Polychaete Key for Chesapeake Bay and Coastal Virginia

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Thanks to the following people for their help on the key: Robert Diaz, Julie Beck, Scott Lerberg, Harry N.ten Hove, Mary Elizabeth Petersen, Janet Nestlerode, Elizabeth Hinchey

Note on using this key: "*helpful hints*" in italics are also characteristic of the given family or species, but should not be considered the key characteristics used to separate families or species, as other species or families may also possess the characteristics described under "*helpful hints*". Use the hints to verify that you are on the right track.

I would greatly appreciate your comments on this key. Any mistakes that you catch, or any “helpful hints” that you feel will improve the key are welcome. Please e-mail any comments to abartholomew@ausharjah.edu

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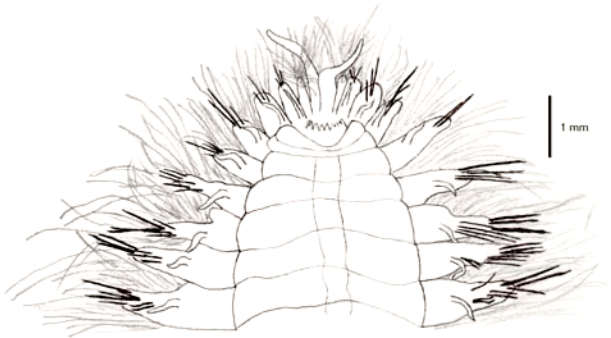
Key to Polychaete Families of Chesapeake Bay and Coastal Virginia

1a. Dorsum with series of elytra (scales), or distinct elytral scars present on the dorsal side of notopodial bases on several segments; felt of matted notosetae may be present, which may obscure the elytra.……**2**

b. Dorsum without elytra, elytral scars, or felt……....**4**

2a. Dorsal felt largely obscuring elytra (see below); *helpful hints*: this worm looks like it has fur on its dorsal side, hence its common name "sea mouse"…….**Aphroditidae**



Aphrodita hastata
anterior end, underside

b. Dorsum without felt, elytra or scars clearly visible…….**3**

3a. Neurosetae composite, notosetae simple; all posterior segments with elytra or scars……...**Sigalionidae**

b. Neurosetae and notosetae simple, some posterior segments lack elytra or scars; *helpful hint*: elytra alternating with dorsal cirri posteriorly……....**Polynoidae**

4a. Notopodia with expanded, golden setae in fan-like, transverse rows that more or less cover the dorsum; *helpful hint*: prostomium small, with a median antennae, and two lateral antennae, and four eyes……...**Chrysopetalidae**

b. Notosetae otherwise (may be absent)……..**5**

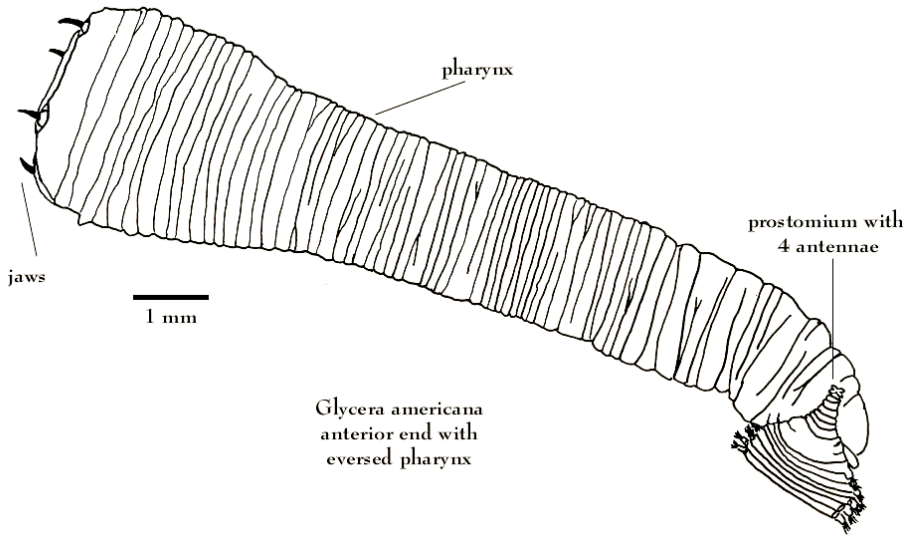
5a. Dorsal cirri large and very prominent, flattened, leaf-like or variably globular; *helpful hint*: two eyes present that are often prominent; four frontal antennae may also be present; two- four pairs of tentacular cirri are present on the first 1-3 segments…....**Phyllodocidae**

b. Dorsal cirri, if present, not very prominent, and not leaf-like or globular……..**6**

