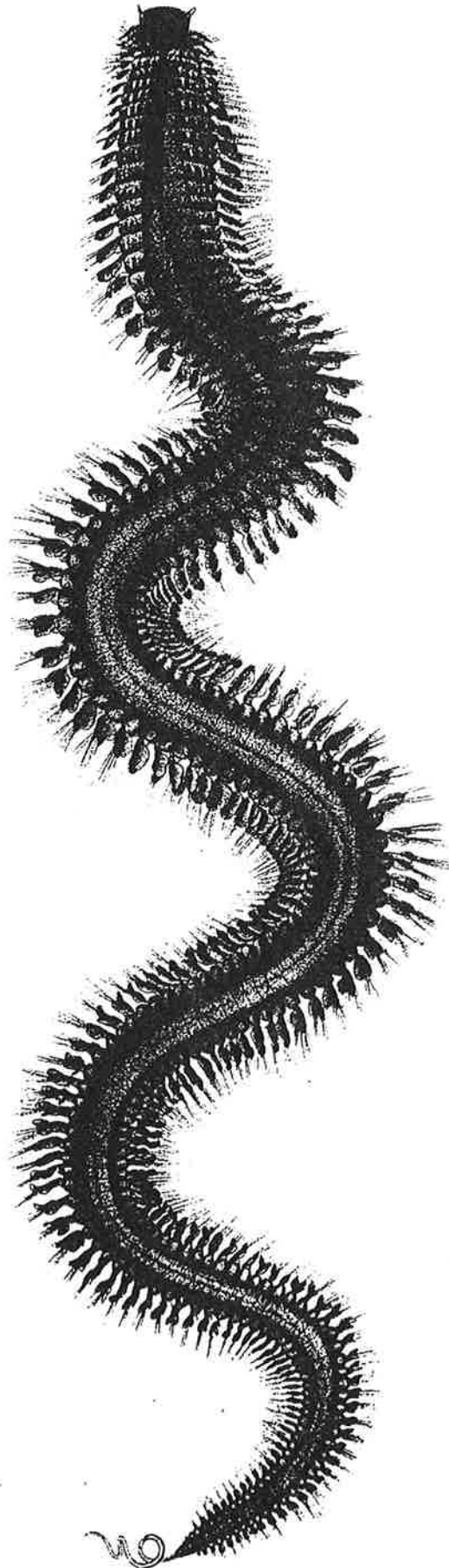


FAMILY NEPHTYIDAE



no

NORTHERN EUROPEAN NEPHTYIDS

Identification of the family: Medium-sized to large slender errant polychaetes of quadrangular shape in crosssection. In general either of a uniform brown colour or unpigmented (i.e. whitish); cuticula may be iridescent in larger specimens; dorsal and ventral longitudinal blood vessels distinct. Two pairs of very short antennae present (Fig. 1A); prostomium quadrangular (Fig. 1A). Eyes usually absent. One pair of lateral jaws situated on the inside of the everted proboscis (difficult to observe without dissection). Tentacular cirri lacking. The most conspicuous character of the family is the presence of curvilinear digitiform gills on the ventral part of the notopodia (Fig. 1C). Complex biramous parapodia with well developed noto- and neuropodia and several different pre -and postsetal lamellae (Fig. 1C). All setae simple. One pygidial cirrus.

Present at all depths, but most common in shallow to moderate depths in sand and mud.

Remarks: European nephtyids are easily identified to family and genus level, whereas species identification of members of the genus *Nephtys* demands careful examination of a number of features. In many cases it may not possible to determine smaller specimens to species level.

KEY TO NORTHERN EUROPEAN NEPHTYIDS

1. Interramal cirri convolute (Fig. 2M,N), proboscis with 14 rows of subterminal papillae.....*Aglaophamus*...2
- Interramal cirri recurved (Fig. 2A-L), proboscis with 14, 20 or 22 rows of subterminal papillae.....*Nephtys*...3
2. Presetal lamellae rudimentary, more or less distinctly bilobed (Fig. 2N); dorsal postsetal lamellae much longer than acicular lobes (Fig. 2N), ventral postsetal lamellae about as long as acicular lobes (Fig. 2N); dorsal interramal cirri from setiger 2, ventral interramal cirri present on neuropodia; up to 120 setigers
.....*Aglaophamus rubella* (Michaelsen, 1896)
- Presetal lamellae rudimentary, simple (Fig. 2M); postsetal lamellae shorter than acicular lobes (Fig. 2M); dorsal interramal cirri from setigers 8-15 to the last 15-40 setigers, no ventral interramal cirri; up to 90 setigers.....*A. malmgreni* (Théel, 1879)
3. Presetal lamellae of notopodia well developed, bilobed, with dorsal and medial portions extending beyond acicular lobes (Fig. 2A-D); interramal cirri from setigers 4-7.....4

