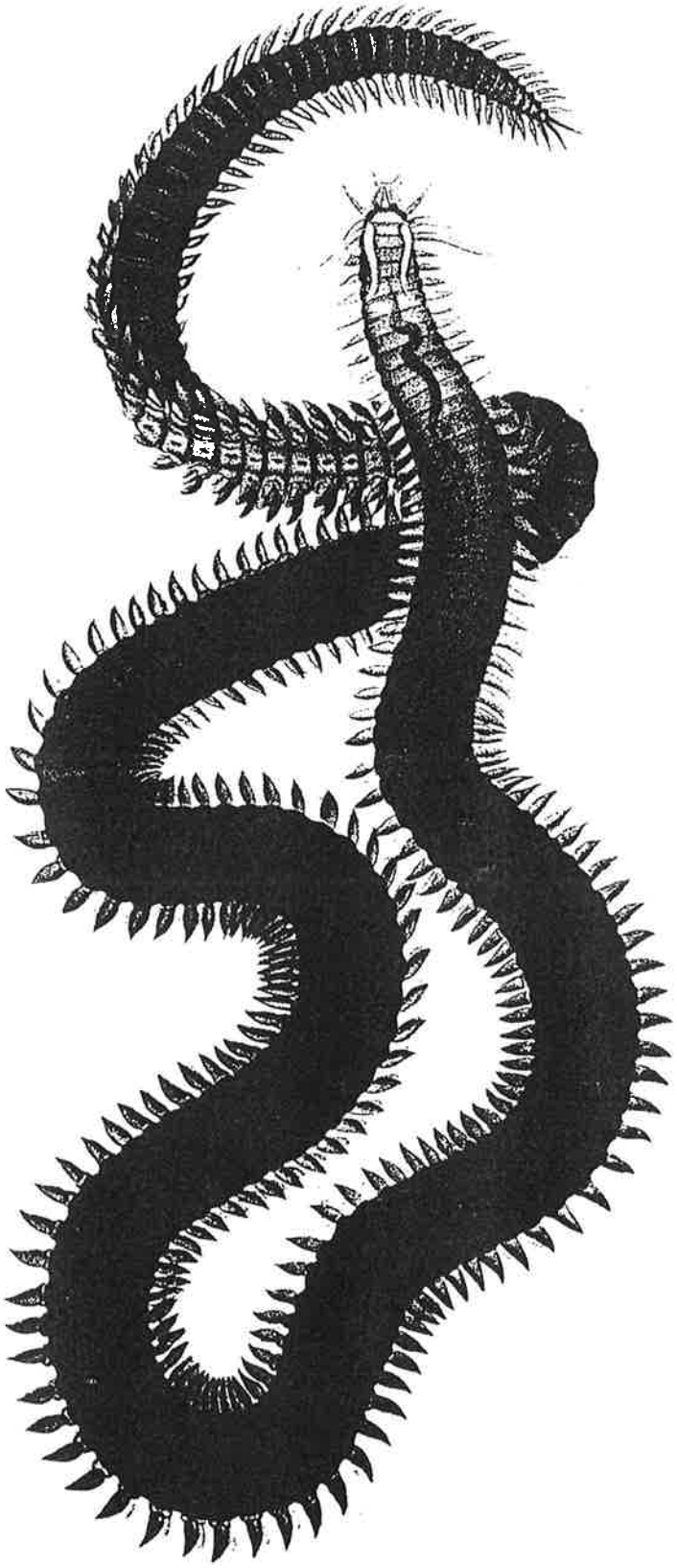
IRTU/ECSA WORKSHOP
PORTAFERRY OCT/ 2001

# FAMILY PHYLLODOCIDAE



# NORTHERN EUROPEAN PHYLLODOCIDS

Polychaetes with two pairs of paired antennae, similar in size and shape, median antenna or nuchal papilla may be present. One pair of eyes, rarely inconspicuous or lacking. Eversible, usually papillose proboscis, without jaws. A pair of nuchal organs present. Two, three or four pairs of tentacular cirri, situated on the first two to three segments. Setae absent from first segment. Dorsal and ventral cirri prominent, foliose. Parapodia uni- or biramous, if biramous with weakly developed notopodia. Notosetae, if present, capillary. Neurosetae compound with rostrum of setal shaft with teeth. Blade serrated along one side. Additional capillary neurosetae may occur. One pair of pygidial cirri. Median pygidial papilla present or absent.