6a. Prostomium elongated, conical, annulated, ending distally in four minute antennae; *helpful hint*: large, eversible pharyx present, but may not be eversed…….**7**

b. Prostomium not as above…….....**8**

7a. Parapodia similar, either all uniramous, or all biramous; eversible pharynx with four jaws arranged in a cross (see below); setigers biannulate (i.e. there appears to be two segment indentations for every one parapodia); branchiae present, although they may be retracted in one species…….……...……...**Glyceridae**



b. Parapodia dissimilar, anterior region with uniramous parapodia, posterior region with biramous parapodia; eversible pharynx with more than four jaws; setigers not biannulate; branchiae absent…….**Goniadidae**

8a. Biramous parapodia with rami well separated, and with long interramal cirri extending downward from notopodia; prostomium flattened, sheild-shaped or sub-rectangular with four small antennae; *helpful hints*: posterior part of prostomium above and within lateral border of the first one or more setigers; all setae simple; eversible pharynx present, although it may not be eversed; the neuropodial lobe of the first setiger is broadly expanded and supports a conspicuous, laterally directed ventral cirrus; body subrectangular in cross section; neurosetae of first setiger face forward, rather than lateral to worm's body……...**Nephtyidae**

b. Parapodia and prostomium not as above…….....**9**

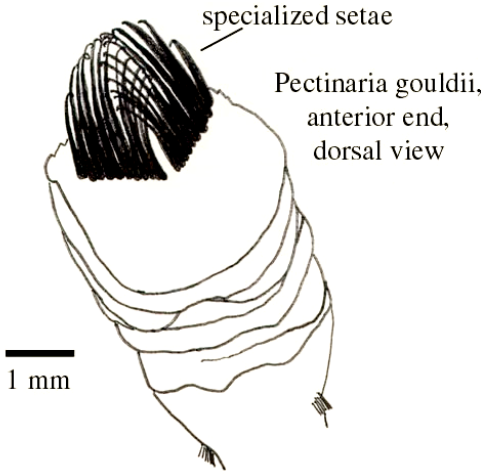
9a. Anterior end with one or several series of long, specialized setae, these setae either cover the anterior end in a protective cage, or form an operculum, or form a series of long, stout protective spines (paleae)…….**10**

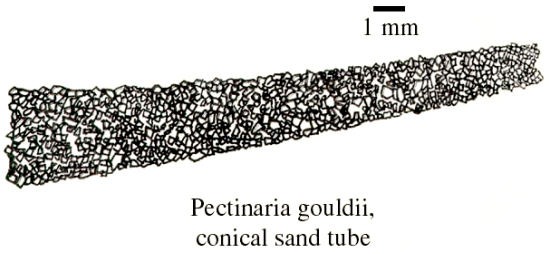
b. Anterior end without specialized setae forming a protective cage, or forming an operculum, or forming long, stout protective spines or paleae; *helpful hint*: elongated setae may be present on setiger 1, but they are not stouter than subsequent setae……....**13**

10a. Specialized setae long and chambered, forming a protective cage around the anterior end; body densely papillose; *helpful hint*: silt and sand grains are often irregularly adhered to the worm's body, giving it a grainy appearance, and obscuring papillae…….**Flabelligeridae**

b. Specialized setae do not form a protective anterior cage; skin papillae few and small, if present……....**11**

11a. Specialized setae in a transverse row (see below, left); conical tube formed of small, closely fitted sand grains (see below, right); *helpful hints*: tube open at both ends; 16 setigers present; paleae taper to fine, slightly curved tips……...**Pectinariidae**





Pectinaria gouldii,
conical sand tube

b. Specialized setae either as fan-shaped group of paleae on either side of the anterior end, or forming an operculum; tube, if present, otherwise……....**12**

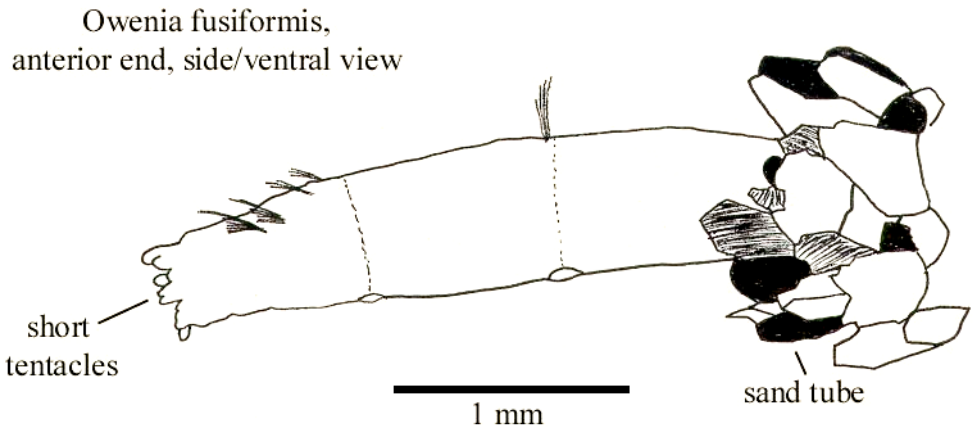
12a. Specialized setae form an operculum, with three apparent rows of concentric paleae; anterior branchiae absent; *helpful hint*: fleshy opercular peduncles present; ventral side of opercular peduncle has many filamentous buccal cirri ……...**Sabellaridae**

