidentate chaetae start on first neuropodium.



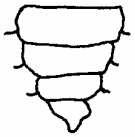
.....***Caulleriella alata*** (Southern, 1914)
[Common subtidally in gravel, ubiquitous.in British waters]
[Posterior angular in cross section with hooks in both rami.]

5. ➔ Pygidium with a pair of anal cirri.



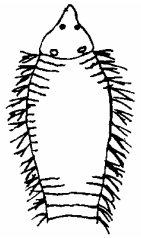
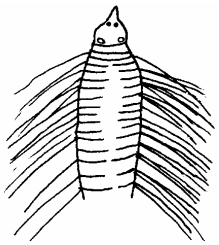
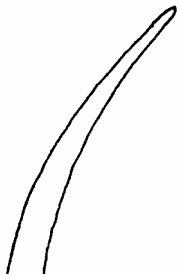
.....***Caulleriella bioculata*** (Keferstein, 1862)
[offshore mud, western British waters ?]

➔ Pygidium without anal cirri.



.....***Caulleriella*** cf. ***viridis*** (Langerhans, 1880)
[Occasional subtidally in stony ground, southern British waters?]
[Posterior angular in cross section with hooks in both rami.]

6. ➔ Prostomium conical and distally pointed.
(Acicular chaetae pointed).

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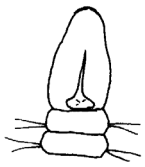
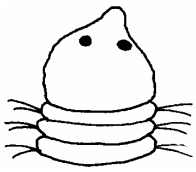
➔ Prostomium distally rounded and excavate ventrally.
(Acicular chaetae blunt ended).

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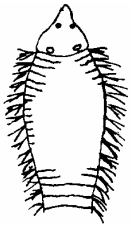
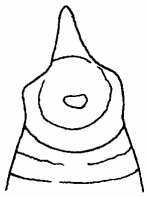
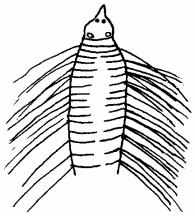
7. ➔ Thoracic capillaries fine, irregularly directed and shorter than body width.
Thoracic region often strongly swollen dorsally, behind head, giving hump-backed appearance tapering rather abruptly towards mid body.

..... ***Chaetozone gibber*** Woodham & Chambers, 1994
[May be common subtidally in mud, southern British waters ?]
[Posterior with acicular spines in both rami; capillaries and awl-shaped chaetae.]

➔ Thoracic capillaries fairly robust, directed backwards (usually in parallel) and longer than body width.
Thoracic region may be swollen dorsally, tapering gradually towards head and mid body.

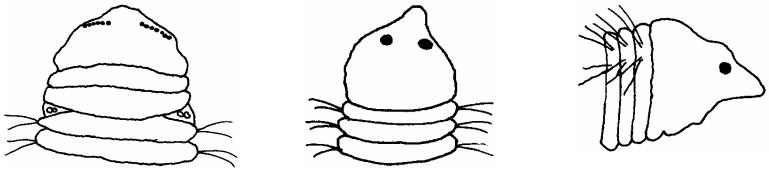


..... ***"Caulleriella" zetlandica*** (McIntosh, 1911)
[Common subtidally in sand and gravel, ubiquitous.in British waters]
[Posterior with acicular spines in neuropodia only; capillaries and awl-shaped chaetae.]

Additional species from literature:

Hooks from chaetiger 10 in neuropodia . *C. caputesocis* (Saint-Joseph, 1894)
Hooks absent. Capillaries very fine.....*"Tharyx" multibranchialis* (Grube, 1863)

8. ➔ Prostomium only slightly flattened (anterior rounded in cross section).
Eyes placed dorsolaterally.



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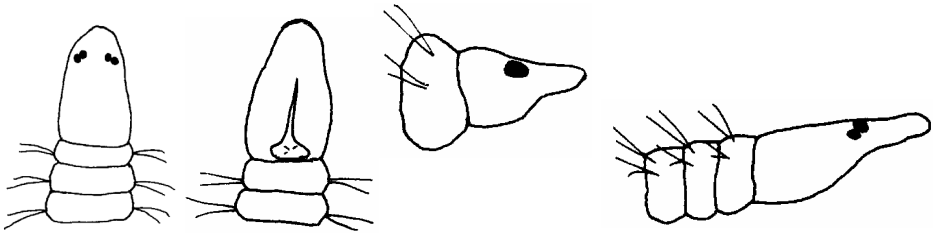
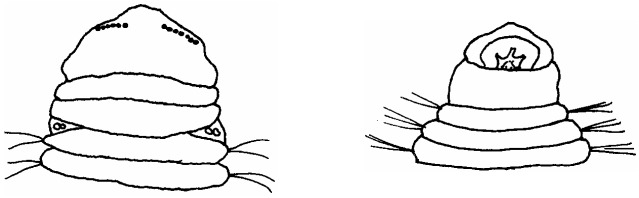
➔ Prostomium and anterior segments strongly flattened.
Eyes large, dorsally placed, one, or occasionally, two pairs.



.....***Cirratulus* "A"**
[Occasional subtidally; ubiquitous in British waters ?]

Possibilities.....*C. incertus* McIntosh, 1923

9. ➔ Prostomium with two transverse rows of up to 8 eyes.

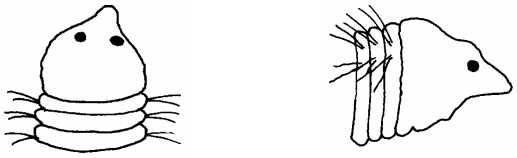


..... ***Cirratulus cirratus*** (O.F. Muller, 1776)
[Common intertidally in mud and rock crevices, northern British waters?]

Species from literature:

..2 gills per segment throughout .... *C. borealis* Lamarck

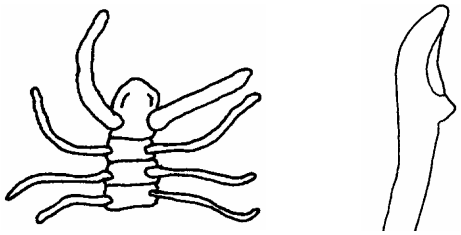
➔ Prostomium with one pair of eyes, placed dorsolaterally.



.....***Cirratulus*** juv.

[Occasional subtidally]

10. ➔ Acicular chaetae spoon-shaped, with or without conical projection.
Palps and gills thick and sparse (fewer than 8 pairs).
Prostomium broadly rounded, with large nuchal organs.



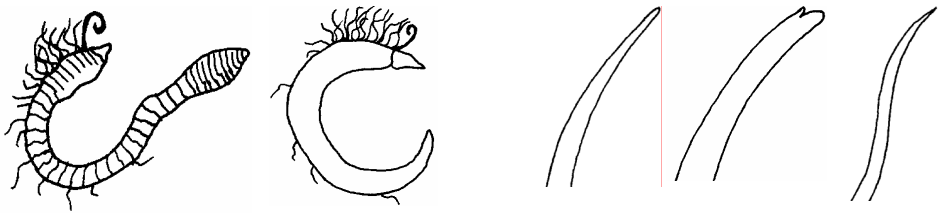
.....***Dodecaceria***

[Occasional subtidally in gravel and stony ground, ubiquitous.in British waters]

Species from literature:

Asexual and epitokous reproduction ..... *D. fimbriata* Verrill, 1879
Non-epitokous sexual reproduction..... *D. concharum* Oersted, 1843

➔ Acicular chatae simple pointed, bidentate or absent.
Gills thin and numerous (more than 8 pairs).
Prostomium more or less conical, nuchal organs indistinct or absent.



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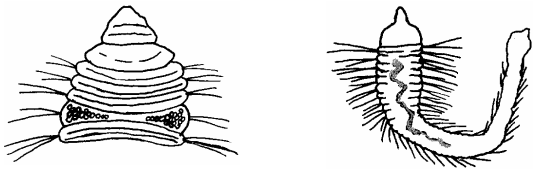
11. ➔ More than one pair of feeding tentacles (here shown as round scars), placed after the first chaetiger (Difficult to see in some but not bipalpate).



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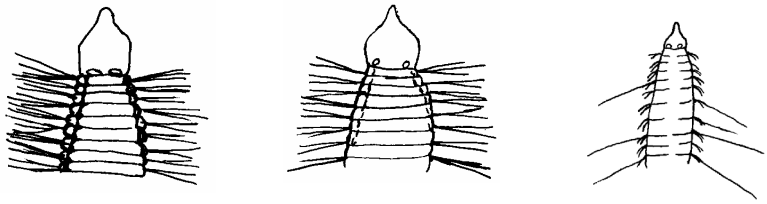
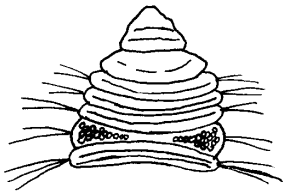
➔ One pair of feeding tentacles (palps) on last achaetous segment.



.....13

12. ➔ Two rows of feeding tentacles placed dorsally on the 4th./5th. or 6th./7th. chaetiger.
Blunt unidentate acicular chaetae in anterior (1st. 10) and posterior parapodia.



..... ***Cirriformia tentaculata*** (Montagu, 1808)
[Common in many habitats, ubiquitous.in British waters]
[Posterior angular in cross section.]

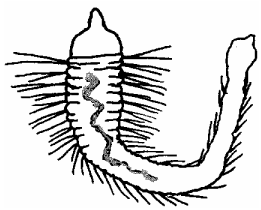
Species from literature:

Many feeding tentacles placed dorsally on the in an almost continuous band across segment.
Feeding tentacles on 6th / 7th chaetiger (on one segment only).
Distance between cirri and notopodia very small posteriorly
.....*C. tentaculata* (Montagu, 1808)

Few tentacular filaments in two separate rows.
Feeding tentacles on 4th / 5th chaetiger (on one segment only).
Distance between cirri and notopodia 2/3 of that between rami, posteriorly.
.....*C. norvegica* (Quatrefages, 1865/6)

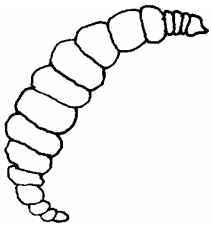
Few tentacular filaments in two separate rows.
Feeding tentacles on 5th - 7th chaetiger (on more than one segment).
Distance between rami 2/3 of that between cirri and notopodia, posteriorly.
.....*Timarete filigera* (Delle Chiaje, 1841)

➔ Feeding tentacles few, placed dorsally on more than one chaetiger (hard to see).
Acicular chaetae absent.



..... cf. ***Protocirrineris chrysoderma*** (Claparede, 1868)
[Subtidal; southwest ern British waters only ?]

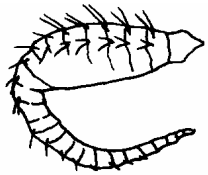
13. ➔ Body relatively short and grub like, widest in centre, tapering gradually at head and tail.
Head may show signs of regeneration.



.....***Cirratulus*** juv.

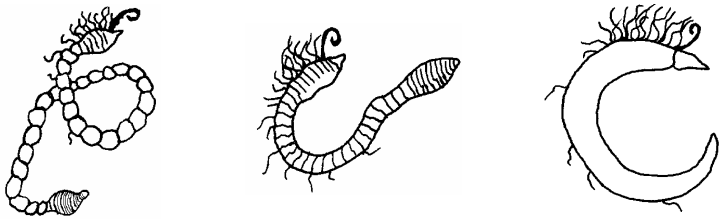
➔ Body may be variously shaped but not as described above.
Head well proportioned.....14

14. - Body of characteristic shape. Expanded in thoracic region, abruptly tapering towards tail, which is narrow, slightly flattened and as long as the thorax. Tadpole-shaped.
Worm short and usually complete in samples.



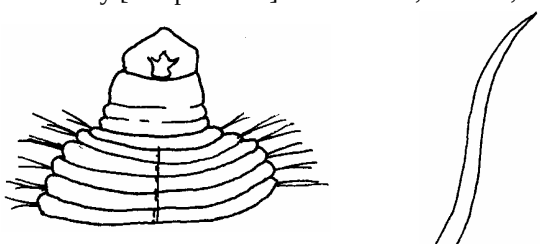
.....***"Tharyx" vivipara*** Christie, 1984
[Often common in estuarine mud, northeast.England only?]
[Posterior with occasional blunt-tipped capillaries.]

➔ Body may be variously shaped but not as described above.
Worm usually elongated, often missing tail in samples.



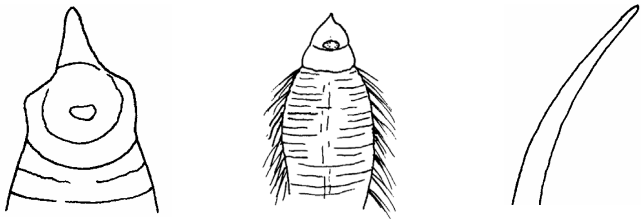
.....15

15. ➔ Prostomium broader than long, bluntish, rather flattened and excavate ventrally.
Mid body [and posterior] with narrow, sinuous, unidentate acicular spines.



.....***Cirratulus*** cf. ***caudatus*** Levinsen, 1893
[Body often inflated anteriorly; glandular area often visible on achaetous segments]
[Subtidal; northern British waters only ?]

➔ Prostomium at least as long as broad, acutely or bluntly conical.
Acicular chaetae, regularly curved or absent.

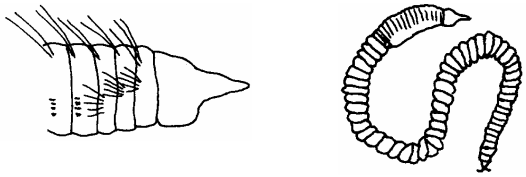


.....16

16. ➔ Acicular chaetae in anterior (1st 10 chaetigers) as well as posterior parapodia. 17

➔ Acicular chaetae absent from anterior parapodia, may or may not be present in posterior parapodia. 18

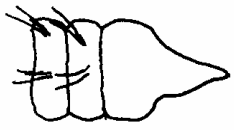
17. ➔ 1st. three neuropodia with capillaries as long as those in notopodia.
Bidentate chaetae start on fourth neuropodium.
Mid body segments may be very convex and "beaded".



..... ***Caulleriella* "A"**
[Northern British waters ?]
[Pygidium has a pair of anal cirri]

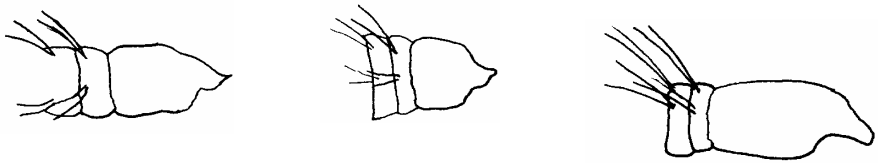
➔ Capillaries of neuropodia much shorter than those of notopodia in all, or all but first two chaetigers.
Bidentate chaetae start on first or third neuropodium.
Segments short and not "beaded" 3

18. ➔ Prostomium elongated and sharply conical.
In lateral view, distance from mouth to tip of prostomium about equal to that from mouth to first neuropodium
Anterior chaetigers generally similar to those of mid body region.
(Posterior acicular chaetae are stout unidentate spines, sometimes arranged in rings around abdomen).



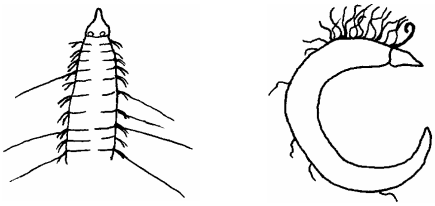
.....19

➔ Prostomium relatively short, sharply or obtusely conical.
In lateral view, distance from mouth to tip of prostomium much less than that from mouth to first neuropodium.
Anterior chaetigers markedly shorter than those behind and swollen to form a distinct thorax.
(Posterior acicular chaetae knob-tipped, serrated or absent).



.....22

19. ➔ Anterior capillaries (excluding natatory chaetae) robust, flattened and regularly curved backwards; shorter than body width.
Worms widest in mid body.



.....***Chaetozone setosa* agg.** Malmgren, 1867
[Common in many habitats, ubiquitous in British waters]
[Posterior with rings of alternating spines and capillaries.]

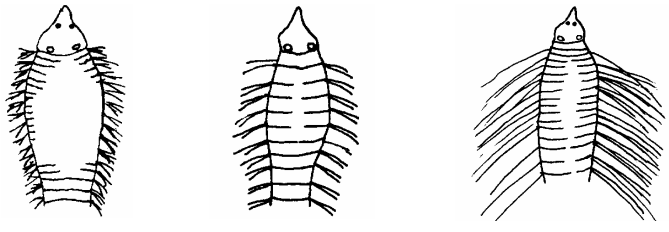
Species types from literature:

Palps on last achaetous segment, in front of 1st pair of gills.
.....type "A" (***C. setosa* ss.**)
[Posterior rounded in cross-section, with almost continuous rings of spines.]

Palps on last achaetous segment, alongside 1st pair of gills
.....type "B"
[Posterior strongly flattened in cross-section, with discrete rows of spines.]

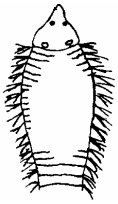
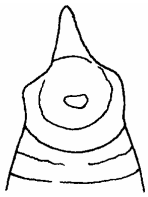
Palps on chaetiger 1, alongside 1st pair of gills
.....type "C"
[Posterior slightly flattened in cross-section, with discrete rows of spines.]

➔ Anterior capillaries long, or short and fine
Worms widest in thoracic region.



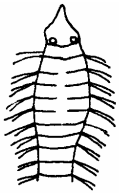
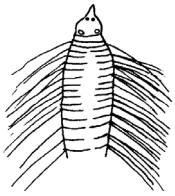
.....20

20. ➔ Anterior capillaries fine, irregularly directed and shorter than body width.
Anterior segments very short and poorly defined dorsally.

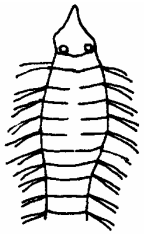
..... ***Chaetozone gibber*** Woodham & Chambers, 1994
[May be common subtidally in mud, southern British waters?]
[Posterior with acicular spines in both rami; capillaries and awl-shaped chaetae.]

➔ Anterior capillaries robust, directed in parallel, as long as body width.

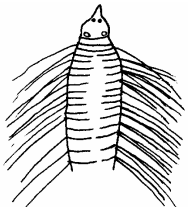
.....21

21. ➔ Anterior segments relatively long, well defined dorsally.



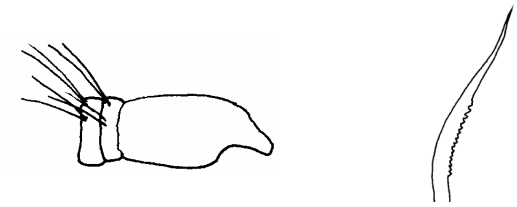
.....***Chaetozone* "D"**
[Offshore form, northern British waters?]
[Posterior with acicular spines in both rami, alternating with capillaries.
.....Concertina-like appearance to posterior segments. Mid body region very long.]

➔ Anterior segments short and poorly defined dorsally.



..... ***"Caulleriella" zetlandica*** (McIntosh, 1911)
[Common subtidally in sand and gravel, ubiquitous.in British waters]
.....[Posterior with acicular spines in neuropodia only; capillaries and awl-shaped chaetae.]

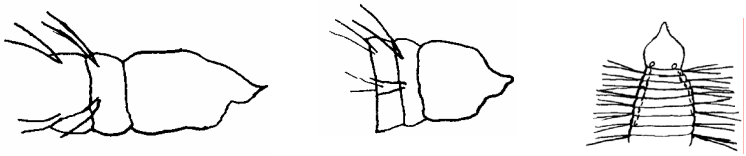
22. ➔ Prostomium elongated and flexible, with a rounded end, usually downturned
Rows of gills gradually converge to form a single mid dorsal line, behind thorax.



..... ***Monticellina*** cf. ***dorsobranchialis*** (Kirkegaard, 1959)
[Often common in subtidal mud, western British waters?]
[Posterior with serrated capillaries.]

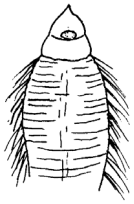
Species from literature
Short body with serrated and pseudocompound chaetae.
..... *"Caulleriella" serrata* Eliason, *1*962

➔ Prostomium regularly conical or with a pointed tip, usually straight.
Rows of gills always totally separate.



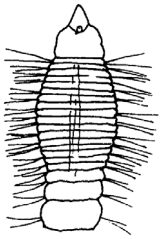
.....23

23. ➔ Anterior capillaries pale and fine, directed backwards.
Anterior segments poorly defined ventrally.
In thoracic region, body dorsoventrally flattened or only weakly expanded.
Prostomium sharply pointed at tip.
(Posterior with knob-tipped acicular chaetae).



.....24

➔ Anterior capillaries robust, directed laterally.
Anterior segments well defined ventrally.
In thoracic region, body rounded in cross section and strongly expanded.
Prostomium pointed or rather bluntly conical.
(Posterior with capillaries only; acicular chaetae absent).



.....25

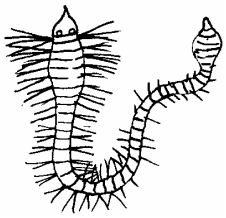
24. ➔ Achaetous segments long (distance from mouth to first chaetiger greater than depth (dorsal to ventral) of achaetous segments.
Body elongated and rounded in cross section throughout.
Mid body segments often as long as wide.

.....***Tharyx killariensis*** (Southern, 1914)
[Occasional in subtidal mixed sediments ? ubiquitous in British waters?]
[Posterior tapered, with long, knob-tipped or faintly bidentate chaetae.]

➔ Achaetous segments short (distance from mouth to first chaetiger about equal to depth (dorsal to ventral) of achaetous segments.
Body generally short, may be dorsoventrally flattened in thoracic region.
Mid body segments rarely as long as wide.

.....***Tharyx* "A"**
[Often common in estuarine mud, southern British waters?]
[Posterior dorsoventrally flattened, with short, knob-tipped or faintly bidentate chaetae.]

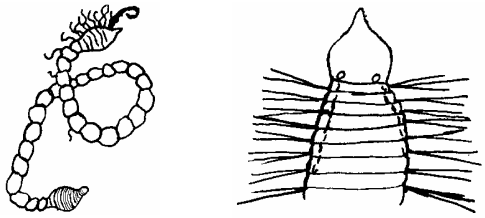
25. ➔ Prostomium finely pointed at tip.
Animals small and fine.
Body often colourless with greenish tinge and dark gut.



..... ***Aphelochaeta* "B"**
[Found in shallow marine muds ? western British waters?]
[Posterior slightly swollen, fine capillaries only.]

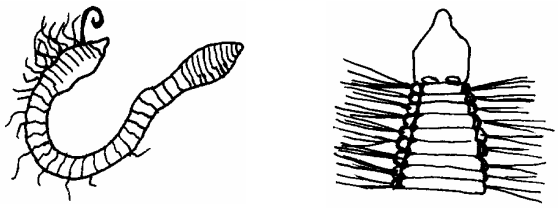
➔ Prostomium obtusely conical.
Animals generally large and coarse.
Body colour dark brown with darker gut.....26

26. ➔ Mid body segments elongated (as long as width), beaded and delicate.
Palps rounded in cross section and generally widely separated.
Groove between dorsum and notopodia slight.



.....***Aphelochaeta marioni*** (Saint-Joseph, 1894)
[Common in estuarine mud, ubiquitous in British waters?]
[Posterior often swollen and globe-like, short capillaries only.]

➔ Mid body segments only slightly more elongated and delicate than those anteriorly.
Palps thick, oval in cross section and generally close together.
Groove between dorsum and notopodia distinct.



.....***Aphelochaeta* "A"**
[Occasional in subtidal gravel, ubiquitous in British waters?]
[Posterior slightly swollen, short capillaries only.]

Possibilities : ..... *Aphelochaeta filiformis* (Keferstein, 1862)
.....*"Tharyx" macintoshi* (Southern, 1914)

Questionnaire

We are always looking for more information on little known and difficult species and would be particularly grateful for feedback on the following points :

1. Have you found *Cirratulus cirratus* (adults) from south of the Humber or Solway ?

2. Have you ever found any of the following : *Cirratulus* "A", *Cirratulus* cf. *caudatus, Protocirrineris chrysoderma***,** *Caulleriella bioculata, Caulleriella* cf. *viridis, Caulleriella* "A", *Aphelochaeta* "A", *Aphelochaeta* "B" ?

3. Do you separate *Chaetozone setosa agg.* into types A to D ?

4. Have you ever found *Tharyx* "A" (= *Caulleriella killariensis* in test key) from north of the Bristol Channel or Tyne ?

5. Have you ever found *Monticellina dorsobranchialis* from off the north or east coasts ?

6. Have you found *Aphelochaeta marioni* from Scotland ?

7. Have you ever found *"Tharyx" vivipara* from Scotland, the west coast or from south of the Humber ?

8. Have you ever found *Chaetozone gibber* from Scotland or the east coast ?

9. Have you ever recorded any of the following : *Cirratulus borealis, Cirratulus incertus***,** *Cirriformia norvegica, Caulleriella caputesocis***,** *Tharyx multibranchiis, Tharyx mcintoshi, Cirratulus filiformis, Caulleriella serrata* ?

10. Have you seen any other cirratulid not included in the key or seen anything which does not fit the key?

11. Have you found any problems with the key, or do you have any suggestions ?

Family Cirratulidae

Body cylindrical. Prostomium conical or blunt; peristomium fused with at least two segments. Parapodia reduced; slender filiform or clavate branchiae present on at least some setigers. All setae simple including capillaries and curved or excavate hooks (Fauchald, 1977).

Genera

Listed in chronological order

Cirratulus Lamarck, 1801

Type species : *Lumbricus cirratus* O.F. Muller, 1776. 25 spp. (Fauchald, 1977).
Cirratulids without palps; tentacular cirri present on one segment only; anteriormost branchiae present from the same segment. Chaetae include capillaries and acicular spines, which are usually entire distally(Fauchald, 1977). Wedge-shaped (not conical) prostomium. Two or more dorsal tentacles on one anterior segment as well as gills. Capillary and sigmoid chaetae (Petersen, 1991).

Cirrhineris Blainville, 1818

Indeterminable (Fd).

Dodecaceria Orsted, 1843

Type species : *D. concharum* Orsted, 1843. 16 spp. (Fauchald, 1977).
Palps present. Branchiae present on a few segments, filiform or clavate. Anterior setigers with capillary chaetae, median and posterior ones also with excavate stout spines. Posterior part of body often flattened and expanded (Fauchald, 1977).

Heterocirrus Grube, 1855

Type species : *H. saxicola* = *Dodecaceria*. *Heterocirrus* Saint-Joseph, 1894 = *Caulleriella* and, in part, *Tharyx* (Fauchald, 1977).Defined as having capillaries and acicular chaetae by Caullery and Mesnil, 1898.

Naraganseta Leidy, 1855

= *Dodecaceria* (Fauchald, 1977).

Audouinia Quatrefages, 1865

= *Cirriformia* (Fauchald, 1977).

Timarete Kinberg, 1866

Type species : *Cirratulus anchylochaetus* Schmarda, 1861. 8 spp. (Fauchald, 1977); 3 spp. (Petersen, 1991)
Palps absent. Tentacular cirri present on at least two anterior setigers. Branchiae present from the same segment as the first tentacular cirri. Chaetae include notopodial capillaries and, anteriorly, neuropodial capillaries. Posterior neuropodia with gently curved spines (Fauchald, 1977). Wedge-shaped prostomium. Dorsal tentacles on several anterior segments after first gills. Mid body gills arising well above notopodia. Capillary and sigmoid chaetae (Petersen, 1991).

Promenia Kinberg, 1866

= *Cirratulus* (Fd).

Labranda Kinberg, 1866

= *Cirriformia* (Fd).

Archidice Kinberg, 1866

= *Cirratulus* (Fd).

Chaetozone Malmgren, 1867

Type species : *C. setosa* Malmgren, 1867; from Spitzbergen. 19 spp. (Fauchald, 1977).
Spines in almost complete rings around posterior (Caullery & Mesnil, 1898; Chamberlin, 1919); with entire tips (Hartman, 1961). Paired palps inserted dorsally anterior to, or at the first chaetiger. Chaetae include capillaries and distally entire, curved spines (Fauchald, 1977).

Mesocirrineris Czerniavsky, 1881

= *Caulleriella* (Fd).

Protocirrineris Czerniavsky

Prostomium bluntly conical to wedge-shaped. Dorsal tentacles few, on several anterior segments after setiger 1. Gills with or without subdistal pads, first present on segments with dorsal tentacles. Chaetae all fine capillaries (Petersen, 1991).

Tharyx Webster and Benedict, 1887

Type species : *T. acutus* Webster and Benedict, 1887; from Maine. 22 spp. (Fauchald, 1977); 5 spp. in genus as redefined (Blake, 1991).
Capillary chaetae only (Caullery & Mesnil, 1898; Chamberlin, 1919). Palps present anterior to or at the first setiger. All chaetae slender, mostly capillary and smooth, but sometimes with serrated cutting edges(Fauchald, 1977). Prostomium conical, peristomium elongate, with pair of grooved palps arising anterior to setiger 1. First pair of branchiae frequently on peristomial segment, arising immediately posterior to palps. Abdominal segments not beadlike. Chaetae include simple capillaries and acicular spines with irregular knobbed tips. Knobs sometimes with shallow nothes but never with distinct teeth (Blake, 1991).

Cirratulispio McIntosh, 1911

= *Cirratulus* or *Chaetozone* ?? (Fauchald, 1977).

Ambo Chamberlin, 1918

= *Timarete* ? (Fauchald, 1977).

Caulleriella Chamberlin, 1919

Type species : *Cirratulus viridis* Langerhans, 1880; from Madeira (Woodham & Chambers, 1994).
Cirratulus bioculatus Keferstein, 1862; from France (Fauchald, 1977). 16 spp. (Fauchald, 1977).
Acicular chaetae with bidentate or unidentate tips, in both rami (Chamberlin, 1919); with bifid tips (Hartman, 1961). Paired palps inserted dorsally anterior to, or at the first chaetiger. Chaetae include capillaries and distally bidentate or multidentate, curved spines (Fauchald, 1977).

Pseudocirratulus Augener, 1922

Type species : *P. kingstonensis* Augener, 1922. 1 sp. (Fauchald, 1977).
Palps absent. Cirri and branchiae present on most segments. Two achaetous anterior segments present. Chaetae all gently curved, entire spines or hooks (Fauchald, 1977).

Cirriformia Hartman, 1936

Type species : *Terebella tentaculata* Montagu, 1808. 26 spp. (Fauchald, 1977).
Cirratulids without palps; tentacular cirri present on one segment only; anteriormost branchiae present anterior to the tentacular cirri. Chaetae include capillaries and curved, distally entire acicular spines (Fauchald, 1977). Feeding tentacles originate from an achaetous segment which has been pushed back dorsally to cover some anterior chaetigers (Day).

Pentacirrus Wesenberg-Lund, 1958

= *Timarete* (Fd).

Monticellina Laubier, 1961

Type species : *M. heterochaeta* Laubier, 1961; from Mediterranean France. 6 spp. (Blake, 1991).
= *Tharyx* (Fauchald, 1977). Prostomium long, sometimes pointed. Peristomium elongated to short, with palps usually arising anterior to setiger 1. Middle body segments frequently bead-like. Setae including capillaries with distinct sawtooth (denticulate) edge (Blake, 1991).

Aphelochaeta Blake, 1991

Type species : *Tharyx monilaris* Hartman, 1960; 10 spp. (Blake, 1991)
Prostomium conical, peristomium elongate, with pair of grooved palps arising either on or anterior to setiger 1. Abdominal segments frequently beaded in appearance. Chaetae all simple capillaries, lacking distinct denticulations or sawtooth edge. Posterior end frequently expanded (Blake, 1991).

