

## NRA POLYCHAETE IDENTIFICATION COURSE

*National Museum of Wales, 23-27 November 1992*

### EXAMINATION OF POLYCHAETE SPECIMENS

When faced with a polychaete that is completely unknown, the first thing to determine is to which family it belongs. It should be stressed that even so-called experts are, not infrequently, faced with this situation. This is especially so when investigating unworked faunas from foreign localities or from unexplored depths. However, it still occasionally happens for 'known' faunas.

In order to work out the family to which a specimen belongs every taxonomist has to call on his experienced knowledge. Generally identification commences with the recognition of similarities with species previously seen. Family keys are usually only consulted as a 'last resort'.

The identifier/taxonomist has to consider the answers to a number of questions. These are listed below and it is best that all are considered together so that an overall impression of the specimen is achieved.

#### PRIMARY QUESTIONS

1. Does the specimen resemble (even remotely) anything you know of or have seen previously?
2. Are there any distinctive features?  
e.g. large spines, bifurcate prostomium, arborescent gills etc.
3. Is the body subdivided into clearly recognisable regions?  
e.g. thorax/abdomen or other divisions.
4. Does the animal look as though it is very mobile (e.g. parapodia conspicuous and projecting) or sessile (e.g. parapodia, or at least neuropodia, inconspicuous)?

## SECONDARY QUESTIONS

5. Is there a well-defined head?
6. Are eyes, antennae, palps, tentacular cirri present?
7. Does it have a proboscis?  
(obviously this may be impossible to tell if not everted)
8. Are any jaws or teeth present?  
(if not exposed they may still be visible through the body wall)
9. Does it have any gills (branchiae) and, if so, what is their form and arrangement?
10. What is the pygidial region like?  
(e.g. anal cirri, pygidial funnel/plaque etc)

All these supply clues to the identity of the polychaete. It is always best to hold a 'complete' image of the animal in your mind, rather than just one feature. In this way decisions in the identification process can be made more rapidly. This holds for all identifications, even if you know the family or genus.

Note that at this stage you do not have to start looking at minute details (e.g. setal structure) of morphology. Naturally this could be done if there were indications that it would be rewarding to do so immediately (e.g. obvious modified setae). Eventually, if no progress is made, more detailed examination will be necessary.

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No attempt has been made to supply a glossary to polychaete terms. There are a number of publications that can be consulted for these. Two useful works detailing these are Mikkelsen & Virnstein (1982) and Fauchald (1977). The title page and setal appendix of the former are attached overleaf.

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# AN ILLUSTRATED GLOSSARY OF POLYCHAETE TERMS

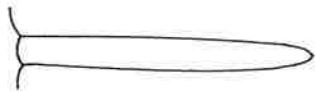
Paul S. Mikkelsen  
and  
Robert W. Virnstein

Harbor Branch Foundation, Inc.  
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Fort Pierce, Florida 33450

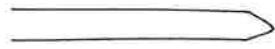


Harbor Branch Foundation, Inc.  
Technical Report No. 46  
June 1982

Appendix I. Setal types, forms and ornament.



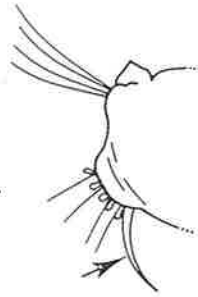
3. ACICULAR SETA



6. ACUTE



5. ACUMINATE



157a. SABRE-LIKE SETA



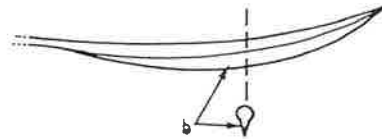
190. WINGED CAPILLARY SETA



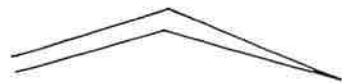
32. CAPILLARY SETA



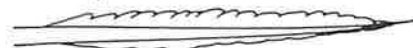
177. SUBULATE



91a. LIMBATE SETA



75. GENICULATE



23. BILIMBATE-CAPILLARY SETA



170. SPIRALLY-SERRULATE SETA



47. CRENUATE SETA

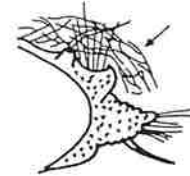


69. FLAIL SETA

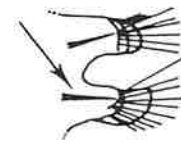


178. SUBULUNCINI

Appendix I (continued)