b. Specialized setae form a fan-shaped group of paleae on either side of the anterior end; long, finger-like branchiae present, arising from first setiger, and extending beyond prostomium; *helpful hint*: numerous tentacles retractile into mouth (may be completely retracted)……..**Ampharetidae** (part)

13a. Anterior end, including in part the prostomium, transformed into a tentacular crown……..**14**

b. Anterior end not transformed into a tentacular crown (antennae and tentacular cirri may be crowded near the anterior end, but not in a "crown-like", circular fashion)…….**16**

14a. Tentacles on crown are short and digitate (see below); *helpful hints*: middle segments are longer than they are wide; tube made of sand grains affixed, and overlapping, in a way that give the tube a "shingled" look…….**Oweniidae**



b. Tentacles longer, and feather-like……..**15**

15a. One tentacle forms a stout, stalked operculum, or two tentacles form spoon-like, membranous opercula; tubes are calcareous; *helpful hint*: tubes often irregularly coiled, and are always attached to hard substrates; often these worms are densely settled……...**Serpulidae**

b. Opercula lacking; tubes flexible to sandy……....**Sabellidae**

16a. Setiger 4 with dark, stout, modified setae (relative to adjacent setigers); some median parapodia also highly modified; *helpful hints*: tubes either parchment-like (for the larger species), or clear and chitinous with annulations (for the smaller species); the smaller species usually has darkened band near setigers 7 and 8 ……...**Chaetopteridae**

b. Setiger 4 without thick, modified setae (other setigers may have modified setae); *helpful hint*: tubes, if present, never parchment-like, and if chitinous, never annulated...**17**

17a. Numerous thread-like, or filamentous tentacles present on lower side of prostomium,or on peristomium; body divisible into two distinct regions: a robust, cylindrical thorax with biramous parapodia, and a tapering abdomen with smaller neuropodia present, and notopodia rudimentary or lacking; *helpful hint*: branchiae, if present, are limited to a few anterior setigers and are prominant, usually cirriform or arborescent; branchiae often missing, but scars remain…….....**18**

b. Anterior end with a limited number of tentacular cirri and /or antennae, or without appendages; body may be divisible into distinct regions, but not as described above…..**20**

18a. A single thick branchial stalk present, bearing four partially fused lamellate lobes; *helpful hints*: 17-18 thoracic setigers present; lateral lobes on peristomium form a collar posterior to branchial stalk. ……....**Trichobranchidae**

b. Branchiae otherwise……...**19**

19a. Branchiae in a transverse or oblique row, appearing to arise from a dorsal ridge across segment three; branchiae long and generally cirriform, branchiae are longer than head, largely obscuring prostomium; tentacles retractile into mouth (may be fully retracted)….…….**Ampharetidae** (part)

b. Branchiae, if present, are on one to three successive segments; tentacles retractile, but not into mouth, thus obscuring prostomium; *helpful hint*: branchiae, if present, are branched, and are usually arborescent. ……....**Terebellidae**

20a. Prostomium with at least one pair of antennae; peristomium usually with paired palps, or tentacular cirri…….**21**

b. Prostomium without appendages, or with a single antennae; peristomium with paired dorsal palps, maximally two pairs of tentacular cirri, or without appendages…….....**29**

21a. Thin, brittle notosetae arranged in tufts on the notopodial lobe; branchiae as dorsal bushy, branched tufts; prostomium and peristomium with two pairs of lateral antennae, and a median antennae; a single dorsal cirri present on each notopodia, that is about as long as the notosetae; *helpful hint*: branchiae begin on setiger 3; worm has a "wooly" appearance due to its thin setae; notopodia and neuropodia well separated. …….....**Amphinomidae**

b. Worm not as above. ……..**22**

22a. Palps absent; jaws present; *helpful hints*: three antennae arising from posterior margin of prostomium; four small eyes alternating with antenae; dorsal cirri foliaceous, and ventral cirri absent.. ……....**Lysaretidae**

b. Palps present, sometimes as ventrolateral pads on the peristomium, or fused to the anterior end of the prostomium so that it appears cleft, palps usually free and digitate; jaws may or may not be present.. ……..**23**