## KEY TO NORTHERN EUROPEAN PHYLLODOCIDS

1. Two or three pairs of tentacular cirri (2+0 or 1+2+0) (Fig. 2A, B).....2
- Four pairs of tentacular cirri (1+2+1) (Fig. 1A).....10
2. Two pairs of tentacular cirri on first visible segment. Following segment lacking dorsal cirri. Nuchal papilla present (Fig. 2A).....*Eteone*...3
- Three pairs of tentacular cirri: one pair on segment 1 and two pairs on segment 2. Third segment lacking dorsal cirri. Median antenna present or absent (Fig. 2B, C).....8
3. Dorsal pair of tentacular cirri more than twice as long as ventral pair. Dark pigments forming three distinct longitudinal lines on dorsum.....*Eteone barbata* (Malmgren, 1865)
- Dorsal pair of tentacular cirri as long as ventral pair, or shorter.....4
4. Ventral cirri with distinctly pointed tips.....*Eteone suecica* Bergström, 1914
- Ventral cirri with rounded tips.....5
5. Segment 3 (second visible segment) without setigerous lobes or setae (a few setae may occur in smaller specimens), only with ventral cirri. Ventral pair of tentacular cirri distinctly longer than dorsal pair. Pygidial cirri long and pointed. Animals white.....*Eteone foliosa* Quatrefages, 1866
- Segment 3 with setigerous lobes and numerous setae. Tentacular cirri of about equal length. Pygidial cirri rounded.....6
6. Proboscis with small, thorny, dorsal papillae. Rust-reddish pigment present on anterior sides of cirrophores and segmentally as two lateral and two median squares across dorsum, giving animal a chequered appearance.....*Eteone picta* Quatrefages, 1866
- Proboscis smooth or with indistinct papillae. Pigmentation pattern, if occurring, otherwise.....7
7. Prostomium with convex sides. Ventral pair of tentacular cirri slightly stouter than dorsal. Live animals rose-red to orange.....*Eteone* cf. *flava* (Fabricius, 1780)
- Prostomium with straight or slightly convex sides. Dorsal and ventral pairs of tentacular cirri of similar size and shape. Live animals yellow to white.....*Eteone* cf. *longa* (Fabricius, 1780)
8. Small median antenna present (may be difficult to detect) (Fig. 2B).....*Pseudomystides limbata* (Saint-Joseph, 1888)
- Median antenna absent.....9
9. Tentacular cirri usually bottle-shaped. Prostomium rounded, about as long as wide. Dorsal and ventral cirri ovoid, dorsal ones slightly larger (Fig. 2C).....*Mystides*[1]

- Tentacular cirri evenly tapering. Prostomium much longer than wide. Dorsal and ventral cirri cylindrical, ventral ones much longer..... .....*Hesionura elongata* (Southern, 1914)

10. Parapodia biramous (Fig. 2F). Nuchal organs large, dorsally extended..... .....*Notophyllum foliosum* (M. Sars, 1835)
- Parapodia uniramous (Figs. 1A, 2G). Nuchal organs either inconspicuous or lateral.....11

11. Segments 2-4 with large protruding stout setae ventro-laterally..... .....*Chaetoparia nilssoni* Malmgren, 1867
- Anterior specialized setae absent.....12

12. Segments 1 and 2 forming a collar covering posterior part of prostomium (Fig. 2D).....*Paranaitis*...13
- Anterior segments visible or reduced, but not forming a collar.....14

13. Nuchal papilla absent, ligula indistinct.....*P. wahlbergi* (Malmgren, 1865)
- Nuchal papilla present, situated in a deep, distinct ligula (Fig. 2D)..... .....*P. kosteriensis* (Malmgren, 1867)

14. Median antenna present (may be small).....26
- Median antenna absent. Nuchal papilla present or absent.....15

15. Nuchal papilla present, situated in a posterior dorsal incision of prostomium (Fig. 2E). Proboscis with distinct proximal and distal parts. Posterior sides of dorsal cirri with ciliated furrow.....*Phyllodoce*...16
- Nuchal papilla absent. Proboscis not subdivided. Posterior side of dorsal cirri without ciliated furrow.....23