Species Lists

Available Names

Cirratulus cirratus (O.F. Muller, 1776)
Cunningham & Ramage, 1888; Fauvel, 1916; McIntosh, 1911; Southern, 1914; McIntosh, 1915; Fauvel, 1927; Howson, 1984

Cirratulus medusa Quatrefages, 1865
syn. of *cirratus* (F)

Cirrhineris blainvillii Quatrefages, 1865
syn. of *cirratus* (F)

Promenia jucunda Kinberg, 1857-1910
syn. of *cirratus* (F)

Promenia fulgida Ehlers, 1897
syn. of *cirratus* (F)

Cirratulus borealis Lamarck - **North Sea**
Johnston, 1865; Keferstein, 1862
syn. of *cirratus* (F)
Petersen, 1991

Cirratulus incertus McIntosh, 1923 - **Shetland**
Petersen, 1991

Cirratulus bioculatus McIntosh, 1911 - **Shetland**
McIntosh, 1915
renamed *incertus* (McIntosh, 1923)

Cirratulus caudatus Levinsen, 1893 - **Kattegat**
McIntosh, 1915.

Chaetozone dunmanni McIntosh, 1911 - **Ireland**
syn. of *caudatus* (Levinsen; McIntosh, 1922?)

Cirratulus tentaculatus Montagu, 1808 - **Devon ?**
Cunningham & Ramage, 1888; McIntosh, 1911; 1915
Audouinia tentaculata Saint-Joseph, 1894; Fauvel, 1927
Cirriformia tentaculata Howson, 1984

Cirratulus lamarcki Audouin & Milne-Edwards (non Grube), 1834
Audouinia lamarcki Quatrefages, 1865
syn. of *tentaculata* (F)

Audouinia crassa Quatrefages, 1865
syn. of *tentaculata* (F)

Cirratulus borealis Lamarck : Rathke, 1843
Audouinia norvegica Quatrefages 1865
Cirratulus norvegicus Grube, 1870; 1872; Southern, 1914
syn. of *tentaculata* (F; George, 1963)
Cirriformia norvegica

Cirratulus filigerus Delle Chiaje, 1841
Audouinia filigera Claparede, 1868; Lo Bianco, 1893; McIntosh, 1911; Fauvel, 1916; 1927
Timarete filigera Petersen, 1991

Cirratulus lamarckii Grube (non Audouin & Milne-Edwards), 1840
syn. of *filigera* (F)

Cirratulus chiajei Marenzeller, 1887
McIntosh, 1922; 1923
syn. of *filigera* (F)

Cirratulus chrysoderma Claparede, 1868
Lo Bianco, 1893; Rioja, 1917; Fauvel, 1927
Protocirrineris chrysoderma Petersen, 1991

Cirratulus bioculatus Keferstein, 1862 - **France**
Cirrhineris bioculatus Quatrefages, 1865
Heterocirrus bioculatus Fauvel, 1925; 1927
Caulleriella bioculata Chamberlin, 1919; Howson, 1987

Heterocirrus flavoviridis Saint-Joseph, 1894 - **Dinard**, **France**
Augener, 1918; Chamberlin, 1919
syn. of *bioculata* (F)

Cirratulus viridis Langerhans, 1880 - **Madeira**
Heterocirrus viridis Caullery & Mesnil 1898
Chaetozone viridis Southern, 1914
syn. of *bioculata* (F)

Caulleriella viridis Chamberlin, 1919

Chaetozone alata Southern, 1914 - **Ireland**
Chamberlin, 1919; McIntosh, 1923
Heterocirrus alatus Fauvel, 1927
Caulleriella alata Howson, 1987

Heterocirrus caputesocis Saint-Joseph, 1894 - **Dinard, France**
Caullery & Mesnil, 1808; Chamberlin, 1919; Rioja, 1917; Fauvel, 1927
Caulleriella caputesocis Howson, 1987; Woodham & Chambers, 1994

Chaetozone zetlandica McIntosh, 1911 - **Shetland**
Southern, 1914; Chamberlin, 1919
Heterocirrus zetlandicus Fauvel, 1927
Caulleriella zetlandica Day, 1976; Howson, 1987; Woodham & Chambers, 1994

Chaetozone gibber Woodham & Chambers, 1994 - **Kent**

Chaetozone setosa Malmgren, 1867 - **Spitzbergen**
Theel, 1879; Cunningham & Ramage, 1888; McIntosh, 1915; Chamberlin, 1919; Fauvel, 1922; 1927; Lechapt, 1983; Christie, 1985; Howson, 1987

Chaetozone macrophthalma Langerhans, 1880; Chamberlin, 1919 - **Madeira**

Chaetozone carpenteri McIntosh, 1911 - **Algeria**
syn. of *setosa* (F)

Chaetozone whiteavesi McIntosh, 1911 - **St. Lawrence**

Chaetozone killariensis Southern, 1914 - **Ireland**
Chamberlin, 1919; McIntosh, 1923
Heterocirrus killariensis Fauvel, 1927
Caulleriella killariensis Howson, 1987
Tharyx killariensis Blake, 1991

Tharyx acutus Webster & Benedict, 1887 - **Maine**
Blake, 1991

Tharyx kirkegaardi Blake, 1991 - **off Cape Hatteras**

Heterocirrus marioni Saint-Joseph, 1894 - **Dinard, France**
Chamberlin, 1919
Tharyx marioni Caullery & Mesnil, 1898; Fauvel, 1927; Howson, 1987
Aphelochaeta marioni Blake, 1991

Cirratulus filiformis Keferstein, 1862; Saint-Joseph, 1894; Fauvel; 1901; 1927

Cirratulus norvegicus McIntosh (non Quatrefages), 1911
= *mcintoshi* (S)
syn. of *filiformis* (F)

Cirratulus tessellatus McIntosh, 1911 - **Algeria**
syn. of *filiformis* (F)

Cirratulus mcintoshi Southern, 1914 - **Drobak, Norway ?**
syn. of *filiformis* (F)
Tharyx mcintoshi Eliason, 1962; Howson, 1987

Cirratulus tenuisetis Grube

Cirratulus dorsobranchialis Kirkegard, 1959 - **Angola**
Monticellina dorsobranchialis Blake, 1991

Monticellina heterochaeta Laubier, 1960 - **Mediterrranean France**
syn. of *dorsobranchialis* (Blake, 1991)

Monticellina baptisteae Blake, 1991 - **Georges Bank**

Dodecaceria concharum Oersted, 1843
Saint-Joseph, 1808; Caullery & Mesnil, 1898; McIntosh, 1922; Fauvel, 1927; Howson, 1987

Heterocirrus ater Quatrefages, 1865
Dodecaceria ater McIntosh, 1911
syn. of *concharum* (F)

Heterocirrus saxicola Grube, 1855
syn. of *concharum* (F)

Heterocirrus fimbriatus Verrill, 1879 - **Bay of Fundy**
syn. of *concharum* (F)
Dodecaceria fimbriata Gibson, 1977

Dodecaceria caulleryi Dehorne, 1933 - **Portel, France**
Howson, 1987
syn. of *fimbriata* (Gibson, 1977)

Heterocirrus gravieri McIntosh, 1911 - **Cadiz**
syn. of *concharum* (F)

Terebella ostreae Dalyell, 1853
syn. of *concharum* (F)

Nereis sextentaculata Delle Chiaje, 1828
syn. of *concharum* (F)

Dodecaceria diceria Hartman, 1951
Gibson, 1996

Heterocirrus multibranchiis Grube, 1863; Chamberlin, 1919 - **Mediterranean**
Tharyx multibranchiis Caullery & Mesnil, 1898; Fauvel, 1927; Howson, 1987

Tharyx vivipara Christie, 1984 - **Northumberland**
Howson, 1984

Tharyx retierei Lechapt, 1994 - **Morocco**

Caulleriella serrata Eliason, 1962 - **Skagerrak**

Aonis vittata Grube

Species Descriptions

Cirratulus cirratus (O.F.Muller, 1776)

Description

Size : Length, 30 - 120 mm; width 1.5 - 3 mm (F).

Colour : Orange-yellow, red, brownish, tentacles and gills red or yellow (F).

Head shape : Obtusely conical prostomium, wide at base, with two oblique rows of 4 - 8 black eyes in adults. Two achaetous segments behind peristomium, often biannulated dorsally (F). Peristomium as long as first 3 or 4 segments (D). Broader than in *C. tentaculata*, hoof shaped, with a slight notch in the centre (McIntosh).

Body form : Elongated, cylindrical. Segments (75 - 130) fairly long and tumid (F). Segments two or three times as long as broad (D); more clearly defined than in *C. tentaculata* (McIntosh). Segment length up to 1/6 of width anteriorly, about 1/3 of width in mid body (UM). Deep groove ventrally, from the first chaetiger to the tail. Forth segment, first chsetiger, has a smaller parapod than the following segments and has two minute tufts of bristles. The parapodia are more prominent than in *C. tentaculata* and the rami closer together (McIntosh).

Chaetae : Capillary chaetae in both rami of all parapodia. Short, fine, sigmoid (Wst). Capillaries simple, flattened and tapering, with extremely slender points. Neuropodial capillaries shorter, some with broader tips than in notopodia. Notochaetae slightly dilate from the base to the middle of the shaft, then taper gradually to a very fine, hair-like tip. The front edge of each is minutely and regularly spinose in a distal direction (McIntosh). Capillaries up to half of body width anteriorly, 1/4 of body width in mid body (UM).

Acicular sines, unidentate and slightly curved (F); dilate a little from the base to a point above the middle, where there is a slight forward curve, then a slight backward bend occurs, then a forward curve to form the hook at the tip. This projects through a neatly rounded aperture in the cuticle and is fairly sharp where undamaged. Those in notopodia, posteriorly, are paler, more slender and less curved than those in neuropodia (McIntosh). Hooks dark and just under half length of capillaries (UM). In the neropodia, 2 - 4, large and long (WSt), from setiger 10 - 12 (F); 1 in 13th neuropodium; 3 in the 16th; 4 in the 30th (McIntosh). 1 - 2 in neuropodia (F). In the notopodia, 1 - 2, short and fine (WSt), from setiger 20 - 23 (F); 1, slender and sharply pointed, in the 29th; (McIntosh).

Palps : Channelled tentacular filaments, a little wider than the gills, inserted on the front side of the 1st setiger in two groups of 2 - 8 (F). Numerous, in a row (D). Fourth chaetiger with a series of proportionately large, filiform branchial cirri arranged in two lateral tufts, each of seven or eight cirri, orange, with blood vessels, bulkier than in *C. tentaculata* (McIntosh).

Gills : From 1st. setiger, almost at posterior end. Inserted a little above the notopodia at a very variable distance, at first small, then equal to the distance between rami, then greater (F). Stout (D). The first 14 or 15 chaetigers have gills, further back there are occasional gills, the posterior is without gills (McIntosh).

Pygidium : Anus small, subdorsal (F). Anus crenulate, with dorsal papilla (McIntosh).

Diagrams

Specimen from the Tees, TY 1.1 (ex. R. Proudfoot).

Distribution
North Sea, Channel, Atlantic, Arctic, (worldwide) (F); Arctic to Madeira and Canaries; eastern North America (S); Northern Britain (UM).

Habitat
Shallow water, in mud filling rock crevices, in muddy sand and dredges (F); Shore species (WSk); under stones, almost up to HWM, prefers some mud, sometimes in *Laminaria* holdfasts, young specimens dredged. To 20 m (S); shallow mixed sediments (UM). Intertidal mud and crevices, young from algal holdfasts (PG).

Biology
Mature at least from June to September, young specimens found in spring (Southern, 1914).

Notes
Juveniles can look very different. We have a few, some complete.

Type Locality

Literature
P1408 in MCS. Included in workshop keys and table.
Cunningham & Ramage, 1888, p. 643, pl. XXXVIII, fig. 9, XXXIX, fig. 9; Fauvel, 1916, p. 447, pl. VII, fig. 12; McIntosh, 1915, p. 249, pl. XCI, fig. 2; Fauvel, 1927; Hartmann-Schroder, Day, Ushakov, Southern. *C. borealis* Johnston, 1865, p. 210, fig. 37; Keferstein, 1862, p. 120, pl. X, fig. 19 - 22. C. medusa Quatrefages, 1865, I, p. 455. *Cirrhineris blainvillii* Quatrefages, 1865, I, p. 463. *Promenia jucunda* Kinberg, 1857 - 1910, p. 64, pl. XXV, fig. 2. P. fulgida Ehlers, 1897, p. 114, pl. VII, fig. 174, 176.
Cirratulus cirratus (O.F. Muller, 1776)
Cunningham & Ramage, 1888; Fauvel, 1916; McIntosh, 1911; Southern, 1914; **McIntosh, 1915**; **Fauvel, 1927**; Howson, 1987

Cirratulus medusa Quatrefages, 1865

Notes
Synonym of *C. cirratus* (F).

Cirrhineris blainvillii Quatrefages, 1865

Notes
Synonym of *C. cirratus* (F).

Promenia jucunda Kinberg, 1857-1910

Notes
Synonym of *C. cirratus* (F).

Promenia fulgida Ehlers, 1897

Notes
Synonym of *C. cirratus* (F).

Cirratulus borealis Lamarck

Notes
Distinct from *C. cirratus*. Differs in having two branchiae per segment throughout, rather than just anteriorly (Petersen, 1991).
Johnston, 1865; Keferstein, 1868. Synonym of *C. cirratus* (F). Petersen, 1991

Cirratulus incertus McIntosh, 1923

Description

Size : Length, 15 mm; width 1 mm (McIntosh, 1923).

Colour :

Head shape : 2 eyes. Less of a basal constriction than in *C. cirratus* (McIntosh, 1923).

Body form : About 55 segments .Segments about 1/3 as long as wide at front and mid body, shorter to rear (McIntosh, 1923).

Chaetae : Capillaries in all notopodia. They are very long at the front, finely tapered with a slight curve at the tip; shorter behind but similarly shaped (McIntosh, 1923). Capillaries in neuropodia have short cylindrical shafts, which expand into knife-blade-like tips, finely tapered at the tip. About five anteriorly (McIntosh, 1923).
Hooks in notopodia and neuropodia, they are at first accompanied by "bristles", they are similar in shape to those of *C. cirratus* (McIntosh, 1923).

Palps : "Cirri from 4th segment are of great length, probably reaching beyond the tail in life" (McIntosh, 1923).

Gills :

Pygidium : Similar to *C. cirratus*, the ventral papilla being the more prominent (McIntosh, 1923).

Distribution

Habitat

Biology
Shows asexual regeneration (Petersen, 1991).

Notes
"This is the Danish species keying out to *C. cirratus*. Misinterpretation of asexual regenerates has led to needless and misleading descriptions of new taxa" (Petersen, 1991).

Type Locality
Shetland

Literature
McIntosh, 1915 (as *bioculatus*); 1923; Petersen, 1991.
Cirratulus incertus **McIntosh, 1923**
Petersen, 1991

Cirratulus bioculatus McIntosh (non Keferstein, 1862), 1911

Notes
Described by McIntosh, 1915. Renamed *C. incertus* (McIntosh, 1923). Synonym of *C. incertus.*

Cirratulus #1 **"Flatheads"**

Description

Size : Length, 5 - 20 mm (UM)

Colour : White to yellowish.

Head shape : Rounded prostomium, flattened dorsoventrally. One or two pairs of large black eyes, (UM).

Body form : Rather short. dorsoventrally flattened. Segments fairly long.

Chaetae : Capillaries in both rami of all parapodia (UM).
Acicular chaetae unidentate, curved, from 7 -8 in neuropodia (UM). Acicular spines long and slender (Wsk).

Palps : One pair, from head / setiger 1 boundary (Wsk).

Gills : Thicker than palps (PG)

Pygidium :

Distribution
Throughout Britain (UM).

Habitat
Offshore species (WSk).

Biology

Notes
Unnamed taxon recognised at UM. Probably juvenile *Cirratulus* but not like typical *C. cirratus* in appearance. We have a few, some complete. Also equals the offshore species of PG etc. Could be *C. incertus* ??

Literature
Cirratulus sp. in workshop keys. *Cirratulus* j. in test key.

Cirratulus caudatus Levinsen, 1893

Description

Size : Length, to 50 mm (McIntosh, 1915).

Colour : Pale greyish white to bluish, may be translucent (UM).

Head shape : Snout forming a blunt cone, with slight lateral furrows. Mouth large with a crescentic groove and two lateral lips. Peristomium and two following segments without chaetae (McIntosh, 1915). Raised glandular area on anterior achaetous segments (PG).

Body form : Body widens to the eighth or ninth chaetiger and then abruptly dilates into an ovoid enlargement of ten segments, when it contracts. About 50 well defined segments, of single annulations. Parapodia form lateral ridges with notopodia and neuropodia and a minute, flat median papilla (McIntosh, 1915).

Chaetae : Capillaries in notopodia long; capillaries in neuropodia shorter. A stouter series starts at the 30th chaetiger, in which capillaries have a double curvature of the shaft and a finely tapered tip, the neuropodia apparently preceeding the notopodia (McIntosh, 1915).
Posteriorly are elongated hooks, with straight, finely striated shafts with a slight bend forwards at the upper part and then gently curve forwards to sharp tips. The striations end at about the middle of the tips (McIntosh, 1915). They start from about chaetiger 30 in neuropodia, a little later in notopodia (PG).

Palps : Third segment with a pair of tentacles (McIntosh, 1915).

Gills : Not seen beyond 12th segment (McIntosh, 1915).

Pygidium :

Distribution
Kattegat, Ireland (McIntosh, 1915). West of Scotland (UM), northeast coast and north North Sea, subtidal (PG).

Habitat
Biology

Notes
Our specimens seem to fit this species fairly well.

Type Locality
Kattegat

Literature
Not in MCS. McIntosh, 1915; note after workshop key.
Cirratulus caudatus Levinsen, 1893
McIntosh, 1915.

Chaetozone dunmanni McIntosh, 1911

Notes
Described from Dunmannus Bay, Ireland. Synonym of *Cirratulus caudatus* (Levinsen; McIntosh, 1922?).

Cirriformia tentaculata (Montagu, 1808)

Description

Size : Length, 150 - 230 mm; width, 4 - 5 mm (McIntosh, 1911; F).

Colour : Orange-yellow or reddish brown or greenish bronze, gills and tentacular filaments red (F); brown, greenish-brown, yellow, juveniles sometimes colourless (UM). There may be some pigment on the prostomium, simulating eyes. Vertical lines of dark pigment in the sulci at segment junctions, from the fourth segment back (McIntosh, 1911).

Head shape : Obtusely conical prostomium, wide at base, without eyes in adults but with pigment spots. Two achaetous segments behind peristomium, often biannulated (F). On each side, a short distance from the tip, an oblique depression slopes outwards and backwards. From where they meet, a ridge runs forwards to the tip of the snout. Ventrally, a deep groove leads backwards to the mouth, which is bounded posteriorly by a thick transverse lip. The peristomium is narrower than two achaetous segments, which have transverse wrinkles (McIntosh, 1911).

Body form : Cylindrical, becoming more angular in cross section towards rear and may be a little flattened ventrally. Fairly robust and of equal thickness but tapering at head and tail and sometimes thinner and more delicate in the median segments. Segments (over 300) very short and fairly well defined along most of body but median setigers may be longer and less clearly divided (F). Posterior region angular in cross section (F). The first chaetiger is broader than its successors (McIntosh, 1911)

Chaetae : Capillary chaetae in both rami of all parapodia (F). They are pale yellow and their length is 1/3 of the body width anteriorly, 1/4 posteriorly (UM). They have stout shafts and long, flattened, tapering tips, with a narrow border of spines directed distally (McIntosh, 1911).

Acicular sines reddish (UM), unidentate and slightly curved (F), neuropodial hooks, large, sigmoid, with a rounded point (WSt); notopodial hooks, slight, straight, simple pointed (WSt), in both rami of all but the first few setigers (F). 2 - 3 in neuropodia, which are larger and darker than those in the notopodia (4 - 5), and start further forwards (F). Hooks slender at front, more robust later. The necks curve backwards then forwards at the tips (McIntosh). Acicular spines slightly bidentate in juveniles (UM). Neuropodial hooks start between the 45th and 65th chaetiger, notopodial hooks start between the 90th and 95th chaetigers (McIntosh, 1911).

Palps : Numerous tentacular filaments in two groups in transverse bands on an elevated ridge lying dorsally over the 5th to 6th setigers (McIntosh, 1911); On the 6th or 7th setiger, rarely at the 4th to 5th (F). The ridge is crescentic in front, straight behind. There are at least 20 tentacles in the cluster (McIntosh, 1911).

Gills : From 1st. setiger, on all but last few segments. Inserted a little above and behind the notopodia at a distance clearly less than that between the rami (F). They continue to about the 35th setiger from the tail and those in mid body are thickest (McIntosh, 1911).

Pygidium : Anus subterminal in an elongated dorsal groove. Pygidium rounded (F). Small process, like a rudimentary cirrus, may be present in mid ventral line (McIntosh, 1911).

Diagrams
Specimen from Essex, LabRef 9312-04452, URC 1041.

Distribution
North Sea, Irish Sea, Atlantic (F), worldwide (D), British Isles, France, Skagerrak, North Sea (Southern), throughout Britain (UM).

Habitat
Shallow water, in black mud to muddy sand and under stones (F). Sand of Zostera beds, sand and mud between stones, occasionally in clean sand near rocks (Southern, 1914), mixed sediments (UM).

Biology
Mature in June (Southern, 1914).

Notes
This could be a species complex and juveniles can look very different. We have lots, adults and juveniles, some complete.

Type Locality
Devon ?

Literature
P1414 in MCS. Included in workshop key and table (6 spp. ?), Day, Ushakov. *Cirratulus tentaculatus* Cunningham & Ramage, 1888, p. 646, pl. XXVIII - XXIX, fig. 10 (F); Southern, 1914; McIntosh, 1915, p. 242 (F). *C. lamarcki* Audouin & Milne-Edwards (non Grube), 1834, p. 271, pl. VII, fig. 4 (F). *Audouinia lamarcki* Quatrefages, 1865 I, p. 460 (F). *A. crassa* Quatrefages, 1865 I, p. 461. *A. tentaculata* Saint-Joseph, 1894, p. 48, pl. III, fig. 55 - 57 (F); Fauvel, 1927, p. 91, fig. 32.
Cirratulus tentaculatus Montagu, 1808
Cunningham & Ramage, 1888; **McIntosh, 1911**; 1915; Southern, 1914.
Audouinia tentaculata Saint-Joseph, 1894; **Fauvel, 1927**
Cirriformia tentaculata Howson, 1984

Cirratulus lamarcki Audouin & Milne-Edwards (non Grube), 1834

Notes
Audouinia lamarcki Quatrefages, 1865. Synonym of *C. tentaculata* (F).

Audouinia crassa Quatrefages, 1865

Notes
Synonym of *C. tentaculata* (F).

Cirriformia norvegica (Quatrefages, 1865)

Description

Size : Length, 35 - 40 mm (Southern, 1914).

Colour : Dark pigment on ventral side of head and anterior region and lateral region of prostomium near nuchal organs (Southern, 1914).

Head shape : Prostomium followed by three achaetous segments. The first is slightly elevated dorsally (Southern, 1914).

Body form : Rounded dorsally, flattened ventrally, with a shallow median groove. Widest and thickest between 30th an 40th segments and tapers gradually towards both ends. 130 - 140 segments. In anterior region distance between gills and notochaetae much less than distance between dorsal and ventral chaetae, increasing to posterior. Distance between rami decreases from front to back. After segment 20 ratio between these spaces is constant, cirri to notochaetae two thirds distance between rami (Southern, 1914).

Chaetae : Longest capillaries very slender, with flattened serrate blades. Shorter capillaries half as long but as wide as longest. On lower margin of notopodia and upper margin of neuropodia are 2 to 3 very slender, short smooth chaetae. 13 capillaries in 10th notopodium, 15 in neuropodium. Notopodial capillaries longer than neurochaetae (Southern, 1914).
Curved hooks from 21st neuropodia and 35th - 41st notopodia. Hooks are slightly thicker, shorter and more strongly curved in neuropodia. In 75th parapod, 3 - 4 capilllaries and 2 - 3 hooks in notopodium; 3 capillaries and 3 hooks in neuropodium. Posteriorly there are 1 - 2 capillaries and 2 - 3 hooks in each division. Size difference between dorsal and ventral hooks of posterior parapodia not so great as in *C. tentaculata*(Southern, 1914).

Palps : Tentacular filaments on fourth setiger. Nine or ten pairs forming an oblique band on both sides and leaving a broad median area bare (Southern, 1914).

Gills : Third post oral segment with a pair on posterolateral margin (Southern, 1914).

Pygidium : Anus large and funnel shaped, with crenulate margin and rounded ventral papilla (Southern, 1914).

Distribution
Norway to N. France (Southern, 1914).

Habitat
Lithothamnion and kelp holdfasts (Southern, 1914).

Biology
Mature specimens found in August (Southern, 1914).

Notes
Possibly represents juveniles of *C. tentaculata* (George, 1963) but he omitted one of the distinguishing features from his discussion (ie. the distance between the gills and the notopodia). Note after workshop key. Synonymised with *C. tentaculata* in Fauvel..

Type Locality
Norway ?

Literature
Not in MCS. *Audouinia norvegica* Quatrefages 1865, I p. 460 (F). *Cirratulus norvegicus* Southern, 1914, p. 107, pl. XI, fig. 26 (with notes on nomenclature).
Cirratulus borealis Lamarck : Rathke, 1843
Audouinia norvegica Quatrefages 1865
Cirratulus norvegicus Grube, 1870; 1872; **Southern, 1914**
syn. of *tentaculata* (F; George, 1963)

Timarete filigera (Delle Chiaje, 1841)

Description

Size : Length, 200 - 250 mm; width, 5 - 6 mm (F).

Colour : Orange-yellow or reddish, gills and tentacular filaments red, sometimes white rings (F).

Head shape : Obtusely conical prostomium, wide at base, without eyes in adults but with pigment spots. Two achaetous segments behind peristomium, often biannulated (F).

Body form : Attenuated at ends. Convex dorsally, flattened ventrally. Segments (over 300) very short (F).

Chaetae : Capillary chaetae in both rami of all parapodia, though sometimes absent from posterior neuropodia. Slightly flattened (Wst). Proportionately larger than in *C. tentaculata* (McIntosh, 1911).
Acicular spines, unidentate and slightly curved (F). Notopodial spines, short, fine pointed; neuropodial spines, large, pointed (WSt). Spines in both rami of all but the first few setigers (F). Notopodia with 3 - 5; neuropodia with 1 - 2 (WSt); from setiger 12 (D); from setiger 37 to 41 (McIntosh). 1 - 2 in neuropodia, which are larger and darker than those in the notopodia, which have 3 - 5 (F). Spines larger anfd darker than those *of C. tentaculata*, and starting further forwards ? (S); from setiger 19 - 30 (McIntosh, 1911). Spines are slightly less curved towards the tip than in *C. tentaculata* (McIntosh, 1911).

Palps : Numerous tentacular filaments in two groups in transverse bands at the 4th or 5th setiger, sometimes at the 5th to 6th. Difficult to tell where they start (McIntosh, 1911)

Gills : From 1st. setiger, on all but last few segments. Inserted above the notopodia at a distance equal to or greater than that between the rami. They are inserted in front of the notopodia (McIntosh, 1911).

Pygidium : Small and rounded (F).

Distribution
Mediterranian, Atlantic, (worldwide) (F).

Habitat
Shallow water and coastal in mud, muddy sand and under stones (F).

Biology

Notes
Not very clear. Probably not British.

Type Locality

References
Not in MCS, included in workshop table (as *C. filigura*); Day. *Audouinia filigera* Claparede, 1868, p. 267, pl. XXIII, fig. 3; Fauvel, 1927 (with a note that it is closely related to *A. tentaculata* and may be only a warm water form). *Cirratulus filigerus* Delle Chiaje, 1841, vol III, p. 85, pl. XCI, fig. 1. *C. chiajei* Marenzeller, 1887, p. 18. *C. Lamarckii* Grube (non Aud. - Edw.), 1840, p. 70.
Cirratulus filigerus Delle Chiaje, 1841
Audouinia filigera Claparede, 1868; Lo Bianco, 1893; McIntosh, 1911; **Fauvel**, 1916; **1927**
Timarete filigera Petersen, 1991

Cirratulus lamarckii Grube (non Audouin & Milne-Edwards), 1840

Notes
Synonym of *C. filigera* (F).

Cirratulus chiajei Marenzeller, 1887

Notes
McIntosh, 1922; 1923. Synonym of *C. filigera* (F).

Protocirrineris chrysoderma (Claparede, 1868)

Description

Size : Length, 20 - 25 mm; width 0.5 mm (F).

Colour : Greenish brown, transparent posterior. Golden yellow granules in the teguments (F).

Head shape : Bluntly conical with two indistinct eyes (D).

Body form : Elongated, thin and flexible with 150 segments (F). Slender, segments much broader than long (D). Expanded anterior ends gradually tapering towards the tail (PG).

Chaetae : Capillaries in both rami of all parapodia (F); long (D).
No acicular chaetae (F).

Palps : 2 - 3 (F) or 4 (D) pairs of tentacular filaments on the first segment with gills, ie.4th to 5th setiger (F), or 7th (D).

Gills : From setiger 4 - 5 (same as filaments), variable in number and usually absent from posterior half of body (F); Fairly stout and arising closer to notosetae than distance between rami (D).

Pygidium : Papilliform, with ventral anus (F).

Distribution
Mediterranean (F); Cornwall (P.G.)

Habitat
Shallow water, in mud between barnacles and ascidians or seagrass (F). Subtidal (PG).

Notes
Seems quite distinct. P.G. has a few. Identity of these specimens not certain. They don't fit the descriptions perfectly.

Type Locality

Literature
Not in MCS, included in workshop table, Fauvel, Day,
Cirratulus chrysoderma Claparede, 1868
Lo Bianco, 1893; Rioja, 1917; **Fauvel, 1927**
Protocirrineris chrysoderma Petersen, 1991

Caulleriella bioculata (Keferstein, 1862)

Description

Size : Length : 10 - 40 mm; width : 0.5 - 1 mm (F).

Colour : Teguments greenish yellow, colour lost in alcohol, yellow or brown granules (F).

Head shape : Prostomium ellipsoidal, quite long. 2 eyes (may be diffuse), much larger in epitokes (F). Peristomium a little expanded dorsally, 2 following segments may be heart-shaped, biannulated on the sides (F).

Body form : Cylindrical; 80 to 140 setigers (F).

Chaetae : Capillaries in first two neuropodia long, thin, flanged and very finely pectinate at ends (F). No capillaries in later neuropodia (F). Capillaries present in all notopodia (F). Epitokes have natatory chaetae (F).
Bidentate hooks with one tooth smaller than the other, without flange, from the 3rd neuropodium and from the 6th - 9th notopodium (F); not so in Irish Sea material (PG); 1 - 3 per bundle (F).

Palps : 1 pair, longer and wider than gills; inserted towards the top on the front end of setiger 1 (F). Long and grooved (D).

Gills : From setiger 1, quite fragile and numerous but becoming rare in posterior portion of body (F); extending to mid body (Wst); long and grooved (D).

Pygidium :

Diagrams

Distribution
Channel, France, Atlantic (F); Irish Sea (Mackie et al. - PG).

Habitat
In *Lithothamnion* and kelp holdfasts and in old shells and dredges (F).