23a. Palps biarticulated, free and digitate; 3, 4, 6, or 8 pairs of tentacular cirri present; *helpful hint*: 2 pairs of eyes usually present, although they may be partially fused……..**24**

b. Palps otherwise, sometimes fused to the prostomium so that it appears cleft, or forming ventrolateral pads on the peristomium; tentacular cirri may or may not be present; *helpful hints*: palps may appear to be multiarticulated, or they may be greatly reduced……...**25**

24a. Notosetae compound; parapodia usually with varying degrees of development of extra tongue-like lobes (ligules); proboscis with a pair of distal, dentate, hooked jaws; 3 or 4 pairs of tentacular cirri present. ……..**Nereidae**

b. Notosetae simple; parapodia without ligules; proboscis without jaws; 6 or 8 pairs of tentacular cirri present. ……..**Hesionidae**

25a. Prostomium with a pair of long, thin ventral palps; prostomium also equipped with a single pair of articulated antennae; *helpful hint*: palps may appear to be multiarticulated; tentacular cirri absent. ……..**Dorvilleidae**

b. Palps otherwise…….…….**26**

26a. Palps are ventrolateral pads on the peristomium; five long occipital, and two short frontal antennae present; *helpful hint*: setigers 1-4 usually have bidentate or tridentate hooded, pseudocompound hooks..……..**Onuphidae**

b. Palps either fused anteriorly to the prostomium, or as free ventrolateral projections; maximally five antennae present..…….....**27**

27a. Eversible pharynx with massive jaws present; *helpful hints*: Palps fused anteriorly to prostomium, so that it may appear anteriorly cleft; 1-5 occipital antennae present; two small eyes usually present…….....**Eunicidae**

b. Eversible pharynx, if present, without jaws (small tooth or teeth may be present)…...**28**

28a. Neurosetae simple; dorsal boat-hook setae present, often quite prominent; *helpful hints*: prostomium usually has one median, and two lateral antennae; two pairs of tentacular cirri present……..**Pilargidae**

b. Neurosetae compound; dorsal boat-hook setae absent; *helpful hints*: prostomium usually with one median antennae, and two lateral antennae; one or two pairs of tentacular cirri present; usually four or more eyes present, often prominent; muscularized region of anterior digestive tract (proventricle) usually visible through body wall ……**Syllidae** (part)

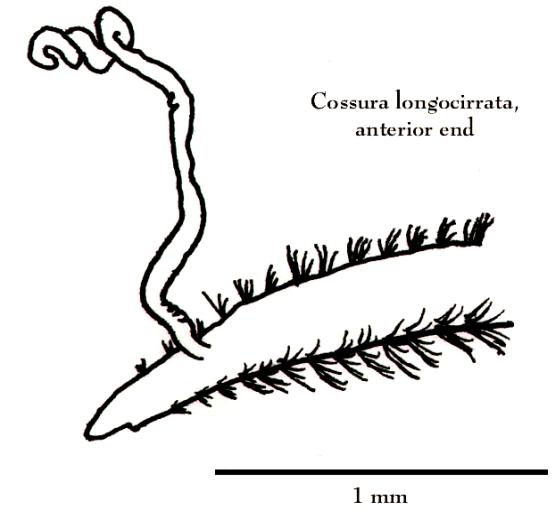
29a. Many body segments distinctly longer than wide; anal segment funneled, flattened or spatulate; dorsal surface of head forms a flattened plate (cephalic plaque)……...**Maldanidae**

b. Body segments not distinctly longer than wide; anal segments and head otherwise....**30**

30a. Anterior end, including only the pro- and peristomium without appendages (appendages may be present on some anterior setigers) *helpful hint*: grooved tentacular filaments may be present on 1st setiger, do not confuse these with appendages arising from the pro- or peristomium.. ……..**31**

b. Prostomium with a single median antennae, and/or peristomium with paired palps and/or tentacular cirri…….**41**

31a. With a single, mid-dorsal branchia arising from approximately the third or fourth setiger (see below); *helpful hints*: worm is quite small; length of branchia is approximately $^{2}/_{3}$-rds of body length……..**Cossuridae**



b. Lacking single, mid-dorsal palp.. ……**32**

32a. With a series of very long, filamentous, branchial filaments along the dorsal anterior length of the worm, two branchiae arising from each setiger (branchiae may have broken off, but scars remain); branchiae begin on, or very near to, setiger 1 …….**Cirratulidae**

b. Branchiae, if present, otherwise. ……..**33**

33a. Body divisible into two distinct regions by parapodial features: thorax with lateral parapodia, abdomen with both noto- and neuropodia in dorsal position; *helpful hints*: anterior region has smooth and flattened segments, posterior appears ragged; prostomium is smooth and pointed .. ……**Orbiniidae**

b. Body may be divisible into distinct regions, but not as above, or parapodial shapes and positions grade along the body. ……....**34**