16. Ventral cirri of median segments slender, subulate, much longer than setigerous lobes. Proboscis with two kinds of papillae: six proximal longitudinal rows of soft rounded papillae on each side; anterior papillae of median rows hard, pointed. Live animals anteriorly with longitudinal red bands laterally on each side of dorsum.....*P. rosea* (McIntosh, 1877)
- Ventral cirri shorter and broader. Proboscis without hard papillae.....17

17. Presetal lobes strongly asymmetrical, with long and pointed upper part. Setae from segment 4. Dorsal cirri of median segments oval..... .....*P.* cf. *longipes* Kinberg, 1866
- Presetal lobes symmetrical or slightly asymmetrical, rounded; never with long and pointed upper part. Setae from segment 3. Dorsal cirri of median segments rectangular or pointed.....18

18. Proximal part of proboscis with six longitudinal rows of papillae on each side.....19
- Proximal part of proboscis otherwise.....21

19. Ventral cirri of median segments pointing downwards[2]. Proboscis with more than 11 papillae in midlateral rows. Dorsum with metallic hue; dark transverse bands on every segment.....*P. groenlandica* Örsted. 1842
- Tips of ventral cirri not directed downwards. Proboscis with no more than 11 papillae in mid-lateral rows. Dorsum with conspicuous spots mid-dorsally, laterally and on dorsal cirri, giving a chequered appearance .....20

20. Ventral cirri pointed. Proboscis with 10-11 papillae in longest rows. Prostomium darkly pigmented in front of eyes.....*P. mucosa* Örsted, 1843
- Ventral cirri oval. Proboscis with 8-9 papillae in longest rows. Prostomium not conspicuously darkly pigmented in front of eyes (some lateral pigmentation may be present). Dorsum of segment three and four darkly pigmented.....*P. maculata* (Linnaeus, 1767)

21. Proximal part of proboscis with 25-30 rows of about 15 papillae arranged in more or less distinct rows. Dorsal tentacular cirri reaching at least segment

15.....*P. lineata* (Claparède, 1870)
- Proximal part of proboscis otherwise. Dorsal tentacular cirri not reaching further than segment 14.....22
22. Proximal part of proboscis with four more or (usually) less well defined rows of three to six papillae on each side. Mid-dorsal spots forming a dark longitudinal line.....*P. citrina* Malmgren, 1865
- Proximal part of proboscis densely covered with small diffusely distributed papillae. No dark longitudinal line on dorsum.....*P. laminosa* Lamarck, 1818
23. No eyes. Segment 1 dorsally visible and well delineated from segment 2. Dorsal and ventral cirri swollen, ovoid. Ventral cirri horizontally oriented.....*Protomystides exigua* (Eliason, 1962)
- Large eyes. Segment 1 fused to segment 2. Dorsal and ventral cirri flattened; dorsal cirri cordiform. Ventral cirri obliquely oriented.....*Nereiphylla*...24
24. Dorsal cirri broader than long.....*N. lutea* (Malmgren, 1865)
- Dorsal cirri longer than broad.....25
25. Some proboscis papillae subapically hooked. Dorsum with two dark, longitudinal lines.....*N. rubiginosa* (Saint-Joseph, 1888)
- Papillae of proboscis without hooks. Dorsal cirri dark with yellow edges.....*N. paretti* Blainville, 1828
26. Segment 1 dorsally visible.....*Eulalia*...27
- Segment 1 partly or completely reduced dorsally.....36
27. Dorsal cirri rounded.....32
- Dorsal cirri pointed.....28
28. Animal without distinct pigmentation pattern.....30
- Animal with distinct pigmentation pattern, forming lines or spots.....29
29. Live animals yellowish with two red lines middorsally, and two darker more lateral lines. Red lines disappear in alcohol, but lateral lines are retained.....*E. aurea* Gravier, 1896
- Animals yellowish with two pairs of transverse olive-green bands across segments and with dark brown spots in the middle.....*E. ornata* Saint-Joseph, 1888
30. Live animals violet, eyes kidney-shaped, distinctly black.....*E. hanssoni* Pleijel, 1987
- Live animals green, eyes red, rounded. Eyes brownish in preserved condition.....*E. viridis* (Linnaeus, 1767)
31. Dorsal and ventral cirri large and flattened. Eyes hardly visible.....*E. microoculata* Pleijel, 1987
- Dorsal and ventral cirri smaller and swollen. Eyes distinct.....32
32. Median antenna minute, hardly visible (best seen in profile). Eyes small. Pygidial cirri with distinct tips. Live animal emerald green.....*E. mustela* Pleijel, 1987
- Median antenna larger. Eyes larger. Pygidial cirri with rounded ends.....33
33. Animal without distinct pigmentation pattern.....*E. tjalfiensis* Ditlevsen, 1917
- Animal with distinct pigmentation pattern, forming lines or spots.....34
34. Animals with a dark, continuous mid-dorsal longitudinal line, pygidial cirri similar to dorsal cirri.....*E. expusilla* Pleijel, 1987
- Pigmentation otherwise, pygidial cirri more elongated than dorsal cirri .....35
35. Animals with one dark longitudinal band on each side of dorsum.....*E. bilineata* (Johnston, 1840)
- Distinct dark spots on every segment, one medial and, on each side, one lateral.....*E. tripunctata* McIntosh, 1874