67. FELT SETA



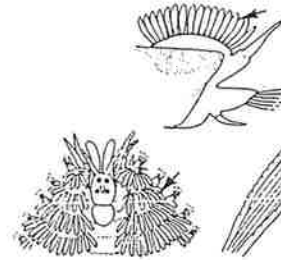
4. ACICULUM



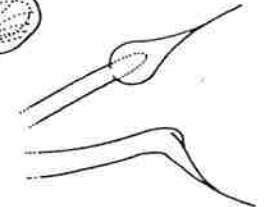
76. GENITAL HOOK



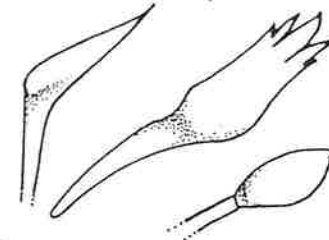
119b. PALEA (Sabellidae)



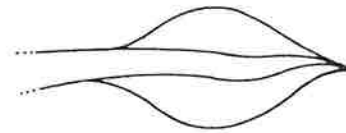
119a. PALEA (Palmyridae)



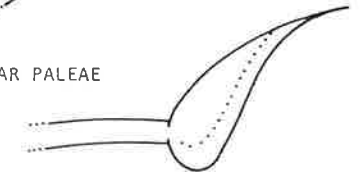
133. PICK-AXE SETA



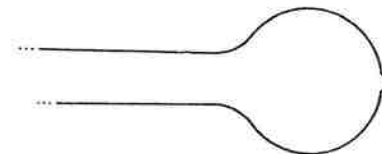
116. OPERCULAR PALEAE



176. SUBSPATULATE



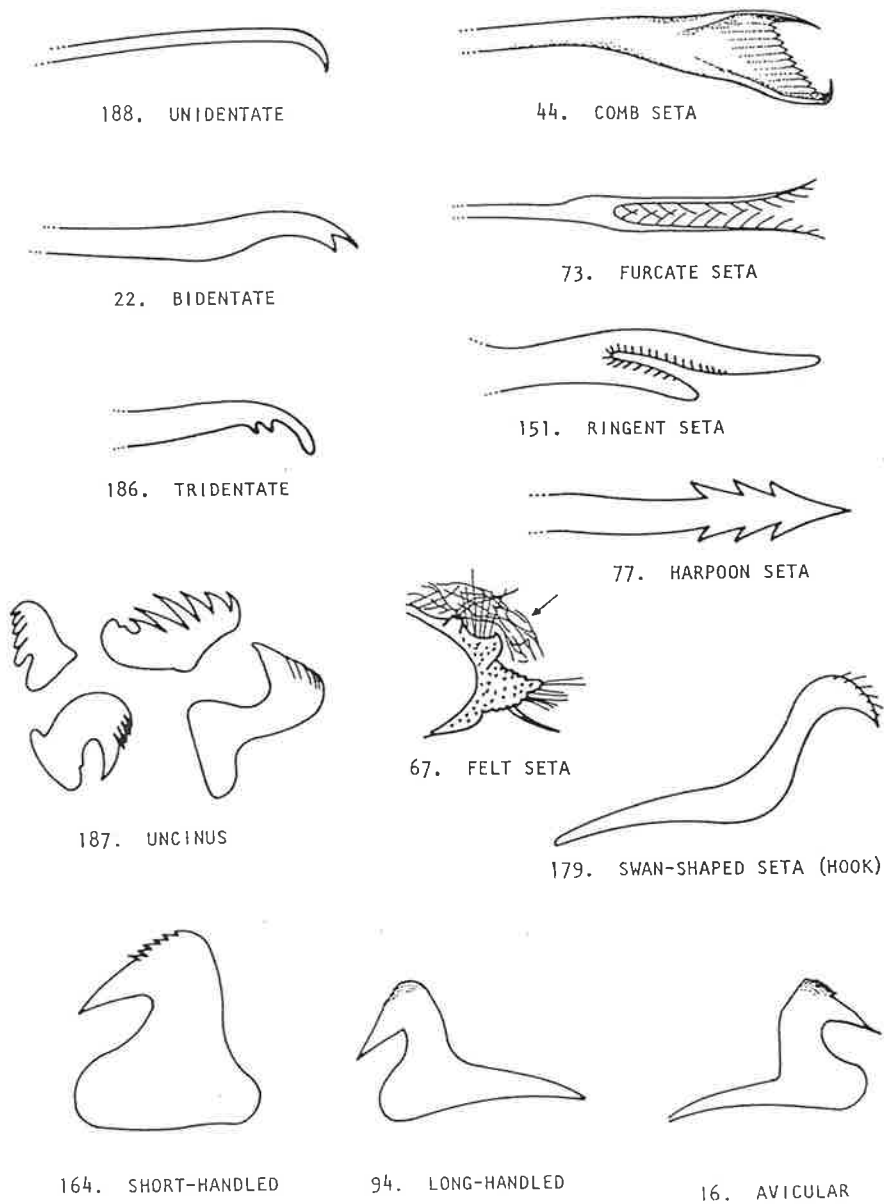