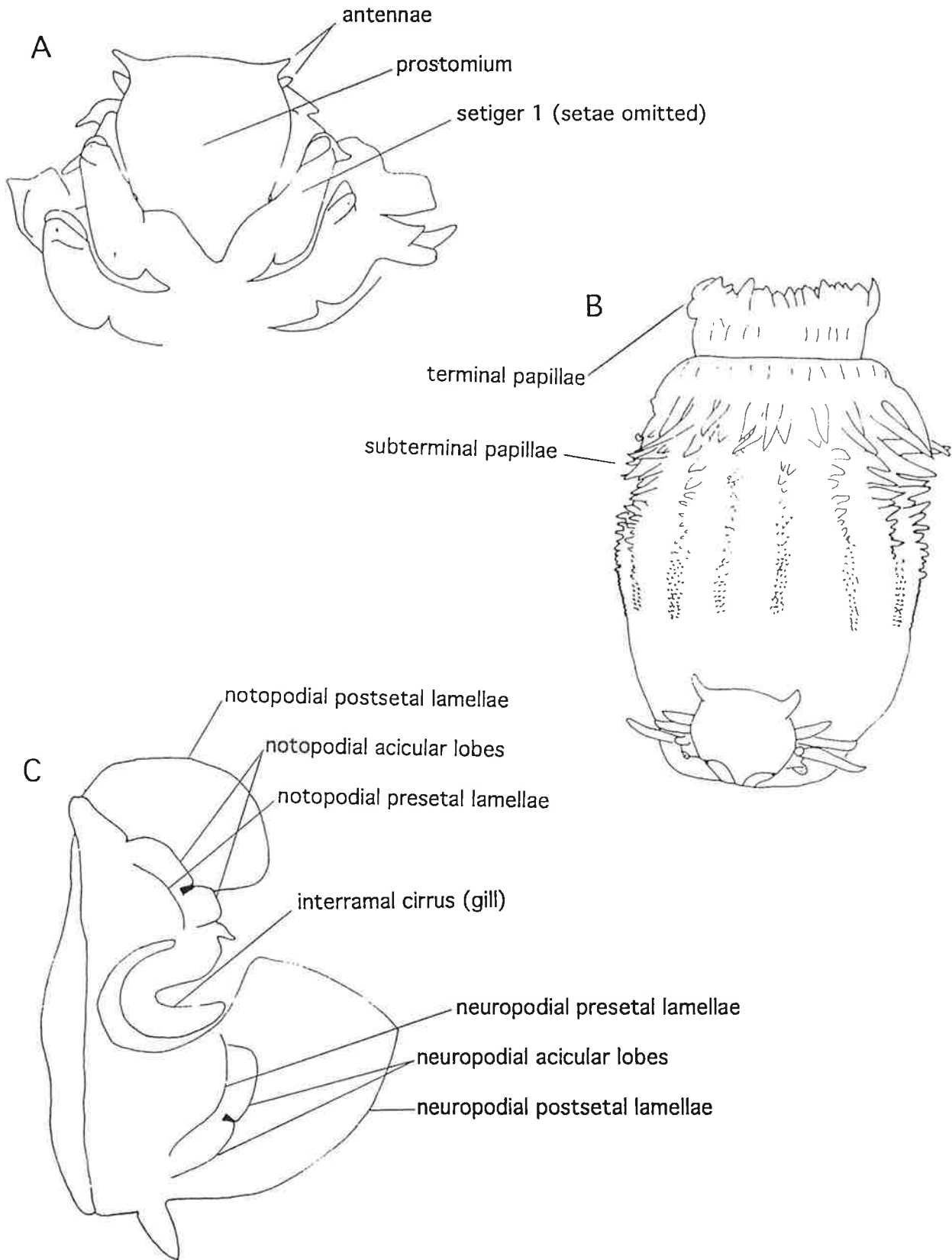
- Presetal lamellae rudimentary or simple (Fig. 2E-L); interrhamal cirri from setigers 3-14.....7
- 4. Acicular lobes with medial bulb or papilla (Fig. 2A, B); postsetal lamellae more than twice as long as acicular lobes (Fig. 2A, B); proboscis with median dorsal papilla long or short.....5
- Acicular lobes simple, rounded to conical (Fig. C, D); postsetal lamellae well or poorly developed (Fig. 2C, D): proboscis with median dorsal papillae at least twice as long as subterminal papillae.....6
- 5. Acicular lobes with low medial bulb (Fig. 2A); interrhamal cirri from setiger 4; prostomium broadest anteriorly or with parallel sides; ventral postsetal lamellae broadly rounded with internal vascular structure (Fig. 2A); interrhamal region of posterior setigers with prominent raised ciliary pads, up to 110 setigers.....
.....*N. assimilis* Örsted, 1843
- Acicular lobes with prominent medial bulb or papilla (Fig. 2B); interrhamal cirri from setiger 4, 5 or 6; prostomium narrowest anteriorly, with convex anterior margin; ventral postsetal lamellae expanded medially, with acutely rounded distal margins; interrhamal region of posterior setigers with low ciliary pads; up to 145 setigers.....*N. hombergi* Savigny, 1818
- 6. Postsetal lamellae up to twice length of acicular lobes (Fig. 2C), which lack a rugose area; interrhamal cirri from setigers 6 or 7, usually 7, reduced or absent in last 15 setigers; up to 70, occasionally 75 setigers.....*Nephtys hystricis* McIntosh, 1900
- Postsetal lamellae more than twice as long as acicular lobes (Fig. 2D), which have a rugose area near aciculae; interrhamal cirri from setiger 4, with basal papillae below dorsal cirrus; up to 85 setigers.....*Nephtys kersivalensis* McIntosh, 1908
- 7. Presetal lamellae rudimentary (Fig. 2E, F); acicular lobes of anterior and middle setigers distinctly bilobed (Fig. 2E, F); proboscis with numerous warty processes or minute papillae; up to 140 setigers..8
- Presetal lamellae rudimentary or moderately developed, acicular lobes of anterior and posterior setigers conical or rounded (Fig. 2G-L); proboscis with or lacking warty processes or minute papillae; up to 150 setigers.....9
- 8. Interrhamal cirri from setigers 7-10, reduced or absent in last 20-30 setigers; up to 140 setigers.....*Nephtys ciliata* (O.F. Müller, 1776)
- Interrhamal cirri from setigers 5 or 6, not markedly reduced in posterior setigers: up to 90 setigers.....*Nephtys pente* Rainer, 1984
- 9. Postsetal lamellae more than twice as long as acicular lobes (Fig. 2G, H); interrhamal cirri from setigers 3-5, usually from 3 or 4; postacicular setae with strongly denticulate distal region.....10