Notes
See under *C. alata*. Also confusion with *C. viridis*, which was combined with *C. bioculata* in Fauvel. Fauvel's descriptions and comments refer, in part, to *C. viridis* but are left in the description here.

Type Locality
France

Literature
P1395 in MCS. Included in workshop keys and table, Fauvel (as *Heterocirrus*), Garwood, Hartmann-Schroder, Day.
Cirratulus bioculatus Keferstein, 1862
Cirrhineris bioculatus Quatrefages, 1865
Heterocirrus bioculatus Fauvel, 1925; 1927
Caulleriella bioculata Chamberlin, 1919; Howson, 1987

Heterocirrus flavoviridis Saint-Joseph, 1894

Description

Size : Length : 11.5 mm; width 0.36 mm (St. Joseph, 1894).

Colour : Pale green or golden yellow. Yellow colour in granules in corpuscles in skin. Often both colours mixed in the same animal (St. Joseph, 1894).

Head shape : Very similar to that of *C. caputesocis*, with 2 eyes (St. Joseph, 1894). Peristomium long, biannulated? (Langerhans, 1880).

Body form : 86 setigers (St. Joseph, 1896).

Chaetae : The two first chaetigers have 5 capillaries in each ramus.
Bidentate hooks start on the third neuropodium, 5 per ramus and from the 13th notopodium, small capillaries accompanying them (St. Joseph, 1894). Hooks clearly visible through stereomicroscope (UM).

Palps : 1 pair, long, spiralled with ciliated groove, on the segment following the peristomium (= last achaetous segment, St. Joseph, 1894).

Gills : From alongside and above palps, finer than palps, on many segments (St. Joseph, 1894).

Pygidium : With five cirri ventrally (St. Joseph, 1894).

Diagrams

Distribution

Habitat
In dredged shells, less common than *C. caputesocis*. (St. Joseph, 1894).

Notes
Similar to *C. viridis* and *C. bioculata* but different positions of palps and hooks (St. Joseph, 1894).
May be a synonym of *C. viridis*, in otherwise, our "*C. viridis*" are probably this species.

Type Locality
Described from Dinard, France.

Literature
Augener, 1918; Chamberlin, 1919
Synonym of *H. viridis* (McIntosh, 1915)
Synonym of *H. bioculata* (F).

Caulleriella viridis (Langerhans, 1880)

Description

Size : Length : 10 mm (Langerhans, 1880); about 12 mm (McIntosh, 1915).

Colour : Green (Langerhans, 1880); greenish or yellowish, blackish in preserved material (McIntosh, 1915) dark brown (UM).

Head shape : Prostomium with 2 eyes (Langerhans, 1880), more or less acute but flattened. Nuchal organ on each side a little behind the eye Two achaetous segments behind prostomium (McIntosh, 1915). Peristomium long, biannulated? (Langerhans, 1880).

Body form : 50 setigers (Langerhans, 1880); 50 - 86 segments, thickest anteriorly, tapering only a little to the snout and gradually from the anterior region to the tip of the slender tail (McIntosh, 1915). Anterior segments short, robust, well defined and angular in cross section (UM). Mid body segments longer, with length about 1/6 of width, less well defined and more fragile than those of thoracic and tail regions (UM).

Chaetae : Anterior capillaries curve backwards, longest anteriorly and soon become short (McIntosh, 1915). Pale yellow, bent back, length 1/4 to 1/2 of body width (UM). Mid body capillaries very short and unclear (UM).

Bidentate hooks with a large and not very acute main fang, a spike above it, a slightly curved shaft with an enlargement at the shoulder (McIntosh, 1915); with long, prominent shafts reaching back one tooth smaller than the other, without flange, from the 3rd - 4th neuropodium and from the 7th - 15th notopodium, up to 8 per bundle, small capillaries accompanying them (Langerhans, 1880). At the thirteenth, four of the five capillaries disappear and two hooks as in the neuropodia accompany the single capillary to the posterior (St. Joseph, 1896). Hooks clearly visible through stereomicroscope (UM).

Palps : 1 pair, long, thick and grooved, on setiger 1 (Langerhans, 1880) on second achaetous segment (that behind peristomium) (McIntosh, 1915).

Gills : From setiger 1, shorter than palps, reaching to end of body but becoming scarcer to rear (Langerhans, 1880), placed below palps on last achaetous segment then numerous on each side giving a woolly appearance (McIntosh, 1915).

Pygidium : Anus terminal (McIntosh, 1915). Without anal cirri (UM).

Diagrams
Specimen from off the Isle of Wight, LabRef 8442, URC 7477.

Distribution
Channel, France, S.W. Ireland, Madeira, east coast of U.S.A. ? (Southern, 1914); southern (McIntosh, 1915); off S.E. Isle of Wight (UM).

Habitat
In *Lithothamnion* and kelp holdfasts and in old shells and dredges (F). In shallow water stony ground (UM).

Notes
See under *C. alata*. Confusion with *C. bioculata*, they are combined in Fauvel. We have a few adults, provisionally refered to this species, some complete but missing palps & gills.

Type Locality
Madeira

Literature
Southern (as *Chaetozone*).
Cirratulus viridis Langerhans, 1880
Heterocirrus viridis Caullery & Mesnil 1898
Chaetozone viridis Southern, 1914
syn. of *bioculata* (F)
Caulleriella viridis Chamberlin, 1919

Caulleriella alata (Southern, 1914)

Description

Size : 10 - 12 mm. (S, F, G); 25mm? (UM).

Colour : Brownish gray (Southern, 1914; F); lilac to purplish (UM).

Head shape : Conical, pointed prostomium. 2 eyes, dark (Southern, 1914), often rather pale and indistinct (UM). Two achaetous segments behind peristomium (Southern, 1914).

Body form : Cylindrical, becoming more angular in cross section towards rear (UM). Fairly robust and of uniform thickness but tapering at head and tail (F). 100 - 110 segments (F), short and fairly well defined along whole of body (UM). Very slender and uniform in width, tapering only slightly at each end (Southern, 1914). Anterior segments well defined, short, angular in cross section, similar in mid body, robust (UM).

Chaetae : Capillary chaetae in all notopodia (mostly short after ca. setiger 20) (Southern, 1914). Some are long, cylindrical and unflattened; others shorter, flattened and very thin along one edge (Southern, 1914). Anterior notopodia with 4 - 6 capillaries, 2 or 3 in mid to posterior notopodia, 1 or two fine capillaries in neuropodia (Southern, 1914). Capillaries accompanying hooks often absent (Southern, 1914). Anterior capillaries thin, pale, regularly bent backwards; length about 1/4 of body width (UM). Mid body capillaries very short and unclear (UM). A few long, fine natatory chaetae may be present in mid body parapodia (UM).
Hooks are bidentate, with a delicate, narrow flange or wing on the convex side and are boldly curved (Southern, 1914). The shaft is constricted where it emerges (Southern, 1914). They are present in all neuropodia - 5 to 7 anteriorly, 3 to 5 posteriorly; in notopodia from about setiger 21, 1 or 2 in mid notopodia, 3 posteriorly (Southern, 1914). Hooks increase in size to rear (Southern, 1914). Dorsal chaetae in each bundle slightly thicker than ventral ones (Southern, 1914). Hooks clearly visible through stereomicroscope (UM).

Palps : 1 pair, thick, inserted on last achaetous segment (F); very large, up to 2 mm long (Southern, 1914).

Gills : From 1st setiger (F); 3 mm long (Southern, 1914).

Pygidium : ?

Diagrams
Specimen from off the Isle of Wight, LabRef 8481, URC 7604.

Distribution
Ireland (Southern, 1914, F); in all British waters (UM).

Habitat
Laminaria holdfasts and caught in surface tow-net at night (Southern, 1914). Mostly in shallow gravels (UM).

Notes
Probably OK, but size and colour different from that given in Fauvel, and he says *C. bioculata* may occasionally have hooks earlier than usual. We have lots, including complete specimens and juveniles.

Type Locality
? Blacksod Bay, Ireland. In *Laminaria* roots.

Literature
P1394 in MCS. Included in workshop keys and table, Fauvel (as *Heterocirrus*), Hartmann-Schroder, Ushakov, Southern (as *Chaetozone*).
Chaetozone alata **Southern, 1914**
Chamberlin, 1919; McIntosh, 1923
Heterocirrus alatus Fauvel, 1927
Caulleriella alata Howson, 1987

Caulleriella "A"

Description

Size : Length up to about 15 mm; width about 0.5 mm (UM).

Colour : Unknown

Head shape : Conical, pointed prostomium. Without eyes.

Body form : Elongated, cylindrical to slightly dorsoventrally flattened; of uniform thickness almost throughout but tapering at head and tail (F). First 15 to 20 segments rather short but in mid body and posterior they are up to 1/3 as long as wide. Segments are fairly well defined along whole of body and are strongly convex after chaetiger 20. Posterior quarter may be quite strongly dorsoventrally flattened, with a pronounced, broad dorsal groove (UM).

Chaetae : Capillary chaetae in all notopodia but mostly short after ca. setiger 20 and capillaries accompanying hooks may be absent in some posterior segments. Anterior capillaries thin, pale, regularly bent backwards; length about 1/4 of body width. Mid body capillaries very short and unclear. Capillaries in first three neuropodia are the same length as those in the anterior notopodia. The distance between rami becomes rapidly greater between chaetigers 1 and 4, with the line of notopodia straight, that of neuropodia descending (UM).
Hooks are bidentate, with a delicate, narrow flange or wing on the convex side and are strongly curved . They are present in neuropodia from chaetiger 4; in notopodia from about chaetiger 15 or 20 and continuing to end of tail. Hooks clearly visible through stereomicroscope, posteriorly (UM).

Palps : 1 pair, inserted on last achaetous segment (UM).

Gills : From 1st setiger ? (UM).

Pygidium : Bears two anal cirri, which are about as long as the mid body segments (UM).

Diagrams
Specimen from the northern North Sea (ex. A. Woodham).

Distribution
Northern North Sea (A. Woodham).

Habitat

Notes
Clearly distinct. Needs more literature work to see if its a new species. So far only from A. Woodham's collection.

Type Locality

Literature

Caulleriella caputesocis (Saint-Joseph, 1894)

Description

Size : Length, 15 - 17 mm; width, 1 mm (F).

Colour : Yellowish brown (F).

Head shape : Prostomium shaped like a pike snout, a little flattened at the front (F). 2 large black eyes. Peristomium elongated and followed by a second achaetous segment, hardly distinct (F).

Body form : Cylindrical, thin (F).

Chaetae : Capillaries in both rami of all parapodia (F). Hollowed serrated posterior acicular and spinulose flattened capillaries (WSt). Long, fine, natatory chaetae (1 - 5 per bundle) in notopodia of epitokes (F).
Acicular chaetae from setiger 10 - 12 in the neuropodia and in the last few notopodia (F). They are unidentate, or very feebly bidentate at the tip (F); red pointed (WSt); without flange (HS).

Palps : 1 pair broad, with ciliated groove, inserted on top of achaetous segment, from last achaetous anterior segment (G).

Gills : Gills from setiger 1, on all but the last 14 - 26 setigers (F).

Pygidium : With ventral cirri (F).

Distribution
Channel, Atlantic (F).

Habitat
Coastal dredges (F).

Notes
Drawing (Petersen?) does not match description in Fauvel very well. We don't have much information. We don't have anything quite like this but see *Aphelochaeta* #1 and *Cirratulus* #1. Woodham & Chambers (1994) noted that the type was in poor condition and that it was of an indeterminable species.

Type Locality
Dinard, France

Literature
P1396 in MCS. Excluded from workshop key, included in workshop table, Fauvel (as *Heterocirrus*), drawing by M. Petersen?, Garwood, Hartmann-Schroder.
Heterocirrus caputesocis Saint-Joseph, 1894
Caullery & Mesnil, 1808; Chamberlin, 1919; Rioja, 1917; **Fauvel, 1927**
Caulleriella caputesocis Howson, 1987; Woodham & Chambers, 1994

Caulleriella zetlandica (McIntosh, 1911)

Description

Size : Length 4 - 44 mm (Southern, 1914).

Colour : ? (F); white or pale yellow, gut sometimes showing dark (UM).

Head shape : Prostomium pointed, expanded posteriorly, 2 reddish-brown eyes, partly soluble in alcohol (Southern, 1914).

Body form : Cylindrical, a little expanded anteriorly, more or less flattened posteriorly. 36 - 150 short, similar segments. Posterior strongly flattened (not always apparent in all growth stages) (Southern, 1914). Anterior segments moderately well defined; short. Ventral groove visible (UM).

Chaetae : Capillaries in both rami of all parapodia, some long, thin and cylindrical, others short, flattened and geniculate (Southern, 1914). Anterior capillaries thin, pale yellow, darker than in *C, gibber* and wider at the base; longer than body width and often reddish at base. Mid body capillaries slightly shorter (UM).
No acicular chaetae in notopodia. Those in neuropodia start at setiger 15 - 25. Weakly bidentate in juveniles, rounded at ends in adults . Neuropodia with 6-7 hooks (Southern, 1914).
18 - 25 chaetae in each bundle posteriorly (Southern, 1914).

Palps : 2 channelled palps inserted on last achaetous segment (Southern, 1914).

Gills : From setiger 1, positioned at posterior side. 1st just above palps (Southern, 1914).

Diagrams
Specimen Banff, Scotland, LabRef 7205, URC 5447.

Distribution
Shetlands, Ireland (Southern, 1914). All around Britain (UM).

Habitat
Shallow water in clean sand, dredged at about 200m, caught in tow net at night (Southern,1914).
LWM to shallow water in mixed sediments (UM).

Notes
Probably OK. We have lots, many in good condition, including juveniles.

Type Locality
St. Magnus Bay, Shetland. Dredged in 100 fthms.

Literature
P1398 in MCS. Included in workshop keys (generic position uncertain) and table, Fauvel (as *Heterocirrus*), Day, Southern (as *Chaetozone*).
Chaetozone zetlandica McIntosh, 1911
Southern, 1914; Chamberlin, 1919
Heterocirrus zetlandicus Fauvel, 1927
Caulleriella zetlandica Day, 1976; Howson, 1987; **Woodham & Chambers, 1994**

Chaetozone gibber Woodham & Chambers, 1994

Description

Size : Length up to 20 mm (Woodham & Chambers, 1994).

Colour : Creamy white in alcohol (Woodham & Chambers, 1994).

Head shape : 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. Mouth ventral. Peristomium achaetous, smooth, partially divided into 3 annuli (Woodham & Chambers, 1994).

Body form : Body surfaces smooth. Dorsal surface swollen between about chaetigers 7 - 30. Ventral surfaces flattened with a longitudinal groove. About 200 segments, broad, short and crowded in anterior region, becoming narrower and longer posteriorly without intersegmental constrictions. Posterior region bluntly tapered, dorsoventrally compressed, with sides flattened to give angular cross section (Woodham & Chambers, 1994).

Anterior segments very narrow; well defined ventrally. Mid body fragile; segments about 1/6 of width, poorly defined (UM).

Chaetae : Slender capillaries in both rami of all parapodia. Stout, awl-shaped capillaries in notopodia between segments 40 and 90 (Woodham & Chambers, 1994). Capillaries, thin, pale yellow, about 1/4 to 1/3 of body width anteriorly (UM).

Unidentate acicular spines in notopodia from mid body (90 - 100) to end and in neuropodia from front (50 - 80) to end. Number of spine in each ramus increasing posteriorly from 1 - 4. In posterior, spines and capillaries, 4 of each. alternating with each other. Chaetal rows well separated, spines not forming rings around segments (Woodham & Chambers, 1994).

Palps : Pair of grooved palps originating from dorsal surface of posterior annulus, about 1/3 of body length (Woodham & Chambers, 1994).

Gills : 1st pair from immediately behind palps, on 1st chaetiger. A pair of gills above each notopodium in anterior, less frequent in mid body, absent posteriorly. Filaments simple, cylindrical, smooth, of variable length to about 2 mm., longest and thickest in front (Woodham & Chambers, 1994).

Pygidium : With small ventral lobe (Woodham & Chambers, 1994).

Diagrams

Specimen from Lyme Bay, Channel, LabRef 9406-05049, URC 4605.

Distribution

Mostly from South west (UM); South coast (Woodham & Chambers, 1994).

Habitat

Shallow water, mud (UM).

Notes

Probably OK. We have a few, some complete.

Type Locality

Off Folkeston, Kent, U.K. Very fine silt to medium sand. 3.5 - 20.5 m. (Woodham & Chambers, 1994).

Literature
Not in MCS. Described and included in some workshop keys and lists as *Chaetozone* nsp. before official description.
Chaetozone gibber **Woodham & Chambers, 1994**

Chaetozone setosa agg. Malmgren, 1867

Description

Size : Length, 20 - 25 mm, width 2 mm (F).

Colour : Greyish or brownish in alcohol (F); pale brown, yellow or colourless (UM).

Head shape : Prostomium conical, pointed without eyes. Peristomium and two achaetous segments biannulated (F).

Body form : Elongated, cylindrical, attenuated at extremities. 70 - 90 segments (F). Anterior segments short, poorly defined dorsally and ventrally, better defined laterally. Mid body segments well defined and longer than anterior (UM).

Chaetae : Capillaries on both rami of all parapodia. Notochaetae very long and fine. Neurochaetae shorter, acuminate (F). Non-natatory capillaries strongly flattened, golden yellow, bent back with length about half of body width. Natatory chaetae very thin with length up to twice body width (UM).
Posteriorly, unidentate acicular spines in both rami (F), sigmoid, from setiger 1 in neuropodia, from 3 in notopodia (WSt); in linear series, forming almost complete rings (F). Most ventral hooks weakly bidentate in last five or less neuropodia of juveniles (Christie).

Palps : 2 very long, broad, fragile, channelled palps inserted at front of first setiger (F).

Gills : From setiger 1 on a farly large number of segments, missing from posterior (F).

Pygidium : Conical, dorsal anus (D).

Distribution
North Sea, Atlantic, Mediterranean, Arctic (F); cosmopolitan (Fauchald, 1972); all round Britain (UM).

Habitat
Dredged on clay or muddy bottoms. (F) Intertidal and shallow water to 4436 m. Most types of bottom except rock and gravel (Christie, 1985; UM).

Notes
This is a species complex, which has been divided into types A, B and C by Christie (1985). Workshop keys also use types A - C, defined differently to those of Christie. Christie's definitions have been employed below. Christie states that forms B and C do not have natatory chaetae. I have consistently recognised forms only from abdomen structure and all forms seem to have natatory chaetae. Species complex can be recognised easily, distinctions between forms are more difficult. There are probably other segregates, as yet undescribed. We usually call them *Chaetozone setosa* agg. We have lots from all over, some in good condition.

Type Locality
Spitzbergen

Literature
P1403 in MCS. Included in workshop keys and table, Fauvel, Garwood, Day, Ushakov, Southern. Probably a species complex, which has been divided into types A, B and C by Christie (1985). Workshop keys also use types A - C. We usually call them *Chaetozone setosa* agg.
Chaetozone setosa Malmgren, 1867
Theel, 1879; Cunningham & Ramage, 1888; McIntosh, 1915; Chamberlin, 1919; Fauvel, 1922; 1927; Lechapt, 1983; **Christie, 1985**; Howson, 1987

Chaetozone macrophthalma Langerhans, 1880

Notes
Described from Madeira.
Chamberlin, 1919

Chaetozone carpenteri McIntosh, 1911

Notes
Described from Algeria. Synonym of *C. setosa* (F).

Chaetozone whiteavesi McIntosh, 1911

Notes
Described from the St. Lawrence River, Canada.

Chaetozone "A" (= C. setosa seg.)

Description

Size :

Colour :

Head shape :

Body form : Deep constrictions between successive posterior segments, concertina-like appearance.

Chaetae : Notopodia of anterior and mid segments with very long fine capillaries (natatory) in specimens over 7 mm.
Almost continuous rings of spines, alternating with capillary chaetae, no clear space between rami.

Palps : Emerge from asetous buccal segment in front of 1st gill pair.

Gills :1st pair emerges from asetous buccal segment just behind palps. Clear space between gills and notopodia.

Diagrams
Specimen from Cumbria, LabRef 9307-04030, URC 3962.

Distribution
Northumberland (Christie, 1985); all around Britain (UM).

Habitat
Fine sandy mud, sheltered, 80 m (Christie, 1985); offshore mud (UM).

Notes
Corresponds to type A of Christie, type B in workshop keys? May be the true *C. setosa*. Fairly easy to recognise but see below. We don't have that many, some complete.

Chaetozone "B"

Description

Size :

Colour :

Head shape :

Body form : Abdominal region more flattened than in C.

Chaetae : Notopodia distinct from neuropodia posteriorly with fewer acicular spines per segment than in A.

Palps : From buccal segment alongside 1st gills, just above them.

Gills : 1st pair on buccal segment, just below palps, no space between notopodia and gills.

Diagrams
Specimen from Northumberland, LabRef 4079, URC 6293.

Distribution : Holy Island, Northumberland (Christie, 1985); (B/C) from all around Britain (UM).

Habitat : Silty sand, sheltered. Intertidal (Christie, 1985); (B/C) from many habitats (UM).

Notes
Corresponds to type B of Christie, type A in workshop keys? I can't split this from C, and they sometimes have natatory chaetae, if you split on abdomen shape. We have lots (of B/C), some complete.

Chaetozone "C"

Description

Size :

Colour :

Head shape :

Body form : Abdominal region more flattened than in A, but less so than in B.

Chaetae : Notopodia distinct from neuropodia posteriorly with fewer acicular spines per segment than in A.

Palps : Placed between 1st gills and 1st setiger.

Gills : 1st pair in front of palps, no space between notopodia and gills.

Distribution : Newton, Northumberland (Christie, 1985); (B/C) from all around Britain (UM).

Habitat : Clean sand, sheltered. Intertidal (Christie, 1985); (B/C) from many habitats (UM).

Notes
Corresponds to type C of Christie, included in type A in workshop keys? I can't split this from B, and they sometimes have natatory chaetae, if you split on abdomen shape. We have lots (of B/C), some complete.

Chaetozone "D"

Description

Size : Length up to about 30 mm; width about 1 mm in mid body (UM).

Colour : Unknown.

Head shape : Prostomium sharply pointed. No eyes (UM).

Body form : Body very elongated, especially in mid body region. Thoracic region expanded, rather strongly tapering towards head and mid body. Abdominal region with concertina-like appearance. Segmentation well defined throughout with mid body segments almost as long as wide. Thoracic segments much shorter but longer and more rounded than those of forms A to C. (UM).

Chaetae : Length of anterior non-natatory capillaries over half of body width, much longer than those of forms A to C and less strongly curved. (UM).
Notopodia and neuropodia close together, posteriorly. 9 to 10 acicular spines per ramus, mostly alternating with capillaries. (UM).

Palps : Emerge from asetous buccal segment in front of 1st gill pair. (UM).

Gills :1st pair emerges from asetous buccal segment just behind palps. Clear space between gills and notopodia. (UM).

Distribution :.Northern and central North Sea (A.W.).

Habitat : Offshore mud (A.W.).

Notes
Corresponds to type C in workshop handouts.

Tharyx killariensis (Southern, 1914)

Description

Size : Length, 11 mm (Southern, 1914); usually about 5 - 10 mm (UM).

Colour : Unknown (S; F); Yellowish brown, white head and tail, gut moderately clear (UM).

Head shape : Conical, pointed prostomium, without eyes (Southern, 1914). Prostimium elongate conical, sharply pointed. Achaetous segments poorly defined, elongated (UM).

Body form : Expanded and a little flattened anteriorly. Widest in anterior third, tapering rapidly towards the head and very gradually towards the tail. In the anterior region the dorsal surface is flatter than the ventral and the segments are very narrow. Further back the segments are longer and the body more rounded in section. 84 setigers (Southern, 1914). Cylindrical, fairly elongated. Segments fairly short at the front, becoming longer (length to half of width) and fragile posteriorly. Tail slightly swollen or narrowly tapering (UM).

Chaetae : Capillaries in both rami of all but last few parapodia. Long and short capillaries alternating in each bundle. They are sigmoid with a cylindrical shaft, flattened blade and a distinct curve at the junction between shaft and blade. Dorsal capillaries longer than ventrals. Longest capillaries, in upper parts of parapodia, about 0.75 mm to 1 mm at about setigers 20 - 30. 5 - 7 setae per bundle anteriorly; 6 - 8 in mid region (Southern, 1914). Long and short capillaries in both rami of all parapodia. Longest with length about 1/3 of body width. Natatory chaetae with length about 1 1/2 times body width may also be present (UM).

Acicular chaetae, resemble short capillaries, except that tip is curved and bifid. The points diverge at a wide angle (Southern, 1914). Acicular chaetae irregularly knob-tipped in syntypes (Blake, 1991); superficially resembling broken capillaries (Wsk). They start from setiger 40 - 56 in neuropodia and from about setiger 61 in notopodia. The uppermost neuropodial hook is larger and broader than the others (Southern, 1914). Notopodial hooks long, neuropodial hooks short (WSk). In notopodia there are 2 hooks in upper part, the outer one the largest. In neuropodia, 2 or 3 hooks, the lowest the shortest. Near tail, all neurochaetae may be hooks. Arrangement depends on size and age of worms. Some have hooks in last 13 - 14 neuropodia but none in notopodia (Southern, 1914). Long and short knob tipped chaetae posteriorly (UM).

Palps : 1 pair, on last achaetous segment (Southern, 1914).

Gills : First pair just below palps, others inserted above notopodia (Southern, 1914). First pair after last asetigerous segment (HS).

Pygidium : Anus dorsal with a ventral lobe beneath (Southern, 1914).

Diagrams
Specimen from off the Llyn Peninsula, Wales, LabRef 8845, URC 8465.

Distribution
Killary, Ireland (S); throughout Britain (Banff, Southwold, I. of Wight, Lyme Bay, N. Wales, Liverpool Bay) (UM).

Habitat
Rich black mud at bottom of harbour, ca. 15 m (Southern, 1914). Shallow water, offshore mud, gravels etc (UM).

Biology

Notes
Blake looked at syntypes & decided it had knob chaetae. It may be (UM) that knob-tipped chaetae are simply worn bidentate chaetae of the widely spaced teeth variety, as described by Southern. These have classic knob tipped chaetae and are longer and narrower than *Tharyx "A"*. We have a few, some complete.

Literature
P1397 in MCS. Included in workshop keys (sometimes as *Tharyx*) and table, Fauvel (as *Heterocirrus*), Hartmann-Schroder. Moved to *Tharyx* by Blake (1991), Southern (as *Chaetozone*),
Chaetozone killariensis **Southern, 1914**
Chamberlin, 1919; McIntosh, 1923
Heterocirrus killariensis **Fauvel, 1927**
Caulleriella killariensis Howson, 1987
Tharyx killariensis Blake, 1991

Tharyx "A"

Description

Size : Length, usually about 5 - 10 mm (UM).

Colour : Pale, usually with brown gut showing as mid body stripe; sometimes also with brown surface pigment (UM).

Head shape : Prostomium sharply pointed, without eyes (UM).

Body form : In large specimens expanded and flattened anteriorly, cylindrical in juveniles. Usually narrowing slightly in mid body, where segments are longer and the body more rounded in section. However, some specimens may be short and broad, widest in mid body. Anterior segments moderately well defined and fairly short. Mid body segments fragile, their length about 1/4 of body width. Tail usually moderately expanded and flattened, less so in small specimens (UM).

Chaetae : Capillaries very pale, thin, length nearly equal to body width anteriorly, a little longer in mid body (UM).
Fairly short knob-tipped chaetae, usually with little evidence of bidentate tip, posterior parapodia. They have stout, curved shafts, tapering fairly strongly towards the neck of the knob-tip (UM).

Palps : 1 pair, on last achaetous segment (UM).

Gills : Numerous in thoracic region (UM).

Pygidium :

Diagrams
Specimen from Essex, LabRef 9401-04529, URC 1322.

Distribution
Estuaries in Southern Britain (we may not have sampled suitable habitats in Scotland) (UM).

Habitat
Muddy, shallow bottoms, mainly estuarine (UM).

Notes
We have lots of these, with variation in size and form, some good specimens.

Tharyx acutus Webster & Benedict, 1887

Notes
Described from Maine.
Blake, 1991

Tharyx kirkegaardi Blake, 1991

Notes
Described from off Cape Hatteras.

Aphelochaeta marioni (Saint-Joseph, 1894)

Description

Size : Length, 35 - 100 mm; width, 0.6 - 1 mm (St-Joseph, 1894; F).

Colour : Reddish brown, colouring alcohol reddish violet. Greenish eggs (St-Joseph, 1894; F).

Head shape : Prostomium a blunt cone without eyes. 2 achaetous segments following prostomium, less distinct than the others (St-Joseph, 1894; F).

Body form : Very long and filiform. Over 200 segments (St-Joseph, 1894; F). Posterior region swollen, globe-like (WSk). Swollen anteriorly and tapered at both ends. Anterior segments short, about three times as wide as long (F). Anterior segments well defined and of moderate length. Mid body segments fragile, well defined and rounded, of equal length and width (UM).

Chaetae : Capillaries in both rami of all parapodia. Notopodial chaetae are fine and as long as the body width. Neurochaetae are of similar length to notochaetae anteriorly but further back (after 16th - 20th setiger) are shorter and wider and a little curved (St-Joseph, 1894; F). Anterior

capillaries robust, irregularly directed, length up to 2/3 of body width, flattened at base (UM). Posterior capillaries similar but sparse, pale and a little shorter (UM).

Palps : 2 very long, broad, channelled palps, rolled in a spiral and inserted on front side of 1st setiger (F).

Gills : Long, from setiger 1, on quite a large number of segments, missing from the posterior region (F). Arising immediately above notosetae throughout (D).

Pygidium : Conical. Anus dorsal with five rounded lobes (St-Joseph, 1894; F).

Diagrams
Specimen from the Humber, LabRef 8561, URC 7970.

Distribution
Channel (F), Southern Britain, have not looked at suitable habitats in Scotland (UM).

Habitat
Quite rare in dredges, some found in a pelagic tow net (St-Joseph, 1894). Shallow water in *Lithothamnion* and in rock crevices, also in dredges and pelagic (F); intertidal and shallow subtidal estuarine mud, usually where there is some grit or peat (UM).

Biology
Intestine with *Opalina lineata* (St-Joseph, 1894).

Notes
General consensus is fairly consistent, this name is usually (not always) used for the estuarine form. Original description doesn't ring true. This may not be the correct name for the familiar species. There are other species of *Aphelochaeta* in British waters. We have lots, some complete. Very similar to *T. multibranchiis* but without eyes and with a longer tail (St-Joseph, 1894).

Type Locality
Dinard, France

Literature
P1424 in MCS (as *Tharyx*). Included in workshop key and table, Fauvel (as *Tharyx*), Garwood (as *Tharyx* - "intertidal records may be one species, not two"), Hartmann-Schroder (as *Tharyx*), Day (as *Tharyx*).
Heterocirrus marioni **Saint-Joseph, 1894**
Chamberlin, 1919
Tharyx marioni Caullery & Mesnil, 1898; **Fauvel, 1927**; Howson, 1987
Aphelochaeta marioni Blake, 1991

Aphelochaeta filiformis (Keferstein, 1862)

Description

Size : Length, 30 - 40 mm (F); to 50 mm (D); 20 - 50 mm (McIntosh, 1911). Width, 0.5 - 1 mm (F).

Colour : Brownish yellow or greenish, colourless in alcohol (F). Dark pigment characterises the anterior dorsal region and also occurs along the posterior lip of the gaping mouth (McIntosh, 1911).