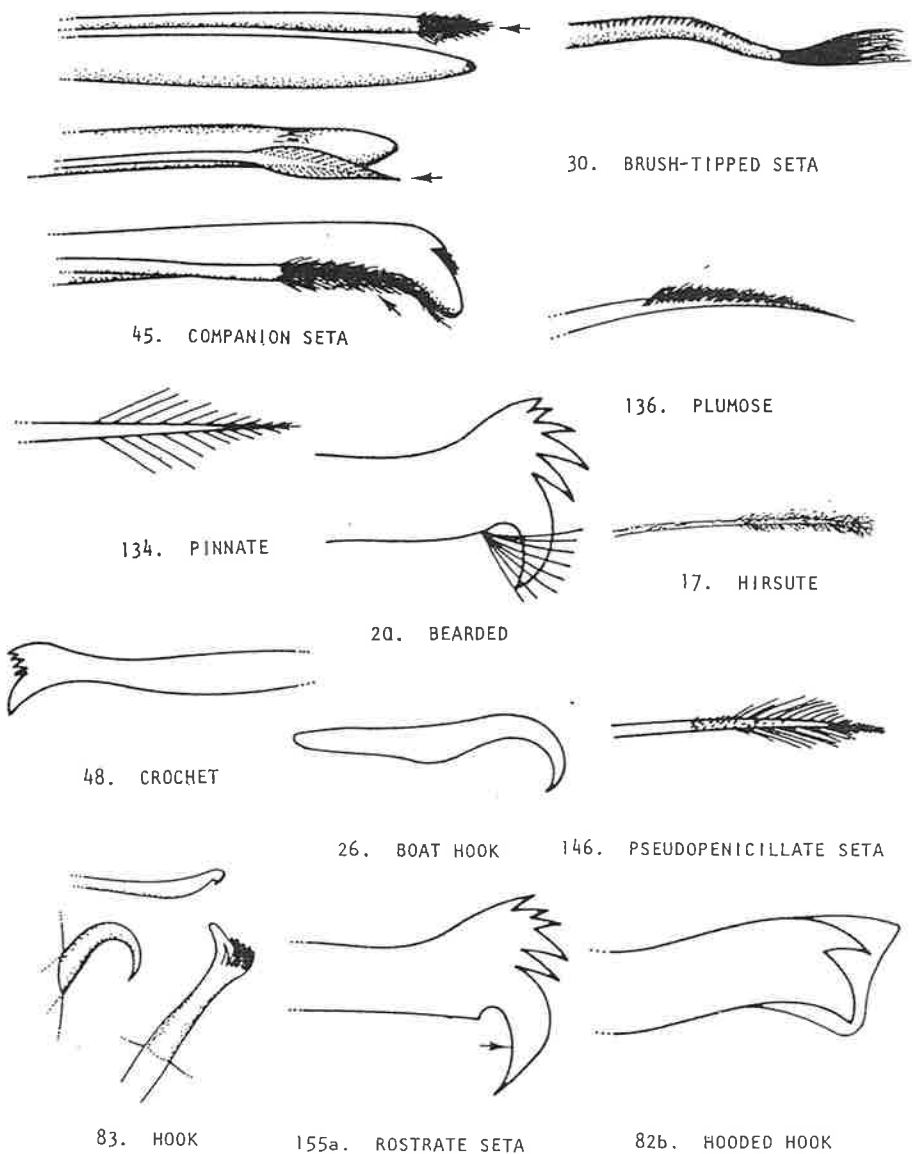
130. PENNONED



166. SPATULATE



51. CULTRIFORM



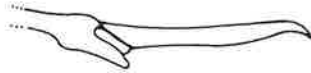
## Appendix I. (continued)



46. COMPOUND SETA



145b. PSEUDOCOMPOUND SETA



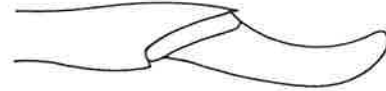
65. FALCIGER



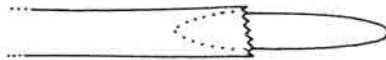
79. HEMIGOMPH



167. SPINIGER



80. HETEROGOMPH

93. LONG-APPENDAGED  
COMPOUND SETA

81. HOMOGOMPH

163. SHORT-APPENDAGED  
COMPOUND SETA