- Postsetal lamellae less than twice as long as acicular lobes (Fig. 2I-N); interramal cirri from setigers 4-14; postacicular setae usually with spinulose or smooth margins.....11
- 10. Postsetal lamellae well-developed in notopodia and neuropodia (Fig. 2G); interramal cirri from setigers 4-5, usually from 4; prostomium broad, with straight or gently concave anterior margin; proboscis with numerous warty papillae; up to 150 setigers.....
.....*Nephtys caeca* (Fabricius, 1780)
- Presetal lamellae of notopodia in middle and posterior setigers much shorter than in neuropodia (Fig. 2H); interramal cirri from setiger 3; prostomium broadest anteriorly, with strongly concave anterior margin; proboscis lacking warty papillae; up to 120 setigers.....*Nephtys longosetosa* Örsted, 1843
- 11. Interramal cirri foliaceous (Fig. 2I) or cirriform, from setigers 8-14, reduced or absent in posterior setigers; up to 110 setigers.....12
- Interramal cirri cirriform, from setigers 4-6 to near end of body; up to 95 setigers.....13
- 12. Interramal cirri foliaceous (Fig. 2I), usually from setigers 8-10, well defined from setigers 14-16, absent from last 30-50 setigers; postacicular setae with denticulate proximal region; up to 110 setigers.....*Nephtys paradoxa* Malm, 1874
- Interramal cirri cirriform, from setigers 8-10, reduced or absent in last 20-25 setigers; postacicular setae with spinulose or smooth margins; up to 70, occasionally 75 setigers.....
.....*Nephtys incisa* Malmgren, 1865
- 13. Interramal cirri from setiger 4; acicular lobes in anterior and posterior setigers simple, rounded, in middle setigers unequally bilobed (Fig. 2J); dorsal cirri in posterior setigers as long as intrramal cirri; proboscis with 22 rows of 9-10 subterminal papillae per row extending to proximal end of proboscis; postacicular setae smooth or very finely denticulate.....
.....*Nephtys cirrosa* Ehlers, 1868
- Interramal cirri from setigers 5 or 6, usually 5; acicular lobes conical (Fig. 2L); neuropodium with a small dorsal lobe in anterior setigers (Fig. 2L); proboscis with 14 rows of 10-12 papillae per row; setae long, flowing, with barred and capillary setae only.....*Nephtys pulchra*

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FIG 1.



A. Prostomium and anterior setigers, dorsal view, setae omitted.
B. Prostomium and everted proboscis, dorsal view.
C. Parapodium, left side, anterior view, setae omitted.

FIG 2. PARAPODIAL CHARACTERS