Head shape : Prostomium obtuse or a sharp elongated cone (F); pointed (D); without eyes (F). Peristomium swollen (D)Two achetous, subequal, segments following peristomium. The second more or less heart-shaped in dorsal view, and overlapping the third (F). Head is a small blunt cone, sometimes constricted posteriorly (McIntosh, 1911).
When the button shaped proboscis is extruded, as in most specimens, it projects upwards and forwards, or, in complete extrusion, upwards (McIntosh, 1911).

Body form : Long, thin, filiform, rounded (in cross section). 150 segments (F); front segments closely arranged, less so to rear (McIntosh, 1911). Flattened anteriorly and somewhat rounded posteriorly. Abruptly tapered anteriorly, much less so posteriorly. Ventral surface flattened, sometimes with a median ridge and two lateral elevations. Anterior notopodia approach each other and in some are raised so that the spaces between the lateral lines at the base of the parapodia are narrow in front and gradually widen backwards (McIntosh, 1911).

Chaetae : Capillary chaetae, flat (WSt), slender (D), in both rami, notopodial longer than neuropodia (F). All parapodia the same, each ramus having a tuft of translucent, pale yellow capillaries. The tips are slightly flattened at the rather narrow base and tapering to delicate hair-like tips. Notopodia are longest and narrowest all along the body. They increase in length towards the middle of the body and remain long posteriorly (McIntosh, 1911).
No acicular chaetae (F).

Palps : 1 - 2 pairs of tentacular filaments, a little wider than the gills, inserted at front end of 1st setiger (F). 2 short lappets interposed between the converging lateral lines of the parapodia, nearly opposite chaetiger 1 McIntosh, 1911).

Gills : From setiger 1 at posterior end. Arise just above notopodia throughout (D). A series of long, slender gills project from the dorsal edge of more than 20 of the front parapodia, with traces in many behind these (McIntosh, 1911).

Pygidium : Triangular with subterminal dorsal anus, folded (F). Pouting, button-shaped vent, produced ventrally into a process with a median fissure and a fillet on each side (McIntosh, 1911).

Distribution
Channel, North Sea, Algeria ? (F). Norway (McIntosh, 1911).

Habitat
In *Lithothamnion*, rock crevices and dredges (F).

Biology
Well developed eggs in July, Norway (McIntosh, 1911).

Notes
A bit unclear, probably an *Aphelochaeta*. This could be our *Aphelochaeta* "A". Comments by McIntosh (1911) refer to his "*Cirratulus norvegicus"*, which is *C. mcintoshi* of Southern, (1914).

Type Locality

Literature
Not in MCS. Included in workshop table (as *Cirratulus*).
Cirratulus filiformis Keferstein, 1862, p. 122, pl. X, fig. 28 - 31; Saint-Joseph, 1894, p. 47; Fauvel, 1901, p. 78; Fauvel, 1927; Garwood, Hartmann-Schroder, Day. *C. norvegicus* McIntosh (non Quatrefages), 1911, p. 171, pl. VII, fig. 12. *C. McIntoshi* Southern, 1914, p. 110. *Cirratulus tessellatus* ? McIntosh, 1911, p. 162, pl. VI, fig. 3.
Cirratulus filiformis Keferstein, 1862; Saint-Joseph, 1894; **Fauvel**; 1901; **1927**; Eliason, 1962.

Cirratulus norvegicus McIntosh (non Quatrefages), 1911

Notes
Renamed *C. mcintoshi* by Southern (1914). Probably a synonym of *C. filiformis* (F).

Cirratulus tessellatus McIntosh, 191

Notes
Described from Algeria. Probably a synonym of *C. filiformis* (F).

Tharyx mcintoshi (Southern, 1914)

Notes
Southern's new name for *C. norvegicus* of McIntosh. Probably a synonym of *C. filiformis*.
Type dredged off Drobak, Christiana Fjord, in 30 - 100 fthms. ? Also, S.W. Ireland 10 - 22 m, on mud and in tow net (S).
P1425 in MCS. Southern (as *Cirratulus*).
Cirratulus mcintoshi Southern, 1914
syn. of *filiformis* (F)
Tharyx mcintoshi Eliason, 1962; Howson, 1987

Cirratulus tenuisetis Grube

Notes
A species without acicular chaetae mentioned as part of a complex of uncertain identity (S). Probably an *Aphelochaeta*.

Aphelochaeta "A"

Description

Size : Length up to about 40 mm ? (UM).

Colour : Yellowish brown to dark brown to purplish (UM).

Head shape : Bluntly conical prostomium. No eyes (UM).

Body form : Cylindrical and elongated, fragile. Expanded thoracic region. Tail moderately expanded. Segments fairly short, becoming longer in middle of worm. Anterior segments well defined, less so dorsally, and of moderate length. Mid body segments rounded, fragile, well defined, length about 1/4 of width (UM). Thoracic parapodia forming lateral ridges with distinct furrows above them (PG).

Chaetae : Long (length up to body width) and short capillaries in both rami of all parapodia. They are pale yellow and robust (UM).

Palps : Two thick stumps, oval in cross section, on last achaetous segment. Usually close together (UM).

Gills : On most of body (UM).

Pygidium :

Diagrams
Specimen from Lyme Bay, Channel, LabRef 9004, URC 8861.

Distribution
Ubiquitous ? (UM; PG).

Habitat
Subtidal, shallow water, gravels (UM).

Biology

Notes
These are large, bipalpate, without acicular chaetae. Possibilities include *Tharyx macintoshi*, and *Aphelochaeta filiformis*. We have a few, some complete.

Aphelochaeta "B"

Description

Size : Length up to about 10 mm ? (UM).

Colour : Colourless to pale yellow, may have a greenish tinge (UM).

Head shape : Sharply conical prostomium. No eyes (UM).

Body form : Cylindrical and elongated, fragile. Very slightly expanded thoracic region. Tail slightly expanded. Segments fairly short, becoming longer in middle of worm, not quite beaded, or as long as width. Anterior segments well defined, less so dorsally, and of moderate length. Mid body segments rounded, fragile, well defined (UM).

Chaetae : Long (length up to body width) and short capillaries in both rami of all parapodia. They are pale and fine(UM). Fan out rather than remaining in discrete bunches (PG).

Palps : Two rond stumps, on last achaetous segment (UM).

Gills : On most of body ? (UM).

Pygidium :

Diagrams

Distribution
Western ? eg. Tremadoc Bay, Wales (UM).

Habitat
Subtidal, shallow muds (UM).

Biology

Notes
These are close to *A. marioni* and may be just abarrent juveniles.

Monticellina dorsobranchialis (Kirkegaard, 1959)

Description

Size : Length, 16 - 20mm; length, 0.5 - 1.0 mm - Georges Bank (Blake, 1991); length, 35 mm; width, 0.5 mm - W. Africa (Blake, 1991).

Colour : Pale to dark brown, or purplish (UM).

Head shape : Prostomium bluntly conical (Blake, 1991), sharply conical (D), without eyes (Blake, 1991). Peristomium greatly elongated, without pseudosegmentation (Blake, 1991); triannulated (D).

Body form : Long and thin, abdominal segments coiled in preservation (Blake, 1991). Thorax expanded in middle, with prominent dorsal groove (Blake, 1991), fusiform area from setiger 1 to about setiger 20 (D). Parapodia elevated here, with notopodia directly dorsal. Abdominal segments longer than wide, sometimes becoming weakly moniliform. Posterior only weakly expanded. 105 - 120 segments. Mucus tube adhering to worm after preservation (Blake, 1991). Anterior segments short, posterior ones about as long as broad (D). Posterior region swollen, globe - like (WSk). Anterior segments moderately well defined, about 1/8 of width. In mid body segments are fragile, rounded and of about equal length and width (UM).

Chaetae : Capillaries in both rami of all parapodia, with smooth margins in thoracic region, with sawtoothed edge in abdominal region, more distinctly toothed in mid abdomen than posteriorly (Blake, 1991). Inferior capillaries in a ramus with less distinct dentition (Blake, 1991). All saw edged (D). Crenulated chaetae start at the same setiger (12th) in both rami and are the same as the smooth chaetae but for the teeth (Laubier - *M. heterochaeta*). Anterior capillaries are nearly as long as body width, thin and very pale (UM). Mid body capillaries about half as long as body width, thin but with wide base (UM).

Palps : From front of setiger 1 (Blake, 1991). 1 pair, large, caducous, grooved, from junction of third annulus and 1st setiger (D).

Gills : From setiger 1, in slope of dorsal groove (Blake, 1991). Very slender, arise from mid dorsal line behind groove (D).

Pygidium : Terminally pointed (Blake, 1991).

Diagrams
Specimen from Tremadoc Bay, Wales, LabRef 8677, URC 7922.

Distribution
U.S. East coast, Mediterranean to Angola, N.E. South America (Blake, 1991), west coasts of Britain (UM).

Habitat
Fine silty sediments; 20 - 2150 m (Blake, 1991), Subtidal mud (UM).

Notes
Monticellina concept clear, species confused. Descriptions by Blake and Day do not fully agree. It would be unlikely for the same species to occur over the given (Blake's) distribution. We have a few, very few complete.

Type Locality
Bay of Lobito, Angola; 27 m.

Literature
Not in MCS. Included in workshop keys, Day (as *Tharyx*), **Blake, 1991** (*M. heterochaeta* - Mediterranean - lumped into *M. dorsobranchialis* - West African).
Cirratulus dorsobranchialis Kirkegard, 1959
Monticellina dorsobranchialis Blake, 1991

Monticellina heterochaeta Laubier, 1960

Notes
Described from Banyuls-sur-mer, Mediterranean France. Synonymised with *M. dorsobranchialis* (Blake, 1991) but will probably turn out to be distinct. May also be distinct from the British *Monticellina*.

Monticellina baptisteae Blake, 1991

Notes
Described from Georges Bank, N.W. Atlantic.

Dodecaceria concharum Oersted, 1843

Description

Size : Length, 20 - 60 mm; width, 2 - 3 mm (F).

Colour : Brownish green or blackish at back. Greenish yellow pigment soluble in alcohol (F).

Head shape : Prostomium small, blunt, cylindricoconical, without eyes in adults but with 2 oblique nuchal slits (F). Nuchal organs long and slit like (Gibson, 1978; 1996). Peristomium long and straight, almost triannulated ventrally (F).

Body form : Cylindrical, short and thick, spatulate posteriorly. 45 - 80 setigers (F).

Chaetae : Capillaries slightly dilated at ends with a long, finely pectinated flange in the first 6 - 7 setigers. Dorsal capillaries longer and finer than the ventrals. Capillaries becoming rarer towards rear (F).
In later parapodia, spoon shaped acicular chaetae are found in both rami, accompanied by finer hooked chaetae. In juveniles these are replaced by the large capillaries. Dorsal acicular chaetae are thinner than the ventrals (F). The hooks are without asecondary tooth (Caullery & Mesnil, 1898; Gibson, 1996). This protruberance varies in size in all species (Gibson, 1978).

Palps : 1 pair of strong, broad, channelled palps in spirals at posterior side of peristomium (F).

Gills : 1st pair much finer than palps situated above and a little behind them. Gills on first 3 - 4 (rarely 5) setigers (F).

Pygidium : Anus subdorsal with 5 lobes, the two ventral ones largest, rounded, separated by an indentation (F).

Diagrams
Specimen from near Dundee, Scotland, LabRef 8221, URC 8363.

Distribution
North Sea, Channel, Atlantic, Mediterranean (F). Throughout British waters (Gibson, 1996).

Habitat
Shallow water in dredges, amongst *Lithothamnion*, old tubes and shells (F). Fully saline conditions only. Littoral to 60m (Gibson, 1996).

Biology
Reproduces parthenogenetically in atokous form (Gibson, 1978).
In the atokous condition species have the following characteristics. In the presegmental head region is a subterminal ventral mouth and a pair of nuchal organs. The first segment is achaetous and bears a pair of grooved tentacles above which is a pair of filiform branchial cirri. The following anterior chaetose segments each have at least one pair of dorsal branchial cirri. The body is approximately cylindrical with the posterior region becoming slightly dorso-ventrally flattened (Gibson, 1978).

The chaetae are capillary and simple or acicular with a subterminal spoon-shaped depression which may have a slight proximal protruberance (Gibson, 1978).

Fresh individuals vary from brown to greeny black and there is usually a prominent dorsal serpentine blood vessel running along the anterior region of the body (Gibson, 1978).

All species inhabit laterally flattened, flask-shaped burrows which have a single opening in which the head and anus lie. Species form dense colonies in, as a rule, a calcareous substratum and are found either in intertidal rock pools, or subtidally (Gibson, 1978).

Notes
There does not seem to be a firm distinction between *Dodecaceria* spp. except with reference to reproductive biology.

Type Locality

Literature
P1420 in MCS. Included in workshop keys, Fauvel (3 forms described - see under *D. fimbriata*), Garwood, Ushakov.
Dodecaceria concharum Oersted, 1843
Saint-Joseph, 1808; Caullery & Mesnil, 1898; McIntosh, 1922; **Fauvel, 1927**; Howson, 1987; **Gibson, 1978**.

Heterocirrus ater Quatrefages, 1865

Notes
Dodecaceria ater McIntosh, 1911
Synonym of *D. concharum* (F) but McIntosh gives differences.

Heterocirrus saxicola Grube, 1855

Notes
synonym of *D. concharum* (F).

Heterocirrus gravieri McIntosh, 1911

Notes
Described from Cadiz, Spain. Synonym of *D. concharum* (F).

Terebella ostreae Dalyell, 1853

Notes
Synonym of *D. concharum* (F).

Nereis sextentaculata Delle Chiaje, 1828

Notes
Synonym of *D. concharum* (F).

Dodecaceria fimbriata Verrill, 1879

Description

Size :

Colour : Yellow

Head shape : 2 large eyes (F). Nuchal organs unlike *D. concharum*, small and oval (Gibson, 1978); oval to rod-shaped (Gibson, 1996).

Body form : Shorter (than type A), thinner (F).

Chaetae : Long, fine natatory chaetae in mid parapodia, longer in notopodia (F).
Dorsal hooked chaetae absent from all but last 10 to 12 notopodia. Ventral hooked chaetae restricted to front and back neuropodia. They have a characteristic lateral tooth (F); tooth at proximal edge of depression (Gibson, 1996).

Palps : Reduced to 2 small stumps or absent (F).

Gills : Shorter (than in type A) (F).

Pygidium :

Distribution
Much rarer than form A (F). Throughout Britain, though possibly absent from far southwest. More tolerant of reduced salinity than *D. concharum* (Gibson, 1996).

Habitat

Biology
Reproduces asexually by fragmentation and sexually by epitokes (Gibson, 1978). Always parasitised by *Gonospora longissima*. Large yellow eggs (F).
Certain species have epitokes which are essentially the same as the atokes. The differences are there is a large pair of orange to red eyes and the body is more darkly pigmented and has long capillary swimming chaetae which have replaced the acicular chaetae of the atoke (Gibson, 1978).
The existence of asexual reproduction is deduced from recently produced fragments of individuals in field samples (Dehorne, 1933). The regenerated regions are distinguished from the original region or fragment by its lighter pigmentation. There are three types of individual : those regenerated from the original anterior region, posterior or pygidial region and one or more segments from the central region of the body. A fourth type of asexually produced individual not showing signs of regeneration is derived from the autotomised regenerate of the single segmental fragments. This individual is indistinguishable from prefragmentary individuals (Gibson, 1978).
All species inhabit laterally flattened, flask-shaped burrows which have a single opening in which the head and anus lie. Species form dense colonies in, as a rule, a calcareous substratum and are found either in intertidal rock pools, or subtidally (Gibson, 1978).

Notes
There does not seem to be a firm distinction between *Dodecaceria* spp. except with reference to reproductive biology. Our *Dodecaceria* are ambiguous, some have both types of hooks.

Type Locality
Bay of Fundy, Newfoundland.

Literature
Not in MCS. Included in workshop keys. Gibson, 1978, 1979. Fauvel (as form B - swimming epitoke, but atokous stage mentioned - of *D. concharum*)?
Heterocirrus fimbriatus Verrill, 1879
syn. of *concharum* (F)
Dodecaceria fimbriata **Gibson, 1978**; 1979.

Dodecaceria caulleryi Dehorne, 1933

Notes
There does not seem to be a firm distinction between *Dodecaceria* spp. except with reference to reproductive biology. Gibson (1978) synonymised this with the American *D. fimbriata* and could find no difference between them. Type Locality - Portel, France.
P1419 in MCS. Gibson, 1978, 1979. Garwood.
Dodecaceria caulleryi Dehorne, 1933
Howson, 1987
Synonym of *D. fimbriata* (Gibson, 1978).

Dodecaceria diceria Hartman, 1951

Description

Size :

Colour :

Head shape : Nuchal organs intermediate between those of *D. concharum* and *D. fimbriata*.

Body form :

Chaetae : Spoon-shaped, hooked chaetae without proximal tooth but with proximal edge of depression serrated. This can only be seen with oil immersion (Gibson, 1996).

Palps :

Gills :

Distribution
Northern North Sea (Gibson, 1996).

Habitat
100 - 200 m. (Gibson, 1996)

Biology
Asexual reproduction as in *D. fimbriata*. One epitoke found (Gibson, 1996)
Certain species have epitokes which are essentially the same as the atokes. The differences are there is a large pair of orange to red eyes and the body is more darkly pigmented and has long capillary swimming chaetae which have replaced the acicular chaetae of the atoke (Gibson, 1978).
The existence of asexual reproduction is deduced from recently produced fragments of individuals in field samples (Dehorne, 1933). The regenerated regions are distinguished from the original region or fragment by its lighter pigmentation. There are three types of individual : those regenerated from the original anterior region, posterior or pygidial region and one or more segments from the central region of the body. A fourth type of asexually produced individual not showing signs of regeneration is derived from the autotomised regenerate of the single segmental fragments. This individual is indistinguishable from prefragmentary individuals (Gibson, 1978).
All species inhabit laterally flattened, flask-shaped burrows which have a single opening in which the head and anus lie. Species form dense colonies in, as a rule, a calcareous substratum and are found either in intertidal rock pools, or subtidally (Gibson, 1978).

Notes

Type Locality
Off the Florida Keys.

Literature
Dodecaceria diceria Hartman, 1951
Gibson, 1996

***Dodecaceria* "Form C"** (of Fauvel)

Description

Size :

Colour : Yellowish (F).

Head shape : 2 large red eyes (F).

Body form : Mucus glands well developed (F).

Chaetae : Hooked chaetae as in type a, in all but mid notopodia, where replaced by natatory chaetae (F).

Palps : Persisting (F).

Gills :

Distribution
Extremely rare (F).

Habitat
In *Lithothamnion*, with type a. (F).

Biology
Sedentary epitoke (but atokous form mentioned) (F).

Certain species have epitokes which are essentially the same as the atokes. The differences are there is a large pair of orange to red eyes and the body is more darkly pigmented and has long capillary swimming chaetae which have replaced the acicular chaetae of the atoke (Gibson, 1978).

The existence of asexual reproduction is deduced from recently produced fragments of individuals in field samples (Dehorne, 1933). The regenerated regions are distinguished from the original region or fragment by its lighter pigmentation. There are three types of individual : those regenerated from the original anterior region, posterior or pygidial region and one or more segments from the central region of the body. A fourth type of asexually produced individual not showing signs of regeneration is derived from the autotomised regenerate of the single segmental fragments. This individual is indistinguishable from prefragmentary individuals (Gibson, 1978).

All species inhabit laterally flattened, flask-shaped burrows which have a single opening in which the head and anus lie. Species form dense colonies in, as a rule, a calcareous substratum and are found either in intertidal rock pools, or subtidally (Gibson, 1978).

Literature
Fauvel, 1927.

Tharyx multibranchiis (Grube, 1863)

Description

Size : Length, 9mm; width, 0.7 mm (F).

Colour : Pale pink in alcohol (F), reddish brown (Wst).

Head shape : Prostomium a blunt cone with 2 small, black, oval eyes. Peristomium very long (F).

Body form : Vermiform, a little expanded in middle. More than 65 segments (F). Posterior region only slightly swollen (Wsk).

Chaetae : Capillaries in both rami of all parapodia. Notochaetae (3 - 6), very fine. Neurochaetae a little broader and in posterior segments shorter and slightly bent at ends (F).

Palps : 2 very long, broad, channelled palps, rolled in a spiral. Inserted on 3rd anterior achaetous segment (G).

Gills : Thin, a little shorter than the palps, from the 1st to the 12th setigers, rare after then (F).

Pygidium :

Distribution
Adriatic (F).

Notes
A bit unclear. We have found nothing like this. Probably an *Aphelochaeta* (if valid) but not specifically transferred by Blake and left alone, here, until its identity is clear. A.W. has some which may be this species, which seem to fit *Aphelochaeta*.

Type Locality
Mediterranean

Literature
P1426 in MCS. Included in workshop keys (As *Aphelochaeta*) and table (3 spp.), Fauvel, Garwood ("offshore records may refer to a *Caulleriella*"), Hartmann-Schroder.
Heterocirrus multibranchiis Grube, 1863; Chamberlin, 1919
Tharyx multibranchiis Caullery & Mesnil, 1898; **Fauvel, 1927**; Howson, 1987

Tharyx vivipara Christie, 1984

Description

Size : Length, 8.5 - 15 mm; width, 1.0 mm (Christie, 1984).

Colour : Pale brown, yellow or colourless (UM).

Head shape : Prostomium small, acutely pointed, without eyes. 3 achaetous segments, including peristomium (Christie, 1984).

Body form : Short and spindle shaped, broadest in middle and tapers anteriorly and posteriorly, pygidial segments not inflated. Segmentation visible laterally but dorsal surface inflated and smooth. Anterior and posterior segments short and narrow, middle segments longer and wider (Christie, 1984).Anterior segments well defined laterally but not dorsally or ventrally, length about 1/6 of width. Mid body segments moderately well defined, length about 1/4 of width (UM).

Chaetae : Short capillaries, slender with finely tapering tips, in both rami of all parapodia. Same length in both rami. Posterior parapodia with some thicker capillaries with abruptly tapering tips. Anteriorly 6 - 8 chaetae in each ramus, 3 - 6 posteriorly (Christie, 1984).Chaetae pale yellow, irregularly directed, length about 2/3 of body width (UM).

Palps : 1 pair from posterior margin of segment 3, relatively short, rarely exceeding 1/2 body length (Christie, 1984).

Gills : From segment 4 (setiger 1), along whole of body. Attached directly above notopodial ridge, never more than one pair per segment (Christie, 1984).

Pygidium : Short and round with dorsal anus and small ventral lip (Christie).

Diagrams
Specimen from the Humber, LabRef 8562, URC 7962.

Distribution
Northumberland to Humber (Christie, 1984; UM).

Habitat
Sublittoral, 1 - 13 m, in soft silt and silty sand. Salinities from 24.4 - 34.3 (Christie, 1984); also lower shore (UM).

Biology
Viviparous, developing embryos visible beneath thin skin, sometimes ruptured, in mature specimens (Christie, 1984).

Notes
Probably OK. We have quite a lot, most are complete. Generic position uncertain. It was not specifically transfered to *Aphelochaeta* by Blake (1991) and shows features atypical of that genus.

Type Locality
Tyne estuary, U.K. Silty sand. 3.5 - 7 m.

Literature
P1427 in MCS. Included in workshop keys (as *Aphelochaeta*, generic position uncertain), Christie, 1984.
Tharyx vivipara **Christie, 1984**
Howson, 1984

Tharyx retierei Lechapt, 1994

Notes
Described from Morocco. Not a typical *Tharyx*. Has aristate and pseudocompound chaetae.
Lechapt, 1994.

Caulleriella serrata Eliason, 1962

Description

Size : Length, 4 - 5 mm (Eliason, 1962).

Colour : “Simple pointed dark brown granulations on anterior, (edges?) of first segments yellowish grey (Wst)”. Pigment present dorsally on head and anterior segments and ventrally on last few segments (Eliason, 1962).

Head shape : No eyes (Eliason, 1962).

Body form : Rather short and broad; 40 - 45 chaetigers (Eliason, 1962).

Chaetae : Capillary chaetae in both rami of all parapodia (WSt).
Acicular bifid (WSt). Acicular chaetae subdistally dentate, distally unidentate, capillary (HS).
Arstate (bayonet) chaetae present, with a thick base giving rise to a long curved spur, with denticulations over a short part of the concave side. These are present in both rami of mid body and posterior segments. Pseudocompound, serrated chaetae are also reported (Eliason, 1962).

Palps : 1 pair on segment before first setiger (Eliason, 1962).

Gills : From 2nd setiger, restricted to front part of animal (Eliason, 1962; HS).

Pygidium : Anus dorsal with ventral lobe (WSt).

Distribution
Skagerrak (Eliason, 1962).

Habitat
295 m. (Eliason, 1962).

Notes
Hard to translate description, Eliason, HS and workshop table do not agree. Generic position needs review. We have seen nothing like it.

Type Locality
Skagerrak (Eliason, 1962).

Literature
Not in MCS. Included in workshop table (3 spp.), Hartmann-Schroder, Eliason (genus uncertain).
Caulleriella serrata **Eliason, 1962**.

Aonis vittata Grube

Notes
A name mentioned by McIntosh as a British cirratulid. I can find no other reference to it.

Abbreviations used in Descriptions

D : Day, 1967
F : Fauvel, 1927
PG : Peter Garwood, pers. comm.
SC : Susan Chambers, pers. comm.
AW : Annette Woodham, pers. comm.
UM : Unicomarine, observations.
Wsk : Workshop key
Wst : Workshop table

Literature

N.B. : References given in boldface after species descriptions contain the most detailed descriptions of the species.

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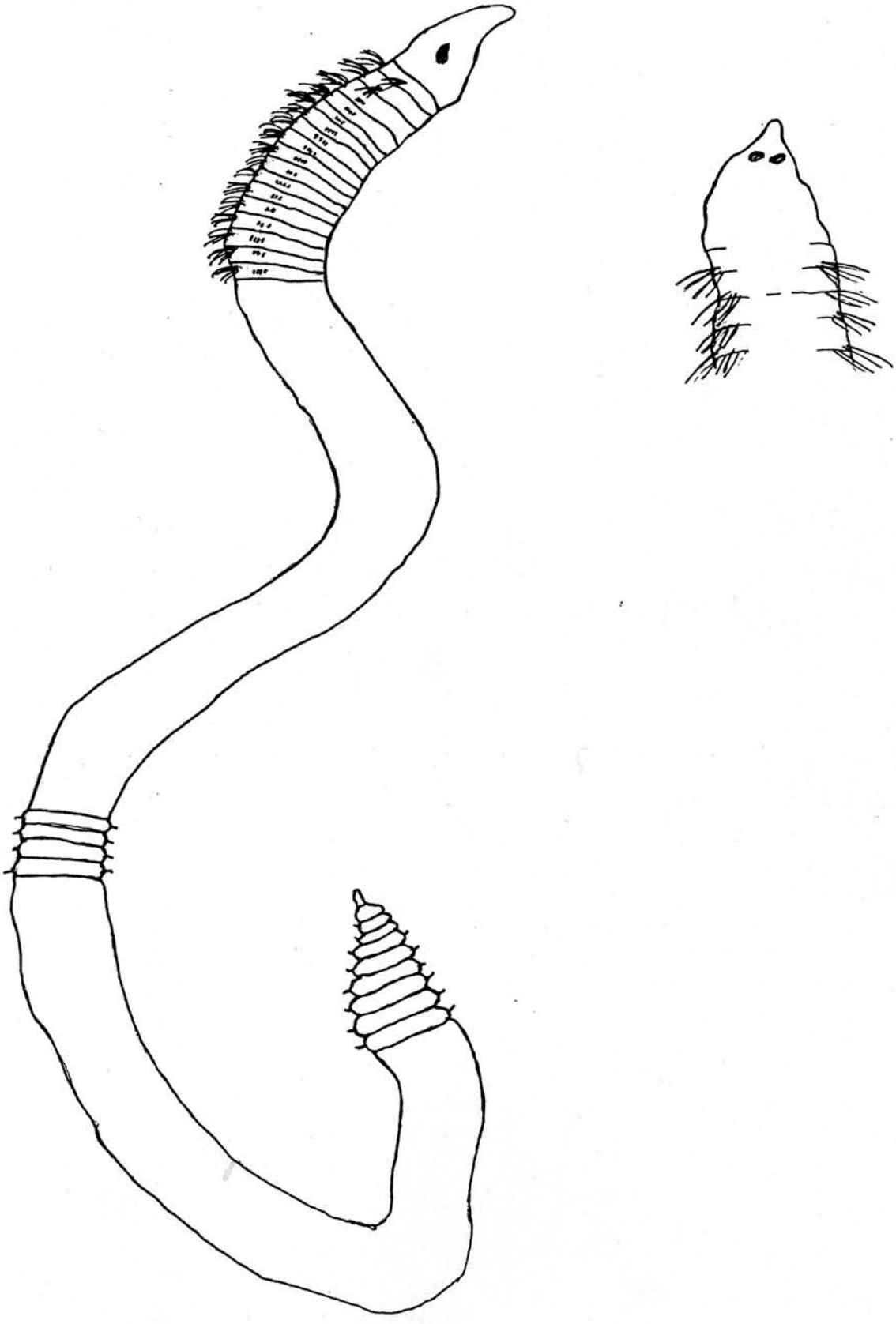
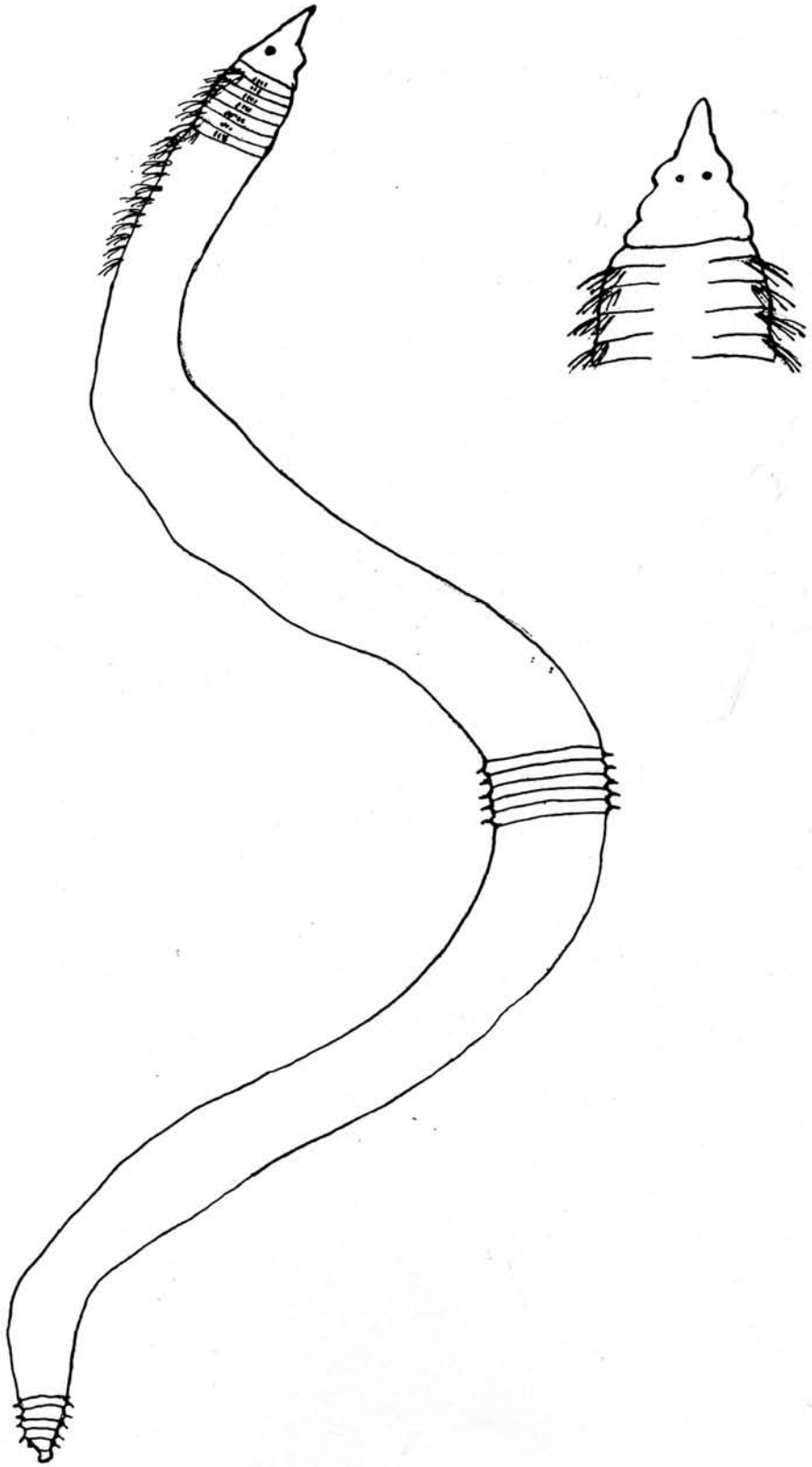
Caulleriella bioculata (Keferstein, 1862)