34a. Anterior end with a complex jaw apparatus; *helpful hints*: prostomium conical or sub-oval; body smooth, elongate, and cylindrical…….**35**

b. Anterior end without jaw apparatus……...**36**

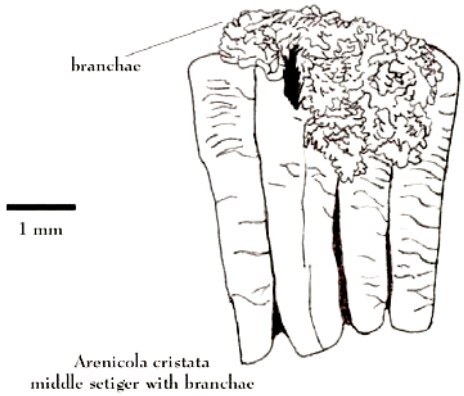
35a. Hooded hooks or crotchets present on at least some setigers …….**Lumbrineridae**

b. Hooded hooks or crotchets completely absent……..**Arabellidae**

36a. Branchiae absent; body separated into two regions with different kinds of setae in thoracic and abdominal regions; *helpful hints*: capillary setae present (except in one species) in thoracic region; some segments with hooded hooks; worms thread-like; food in digestive tract often in discrete, ovoid pellets…….....**Capitellidae** (part)

b. Branchiae present; body usually not divisible by setae type……..**37**

37a. Mid-region with 11 pairs of dorsal brachae that are branched and bushy; body thick, large, and a dark greenish color (see below) ……...**Arenicolidae**



b. Worm otherwise. ……...**38**

38a. Prominant strap-like or foliaceous branchiae present dorsally starting on setiger 4 or 5, and numbering up to approximately 25 pairs ……..**Paraonidae** (part)

b. Branchiae otherwise, beginning on different setigers. ……..**39**

39a. Four pairs of arborescent branchiae present, beginning on setiger 2; prostomium t-shaped; furcate setae present…..…….**Scalibregmidae**

b. Branchiae not arborescent, and in different locations; prostomium pointed or rounded; furcate setae absent……**40**

40a. All setae are simple capillaries, hooded hooks absent; *helpful hint*: worms often have a "grub-like" appearance. ……..…….**Opheliidae**

b. All setae are not simple capillaries, hooded hooks present …...…....**Capitellidae** (part)

41a. Median antennae present. ……..**42**

b. Median antennae absent.. ……..**44**

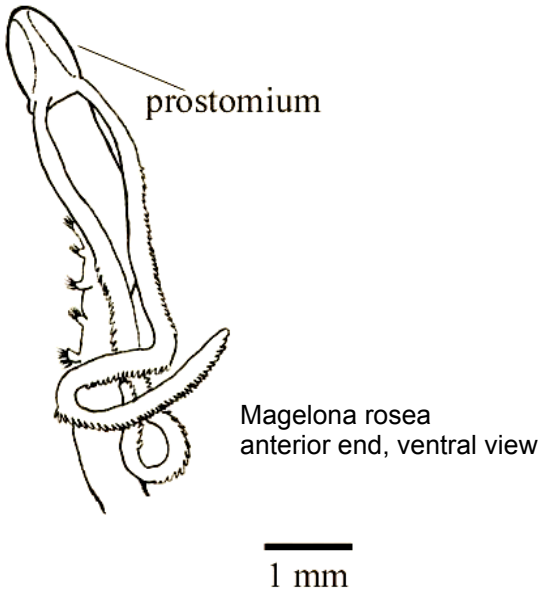
42a. Fifth setiger with modified, heavy, retractable setae …….**Spionidae** (part)

b. Fifth setiger with setae similar to adjacent setigers……...**43**

43a. Prominent, muscularized region of digestive tract (proventricle) absent; strap-like or foliaceous branchiae present, beginning on setigers 4-10, and extending 15-25 segments back. ……....**Paraonidae** (part)

b. Prominent, muscularized region present in anterior portion of digestive tract (proventricle); branchiae not as above ……..**Syllidae** (part)

44a. Body divided into two distinct regions: thorax consisting of head and first 9 setigers, and abdomen which is longer with many setigers; prostomium distinctly flattened and spatulate, and as wide as the widest part of the body (see below)……...**Magelonidae**