36. Median antenna inserted anteriorly on prostomium. Proboscis densely covered with long thread-like papillae. Ventral tentacular cirri of segment 2 conspicuously flattened and enlarged.....*Pterocirrus*...37
- Median antenna inserted centrally on prostomium. Proboscis smooth or with rounded papillae. Ventral tentacular cirri cylindrical or slightly flattened.....39
37. Eyes, if visible, poorly delineated, kidneyshaped.....*P. slastnikovi* (Annenkova, 1946)
- Eyes distinct, rounded.....38
38. Dorsal cirri almost as wide as long. Ventral cirri with distinct tips.....*P. nidarosiensis* Pleijel, 1987
- Dorsal cirri much longer than wide. Ventral cirri without distinct tips.....*P. macroceros* (Grube, 1860)
39. Proboscis densely covered with distinct rounded papillae. Presetal lobes distinctly cleft. Dark spots present dorsally anterior to eyes and as transverse rows of about six on each segment.....*Pirakia punctifera* (Grube, 1860)
- Proboscis with micropapillae only. Presetal lobes either entire and symmetrical, or distinctly asymmetrical with prolonged upper part.....40
40. Segment 1 completly reduced. Presetal lobes symmetrical (Fig. 1B).....*Eumida*...41
- Segment 1 partly reduced. Presetal lobes with prolonged upper part. (Fig. 2G).....*Sige*...44
41. Dorsal and pygidial cirri oblong, swollen, with rounded ends.....*E. arctica* (Annenkova, 1946)
- Dorsal cirri cordiform or triangular, pygidial cirri cylindrical, pointed.....42
42. Dorsal and ventral cirri pointed. Live animals always with green pigmentation.....43
- Ventral cirri rounded. Dorsal cirri cordiform, longer than broad, without demarcated tips. Colour variable, usually with brown or green pigmentation.....*E. sanguinea* (Örsted, 1843)
43. Dorsal cirri of adults cordiform, about as broad as long, with pronounced tips. Cirrophores distinct. Pygidium without small median papilla.....*E. bahusiensis* Bergström, 1914
- Dorsal cirri triangular. Cirrophores indistinct. Pygidium with small median papilla. Animals no longer than 1 cm.....*E. ockelmanni* Eibye-Jacobsen, 1987
44. Eyes present.....*S. fusigera* Malmgren, 1865
- Eyes absent.....*S. oliveri* Pleijel, 1990

1. Three species of the genus may occur in British waters: the deep-water species (2.000 m) *Mystides bathysiphonicola* Hartmann-Schröder, 1973, the blind *M. caeca* Langerhans, 1880, and the northern form *M. borealis* Théel, 1879, which is provided with eyes. The latter, however, is poorly known and requires redescription.
2. Character not distinctly developed in specimens smaller than about 2 cm long.