Specimen from off the Isle of Wight, Channel



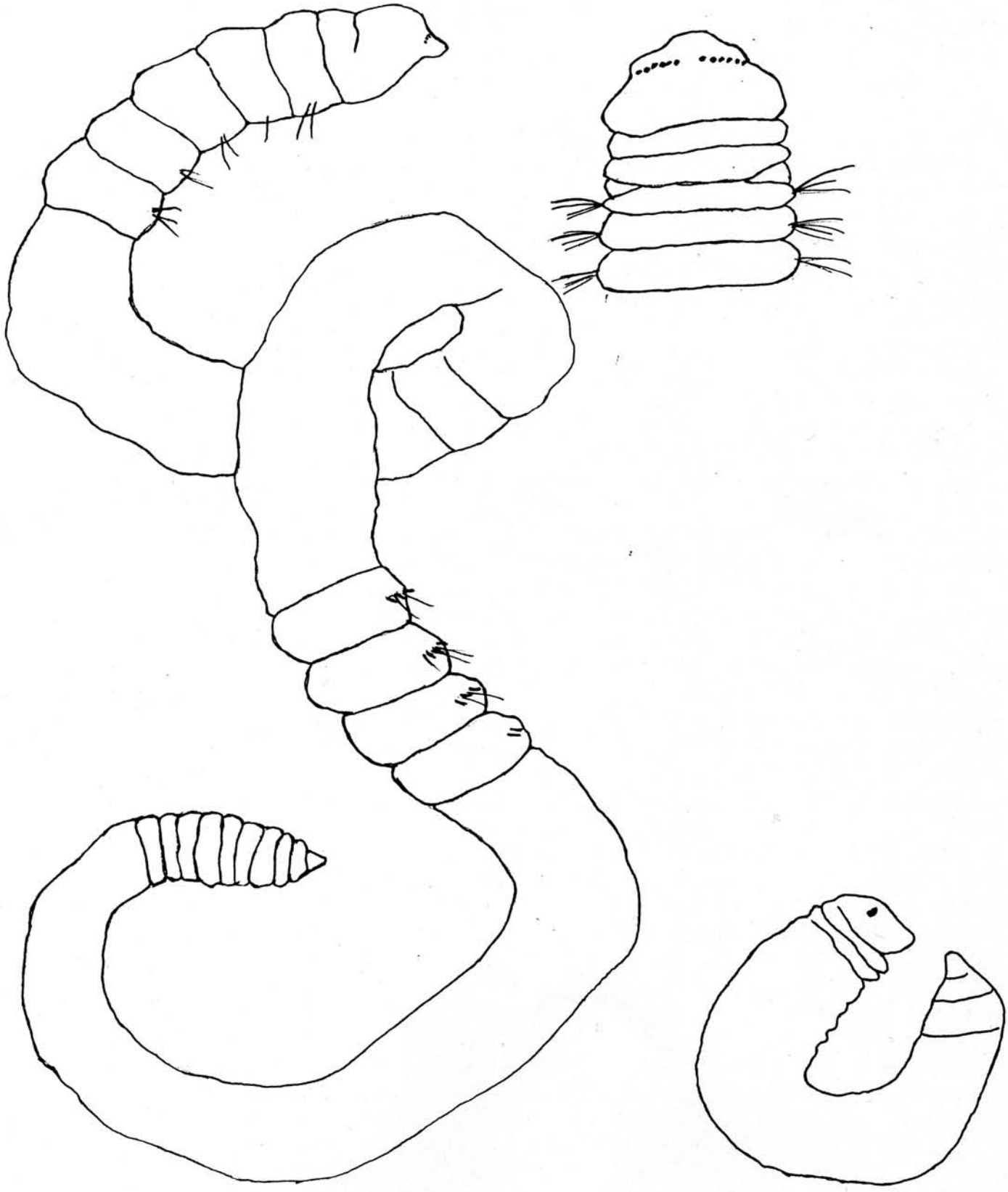
Caulleriella alata (Southern, 1914)

Specimen from off the Isle of Wight, Channel



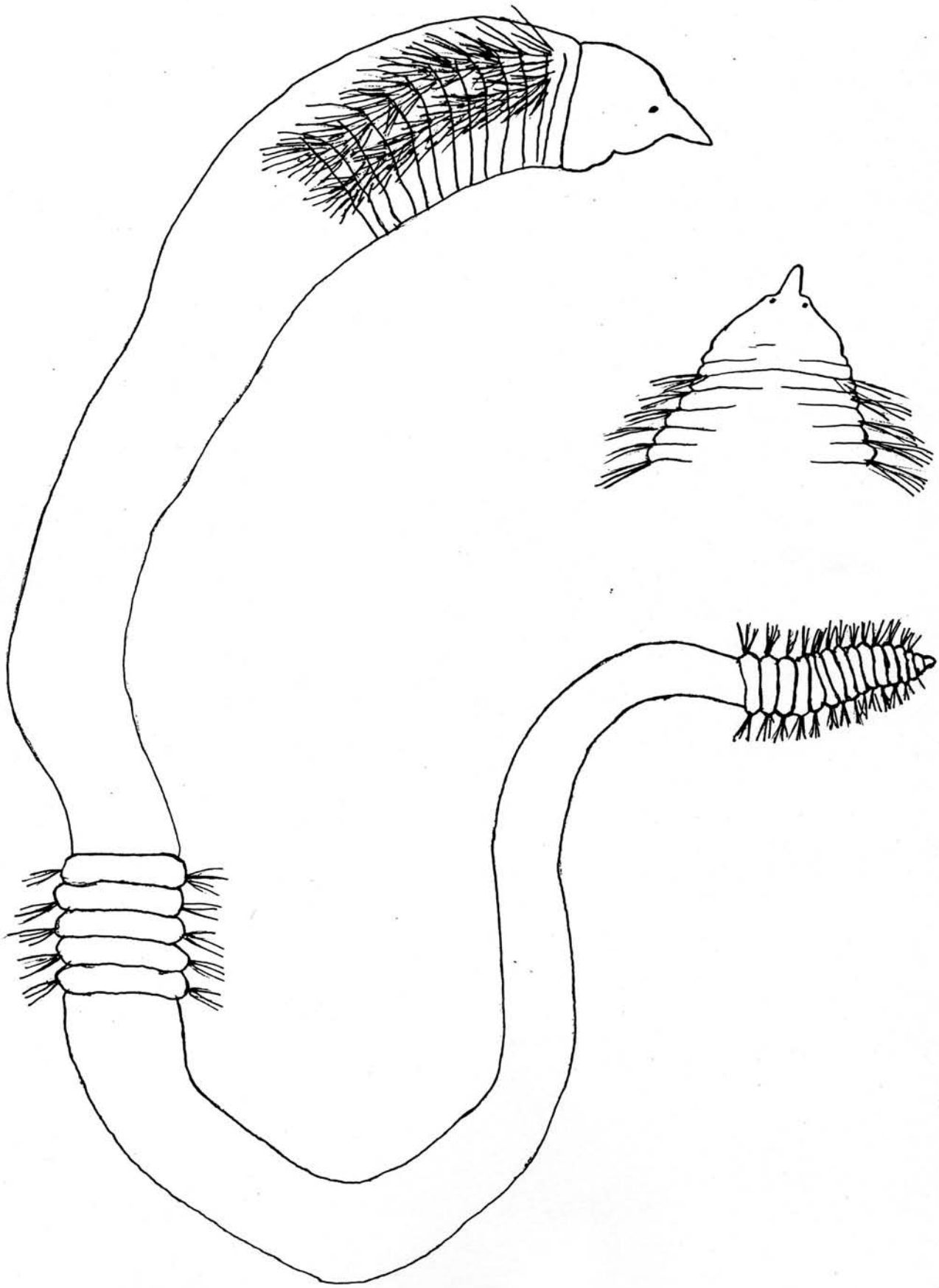
Cirratulus cirratus (O.F. Muller, 1776)

Specimen from the Tees



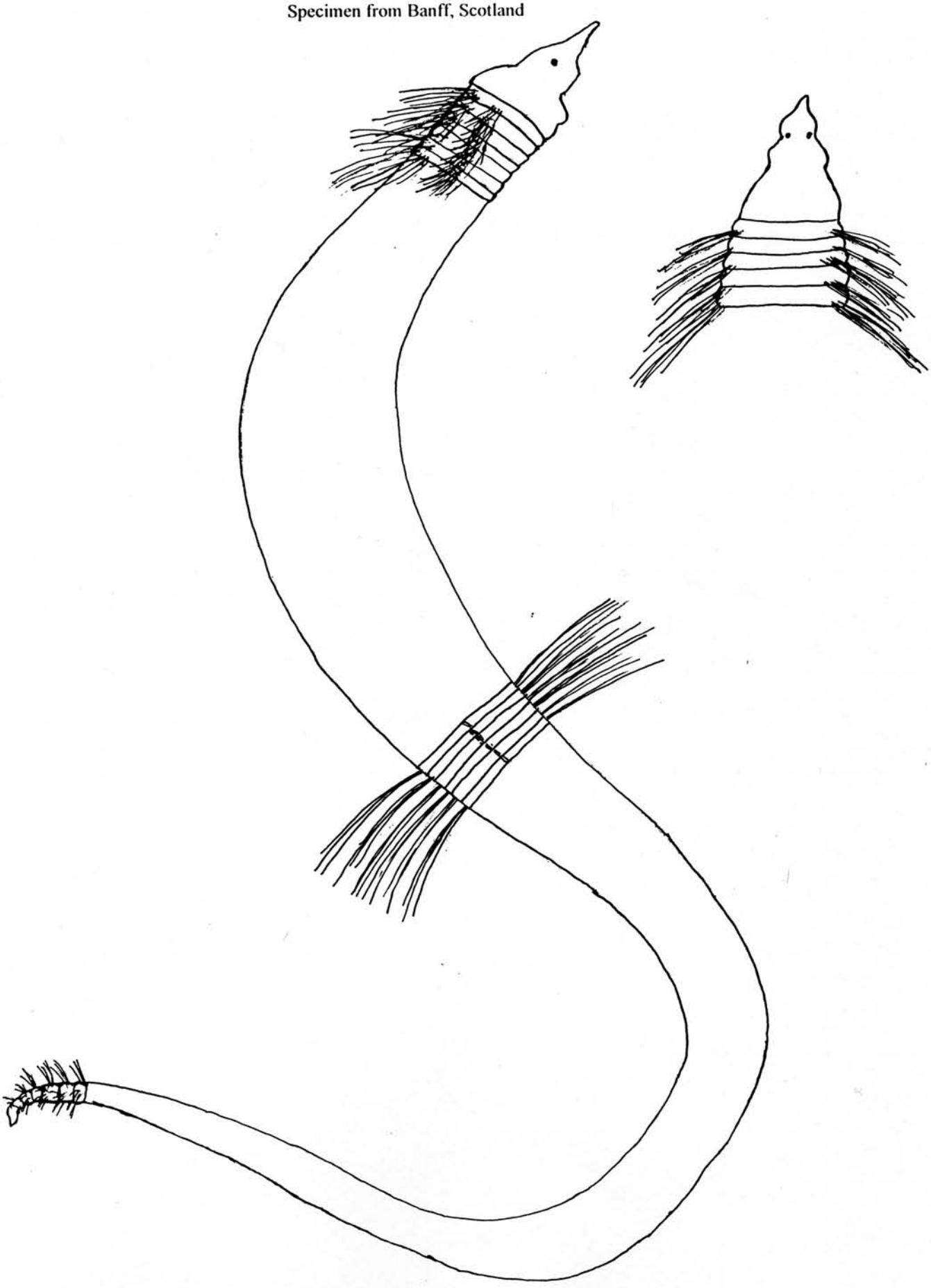
Chaetozone gibber Chambers

Specimen from Lyme Bay, Channel



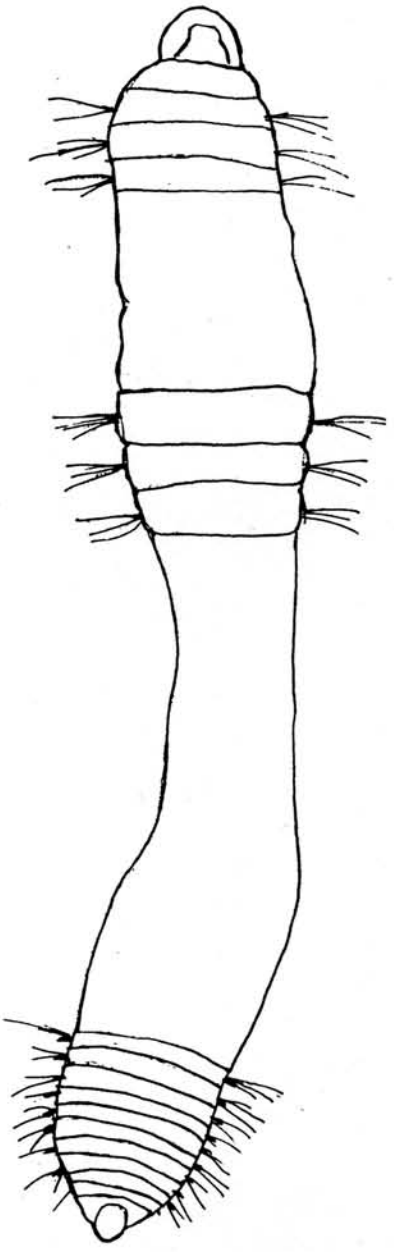
"*Caulleriella" zetlandica* (*Chaetozone* ?) (McIntosh, 1911)

Specimen from Banff, Scotland



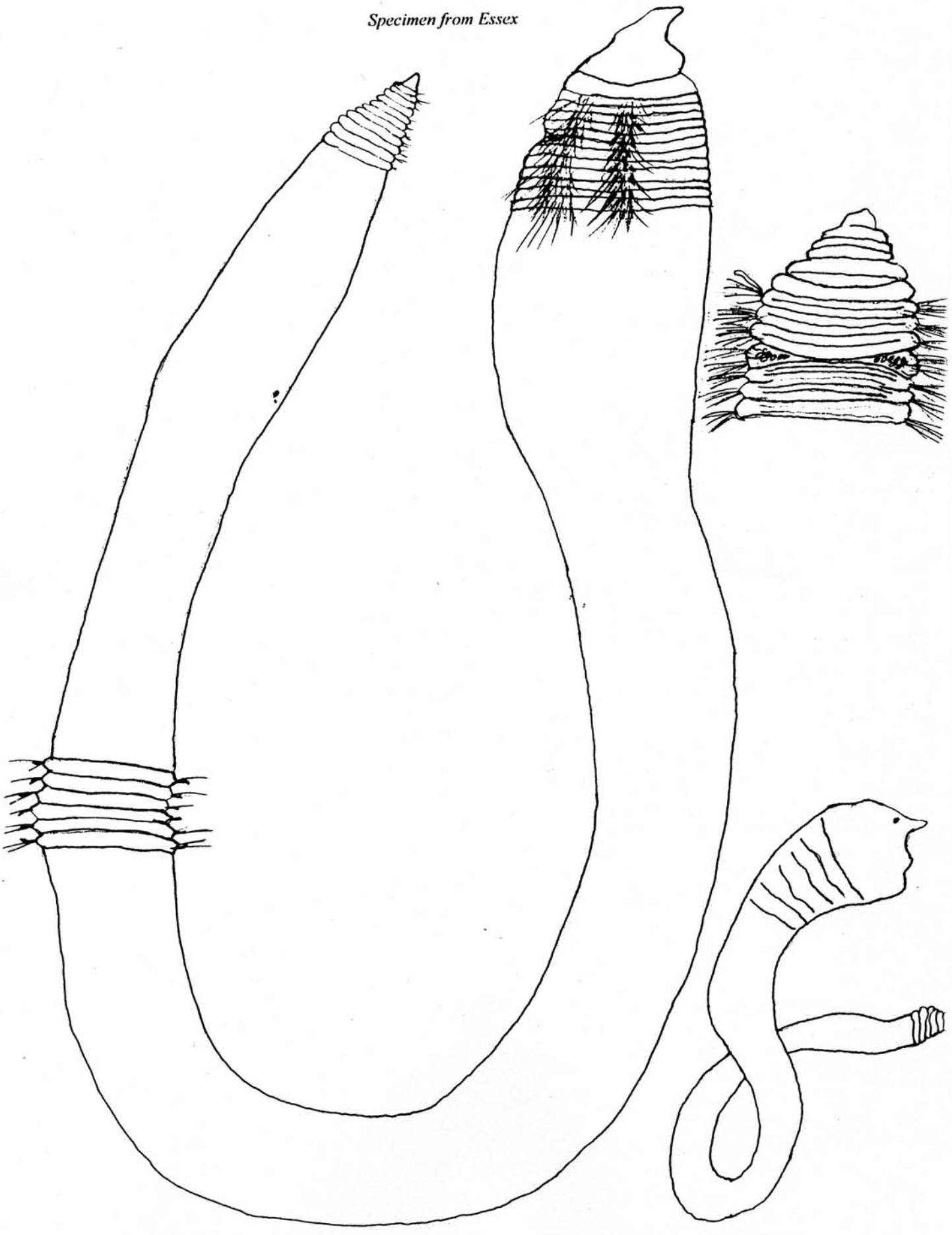
Dodecaceria

Specimen from near Dundee, Scotland



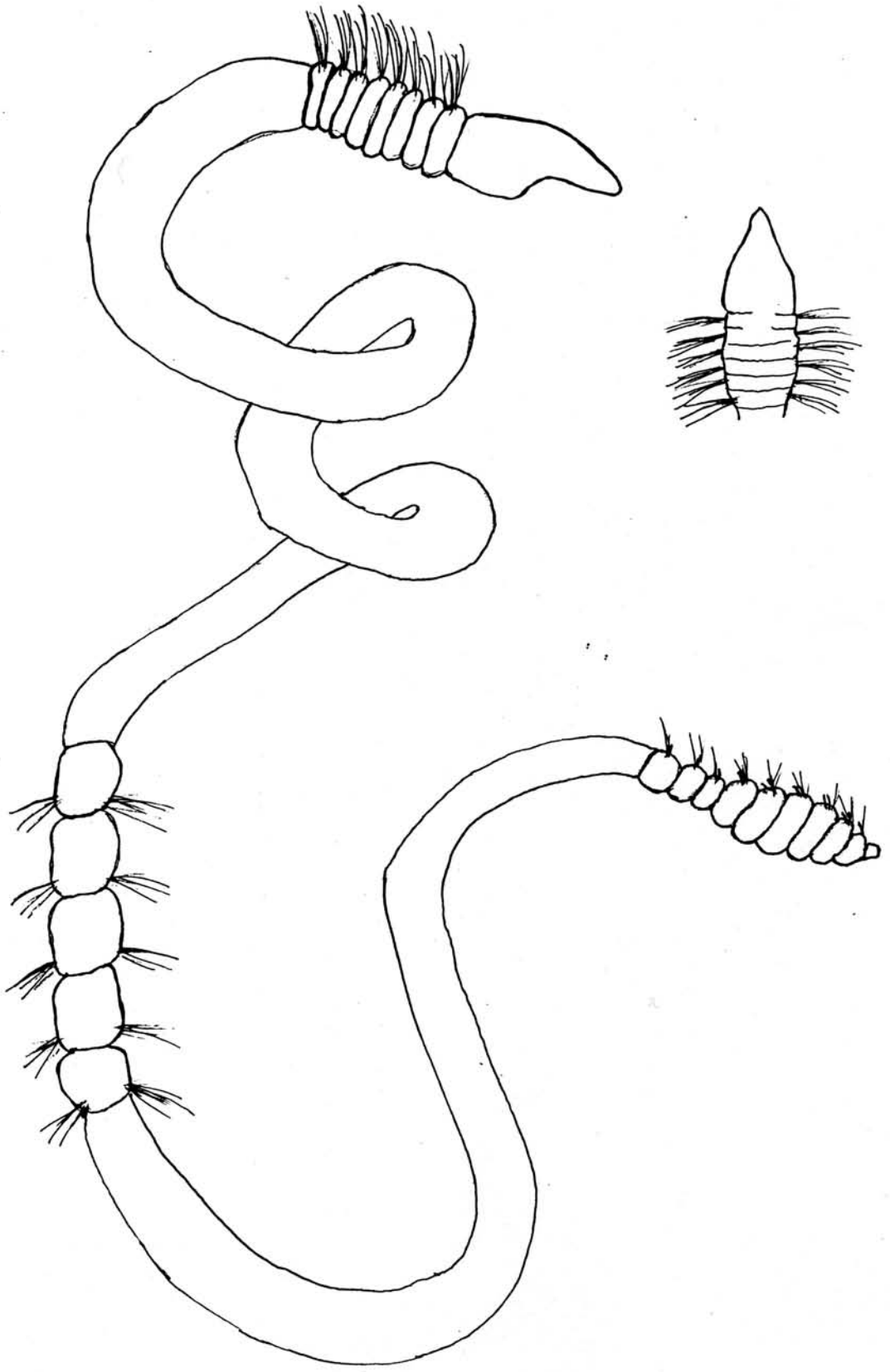
Cirriformia *(adult) cf.* C. tentaculata *(Montagu, 1808)*

Specimen from Essex



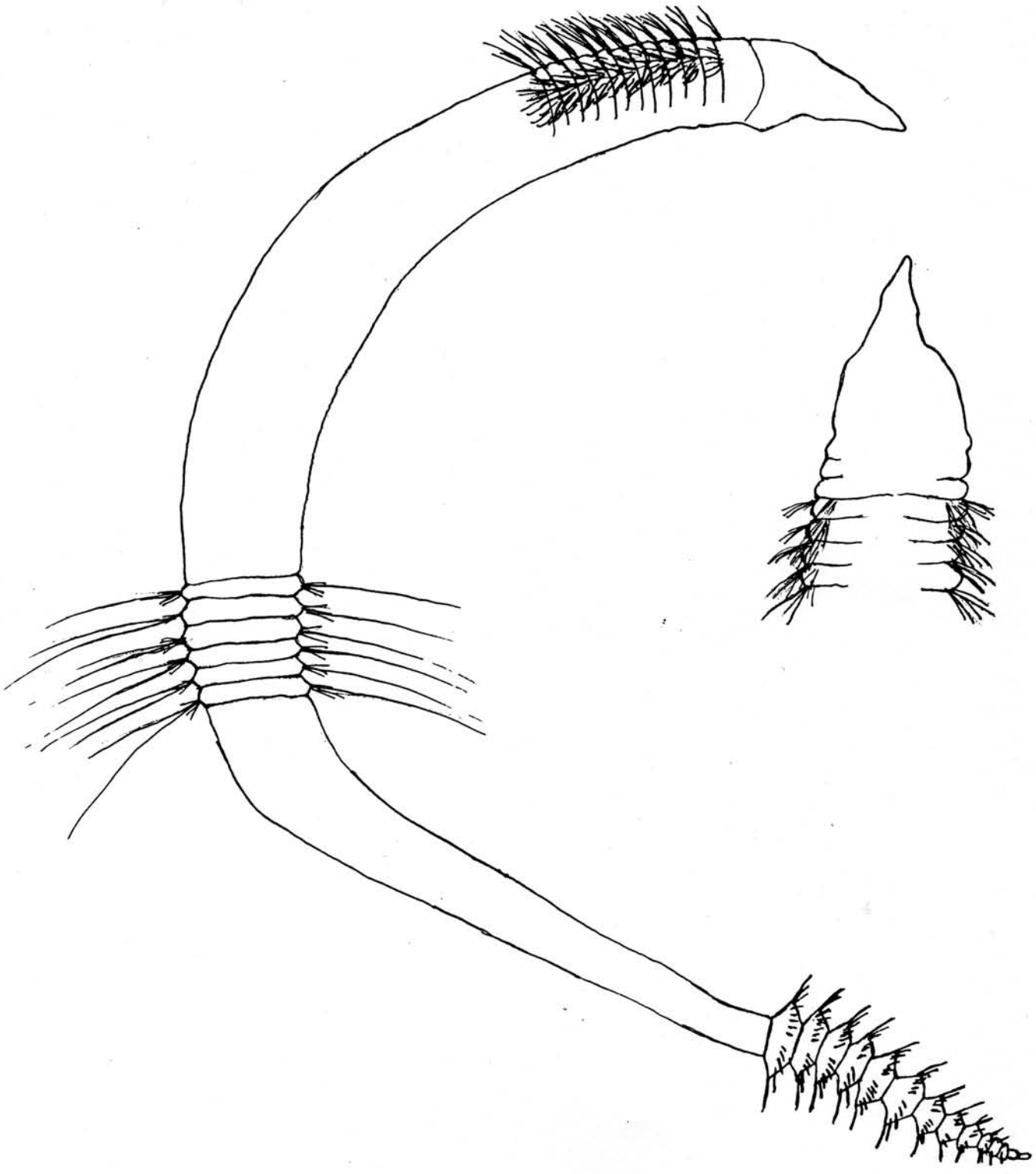
***Monticellina** (dorsobranchialis ?)* (Kirkegaard, 1959)

Specimen from Tremadoc Bay, Wales



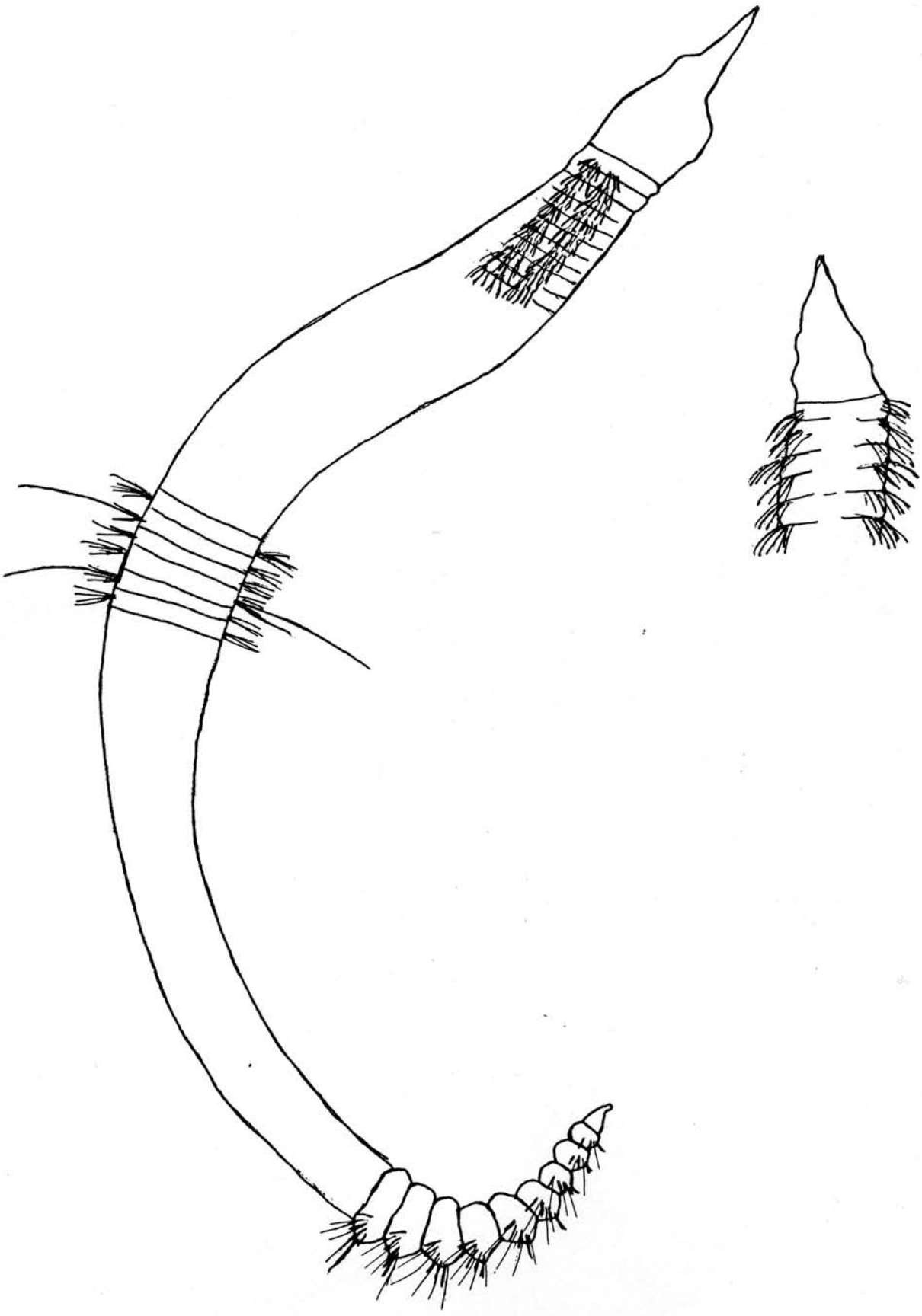
***Chaetozone setosa* agg.** Malmgren, 1867 Type "A"

