ECSA
Polychaeta Workshop
Fort Rapton
April 1990

FRPB

SABELLIDAE

Andy Mackie
ASYM/ECSA 90

The Sabellidae are one of the most attractive of the polychaete families. The Fanworms, as they are commonly known, are recognised as such by many people (not just marine scientists) through their frequent exposure on television in marine wildlife programmes. Their taxonomy, however, is not so well-known. Currently much work is taking place worldwide and considerable changes are occurring in our understanding of the genera. The key to genera presented below is the most up to date available and is based primarily on the review of Fitzhugh (1989) with modifications necessitated by the recent erection of a new genus (*Fabricinuda*) by Fitzhugh (1990). For the British Sabellidae much work is currently in progress involving Phyllis Knight-Jones (University College of Swansea) and several papers have been published (see below). This work will lead to a contribution in the *Synopses of the British Fauna* series

1. Thoracic uncini absent.....*Caobangia*
-- Thoracic uncini present.....2

2. Breast of thoracic uncini narrow, poorly developed, giving uncini an acicular appearance.....3
-- Breast of thoracic uncini well-developed, giving uncini a Z-shaped, or avicular appearance.....16

3. Abdominal uncini rasp-shaped plates, with an elongate manubrium below dentate region.....4
-- Abdominal uncini rasp-shaped plates, or with series of teeth above main fang, but without a manubrium.....9

4. Thoracic uncini with equal-sized teeth above main fang.....5
-- Thoracic uncini with unequal-sized teeth above main fang.....6

5. Body surface, especially radioles and pygidium, with minute, emergent spicules; anterior peristomial ring modified ventrally as a thick, rounded lobe; three pairs of pinnulate radioles.....Genus A
-- Body surface without spicules; anterior peristomial ring modified as a thin collarlike membrane; two pairs of pinnulate radioles....*Manayunkia*

6. Ventral filamentous appendages branched and vascularised; anterior margin of anterior peristomial ring a wide ventral lobe; inferior pseudospatulate notosetae on setigers 3-6.....*Augeneriella*
-- Ventral filamentous appendages (if present) unbranched.....7

7. Ventral filamentous appendages non-vascularised; anterior margin of anterior peristomial ring modified as low membranous collar..*Fabriciola*
-- Ventral filamentous appendages (if present) vascularised.....8

8. Ventral filamentous appendages lacking; anterior margin of anterior peristomial ring modified into a wide ventral lobe; inferior pseudospatulate notosetae on setigers 3-7.....*Fabricia*
-- Ventral filamentous appendages vascularised or lacking; anterior margin of anterior peristomial ring a low even or slightly oblique ridge; inferior pseudospatulate notosetae on setiger 3-8.....*Fabricinuda*

9. Abdominal uncini as rasp-shaped plates only.....10
-- Abdominal uncini at least in part not rasp-shaped, with a distinct main fang surmounted by broad series of smaller teeth.....11

10. Posterior peristomial ring collar present; anterior peristomial ring with a narrow, triangular, ventral lobe.....*Oriopsis*
-- Posterior peristomial ring collar absent; anterior peristomial ring with a wide, blunt, ventral lobe.....*Desdemona*

11. Abdominal uncini form short, discrete tori.....12
-- Abdominal uncini form nearly complete cinctures around the body.....*Myxicola*

12. Abdominal uncini with a distinct handle proximal to the breast.....15
-- Abdominal uncini without a distinct handle.....13

13. Thoracic neuropodial companion setae present.....*Panousea*
-- Thoracic neuropodial companion setae absent.....14

14. Last several abdominal setigers modified as a ventral anal depression.....*Euchone*
-- Last several abdominal setigers not so modified.....*Chone*

15. Palmate membrane present; dorsal radiolar appendages and bayonet setae absent.....*Fabrisabella*
-- Palmate membrane absent; dorsal radiolar appendages and bayonet setae present.....*Jasmineira*

16. Handle of thoracic uncini very long.....*Potamethus*
-- Handle of thoracic uncini of medium to short length, or absent.....17

17. Abdominal neuropodial tori as erect, conical lobes.....18
-- Abdominal neuropodial tori as low, transverse ridges.....22

18. Companion setae present.....19
-- Companion setae absent.....20

19. Radiolar eyes absent; abdominal neurosetae arranged in a tight spiral pattern.....*Sabella*
-- Radiolar compound eyes present; abdominal neurosetae arranged in an incomplete spiral, or C-shaped pattern.....*Bispira*