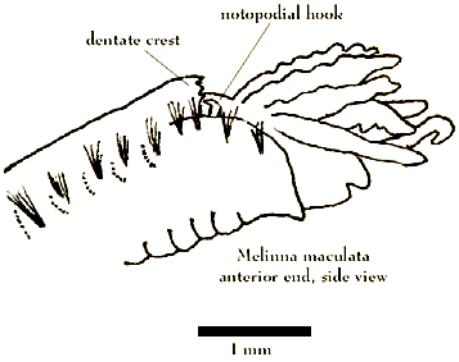


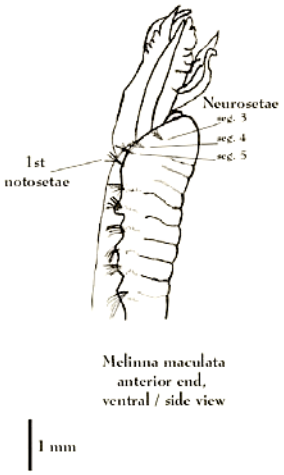
b. Body segments roughly similar, changes grading over the entire body (except setiger 5 in some species which may have highly modified setae); prostomium may occaisionally appear spatulate, but it will be slightly less wide than the widest part of the body . ……....**Spionidae** (part)

Key to Species within Families

Ampharetidae

1a. A pair of stout notopodial hooks present behind branchiae on segment 5 (see below, left); dentate dorsal crest present across segment 6; fine, imbedded, acicular neurosetae present laterally on segments 3 to 5 (see below, right); *helpful hints*: 14 thoracic setigers with uncini (segment 6 lacks uncini); long abdominal region with 40+ segments……..**Melinna maculata**



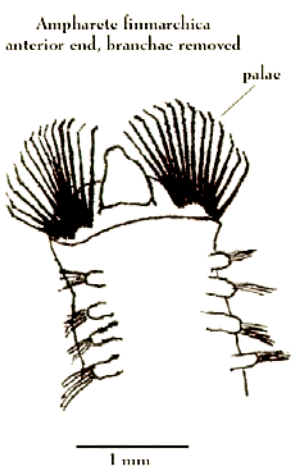


b. Stout notopodial hooks completely absent; fine, imbedded, acicular neurosetae absent from segments 3 to 5, no dorsal crest present. ….……..**2**

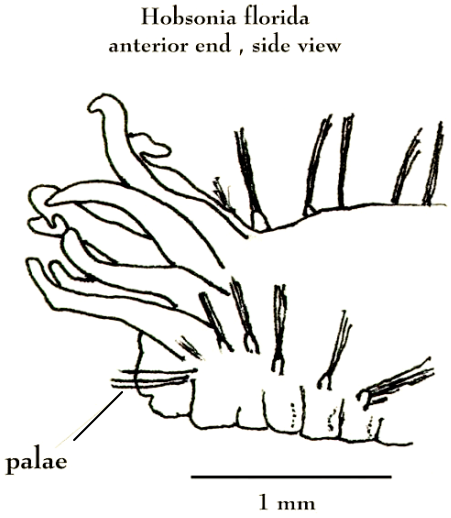
2a. Conspicuous paleae present, roughly equal to, or exceeding the tip of the prostomium in length.. ……....**3**

b. Paleae absent, or if present, inconspicuous, definitely shorter than the tip of the prostomium. ……....**6**

3a. Paleae stout and very prominent (see below), appearing to be wider and stronger than notosetae of thorax; 14 pairs of thoracic notosetae present, with 12 thoracic uncinigers; two sets of four branchiae present in a single transverse row; *helpful hint*: paleae appear to have a golden shine, and their tips are slightly bent……....**4**

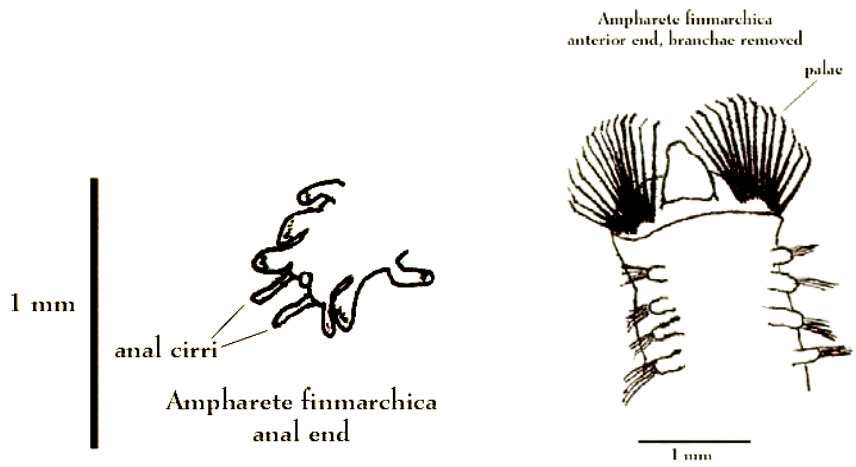


b. Paleae thin, resembling capillary notosetae of thorax (see below); 17 pairs of thoracic notosetae present, with 14 thoracic uncinigers; four pairs of two branchiae present arranged in two transverse rows…….**5**