Specimen from Cumbria



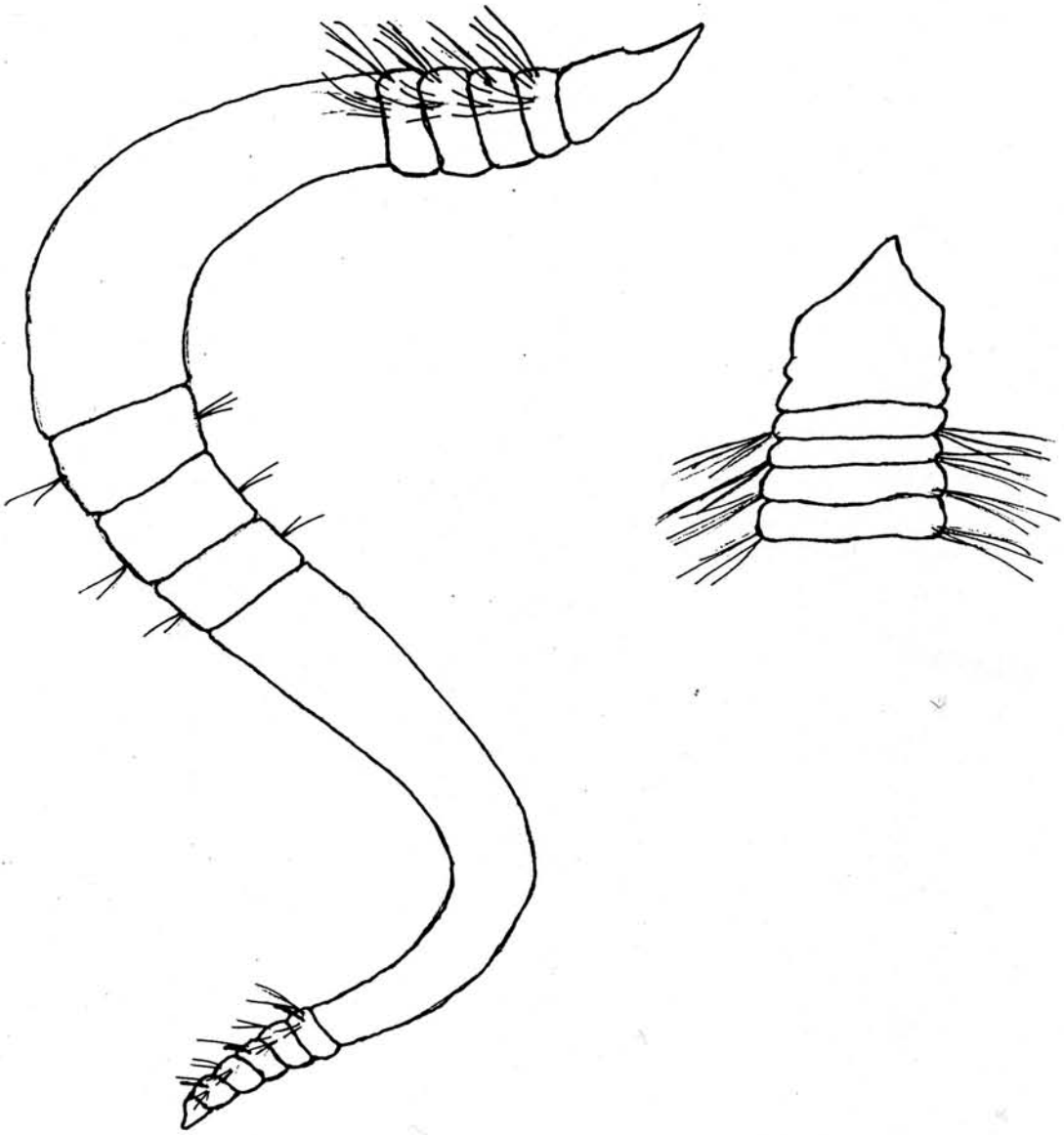
Chaetozone setosa **agg.** Malmgren, 1867 Type "B/C"

Specimen from Northumberland



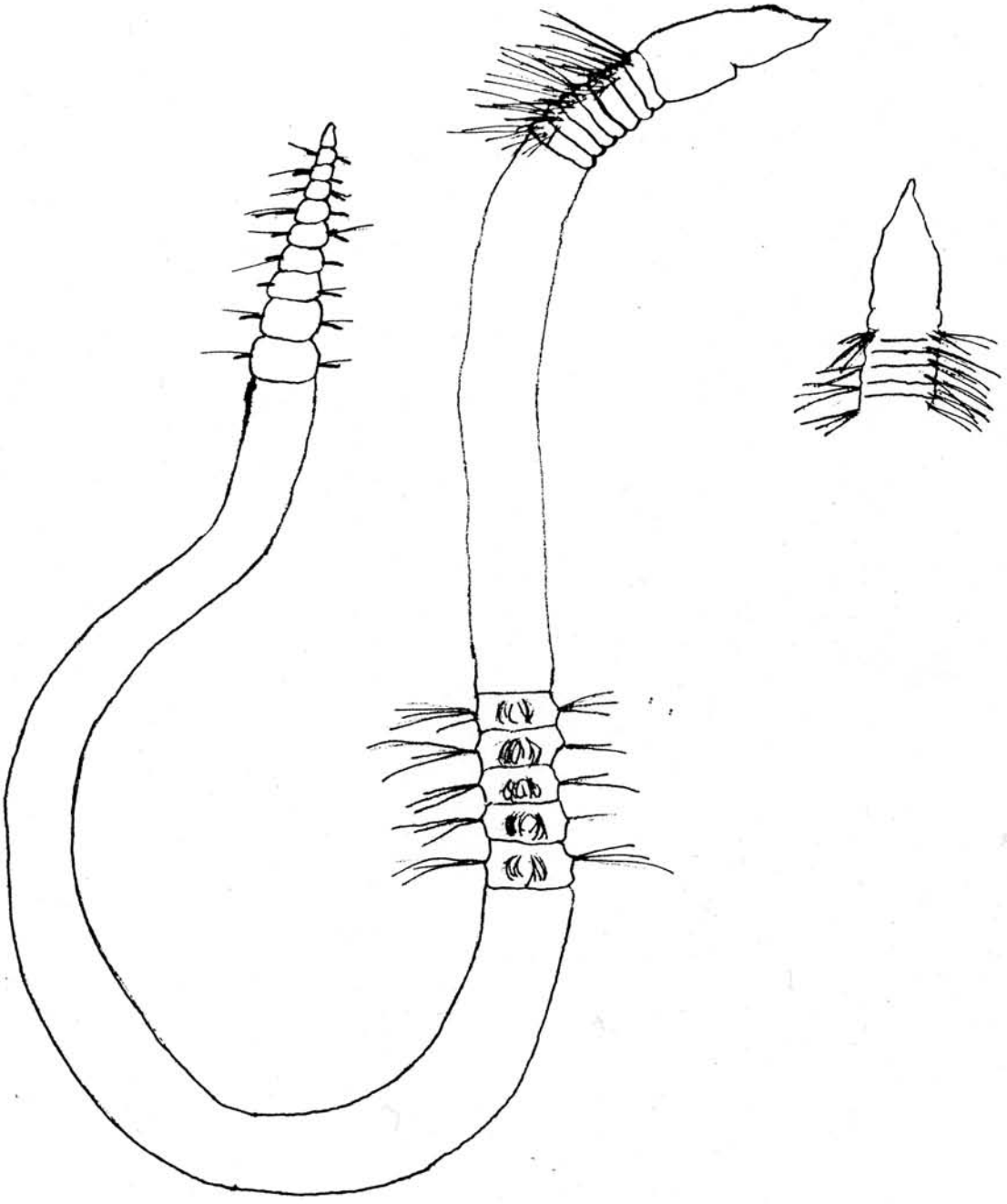
"Tharyx" vivipara (*Aphelochaeta* ?) Christie, 1984

Specimen from the Humber



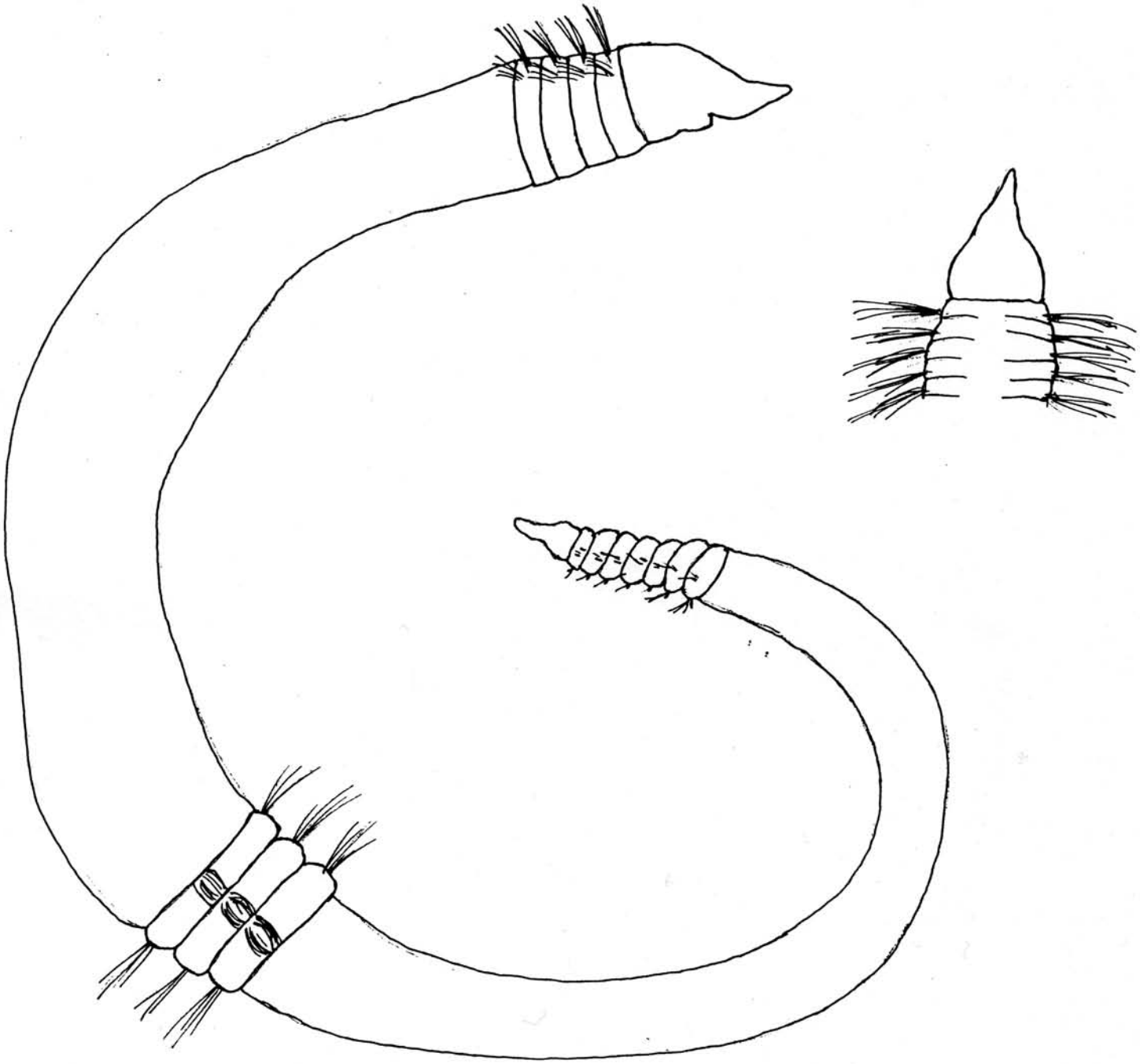
"*Tharyx* #1"

Specimen from the Llyn Peninsula, Wales



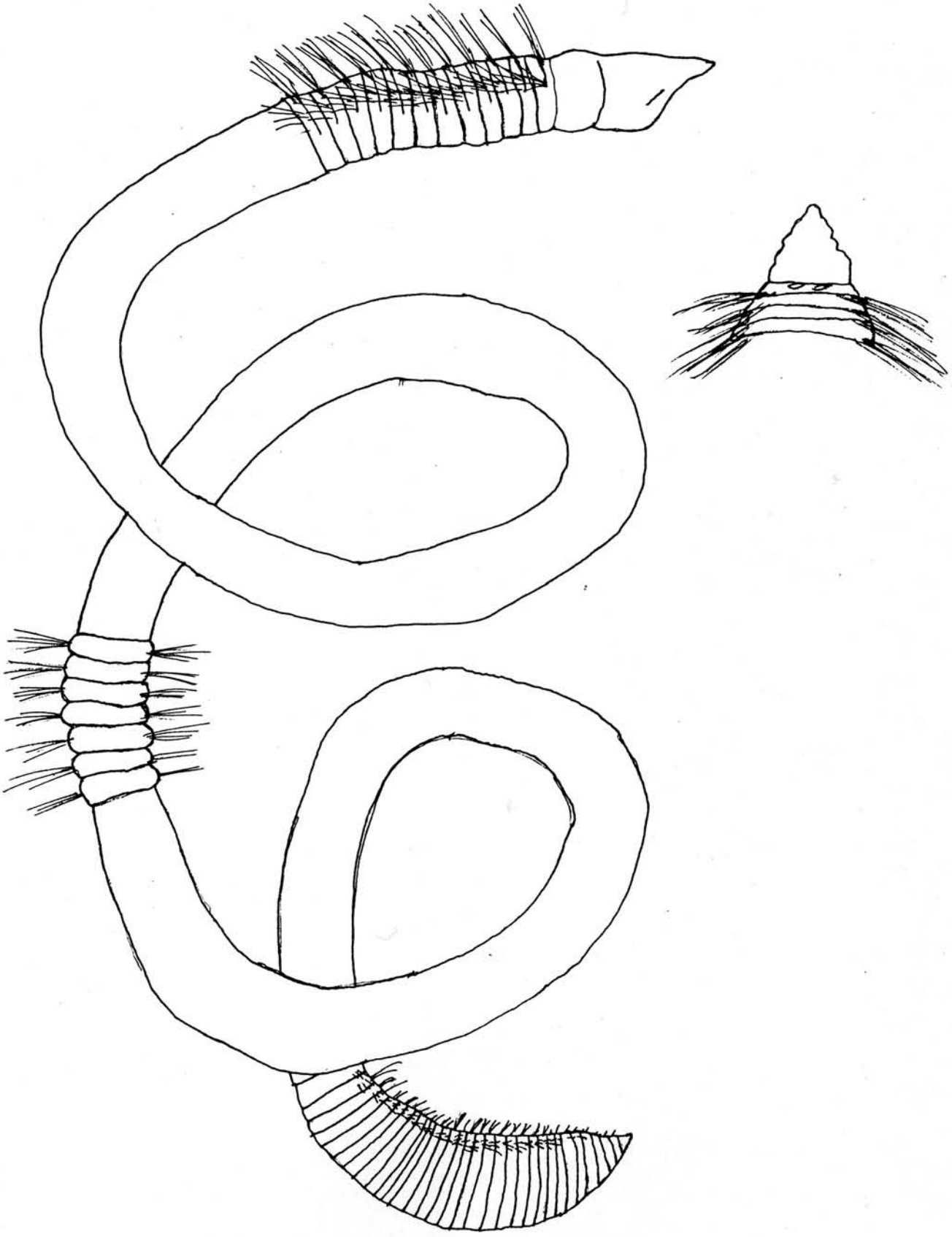
"Tharyx" killariensis **? (*Caulleriella* ?) (Southern, 1914)**

Specimen from Essex



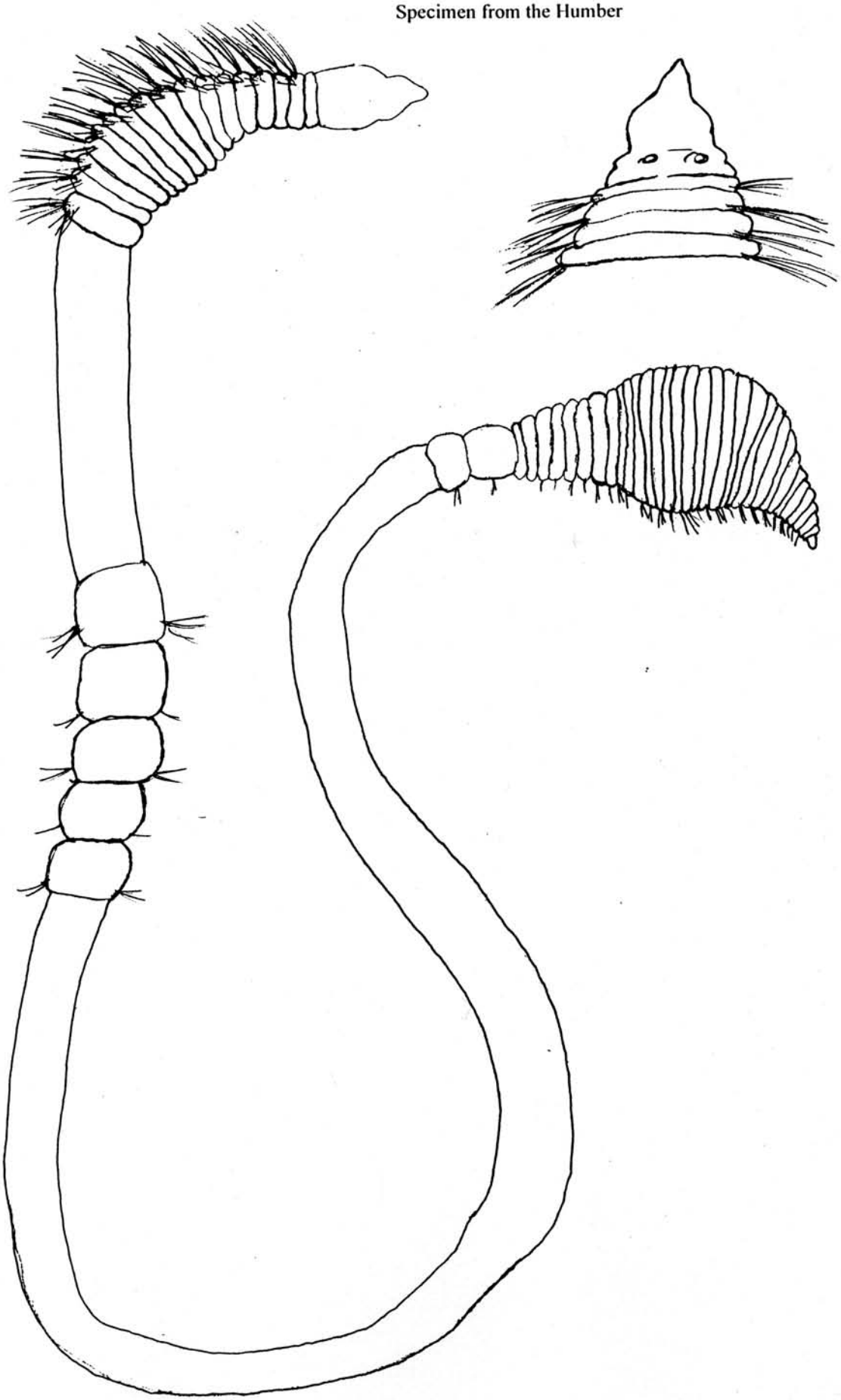
"*Aphelochaeta* #1"

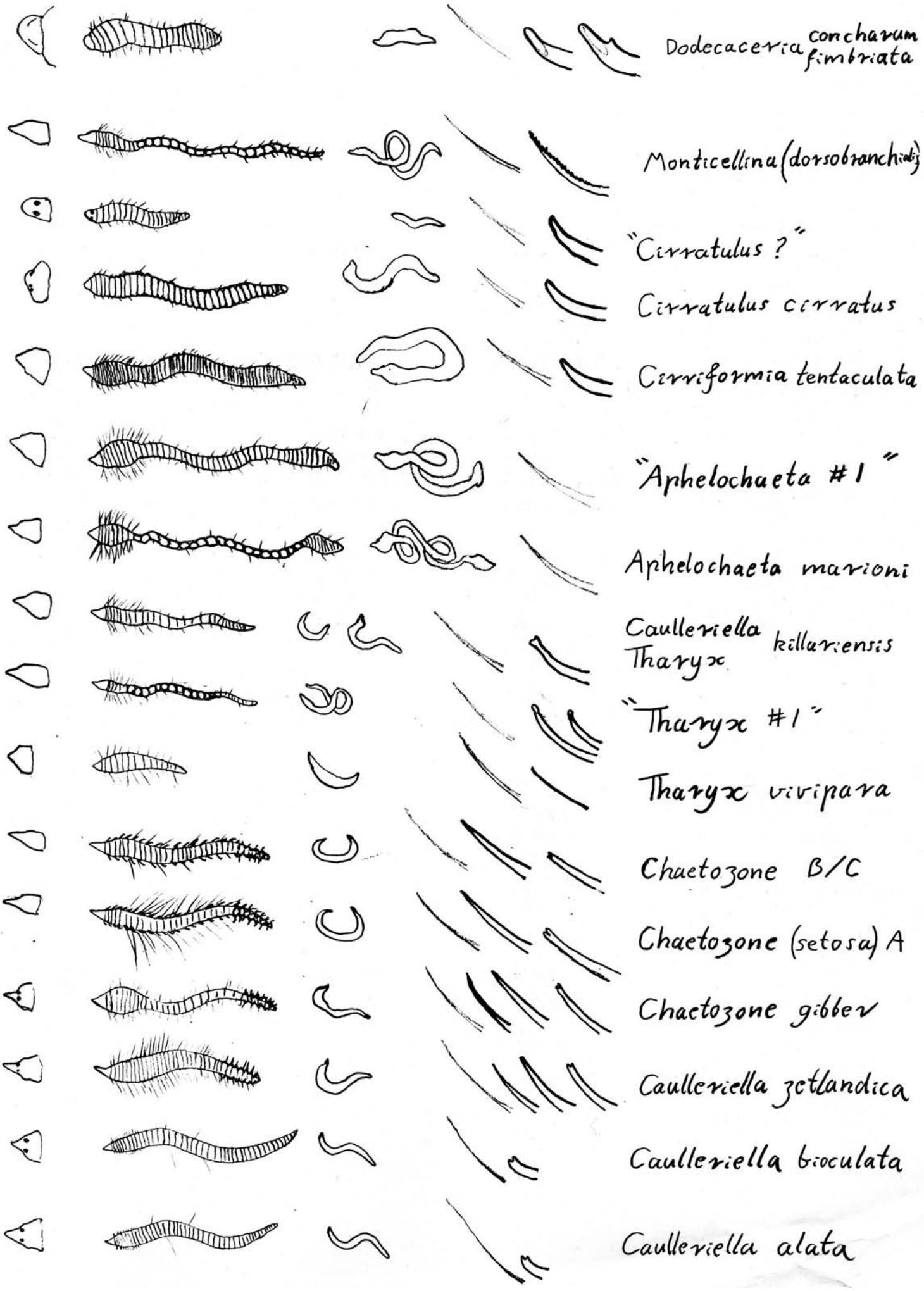
Specimen from Lyme Bay, Channel



Aphelochaeta marioni (Saint-Joseph, 1894)

Specimen from the Humber




Dodecaceria concharum
fimbriata
Monticellina (dorsobranchialis)
"Cirratulus ?"
Cirratulus cirratus
Cirriformia tentaculata
"Aphelochaeta #1"
Aphelochaeta marioni
Caulleriella killariensis
Tharyx
"Tharyx #1"
Tharyx vivipara
Chaetozone B/C
Chaetozone (setosa) A
Chaetozone gibber
Caulleriella zetlandica
Caulleriella bioculata
Caulleriella alata

Section 2:
ADDITIONAL DOCUMENTS, POST 1996

Cirratulus cirratus (RT3006)

Notes on Revised Cirratulid Taxonomy for Key (v. 2.00)

There are a few taxonomic changes to be made in the light of new literature and observations made at the workshop and by experts, which are summarised below. However, we have not completed substantial literature revisions and there are many problems yet to be resolved, particularly in the genera *Dodecaceria*, *Cirratulus* and *Aphelochaeta*.

Caulleriella

Examination of workshop specimens showed that examples corresponding to *Caulleriella* cf. *viridis* (without pygidial cirri) may be found in the same sample as *C. bioculata* (with pygidial cirri but otherwise identical). It may be that there is only one species (*C. bioculata*) involved. *C. viridis* was originally described from Madeira and may not be present in British waters. Another similar species without pygidial cirri (*C. parva*) is included in Hartmann-Schroder (1996). The illustration shows a blunt prostomium but the key features given refer only to small size and few segments (which could be juvenile features). *C. caput-esocis* and *C. serrata* are also described in the same work. They are not typical of the genus and I have not yet seen definite material. *C. caput-esocis* seems to be similar to our *Cirratulus* "A".

Aphelochaeta

Tharyx vivipara and *T. multibranchis* have been transferred to the genus *Aphelochaeta* Hartmann-Schroder (1996). *A. vivipara* is not a typical *Aphelochaeta* and will probably eventually be transferred to yet another genus. *A. multibranchis* is a species with which we are not yet confident but should eventually be incorporated into the key. The status of our *Aphelochaeta* "A" and "B" is yet to be resolved.

Dodecaceria

There are opposing views on the taxonomy of *Dodecaceria* spp. Gibson (1996) divides the majority of British species between *D. concharum* and *D. fimbriata* and has recently added *D. diceria* to the British list, from northern waters. This nomenclature was used in version 1.00 of the key, although the Dodecaceria spp. are indented as a sub-key, as a suggestion that the taxonomy was confused and that the recommendation was to leave them identified at the generic level.

However, others (*eg*. M. Petersen pers. comm.) regard the true *D. concharum* (type of the genus) as being the species identified as *D. fimbriata* by Gibson. The species identified as *D. concharum* by Gibson is then referred to as *D. ater*. As the issue is still confused to us, we would still recommend leaving their identification at the generic level for the time being.

References

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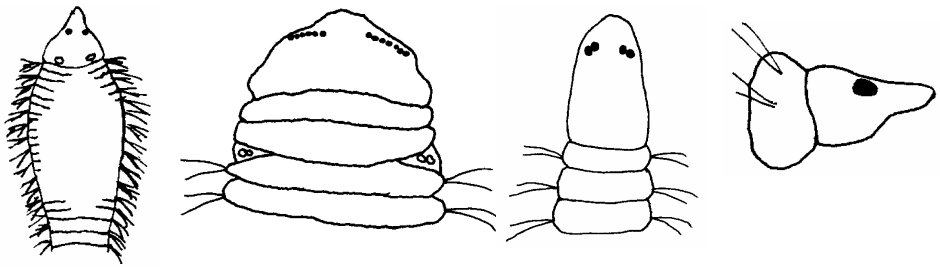
Hartmann-Schroder, G. 1996. Annelida, Borstenwurmer, Polychaeta. Jena, Gustav Fischer. (Die Tierwelt Deutschlands, No. 58).

Petersen, M.E., George, J.D., Blake, J.A., Fauchald, K., & Ockelmann, K.W. 1996. Comments to Case 2899. Recommendation that Gibson & Heppell's requests to the ICZN in Case 2899 (deliberate misidentification of type species of *Dodecaceria* Oersted, 1843 (Annelida: Polychaeta) by designation of a neotype from a nontype locality and based on a species not available to Oersted) not be approved, with an appendix by Mary E. Petersen with synonymies of the involved taxa. Bulletin of Zoological Nomenclature,

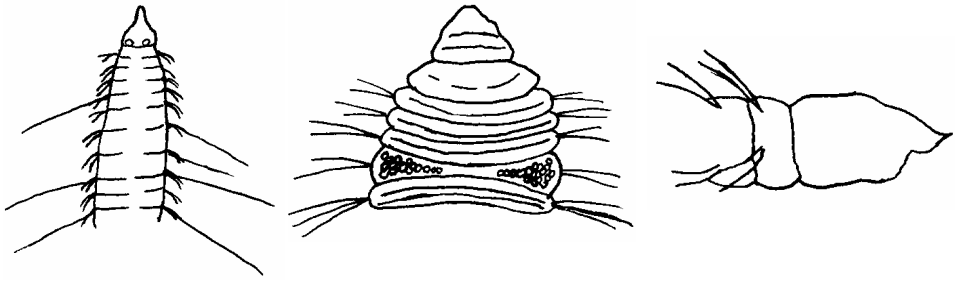
Key

1. ➔ Prostomium with visible eyes.



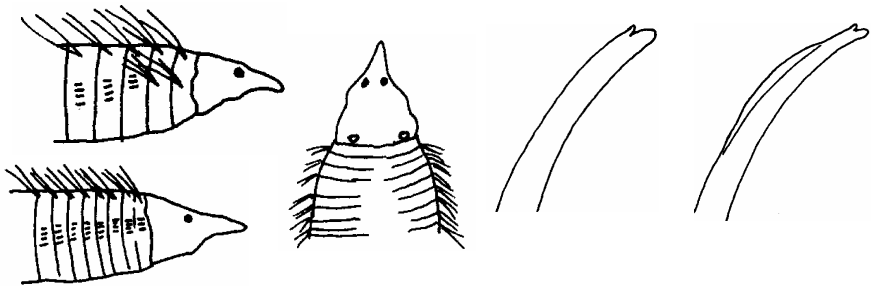
.....2

➔ Prostomium without visible eyes, ie. absent or faded.



.....10

2. ➔ Acicular chaetae in anterior (1st 5 chaetigers) as well as posterior parapodia.
Acicular chaetae all strongly bidentate and strongly curved.
Prostomium distally pointed
Capillary chaetae short, less than 1/4 of body width.



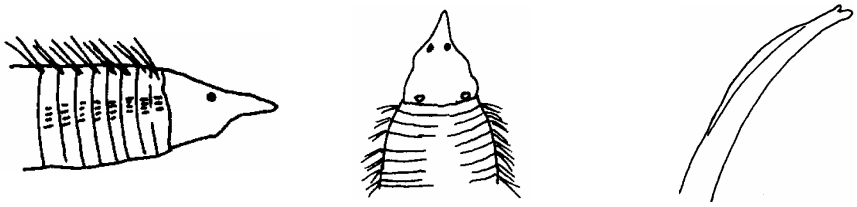
.....3

➔ Acicular chaetae absent from anterior parapodia, may or may not be present in posterior parapodia.
Prostomium blunt or pointed.
Capillary chaetae variable. 5

3 ➔ First two neuropodia with capillaries as long as those in notopodia (much shorter after the third chaetiger).
Bidentate chaetae without flange.
Bidentate chaetae start on third neuropodium.

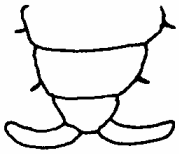
.....4

➔.All neuropodia with capillaries much shorter than those in notopodia, almost as short as bidentate chaetae and difficult to see.
Bidentate chaetae with narrow flange on convex side.
Bidentate chaetae start on first neuropodium.



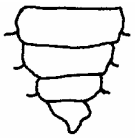
.....***Caulleriella alata*** (Southern, 1914)
[Common subtidally in gravel, ubiquitous.in British waters]
[Posterior angular in cross section with hooks in both rami.]

4. ➔ Pygidium with a pair of anal cirri.



.....***Caulleriella bioculata*** (Keferstein, 1862)
[offshore mud, western British waters ?]

➔ Pygidium without anal cirri.

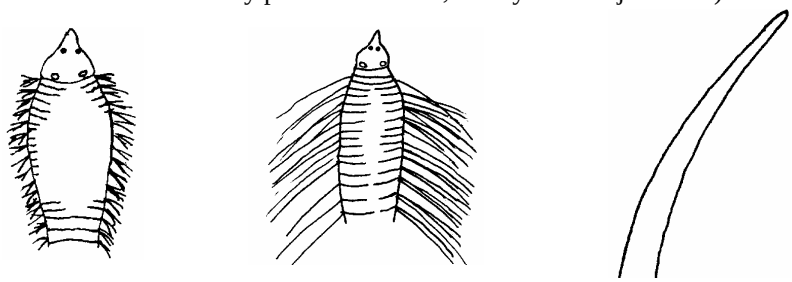


.....***Caulleriella*** cf. ***viridis*** (Langerhans, 1880)
[Occasional subtidally in stony ground, southern British waters?]
[Posterior angular in cross section with hooks in both rami.]

Additional species from literature:

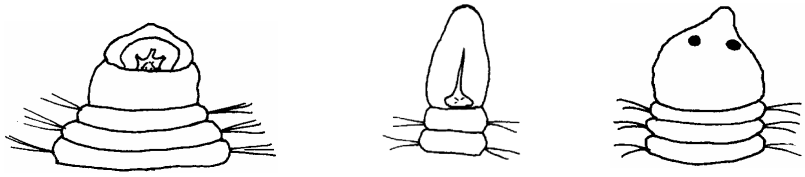
Adults less than 3 mm in length, fewer than 60 segments
.....C. *parva* Gillandt, 1979

5. ➔ Prostomium conical and distally pointed.
(Acicular chaetae mostly pointed in adults, faintly bifid in juveniles).



