Notes to Accompany the Species Description Section of the Cirratulid Guide (Version 2.00) July 97/98

It has been pointed out that there are inconsistencies in the layout and format of the various parts in this section. These were originally personal notes used to help make up the key and final species list and were included in the guide for interest, with a minimum of "tidying". The whole section will eventually need updating and this is currently being undertaken. However, some clarifying comments are included below.

The ordering of genera and species in all sections is basically taxonomic, with similar (closely related) forms near to each other. However, there is no absolute order and there are currently inconsistencies between the ordering of the various sections. The list of genera includes world-wide genera as far as I have been able to come across them. It is probably not comprehensive. Valid genera are in bold type, invalid or indeterminable genera are in plain italics. No distinction is made between British and non-British genera in this section.

The species list (available names) includes all the names I could find (again, probably not completely comprehensive) which have been, or could be, applied to British cirratulids. Species from neighbouring areas are included if there is a possibility that they could turn up in Britain. The geographical area has been expanded to allow for many possibilities and includes the Mediterranean region and the East coast of North America as well as northern Europe, as species from these areas often turn out to be synonymous with British species. Species currently considered to be valid are given in bold type italics, regardless of their known distribution within the North Atlantic area. The restricted list of British and north European species is given at the front of the guide. Synonyms are given in plain italics. Generic changes are clustered together where the specific name has not changed, without blank line spaces between them. Each specific name is given with blank lines above and below. It should also be noted that the syntax of the list is not in the standard form for publication in terms of synonyms and authors.

The main species descriptions section uses bold type for all names as headings for notes, regardless of current validity and includes all species listed in the available names section. However, notes have been kept to a minimum for invalid names and Mediterranean and American species not yet known from northern Europe.

The illustrations at the end of the guide are still very rough at the moment and exclude palps and gills. They could be improved if there is time at a later date.

The distribution maps, included here, would also benefit from a full search of the literature as well as laboratory and museum reference collections (not yet done) but are included as a product of the workshop, giving some impression of cirratulid distribution.

The key is provided as another approach to a difficult group and should be used with the same caution as any other key. We would be grateful for any comments and particularly pointers to any errors or omissions you may find.

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

Comments on the identifications made in RT09

To provide further information on the identification problems encountered with the animals in RT09 more detailed analysis of the results has been undertaken. Differences at the generic and specific level have been calculated in the same way as for previous circulations. It should be noted that some of the names given in the AQC identification column are slightly different from those given in the cirratulid guide which was distributed with RT09. This is for data processing reasons and all cases where the terms given in the guide have been used are scored as correct though they may be in square brackets. This applies for example in some cases where inverted commas or cf. are used in the guide. eg :

Guide	Spreadsheet
"Caulleriella" zetlandica	*Caulleriella zetlandica*
Cirratulus cf. *caudatus*	*Cirratulus caudatus*

The *Chaetozone setosa* complex has not been split for the purposes of this analysis. All segregates (*eg.* Type A*)* have been regarded as correct identifications for this taxon. The distinctions made by some participants will be of interest to further studies on the group.

There were many identification problems with this ring test. Every species and most specimens caused some problems and every laboratory had some different identifications to the AQC identification. This was expected as we concentrated on a difficult family and many of the specimens were small or incomplete. This was a deliberate investigation of the effect of these factors on identification. Also, single specimens were often used whereas samples generally contain many specimens, which allow for more comparison of features. This was due to limited material for use in the ring test. A knowledge of habitat is also useful, especially in separating the species types of *Tharyx* and *Aphelochaeta*.

In spite of these problems, most species were correctly identified by the majority of laboratories. The exception was *Tharyx killariensis*, which was often recorded as an *Aphelochaeta* or as *Tharyx* A. This is probably due to the subjectivity of the features available for identifying incomplete specimens, and to the poor quality of some of the specimens. Other problem areas highlighted by the test included the distinctions between the two forms of *Aphelochaeta* and of *Tharyx* as well as those between *Caulleriella zetlandica*, *Chaetozone setosa* agg. and *C. gibber*. The small specimens of *Aphelochaeta marioni* were more troublesome than the large ones in spite of the fact that they had their tails, which were absent from the large ones. Most were recorded as *Aphelochaeta* but many were assigned to type A (or B, for the small specimens). For *Chaetozone setosa* agg. small size caused more problems than lack of tails but for *Tharyx* spp. complete specimens proved to be much easier than front ends. Nearly all participants misidentified the tail-less *T. killariensis*.

Some of these problems may be looked at in a revision of the key but it is likely that not much more is possible in some cases. It may be that the key should be made for complete specimens, with comments on identification of damaged specimens given in

a more descriptive format. There will also be a few taxonomic changes in the light of new literature and observations made at the workshop and by experts. For example, *Caulleriella* cf. *viridis* may be only a form of *C. bioculata*. *C. parva* has been included in the revised edition of the work by Hartmann-Schröder and *Tharyx vivipara* transfered to the genus *Aphelochaeta*. There are also many problems yet to be resolved in the genera *Dodecaceria*, *Cirratulus* and *Aphelochaeta*. We also continue to collect distribution data.