4a. Anal end surrounded by about 20 anal cirri; 12 abdominal setigers present ……..**Ampharete acutifrons**

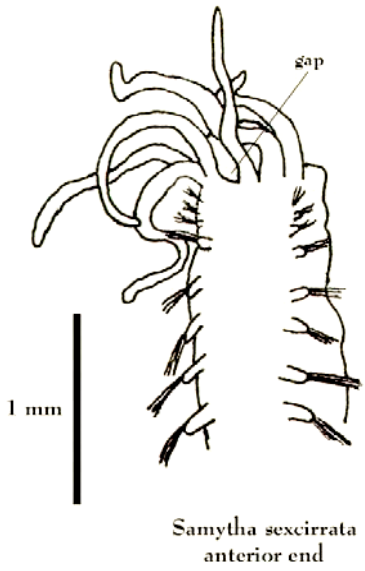
b. Anal end with 2 long cirri present (see below, left); 13 abdominal setigers present ……..…….**Ampharete finmarchica**



5a. 25-28 abdominal segments present; abdominal notopodial rudimets nearly absent; *helpful hint*: this species is usually found in salt marshes, intertidal mud, areas of lower salinity. ……....**Hobsonia florida**

b. 12-16 abdominal segments present; large, abdominal notopodial rudiments present, decreasing in size posteriorly; *helpful hint*: found intertidally, but more common in deeper, higher salinity waters. ……..……..**Amphicteis gunneri**

6a. Capilliform notosetae on 17 segments; *helpful hints*: two sets of three branchiae present, the two sets are widely separated (see below); uncini begin at setiger 4; the notosetae of the first three setigers are shorter and less conspicuous than the following thoracic notosetae; 13 abdominal setigers present ……..**Samytha sexcirrata**



b. Capilliform notosetae on 15 or less segments……....**7**

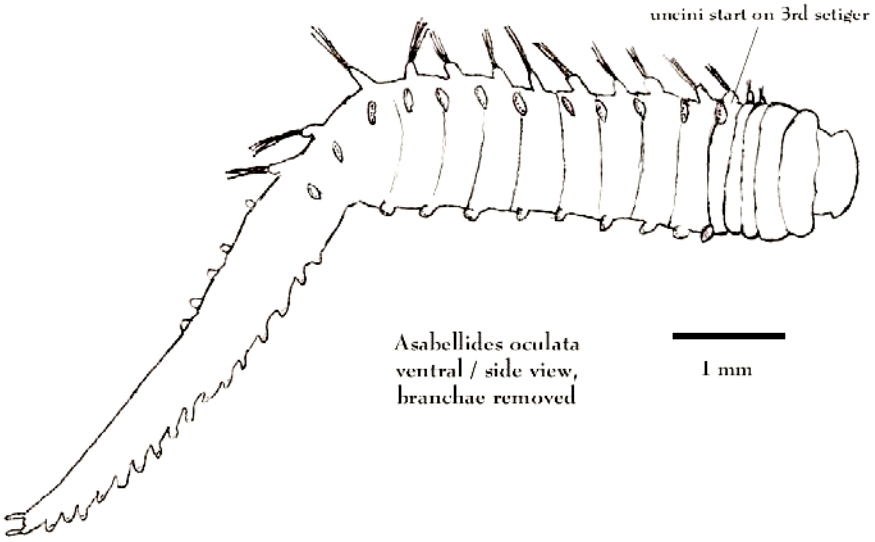
7a. Two sets of three branchiae present; *helpful hints*: capilliform notosetae on 15 segments, uncini begin at setiger 4; 29-31 abdominal segments present . ……..**Samythella elongata**

b. Two sets of four branchiae present; *helpful hint*: less than 15 segments with capilliform notosetae, not including paleae, if present. ……..**8**

8a. 11 thoracic uncinigers present; *helpful hints*: 13 capilliform notosetae present, which does not include the short paleae that are present on segment 3; uncini begin on setiger 4 (the first three setigers, including segment 3 with the paleae are without uncini); paleae scarcely perceptible; 15-18 abdominal segments present; branchiae are fairly long ……...……....**Sabellides octocirrata**

b. 12 thoracic uncinigers present. ……..**9**

9a. Uncini begin on third setiger (see below); small, inconspicuous paleae absent ……..**Asabellides oculata**



b. Uncini begin on fourth setiger; small, inconspicuous paleae present on segment 3 (the paleae count as the first setiger). ……...**10**