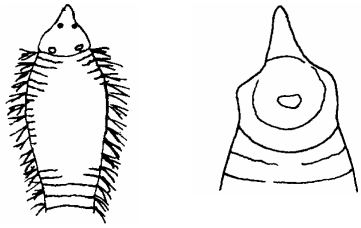
.....6

➔ Prostomium distally rounded and excavate ventrally.
(Acicular chaetae mostly blunt ended in adults, faintly bifid in juveniles).



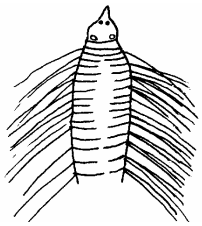
.....7

6. ➔ Thoracic capillaries fine, irregularly directed and shorter than body width.
Thoracic region often strongly swollen dorsally, behind head, giving hump-backed appearance tapering rather abruptly towards mid body.



..... ***Chaetozone gibber*** Woodham & Chambers, 1994
[May be common subtidally in mud, southern British waters ?]
[Posterior with acicular spines in both rami; capillaries and awl-shaped chaetae.]

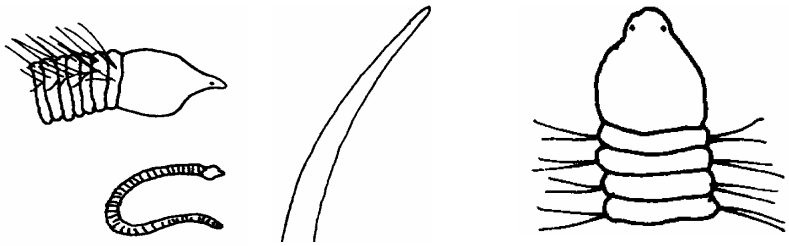
➔ Thoracic capillaries fairly robust, directed backwards (usually in parallel) and equal to or longer than body width.
Thoracic region may be swollen dorsally, tapering gradually towards head and mid body.



..... ***"Caulleriella" zetlandica*** (McIntosh, 1911)
[Common subtidally in sand and gravel, ubiquitous.in British waters]
[Posterior with acicular spines in neuropodia only; capillaries and awl-shaped chaetae.]

Additional species from literature:
Hooks from chaetiger 10 in neuropodia . *C. caputesocis* (Saint-Joseph, 1894)
Hooks absent. Capillaries very fine.....
.....*Aphelochaeta multibranchis* (Grube, 1863)

7. ➔ Eyes very small, positioned on front half of prostomium.

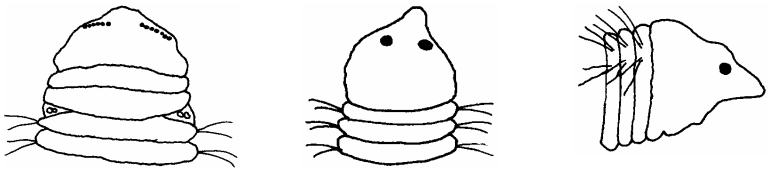


.....***Cirriformia*** (juv.)
[Common in many habitats, ubiquitous in British waters]

➔ Eyes large, placed above mouth, on prostomium.

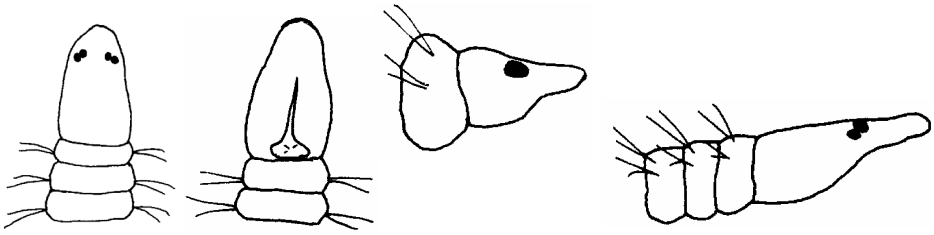
.....8

8. ➔ Prostomium only slightly flattened (anterior rounded in cross section).
Eyes placed dorsolaterally.



.....9

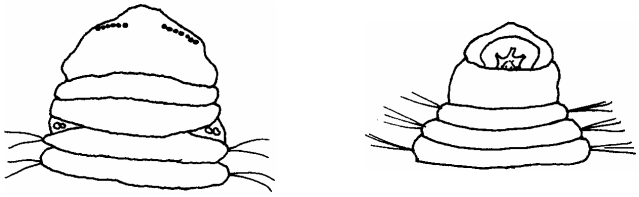
➔ Prostomium and anterior segments strongly flattened.
Eyes large, dorsally placed, one, or occasionally, two pairs.



.....***Cirratulus "A"***
[Occasional subtidally; ubiquitous in British waters ?]

Possibilities.....*C. incertus* McIntosh, 1923

9. ➔ Prostomium with two transverse rows of up to 8 eyes.

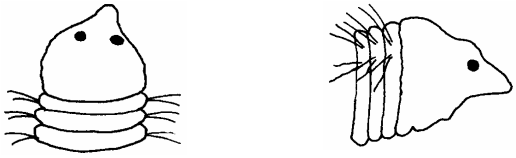


..... ***Cirratulus cirratus*** (O.F. Muller, 1776)
[Common intertidally in mud and rock crevices, northern British waters?]

Additional species from literature:

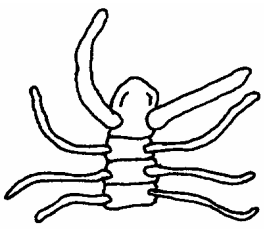
2 gills per segment throughout .....*C. borealis* Lamarck

➔ Prostomium with one pair of eyes, placed dorsolaterally.



.....***Cirratulus*** juv.
[Occasional subtidally]

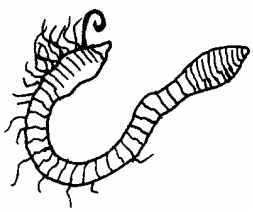
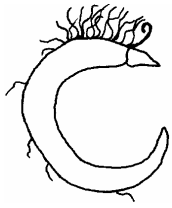
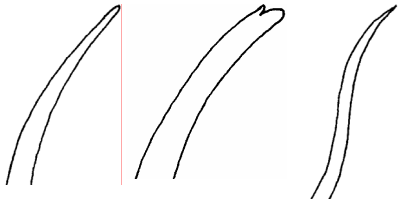
10. ➔ Acicular chaetae (in posterior segments only) spoon-shaped, with or without conical projection.
Palps and gills thick and sparse (fewer than 8 pairs).
Prostomium broadly rounded, with large nuchal organs, ie. sensory pits placed dorsally on the prostomium (may be confused with eyes).




..... ***Dodecaceria***
[Occasional subtidally in gravel and stony ground, often boring into shell, ubiquitous.in British waters]

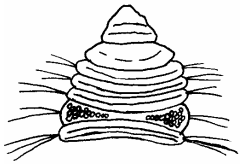
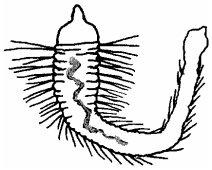
Species from literature:
See separate notes and key.

➔ Acicular chatae simple pointed, bidentate or absent.
Gills thin and numerous (more than 8 pairs).
Prostomium more or less conical, nuchal organs indistinct or absent.

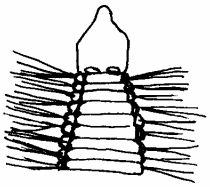
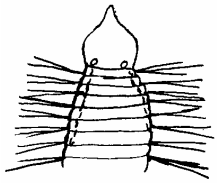
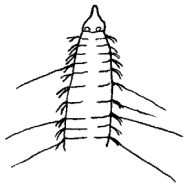
.....11

11. ➔ More than one pair of feeding tentacles (here shown as round scars), placed after the first chaetiger (difficult to see in some but should be clearly non-bipalpate).

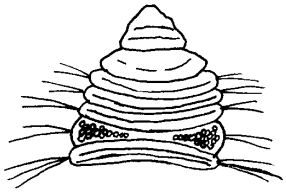
.....12

➔ One pair of feeding tentacles (palps) on last achaetous segment.

.....13

12. ➔ Two rows of feeding tentacles placed dorsally on the 4th./5th. or 6th./7th. chaetiger.
Blunt unidentate acicular chaetae in anterior (1st. 10) and posterior parapodia.



..... ***Cirriformia tentaculata*** (Montagu, 1808)
[Common in many habitats, ubiquitous.in British waters]
[Posterior angular in cross section.]

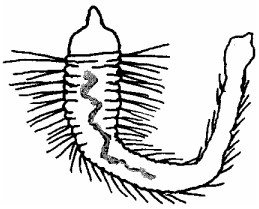
NB.: The species below are not yet well defined and most specimens are referred to ***C tentaculata***

Species from literature:

Many feeding tentacles placed dorsally on the in an almost continuous band across segment.
Feeding tentacles on 6th / 7th chaetiger (on one segment only).
Distance between cirri and notopodia very small posteriorly
.....*C. tentaculata* (Montagu, 1808)

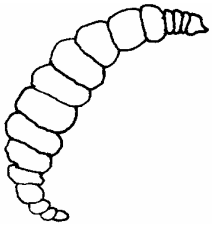
Few tentacular filaments in two separate rows.
Feeding tentacles on 4th / 5th chaetiger (on one segment only).
Distance between cirri and notopodia 2/3 of that between rami, posteriorly.
.....*C. norvegica* (Quatrefages, 1865/6)
Few tentacular filaments in two separate rows.
Feeding tentacles on 5th - 7th chaetiger (on more than one segment).
Distance between rami 2/3 of that between cirri and notopodia, posteriorly.
.....*Timarete filigera* (Delle Chiaje, 1841)

➔ Feeding tentacles few, placed dorsally on more than one chaetiger (hard to see).
Acicular chaetae absent.



..... cf. ***Protocirrineris chrysoderma*** (Claparede, 1868)
[Subtidal; southwest ern British waters only ?]

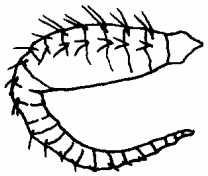
13. ➔ Body relatively short and grub like, widest in centre, tapering gradually at head and tail.
Head may show signs of regeneration.



.....***Cirratulus*** juv.
➔ Body may be variously shaped but not as described above.

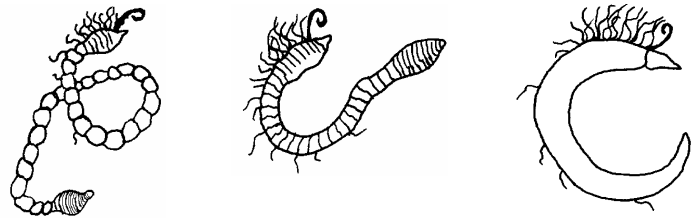
Head well proportioned.....14

14. - Body of characteristic shape. Expanded in thoracic region, abruptly tapering towards tail, which is narrow, slightly flattened and as long as the thorax. Tadpole-shaped.
Worm short and usually complete in samples.
(Posterior with occasional blunt-tipped capillaries, no acicular chaetae.)



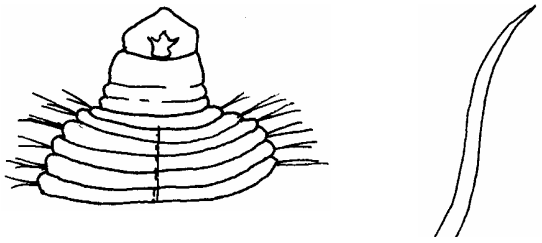
.....***Aphelochaeta vivipara*** (Christie, 1984)
[Often common in estuarine mud, northeast.England only?]

➔ Body may be variously shaped but not as described above.
Worm usually elongated, often missing tail in samples.
(Acicular chaetae present or absent).



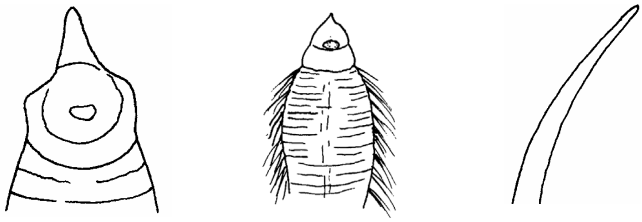
.....15

15. ➔ Prostomium broader than long, bluntish, rather flattened and excavate ventrally.
Mid body [and posterior] with narrow, sinuous, unidentate acicular spines.



Cirratulus cf. ***caudatus***
Levinsen, 1893
[Body often inflated anteriorly; glandular area often visible on achaetous segments]
[Subtidal; northern British waters only ?]

➔ Prostomium at least as long as broad, acutely or bluntly conical.
Acicular chaetae, regularly curved or absent.

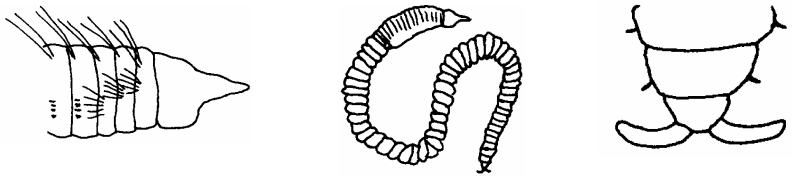


.....16

16. ➔ Acicular chaetae in anterior (1st 5 chaetigers) as well as posterior parapodia. 17

➔ Acicular chaetae absent from anterior parapodia, may or may not be present in posterior parapodia. 18

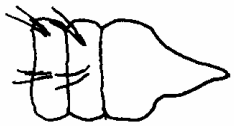
17. ➔ 1st. three neuropodia with capillaries as long as those in notopodia.
Bidentate chaetae start on fourth neuropodium.
Mid body segments may be very convex and "beaded".



..... ***Caulleriella* "A"**
[Northern British waters ?]
[Pygidium has a pair of anal cirri]

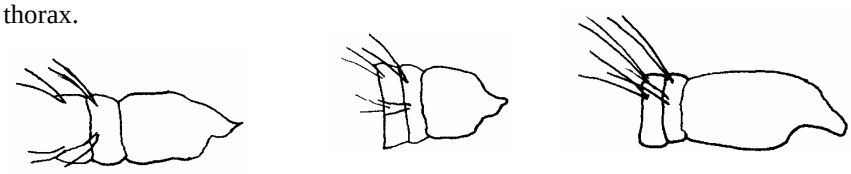
➔ Capillaries of neuropodia much shorter than those of notopodia in all, or all but first two chaetigers.
Bidentate chaetae start on first or third neuropodium.
Segments short and not "beaded" 3

18. ➔ (Posterior acicular chaetae are stout unidentate spines, sometimes arranged in rings around abdomen - NB. anterior features given below are subjective).
Prostomium elongated and sharply conical.
In lateral view, distance from mouth to tip of prostomium about equal to that from mouth to first neuropodium
Anterior chaetigers generally similar in length to those of mid body region.



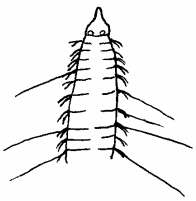
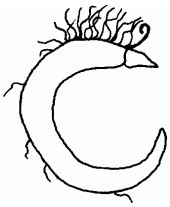
.....19

➔ (Posterior acicular chaetae knob-tipped, serrated or absent).
Prostomium relatively short, sharply or obtusely conical.
In lateral view, distance from mouth to tip of prostomium much less than that from mouth to first neuropodium.
Anterior chaetigers markedly shorter than those behind and swollen to form a distinct thorax.



.....22

19. ➔ Anterior capillaries (excluding long natatory chaetae,which are variable and may or may not be present - both types shown on left hand drawing) robust, flattened and regularly curved backwards; shorter than body width.
Worms widest in mid body.

.....19a

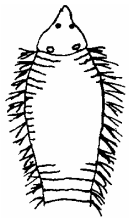
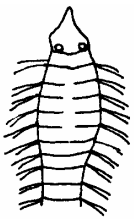
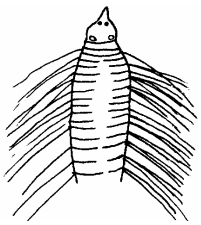
19a (3 alternatives)

Palps on last achaetous segment, in front of 1st pair of gills.
..... *Chaetozone setosa* Malmgren, 1867
[Common in many habitats, ubiquitous in British waters]
.....[Posterior with rings of alternating spines and capillaries.]
[Posterior rounded in cross-section, with almost continuous rings of spines.]

Palps on last achaetous segment, alongside 1st pair of gills
.....*Chaetozone christiei* Chambers, 2000
[Posterior strongly flattened in cross-section, with discrete rows of spines.]

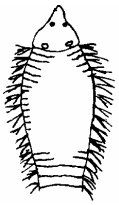
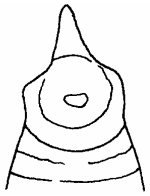
Palps on chaetiger 1, alongside 1st pair of gills
.....*Chaetozone* "type C"
[Posterior slightly flattened in cross-section, with discrete rows of spines.]

➔ Anterior capillaries either all long, or all short and fine.
Worms widest in thoracic region.

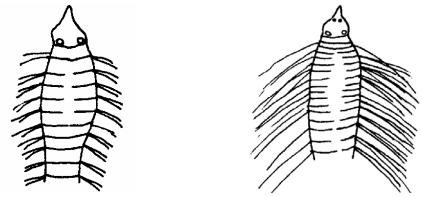
.....20

20. ➔ Anterior capillaries fine, irregularly directed and shorter than body width.
Anterior segments very short and poorly defined dorsally.

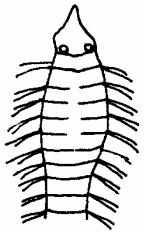
..... ***Chaetozone gibber*** Woodham & Chambers, 1994
[May be common subtidally in mud, southern British waters?]
[Posterior with acicular spines in both rami; capillaries and awl-shaped chaetae.]

➔ Anterior capillaries robust, directed in parallel, at least as long as body width.



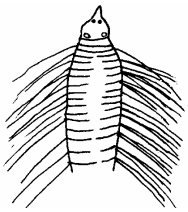
.....21

21. ➔ Anterior segments relatively long, well defined dorsally.



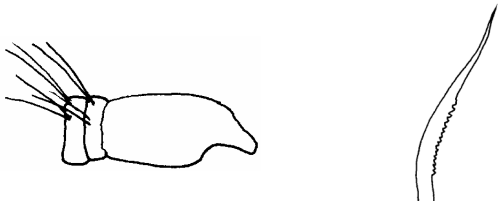
.....*Chaetozone* "type D"
[Offshore form, northern British waters?]
[Posterior with acicular spines in both rami, alternating with capillaries.]
[Concertina-like appearance to posterior segments. Mid body region very long.]

➔ Anterior segments short and poorly defined dorsally.



..... ***"Caulleriella" zetlandica*** (McIntosh, 1911)
[Common subtidally in sand and gravel, ubiquitous.in British waters]
.....[Posterior with acicular spines in neuropodia only; capillaries and awl-shaped chaetae.]

22. ➔ Prostomium elongated and flexible, with a rounded end, usually downturned
Rows of gills gradually converge to form a single mid dorsal line, behind thorax.

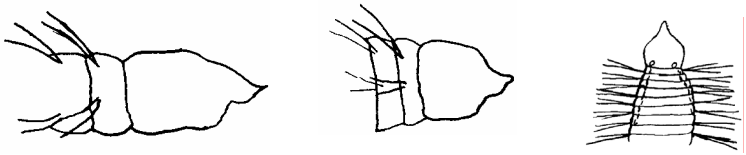


..... ***Monticellina*** cf. ***dorsobranchialis*** (Kirkegaard, 1959)
[Often common in subtidal mud, western British waters?]
[Posterior with serrated capillaries.]

Species from literature

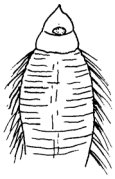
Short body with serrated and pseudocompound chaetae.
..... "*Caulleriella" serrata* Eliason, 1962

➔ Prostomium regularly conical or with a pointed tip, usually straight.
Rows of gills always totally separate.



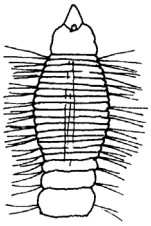
.....23

23. ➔ Anterior capillaries pale and fine, directed backwards.
Anterior segments poorly defined ventrally.
In thoracic region, body dorsoventrally flattened or only weakly expanded.
Prostomium sharply pointed at tip.
(Posterior with knob-tipped acicular chaetae).



.....24

➔ Anterior capillaries robust, directed laterally.
Anterior segments well defined ventrally.
In thoracic region, body rounded in cross section and strongly expanded.
Prostomium pointed or rather bluntly conical.
(Posterior with capillaries only; acicular chaetae absent).



.....25

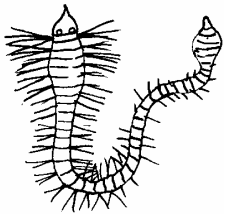
24. ➔ Achaetous segments long, ie. distance from mouth to first chaetiger greater than depth (dorsal to ventral) of achaetous segments.
Body elongated and rounded in cross section throughout.
Mid body segments often as long as wide.

.....***Tharyx killariensis*** (Southern, 1914)
[Occasional in subtidal mixed sediments ? ubiquitous in British waters?]
[Posterior tapered, with long, knob-tipped or faintly bidentate chaetae.]

➔ Achaetous segments short, ie. distance from mouth to first chaetiger about equal to depth (dorsal to ventral) of achaetous segments.
Body generally short, may be dorsoventrally flattened in thoracic region.
Mid body segments rarely as long as wide.

..... *Tharyx* "type 1"
[Often common in estuarine mud, southern British waters?]
[Posterior dorsoventrally flattened, with short, knob-tipped or faintly bidentate chaetae.]

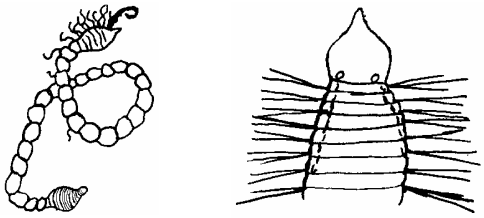
25. ➔ Prostomium finely pointed at tip.
Animals small and fine.
Body often colourless with greenish tinge and dark gut.



..... *Aphelochaeta* "B"
NB.: This is a tentative taxon, rarely found, and could be discounted. Identification is still very subjective.
[Found in shallow marine muds ? western British waters?]
[Posterior slightly swollen, fine capillaries only.]

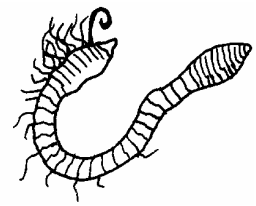
➔ Prostomium obtusely conical.
Animals generally large and coarse.
Body colour dark brown with darker gut..... 26

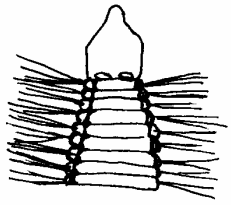
26. ➔ Mid body segments elongated (as long as width), beaded and delicate.
Palps rounded in cross section and generally widely separated.
Groove between dorsum and notopodia slight.



..... ***Aphelochaeta marioni*** (Saint-Joseph, 1894)
[Common in estuarine mud, ubiquitous in British waters?]
[Posterior often swollen and globe-like, short capillaries only.]

➔ Mid body segments only slightly more elongated and delicate than those anteriorly.
Palps thick, oval in cross section and generally close together.
Groove between dorsum and notopodia distinct.





..... *Aphelochaeta* "type 1"
[Occasional in subtidal gravel, ubiquitous in British waters?]
[Posterior slightly swollen, short capillaries only.]

Possibilities : ..... *Aphelochaeta filiformis* (Keferstein, 1862)
.....*"Tharyx" macintoshi* (Southern, 1914)

Identification of *Dodecaceria*

The identification notes below are mostly transcribed from those of Mary Petersen (pers. comm), with additional notes (ecology of all species and identification of *D. diceria*) from Gibson (1996).

Identification

- Body long and slender, middle segments often beadlike, posterior end tapering. Nuchal slits flat oval patches, inconspicuous. Atokous chaetae small and inconspicuous, difficult to see at lower magnifications. Posterior segments with spatulate neurochaetae, some or all of which with pronounced basal boss. Life history includes asexual reproduction by fragmentation when mature. Male and female epitokes.

  Found throughout British waters (though possibly absent from the far southwest), boring in soft rocks and stone, in intertidal and shallow waters. Tolerant of reduced salinities.

  .....***D. concharum*** Oersted, 1843 (sensu Petersen etc.)
  D. fimbriata Verrill, 1879 (sensu Gibson etc.)
  including *D. caulleryi* Dehorne, 1933

- Body short and broad, segments short throughout, not particularly beadlike, posterior end broad and flattened. Nuchal slits linear, usually recognisable under a stereomicroscope. Chaetae large and conspicuous, easy to see. Posterior segments with chisel-shaped (oar-shaped) spatulate chaetae with basal boss. Life history incompletely understood, most mature individuals appear to contain fertilised oocytes (parthenogenesis) but sexually mature males, apparently belonging to this species, with epitokous capillaries have also been found.

  Found throughout British waters, boring in soft rocks and stone, in intertidal and shallow waters. Intolerant of salinities below about 34 pp 100.

  .....***D. ater*** (Quatrefages, 1865) (sensu Petersen etc.)
  D. concharum Oersted, 1843 (sensu Gibson etc.)

- Nuchal slits intermediate between those of the above species. Posterior segments with spoon shaped, hooked chaetae, without proximal tooth but with proximal edge of depression serrated (seen only in oil immersion). Life history includes asexual reproduction by fragmentation when mature. One epitoke found. Found in the northern North Sea at depths of 100 - 200 m.

  ..... ***D. diceria*** Hartman, 1951

Section 3:
2006 UPDATE

Tharyx sp. ‘A’ (RT3018)

A provisional update to the identification of UK Cirratulidae

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for

BEQUALM/NMBAQC 2006 Taxonomic Workshop

Dove Marine Laboratory

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Introduction

Ten years ago, Unicomarine circulated a preliminary key and guide to British cirratulids (Unicomarine, 2006), through the NMBAQC Scheme, with an aim to help standardise the identification and naming of cirratulids in macrofaunal samples and improve data comparability. Since that time, there have been several Scheme exercises involving cirratulids and problems remain. There has also been increased recognition of the need to publish workshop literature and to establish clearer guidelines for data standardisation. In addition, new observations have been made on cirratulids since circulation of the 1996 guide and new literature published.

This workshop document is a stage towards updates to cirratulid identification and recording protocols, due to be published in the future, through the NMBAQC Scheme. All contents are provisional and will be edited following further work and (hopefully) participant feedback, before any publication.

Cirratulid identification

The 1996 guide included an illustrated dichotomous key using anterior portion features for splits and additional information (including posterior portion features) in brackets following each species. This was to allow front-ends to be identified, as a way of ensuring maximum data comparability between samples that might have been preserved/processed differently. I would still suggest that cirratulids can be identified from front-portions but have now included all features (including identification and ecology) in a tabular form.

The contents of the table circulated here are provisional and due for a substantial rewrite before publication. It would be best for those simply processing samples to use only the update notes below, along with the 1996 key and literature references in the table. I would, however, be grateful for comments on the format of the table and suggested changes.

Cirratulid distribution and habitat preference

Notes on distribution and habitat are included in the table and also discussed below. Published distributions for cirratulids are generally inadequate, due to the need to publish taxonomic descriptions before detailed records become available. We have provided information from Unicomarine records, as well as published literature, in the table. There is also a detailed table including distribution records for different regions, using ‘Um’ to indicate a Unicomarine record for a particular region. Biologists from three other laboratories, with reasonable confidence in cirratulid identification have contributed to the table and their records are included with laboratory codes: Carol Milner and Lee Heaney, Scottish Environment Protection Agency (SEPA), Will Musk, Institute of Estuarine and Coastal Science, Hull (IECS) and Grant Rowe, Emu (Emu). I would be grateful for any volunteers to add to this table; I’ll look at any specimens from outside the known (according to this table) distribution range and would be happy to look at other problem specimens also.

Remaining issues

The species tables include updates to nomenclature and taxonomy from recent literature, though it is clear that much remains to be resolved. The following UK cirratulid list has notes on remaining issues and any comments that may help resolve problems would be greatly appreciated. I have had much useful advice from Mary E. Petersen (MEP; mepetersen@maine.edu, Darling Marine Center, Walpole, Maine), who is currently reviewing some of the *Cirratulus* and *Dodecaceria*. Some of the bipalpate genera are under review by James Blake and Stacy Doner (ENSR, Woods Hole, Massachusetts), as well as by Susan Chambers (National Museum of Scotland).

Provisional UK cirratulid list (names in bold appeared in the 1996 guide)

Cirratulus borealis Lamarck, 1818
A northern species that could have been confused with *C. cirratus*. Its distribution is unknown but the type locality is SW Greenland (south of the Arctic Circle). A small specimen (<1 cm) that appears to be this has been taken off W Norway. Any suspected specimens (2 gills on all segments, not just the most anterior ones) would be much appreciated (MEP). Not multibranchiate but unusual in having 2 branchiae right and left) on all or nearly all segments to the end of the body (most cirratulids have 2 per segment on the anterior segments and thereafter few or none).

Cirratulus caudatus Levinsen, 1893
Missed from the Species Directory but recorded from Ireland in older literature. It seems fairly easily recognisable and is found in northern samples; it may be especially common near fish farms. MEP has drawings from Levinsen's syntypes and material from Danish waters. It is bitentaculate and may eventually change its generic position, also differing from other *Cirratulus* in lacking eyespots and having a tessellate cuticle. It can get quite large, and newly collected specimens are said to be a bright red-orange (MEP).

Cirratulus cirratus (O.F. Muller, 1776)
Has been confused with *C. incertus* and perhaps also *C. borealis* but the latter is not common in collections. The main differences from *C. incertus* are eyespot color (black, often running together; red, discrete in *C. incertus*), size and habitat (larger infaunal vs. smaller cryptofaunal), reproduction type (iteroparous, *i.e.*, adults can spawn repeatedly, with pale yellow eggs spawned in a jelly mass on stones vs. peach-colored eggs spawned by epitokes that die after spawning). There is also a difference in the shape of the prostomium: slightly more rounded in *C. cirratus*, more pointed in *C. incertus*. *C. incertus* also reproduces asexually by fragmentation, which *C. cirratus* does not; see figures of asexual regenerates in Petersen (1999). Body colour is often yellowish in *C. cirrata* but has never been seen to be so in *C. incertus*. *C. cirratus* may be less tolerant of lower salinity than *C. incertus*, as it has never been seen in Danish waters, where we (MEP) have never seen *Dodecaceria ater* either. Stephenson (1950a, b) describes the development of C. cirratus larvae and the spawning and epitoke of *C. incertus*, both of which were present in the tanks at Cullercoats (MEP).

Cirratulus incertus McIntosh, 1916
Many records of *C. cirratus* may be this species, especially in area with low salinity (see above).

***Cirratulus* "A"**
Not yet identified. Possibly juvenile.

Cirratulus sp.
There is a yellowish *Cirratulus* with red eyes that needs further work (MEP).

Cirriformia tentaculata (Montagu, 1808)
There is probably only one British Cirriformia. *C. norvegica* (Quatrefages, 1865) is a juvenile *C. tentaculata*, according to Clark (1963) but may be a *Timarete* (MEP); though we've seen a few that could be different and *C. semicincta* (Ehlers, 1905) appears in the ERMS list, possibly a Mediterranean species.

Protocirrineris chrysoderma (Claparède, 1868)
This name remains provisional for the sp found in UK estuaries: fairly short with long capillaries and a dark gut stripe. It does not fit Fauvel's description perfectly. It's listed twice in ERMS, under different genera.

Caulleriella bioculata (Keferstein, 1862)
We could be using this for several spp.; forms with hooks from 3 are found in both mud and gravel; true *C. bioculata* has bilobed pygidium but tails often missing in preserved material.