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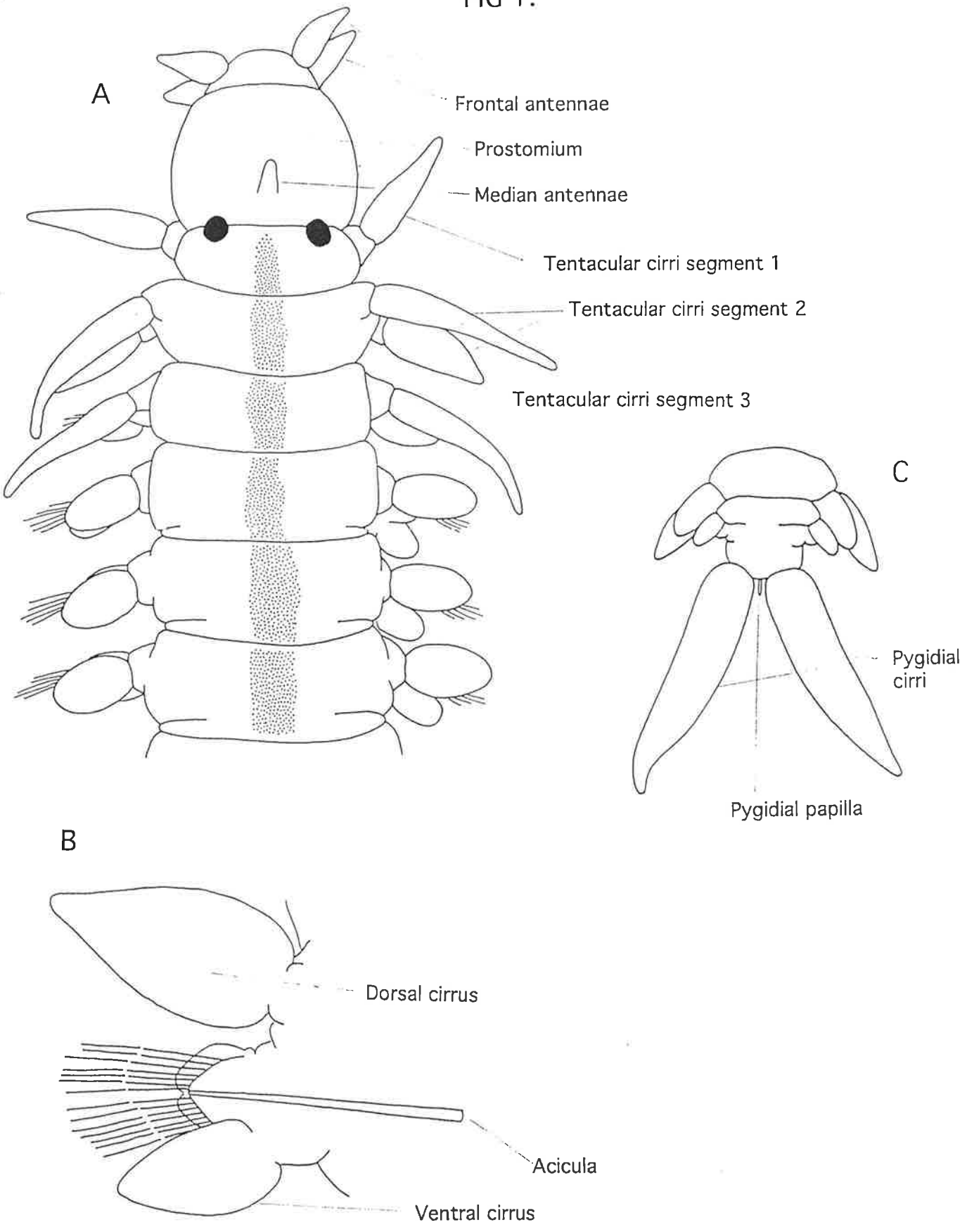
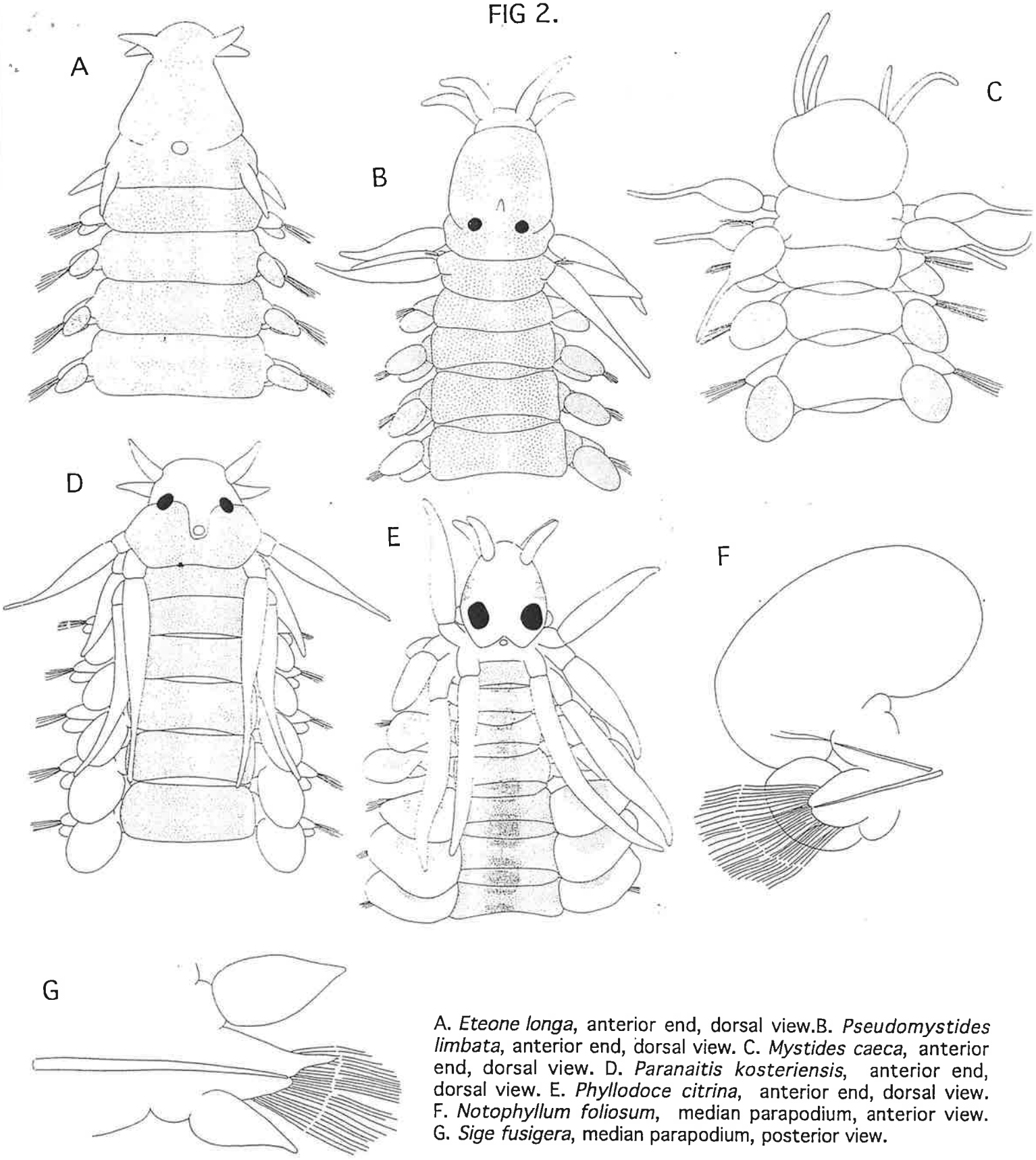
FIG 1.




A. Anterior end, dorsal view.
B. Parapodium, posterior view.
C. Pygidium, ventral view.

FIG 2.




A. *Eteone longa*, anterior end, dorsal view.B. *Pseudomystides limbata*, anterior end, dorsal view. C. *Mystides caeca*, anterior end, dorsal view. D. *Paranaitis kosteriensis*, anterior end, dorsal view. E. *Phyllodoce citrina*, anterior end, dorsal view. F. *Notophyllum foliosum*, median parapodium, anterior view. G. *Sige fusigera*, median parapodium, posterior view.