Distribution of records Protocirrineris chrysoderma

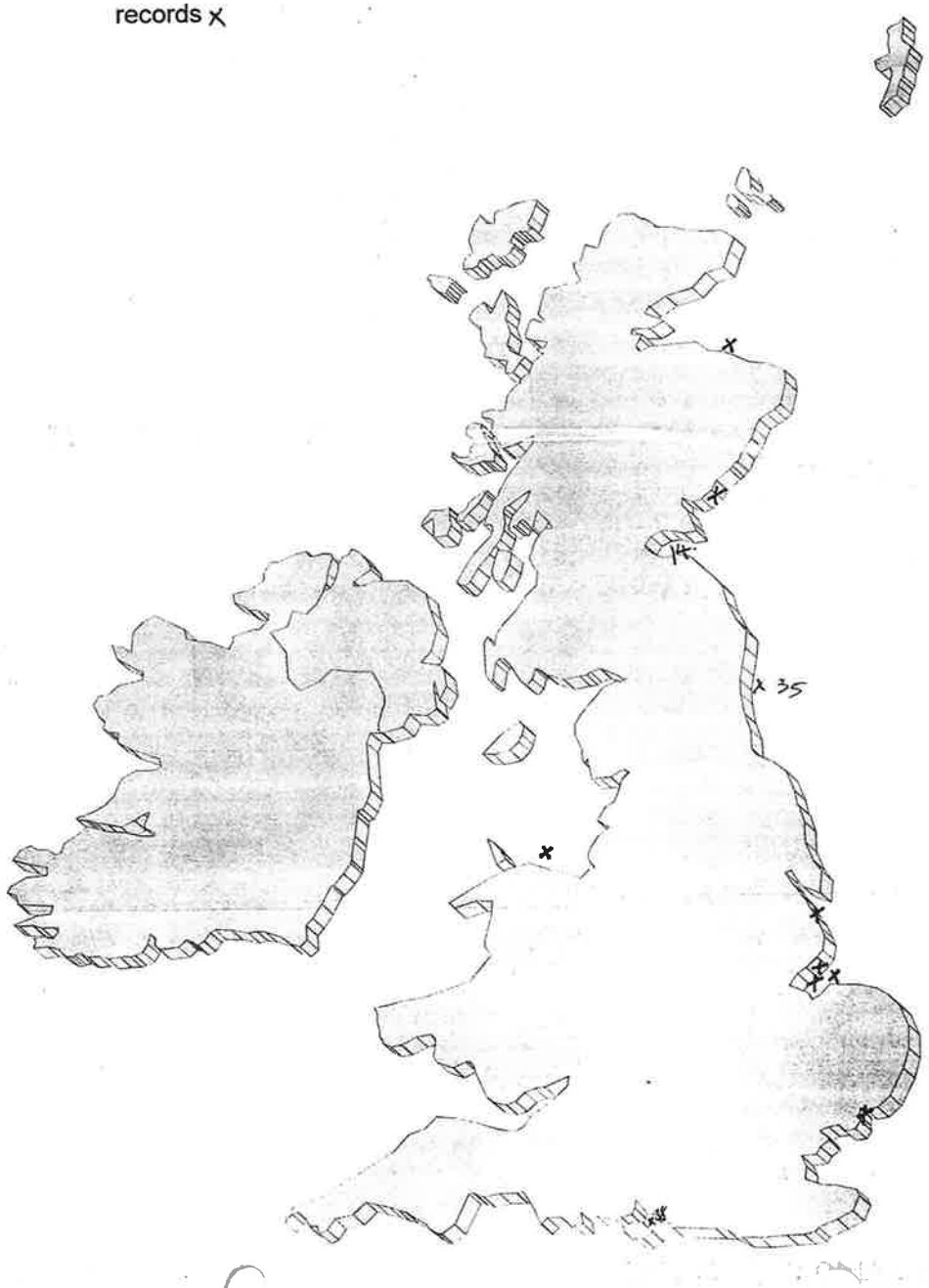
records X

Distribution of records Circriformia tentaculata

records X

Distribution of records Dodecaceria

records x



Distribution of records Tharyx "A"

records x

Distribution of records Tharyx killariensis

records x

Distribution of records Tharyx vivipara

records X

Distribution of records Monticellina cf. dorsobranchialis

records x

Distribution of records Aphelochaeta marioni

records x

Distribution of records Aphelochaeta 'A'

records x

Distribution of records Chaetozone gibber

records x

Distribution of records Chaetozone setosa agg. (A-D)

records x

Distribution of records Caulleriella "A"

records X

Distribution of records "Caulleriella" zetlandica

records x

Distribution of records Caulleriella cf. bioculata

records x

Distribution of records Caulleriella cf. viridis

records x

Distribution of records Cirratulus cf. cirratus

records x

Distribution of records Cirratulus cirratus

records x

Distribution of records | Cirratulus "A"

records X

Distribution of records | Caulleriella aluta

records x