20. Outer margins of radioles with stylodes.....21
-- Outer margins of radioles without stylodes.....*Sabellastarte*

21. Stylodes poorly developed, only as low, rounded elevations; radiolar eyes absent.....*Pseudobranchiomma*
-- Stylodes well developed; paired, radiolar compound eyes present.....*Branchiomma*

22. Abdominal neurosetae include paleate setae.....23
--.Abdominal neurosetae do not include paleate setae.....25

23. Posterior peristomial ring with large, erect, dorsal and ventral flanges.....*Anamobaea*
-- Posterior peristomial ring without such appendages; accessory lamellae may be present.....24

24. Setae of setiger 1 arranged in an elongate fascicle.....*Notaulax*
-- Setae of setiger 1 arranged in a bundle similar to other superior thoracic notosetae.....*Hypsicomus*

25. Inferior thoracic notosetae composed of broadly hooded setae.....26
-- Inferior thoracic notosetae composed of paleate setae only.....27

26. At least some radioles with compound eyes located on inner margins, near the distal end.....*Megalomma*
-- No radiolar compound eyes present.....*Demonax*

27. With unpaired radiolar compound eyes present on outer margins; limited to proximal region of most radioles.....28
-- Without compound radiolar eyes.....30

28. Radioles, at least of large specimens, appear spiraled; very numerous (>20 pairs); sometimes dichotomously branched.....*Eudistylia*
-- Radioles not spiraled; less than 20 pairs.....29

29. Radioles with numerous dichotomous branches.....*Schizobranchia*
-- Radioles not branched.....*Pseudopotamilla*

30. Radioles united by a palmate membrane.....*Potamilla*
-- Radioles free to their bases.....31

31. Thoracic neurosetae replaced by thick spines on last few setigers.....*Potaspina*
-- All thoracic neurosetae are uncini of similar shape.....32

32. Last 5 abdominal setigers with uncini replaced by large, thick, falcate spines.....*Sabellonga*
-- All abdominal uncini of similar shape.....33

33. Posterior peristomial ring collar present.....34
-- Posterior peristomial ring collar absent.....*Amphiglena*

34. Thoracic and abdominal uncini without handles.....*Laonome*
-- Thoracic and abdominal uncini with handles.....*Perkinsiana*

SELECTED REFERENCES

CHUGHTAI, I. & KNIGHT-JONES, E. W. 1988. Burrowing into limestone by sabellid polychaetes.-*Zoologica Scripta*, 17: 231-238.

FITZHUGH, K. 1989. A systematic revision of the Sabellidae-Caobangiidae-Sabellongidae complex (Annelida: Polychaeta).-*Bulletin of the American Museum of Natural History*, 192, 104pp.

FITZHUGH, K. 1990. Fabricinuda, a new genus of Fabriciinae (Polychaeta: Sabellidae).-*Proceedings of the Biological Society of Washington*, 103: 161-178.

GAMBI, M. C., GIANGRANDE, A. & FRESI, E. 1983. Présence d'*Oriopsis eimeri* (Langerhans, 1880) (Polychaeta, Sabellidae) en Méditerranée.-*Vie et Milieu*, 33: 213-217.

GIANGRANDE, A. & CASTELLI,A. 1986. Occurrence of *Fabricia filamentosa* Day, 1963 (Polychaeta, Sabellidae, Fabricinae) in the Mediterranean Sea.-*Oebalia*, 13: 119-122.

KNIGHT-JONES, P. 1983. Contributions to the taxonomy of Sabellidae (Polychaeta).-*Zoological Journal of the Linnean Society*, 79: 245-295.

KNIGHT-JONES, P. & BOWDEN, N. 1984. Incubation and scissiparity in Sabellidae (Polychaeta).-*Journal of the Marine Biological Society of the United Kingdom*, 64: 809-818.

KNIGHT-JONES, P. & WALKER, A. J. M. 1985. Two new species of *Demonax* (Sabellidae: Polychaeta) from Liverpool Bay.-*Journal of Natural History*, 19: 605-612.

LARDICCI, C. & CASTELLI, A. 1986. *Desdemona ornata* Banse, 1957 (Polychaeta, Sabellidae, Fabricinae) new record in the Mediterranean Sea.-*Oebalia*, 13: 195-201.