Caulleriella alata (Southern, 1914)
Easily recognisable from other taxa but possibly a complex (subtle variations seen in colour and pygidium shape). Common in gravel

Caulleriella serrata Eliason, 1962
I've never seen anything like this but it could turn up in deeper water. Not a typical *Caulleriella*. Has anyone seen this?

Caulleriella parva Gillandt, 1979
I don't think I've seen this but it could be a typical species of holdfasts or in shells bored by spionids or *Dodecaceria*; it's yellow with red eyes (MEP). Has anyone seen this?

Caulleriella viridis (Langerhans, 1880)
May include *C. flavoviridis* St.Joseph. Could be included with our *C. bioculata* records but no confirmed distribution outside Madeira. Has anyone seen this?

Caulleriella "A"
Nothing like this in literature I've seen. Known from offshore mud.

Caulleriella "B"
May be similar to Doner/Blake? (in press) sp. Very long pointed prostomium long thin body, hooks from about 10; shallow gravel; western. Has anyone seen it? – all specimens should be kept.

Chaetozone caputesocis (St.Joseph, 1894)
Moved to *Chaetozone* by Petersen (1999); name commonly used but I've seen nothing like the descriptions unless it's a juvenile *Cirratulus* with palps miscounted. Some references may have been *C. gibber* but no eyed cirratulids common on mudflats. This is a small species with very curved chaetae (MEP): Has anyone ever called anything by this name?

Chaetozone christiei Chambers, 2000
This corresponds to '**Type B**' in the 1996 guide (and Christie, 1985). Some we thought like '**Type C**' were identified as *C. christiei* by S. Chambers. This is the commonest *Chaetozone*, in shallow sediments and ubiquitous. Does anyone have definite 'Type C'?

Chaetozone gibber Woodham & Chambers, 1994
Fairly easily recognisable. It's distribution is now known to extend from the south and west coasts to Scotland and around the east coast of Scotland and south to north east England (*i.e.* everywhere except SE England North Sea coast – has anyone found it there?)

Chaetozone jubata Chambers & Woodham, 2003
A recently described deep sea species. Deep samples (>200m) have more undescribed species, not covered here.

Chaetozone setosa Malmgren, 1867
The current (Chambers, 2000) definition may still be a complex. It's found in mud at moderate depths; probably not in the south east.

Chaetozone vivipara (Christie, 1984)
Moved to *Chaetozone* by Petersen (1999). Fairly recognisable. Lives in same habitat as *Tharyx* 'Type A' (estuarine mud) but not found with it. Has anyone ever found them together? Found in Northern Ireland as well as NE England. Does anyone have access to Scottish estuarine mud cirratulids?

Chaetozone zetlandica (McIntosh, 1911)
Effectively moved back to *Chaetozone* (from *Caulleriella*) by Blake (1996). Fairly recognisable (by Chambers' paper). Ubiquitous in shallow mixed sediments and muddy sand.

***Chaetozone* "D"**
Quite distinctive; broad thoracic region; long bent capillary chaetae in front with fairly long segments; very long beaded mid body. Please note that this form often has eyes (not seen in material described for the 1996 guide. Found in northern mud samples in fairly deep water. Under investigation by S. Chambers

Tharyx acutus Webster & Benedict, 1887
No published records for UK but similar to our ***Tharyx*** **'Type A'** and could be a provisional name for it; depth range given by Blake (1991) seems unlikely. 'Type A' seems restricted to estuarine mud in the south. Has anyone seen it in Scotland, or with *C. vivipara*? Would participants prefer to continue using letter type names or begin using a published name that could change?

Tharyx killariensis (Southern, 1914)
Swellings listed by Blake (1991) not always apparent; some variation in colour/shape; notopodial hooks not always present (Southern, 1914); could still be a complex. Frequent in a range of subtidal sediments.

Aphelochaeta filiformis (Keferstein, 1862)
Descriptions don't seem to fit any I've seen but *Aphelochaeta* need more attention. Mentioned in Petersen (1999): some material from northern France had the papillate pharynx extruded and otherwise in good agreement with the original description. Has anyone used this name?

Aphelochaeta glandaria Blake, 1996
This American (west coast) species is very similar to some of our 'Type A' and Blake (1996) states he's seen similar worms in northern Europe. Should we provisionally use the name?

Aphelochaeta marioni (St.Joseph, 1894)
The worm commonly called *A. marioni* in UK is almost certainly not this (*e.g.* Blake, 1996); the name may apply to one of the 'Type A' forms. However, the figures given by Hartmann-Schröder are in good agreement with a specimen identified by St. Joseph. He was probably looking at more than one species when he wrote the description, as the chaeta he shows is that of a *Monticellina*, which may have been *M. heterochaeta* (if it has blue oocytes, it probably is). The specimen that I (MEP) received for examination was a true *Aphelochaeta*, without any modified spines, so the original sample probably had more than one species. It's probably less confusing to continue with our present system until we have a definite name for the well-known worm (estuarine with a swollen tail; it can be separated by it's palps being much further forward than in 'Type A').

Aphelochaeta mcintoshi (Southern, 1914)
Similar to some 'Type A' but described as usually having proboscis everted (unusual for a cirratulid). Do you call anything by this name?

Aphelochaeta monilaris (Hartman, 1960)
A west coast American species that is similar to some *A. marioni*. McIntyre's specimens have a short, distinct "thorax" thereafter with segments rapidly becoming larger and rounder. I have not seen a complete specimen, but I suspect the species may have a slightly inflated posterior region (MEP); see Petersen (1999) Fig. 1, far right.

Aphelochaeta "A"
General term for offshore *Aphelochaeta* with palps close to chaetiger 1. There are probably several spp involved, including 'MEP nsp' below.

Aphelochaeta "B"
The taxon described in the 1996 guide as above does not now seem consistent enough to use – refer to *A. 'marioni'*.

Aphelochaeta "C"
This name should now be used for *Aphelochaeta* with eyes.

In the 1996 guide ***'Aphelochaeta' multibranchis*** (Grube, 1863) was used. However that species has spines so is not an *Aphelochaeta*. The sigmoid spines never become long and prominent; they do not develop gradually, with some capillaries slowly becoming wider and wider but appear suddenly without any transitional forms preceding them; on the lectotype, they suddenly appear on chaetiger 10, with 4 short, strongly hooked sigmoid spines appearing between the capillaries, with a capillary outer most at both ends; farther back the neuropodia have up to 6-7 (8?) spines. It is from the Adriatic. I have not seen it in any northern European material (MEP).

*Aphelochaeta "*MEP n.sp.*"*
This is a small cryptofaunal worm with large eggs found in holdfasts, found at least up to Iceland. See (Petersen, 1999 for figure); it is awaiting description.

Monticellina annulosa (Hartman, 1965)
Possibly present in UK but *M. heterochaeta* is the most likely (MEP). There might be more than 1 *Monticellina* in UK waters; some are large and dark red-brown, while others are smaller with a pale body and dark gut.

Monticellina heterochaeta Laubier, 1960
3 Atlantic *Monticellina* were combined under ***M. dorsobranchialis*** (Kirkegaard, 1959) by Blake (1991) but they are likely to be re-split (Blake, 1996). True *M. dorsobranchialis* is probably not found in the UK. M. *heterochaeta* is the most likely British sp (MEP). Should we leave them at genus for now?

Dodecaceria concharum Oersted, 1843
Gibson (1979) used the name *D. fimbriata* (Verrill, 1879) for this species but that species is probably not found in the UK (MEP). *D. caulleryi* Dehorne, 1933 is a junior synonym of *D. concharum*. This species is more tolerant of lower salinity than the following. It reproduces asexually by fragmentation (and eventually by epitokes) and has nuchal organs that are flat patches of cilia (George & Petersen 1991). Those of *D. ater* and the Mediterranean *D. saxicola* (Grube, 1863) are slit-like and easy to see under a good stereo microscope (Fig. 1 in Petersen, 1999). If you can see nuchal slits, you do not have *D. concharum,* where the nuchal organs are not conspicuous and not easy to see. There are also usually signs of asexual reproduction, which would eliminate the parthenogenetic species with the slitlike nuchal organs. Does anyone identify *Dodecaceria* with confidence?

Dodecaceria ater (Quatrfages, 1866)
This species was called *D. concharum* Oersted, 1843 by Gibson (1979). A subtidal marine species. *D. saxicola* (Grube, 1855) may be the senior synonym of *D, ater*, but until we get more information it is easier to keep them separate. It is much more difficult to re-separate species (MEP).

Dodecaceria diceria Hartman, 1951
The species conforming to the description from the North Sea may not be this (MEP).

Literature

This is not an exhaustive list but includes key references. Those given in boldface have been added since the 1996 guide. I have Petersen (1999) as a PDF, which I can email on request.

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Table 1. Distribution of cirratulids in UK waters

Region		Offshore Atlantic	Offshore North Sea	Shetland	E Scotland	NE England	SE England	Channel / SW England	Wales	NW England	W Scotland	N Ireland
Unicomarine Coverage		Poor	Poor	Poor	Poor	Moderate	Good	Moderate	Poor	Moderate	Poor	Moderate
Genus	**species**	(deeper than 200m)	(over 50km from coast)		(south from JohnOGroats)	(north from Bridlington)	(Bridlington to Dover)	(Dover to Welsh border)			(including Orkney and north coast)	
Cirratulus	*cirratus agg.*	-	Emu	-	Um,SEPA	Um	Emu,IECS	Emu	IECS	-	SEPA	Um,Emu
Cirratulus	*caudatus*	Um	Emu	Um	IECS	Emu	-	-	-	-	Um,SEPA	-
Cirratulus	" A"	-	-	-	-	-	-	-	-	-	-	-
Cirriformia	*tentaculata*	-	-	-	Um,SEPA	Um,IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu	Um	Um,SEPA	Um,Emu
Protocirrineris	*chrysoderma*	-	-	-	-	-	Um	Um,Emu,IECS	-	-	-	-
Caulleriella	*bioculata*	-	Um,Emu	-	-	-	-	Um,Emu,IECS	Um,Emu	-	-	Um
Caulleriella	*alata*	-	Um,Emu	SEPA	Um,SEPA	-	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	Um,IECS	Um,SEPA	Um,Emu
Caulleriella	*"A"*	Um	Um,Emu	-	-	-	-	-	-	-	-	Um
Caulleriella	*"B"*	-	Emu	-	-	-	-	Um,Emu	-	-	Um	-
Caulleriella	*viridis*	-	-	-	-	-	-	-	IECS?	-	-	-
Chaetozone	*zetlandica*	-	Emu	-	Um,SEPA,IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	Um	Um,SEPA,IECS	Um,Emu
Chaetozone	*gibber*	-	-	-	Um,SEPA	Emu,IECS	-	Um,Emu,IECS	Um,Emu,IECS	-	SEPA	-
Chaetozone	*setosa*	Um	Um,Emu	-	IECS	Um,Emu,IECS	Emu,IECS	Emu,IECS	-	Um,Emu	IECS	Emu
Chaetozone	*christiei*	-	Um,Emu	-	Um,IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	Um	-	Um
Chaetozone	*vivipara*	-	-	-	-	Um,IECS	-	-	-	-	-	Um,Emu
Chaetozone	"D"	Um	Um	-	-	-	-	-	-	-	SEPA,IECS	Um
Tharyx	*killariensis*	-	Um,Emu	SEPA	Um,SEPA,IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	Um	Um,SEPA,IECS	Um,Emu
Tharyx	*"A"*	-	-	-	SEPA	IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	-	-	Um
Aphelochaeta	*marioni*	-	-	-	Um,SEPA	Um	Um,Emu,IECS	Um,Emu,IECS	Um,IECS	Um	Um,SEPA	Um,Emu
Aphelochaeta	*"A"*	Um	Um,Emu	-	IECS	Um,Emu,IECS	Um,Emu,IECS	Um,Emu,IECS	Emu,IECS	Um	IECS	Um
Aphelochaeta	*"C"*	-	-	-	SEPA	-	-	Um	Um	-	SEPA	Um
Monticellina		Um	-	-	SEPA	-	-	Um,Emu,IECS	Um,Emu,IECS	Um,Emu	SEPA,IECS	Um,Emu
Dodecaceria	*concharum*	-	-	SEPA	SEPA	-	-	Emu	-	-	SEPA	-
Dodecaceria	*ater*	-	Um	-	Um,IECS	-	Um,IECS	Um,IECS	Um	Um	Um	Um

Can anyone add to this?

Table 2. Provisional UK shallow water (<200m) cirratulid list with habitat information

					Listed								
Genus	**Species**	**Authority**	**Original genus**	**Other Synonyms**	**ERMS**	**NEAT**	**SD**	**Description**	**Figure**	**Type locality**	**UK distribution**	**Habitat**	**Depth**
Cirratulus	*borealis#*	Lamarck, 1818	*Cirratulus*			NEAT				S Greenland	?	?	?
Cirratulus	*caudatus*	Levinsen, 1893	*Cirratulus*		ERMS	NEAT		McIntosh, 1923	McIntosh, 1923		northern	mud	shallow - moderate
Cirratulus	*cirratus*	(O.F. Muller, 1776)	*Cirratulus*		ERMS	NEAT	SD	Fauvel, 1927; Hartmann-Schroder, 1996	Fauvel, 1927; Hartmann-Schroder, 1996		northern	mixed substrata	intertidal - shallow
Cirratulus	*incertus#*	McIntosh, 1916	*Cirratulus*		ERMS	NEAT					?	cryptofaunal	intertidal - shallow
Cirratulus	" A"#										northern?	mixed substrata	shallow
Cirratulus	*sp#*										?	?	?
Cirriformia	*tentaculata*	(Montagu, 1808)			ERMS	NEAT	SD	Fauvel, 1927; Hartmann-Schroder, 1996	Fauvel, 1927	Devon?	ubiquitous	mixed substrata	intertidal - shallow
Protocirrineris	*chrysoderma*	(Claparede, 1868)	*Cirratulus*		ERMS*			Fauvel, 1927			southern	mud; estuarine	intertidal - shallow
Caulleriella	*bioculata*	(Keferstein, 1862)	*Heterocirrus*	*Heterocirrus bioculatus*	ERMS	NEAT	SD	Fauvel, 1927	Fauvel, 1927		southern, western	mud; mixed substrata?	shallow
Caulleriella	*alata*	(Southern, 1914)	*Chaetozone*	*Heterocirrus alatus*	ERMS	NEAT	SD	Southern, 1914; Fauvel, 1927	Southern, 1914; Fauvel, 1927	SW Ireland	ubiquitous	gravel	shallow
Caulleriella	*serrata#*	Eliason, 1962	*Caulleriella*	*Aphelochaeta*	ERMS	NEAT		Hartmann-Schroder, 1996		Skagerrak	?	mud	moderate
Caulleriella	*parva#*	Gillandt, 1979	*Caulleriella*	*C. bioculata parva*	ERMS*	NEAT		Hartmann-Schroder, 1996	Hartmann-Schroder, 1996	Germany	?	cryptofaunal	intertidal
Caulleriella	*viridis*	(Langerhans, 1880)	*Cirratulus*		ERMS					Madeira	?	cryptofaunal	intertidal - shallow
Caulleriella	*"A"*										northern, deep	mud	moderate
Caulleriella	*"B"#*											gravel	shallow
Chaetozone	*caputesocis*	(St.Joseph, 1894)	*Heterocirrus*	*Caulleriella*	ERMS	NEAT		Fauvel, 1927; Hartmann-Schroder, 1996	Fauvel, 1927; Hartmann-Schroder, 1996	N France	?	?	?
Chaetozone	*christiei#*	Chambers, 2000	*Chaetozone*					Chambers, 2000; Christie, 1985	Chambers, 2000; Christie, 1985	Northumberland	ubiquitous	sand	intertidal - shallow
Chaetozone	*gibber*	Woodham & Chambers, 1994	*Chaetozone*		ERMS	NEAT	SD	Woodham & Chambers, 1994	Woodham & Chambers, 1994	Kent	south, west, north and northeast	mud	shallow
Chaetozone	*jubata#*	Chambers & Woodham, 2003	*Chaetozone*					Chambers & Woodham, 2003	Chambers & Woodham, 2003	Faroe-Shetland Channel	northwest, deep	fine sand	deep
Chaetozone	*setosa#*	Malmgren, 1867	*Chaetozone*		ERMS	NEAT	SD	Chambers, 2000; Christie, 1985; Fauvel, 1927; Hartmann-Schroder, 1996; Blake, 1996	Chambers, 2000; Christie, 1985; Fauvel, 1927; Hartmann-Schroder, 1996; Blake, 1996	Spitzbergen	south, west, north and northeast	mud	moderate
Chaetozone	*vivipara#*	(Christie, 1984)	*Tharyx*	*Aphelochaeta*	ERMS	NEAT	SD	Christie, 1984	Christie, 1984	Northumberland	northeast England; Northern Ireland	estuarine mud, sand	intertidal - shallow
Chaetozone	*zetlandica#*	(McIntosh, 1911)	*Caulleriella*		ERMS	NEAT	SD	Woodham & Chambers, 1994; Fauvel, 1927	Woodham & Chambers, 1994; Fauvel, 1927	Shetland	ubiquitous	mud, sand	shallow
Chaetozone	"C"	[Christie, 1985]						Christie, 1985	Christie, 1985	(Northumberland)		sand?	Intertidal - shallow
Chaetozone	"D"#										northern, deep	mud	moderate
Tharyx	*killariensis*	(Southern, 1914)		*Caulleriella*	ERMS	NEAT	SD	Southern, 1914; Fauvel, 1927; Hartmann-Schroder, 1996	Southern, 1914; Fauvel, 1927; Hartmann-Schroder, 1996	Ireland	ubiquitous	mud	shallow - moderate
Tharyx	*"A" (cf acutus)#*						SD					coarse sand	intertidal - shallow
Aphelochaeta	*filiformis*	(Keferstein, 1862)	*Cirratulus*		ERMS	NEAT	SD	Fauvel, 1927	Fauvel, 1927	N. France		cryptofaunal	?
Aphelochaeta	cf *glandaria#*	Blake, 1996	*Aphelochaeta*					Blake, 1996	Blake, 1996	California	(ubiquitous)	?	
Aphelochaeta	*marioni*	(St.Joseph, 1894)	*Heterocirrus*	*Tharyx*	ERMS	NEAT	SD	StJoseph, 1894; Fauvel, 1927; Hartmann-Schroder, 1996	StJoseph, 1894; Fauvel, 1927; Hartmann-Schroder, 1996	France	southern?	mixed substrata; estuarine	intertidal - shallow
Aphelochaeta	*mcintoshi*	(Southern, 1914)		*'Cirratulus norvegicus* ?' in McIntosh	ERMS	NEAT	SD	McIntosh, 1911		Norway	?	?	?
Aphelochaeta	cf *monilaris#*	(Hartman, 1960)	*Tharyx*	*Tharyx*				Blake, 1996	Blake, 1996	California	No	?	?
'Aphelochaeta'	*multibranchiis#*	(Grube, 1863)	*Tharyx*	*Tharyx* ; a *Chaetozone* ? - MP	ERMS	NEAT	SD	Fauvel, 1927; Hartmann-Schroder, 1996	Fauvel, 1927; Hartmann-Schroder, 1996	Mediterranean?	?	?	?
Aphelochaeta	*"A"*										ubiquitous	subtidal mixed	shallow
Aphelochaeta	*"* MEP n.sp.*"#*							Petersen, 1991	Petersen, 1999, fig. 4	(Denmark)	?	cryptofaunal: holdfasts	
Monticellina	cf *annulosa#*	(Hartman, 1965)	*Tharyx*										
Monticellina	cf *heterochaeta#*	Laubier, 1960	*Monticellina*		ERMS			Laubier, 1960	Laubier, 1960	Mediterranean France	western?	mud	shallow - moderate
Dodecaceria	*concharum*	Oersted, 1843	*Dodecaceria*	*D. fimbriata* of Gibson	ERMS	NEAT	SD	Gibson, 1977; Hartmann-Schroder, 1996;	Hartmann-Schroder, 1996;		?	cryptofaunal	intertidal - shallow
Dodecaceria	*ater*	(Quatrefages, 1866)		*D. concharum* of Gibson; may = *D. saxicola*	ERMS	NEAT		Gibson, 1977			?	cryptofaunal	shallow
Dodecaceria	cf *diceria*	Hartman, 1951	*Dodecaceria*		ERMS	NEAT				Florida	?	?	moderate

 # represents taxa changed or added since previous guide

Table 3. Provisional cirratulid identification table (UK shallow water <200m)

Genus	Species	Size (mm)	Chaetigers	Prostomium	Peristomium	Mouth	'Thoracic' region	'Abdominal' region	Tail	Pygidium	Colour	Eyes	Capillary Notochaetae	Capillary Neurochaetae	Natatory chaetae	Acicular Notochaetae		Acicular Neurochaetae		Palps	1st Gills	2nd Gills	Gills end
Cirratulus	*borealis#*					excavate anteriorly						many				from mid body	short, unidentate	from mid body	short, unidentate				2 on all segments
Cirratulus	*caudatus*			blunt		excavate anteriorly	expanded	narrower than thorax	bluntly tapering			none	fairly short	fairly short	not seen			from mid body	elongate hooks with straight shafts and curved tips	1pr on ch3			ch12?
Cirratulus	*cirratus*	120x3		blunt		excavate anteriorly	almost uniform width	segments slightly longer than in thorax	bluntly tapering		yellowish in life	black, in rows that run together	fairly short	fairly short	not seen	from mid body	short, unidentate	from mid body	short, unidentate				scattered only, posteriorly
Cirratulus	*incertus#*			blunt		excavate anteriorly					whitish, blackish, greenish	red, discrete				from mid body	short, unidentate	from mid body	short, unidentate				scattered only, posteriorly
Cirratulus	*" A"#*			flattened		excavate anteriorly	uniform width	segments slightly longer than in thorax	bluntly tapering		colourless	2	fairly short	fairly short		from mid body	short, unidentate	from mid body	short, unidentate				
Cirratulus	*sp#*										yellowish in life	red, discrete											scattered only, posteriorly
Cirriformia	*tentaculata*			blunt		excavate anteriorly	uniform width	segments slightly longer than in thorax	bluntly tapering; weakly expanded		grey or yellowish	none as adult; very small in juveniles	fairly short	fairly short	not seen	from mid body	short, unidentate	from mid body	short, unidentate				
Protocirrineris	*chrysoderma*	25 x 0.5	150	bluntly conical			weakly expanded	narrower than thorax	bluntly tapering	papilla; anus ventral	brownish with dark gut	none	fairly long in thorax	fairly long in thorax		none	none	none	none	2-3 prs; ch 4-5	as palps (ch 4-5)		
Caulleriella	*bioculata*	40 x 1	140	pointed		round	almost uniform width	segments slightly longer than in thorax	tapering slightly	bilobed; elongate distally rounded lobes	dark, brownish	2	fairly short	fairly short	not seen	from mid body	curved, bifid	from ch3	curved, bifid				
Caulleriella	*alata*	12	110	pointed		round	almost uniform width	segments slightly longer than in thorax	tapering slightly	simple	purple to pale lilac; or yellowish	2	fairly short	fairly short	rare	1-3, from 21	curved, bifid; wing on posterior margin	5-7, from 1	curved, bifid; wing on posterior margin	peristomium	accompany palps		
Caulleriella	*serrata#*																						
Caulleriella	*parva#*										brilliant yellow	2, small, red											
Caulleriella	*viridis*			pointed			almost uniform width	segments slightly longer than in thorax	tapering slightly	simple	green in life	2	fairly short	fairly short	not seen	from mid body	curved, bifid	from 3	curved, bifid	peristomium	alongside palps		
Caulleriella	*"A"*			pointed		round	expanded	long & thin; beaded	segments narrow slightly	bilobed; elongate distally rounded lobes	colourless?	none	fairly short	fairly short	not seen	from mid body	curved, bifid	from 4	curved, bifid				
Caulleriella	*"B"#*			very elongate - pointed	elongate	round	long & thin; almost uniform width	segments slightly longer than in thorax	?	?	pale; yellowish	2	fairly short	fairly short	not seen			from ca. 10	curved, bifid				
Chaetozone	*caputesocis*	17 x 1	95	blunt cone						conical tip		2					unidentate	from 10	unidentate				
Chaetozone	*christiei#*	12x1	110	narrowly pointed	partially divided into 3 annuli	round	widens to mid body	tapers	dorsoventrally flattened	rounded flattened leaf like lobe; anus dorsal	colourless to yellowish	none	short, recurved awl shaped in front & mid body	short, recurved awl shaped in front & mid body	2-3 times longer than capillaries, from c20 to end	alternate with capillaries; clear dorsal and ventral gaps between parapodia; from c50	unidentate	alternate with capillaries; clear dorsal and ventral gaps between parapodia; from c30	unidentate	peristomium	Per, almost alongside palps		less in mid body, absent posteriorly
Chaetozone	*gibber*	20	200	acutely pointed	partially divided into 3 annuli	round	swollen between chs 7-30 to form hump back;	segments becoming narrower and longer	bluntly tapered, dorsoventrally flattened, slightly angular cross section	small ventral lobe	colourless to yellowish	2; often faded	fine and slender on all; awl-shaped between 40-90	slender on all; awl-shaped between 40-90		alternate with capillaries; from 90/100 to end: 1-4	unidentate	alternate with capillaries; from 50/80 to end	unidentate	peristomium	1st ch, immediately post to palps		
Chaetozone	*jubata#*			pointed		round	widens to mid body	tapers	deep constrictions between segments; rounded cross section		colourless to yellowish	none	short, recurved awl shaped in front & mid body	short, recurved awl shaped in front & mid body			unidentate		unidentate				
Chaetozone	*setosa#*	20x1.5	83	narrowly pointed	partially divided into 3 annuli	round	widens to mid body	tapers	deep constrictions between segments; rounded cross section	very small, flat rounded ventral lobe; dorsal anus	colourless to yellowish	none	short, recurved awl shaped in front & mid body	short, recurved awl shaped in front & mid body	4-6 times as long as capillaries, from c20-c70	alternate with capillaries; almost continuous ring; from c50	unidentate	alternate with capillaries; almost continuous ring; from c40	unidentate	peristomium	Per, behind palps	1st ch, dorsal to notopodia	less in mid body, absent posteriorly
Chaetozone	*vivipara#*	8 x 1 mm	44	pointed	3 annuli	round	widens to mid body	very short, tapering	sharply tapering	short, round, ventral lip; dorsal anus	colourless to yellowish	None	short	short, same length as notochaetae		posteriormost chs of small specimens, alternating with capillaries	very fine	posteriormost chs of small specimens, alternating with capillaries	very fine	post edge of peri	ch 1	ch2	to end
Chaetozone	*zetlandica#*	24 x 1	154	acutely pointed	partially divided into 3 annuli	round	widens to mid body	tapers	bluntly tapered, dorsoventrally flattened, oval cross section	small ventral button-like lobe	colourless to yellowish	2; sometimes faded	slender on all; medium awl-shaped on all	medium awl-shaped on all; stout awl shaped in mid body		none	none	posteriorly	unidentate (bifid in juvs)	peristomium	1st ch, immediately post to palps	above notopodial lobes	less in bid body and post.
Chaetozone	*"C"*			Pointed		round	widens to mid body	tapers	slightly flattened dorsoventrally			None	short, recurved awl shaped in front & mid body	short, recurved awl shaped in front & mid body		alternate with capillaries; clear dorsal and ventral gaps between parapodia	unidentate	alternate with capillaries; clear dorsal and ventral gaps between parapodia	unidentate	1st ch	1st ch, alongside palps		
Chaetozone	*"D"#*			pointed		round	expanded	elongate, may be beaded	deep constrictions between segments; rounded cross section		Colourless to yellowish	2; often faded	long, recurved awl shaped in thorax	long, recurved awl shaped in thorax		alternate with capillaries; almost continuous ring	unidentate	alternate with capillaries; almost continuous ring	unidentate				

Table 3. Provisional cirratulid identification table (UK shallow water <200m)

Genus	Species	Size (mm)	Chaetigers	Prostomium	Peristomium	Mouth	'Thoracic' region	'Abdominal' region	Tail	Pygidium	Colour	Eyes	Capillary Notochaetae	Capillary Neurochaetae	Natatory chaetae	Acicular Notochaetae		Acicular Neurochaetae		Palps	1st Gills	2nd Gills	Gills end
Tharyx	*killariensis*	11	84	pointed		round	expanded; ventrolatteral swelling on posterior margin	elongate; may be beaded; rounded cross section	weakle expanded	anus dorsal, ventral lobe	brownish or pale; may have darker gut	none	become longer to rear	shorter than notochaetae; absent in far posterior		from 61; variable; may be absent	1-2 curved, bifid/knob-tipped	from 56; variable	2-3 curved, bifid/knob-tipped	peri	1st imm. post to palps, ant. to ch1	above chaetae	
Tharyx	*"A" (cf acutus)#*			pointed		round	expanded; dorsa laterally flattened	narrower than thorax	expanded; dorsoventrally flattened		brownish with dark gut	none; rarely 2	fairly short	fairly short					knob-tipped				
Aphelochaeta	*filiformis*	40 x 1	150	bluntly conical	3 annuli, 2nd heart-shaped	papillate pharynx				triangular	brown/yellow or greenish live	none				none	none	none	none	1-27; front margin of ch1	ch1		to end
Aphelochaeta	cf *glandaria#*			bluntly conical		round						none				none	none	none	none				
Aphelochaeta	*marioni*	70 x 0.8	206	bluntly conical		round	expanded	narrow, elongate	strongly expanded	5 lobes below	red/brown	none	straight, fine, as long as the width of the body	anteriorly as notochaetae, shorter & wider from 16/20		none	none	none	none	1st ch	just below palps	above ch2 notopodia	gradually reducing towards end
Aphelochaeta	*mcintoshi*	1-2inches	100	small, blunt cone		proboscis usually protruded'	flattened	not much tapered	rounded	pouting button shaped vent						none	none	none	none	nearly opposite 1st notopodia			more than 20; traces behind
Aphelochaeta	cf *monilaris#*			bluntly conical			expanded	narrow, elongate	strongly expanded			none				none	none	none	none				
'Aphelochaeta'	*multibranchis#*	9 x 0.7	65+	bluntly conical			expanded					2						spines					curled
Aphelochaeta	*"A"*			bluntly conical		round	expanded	narrower than thorax	expanded		dark reddish brrown; may have darker gut	none	fairly long, straight	fairly long, straight		none	none	none	none				
Aphelochaeta	"MEP n.sp."#	Small																					
Monticellina	cf *annulosa#*			bluntly conical	elongate		weakly expanded	elongate, weakly beaded	weakly expanded			none	dorsally placed; sawtoothed abdominally, especially mid body	dorsally placed; sawtoothed abdominally, especially mid body			none	none	none		ant edge of ch1		in slope of groove
Monticellina	cf *heterochaeta#*			bluntly conical	elongate	round	weakly expanded; dorsal groove	elongate, weakly beaded	weakly expanded		dark reddish brrown; may have darker gut	none	dorsally placed; sawtoothed abdominally, especially mid body	dorsally placed; sawtoothed abdominally, especially mid body			none	none	none		ant edge of ch1		in slope of groove
Dodecaceria	*concharum*			blunt			weakly expanded	short	short										spoon-shaped		thick, fewer than 8 pairs	thick, fewer than 8 pairs	thick, fewer than 8 pairs
Dodecaceria	*ater*			blunt			weakly expanded	short	short		dark reddish brrown								spoon-shaped		thick, fewer than 8 pairs	thick, fewer than 8 pairs	thick, fewer than 8 pairs
Dodecaceria	cf *diceria*			blunt				short	short										spoon-shaped		thick, fewer than 8 pairs	thick, fewer than 8 pairs	thick, fewer than 8 pairs

 # represents taxa changed or added since previous guide