10a. Innermost pair of branchiae much shorter than the others; outermost pair of branchiae are the longest; the two groups of four branchiae are separated by a gap; thoracic uncini with two rows of three teeth……...**Ampharete parvidentata**

b. Branchiae not significantly different in lengths; branchiae not separated by an obvious gap; thoracic uncini with two rows of five teeth…….**Ampharete americana**

Amphinomidae

1a. Small, distinct eyes present; head not raised posteriorly into a lobe; branchiae present from setigers 3 to 35 or more; body tapers gradually posteriorly; *helpful hints*: there are actually two pairs of eyes present, the anterior pair are small but distinct, while the posterior pair are difficult to see.. …….**Linopherus ambigua**

b. Small, very indistinct eyes present; head raised posteriorly into a "heart shaped" lobe; branchiae present from setigers 3 to 25 or less; body more or less moniliform posteriorly; *helpful hint*: there is a single pair of eyes present, but they are very difficult to see, and are without a distinct border to them…….....**Linopherus paucibranchiata**

Aphroditidae

Aphrodita hastata is the only species from Virginia

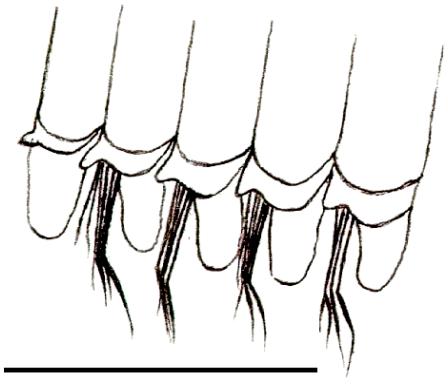
Arabellidae

1a. Parapodia with a prominent, stout, projecting acicula that is blunt, without a small, tapered blade or hood. …….....**3**

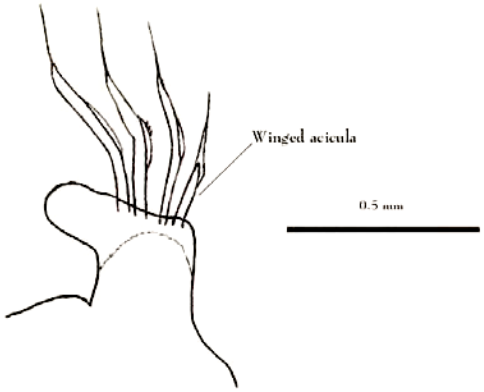
b. Parapodia with acicula absent, or if present they are not prominent or blunt, and they have a small tapered blade or hood at the tip……...**2**

2a. All setae are winged capillaries (see below); maxillae II asymmetrical, the left maxillae has 6 to 8 teeth, and the right maxillae has 12 to 14 teeth ….....**Arabella iricolor**

Arabella iricolor
mid-rear setigers, dorsal view



b. Middle and posterior setae have acicula that have a tapered blade or hood (see below); maxillae II symmetrical with 12 to 16 teeth on both the left and the right sides; *helpful hint*: acicula are shorter and slightly stouter than winged capillaries…....**Arabella mutans**

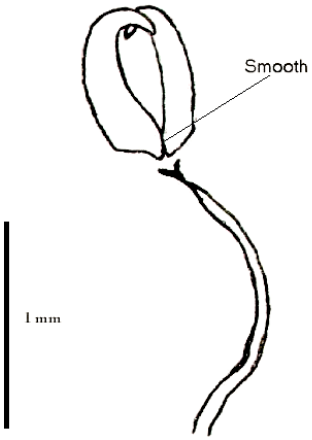


Arabella mutans
middle parapodia,
viewed from ventral side

3a. Maxillae I with first tooth not much larger than the others (not falcate); 4 eyes usually present; maxillae II asymmetrical……..**Notocirrus spiniferus**

b. Maxillae I with first tooth greatly enlarged, forming pincers (strongly falcate); 4 eyes never present; maxillae II symmetrical……....**4**

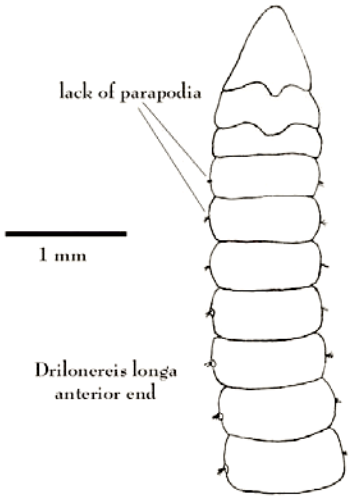
4a. Maxillae I with smooth bases, lacking distinct basal denticles (see below) ……..…….....**Drilonereis filum**



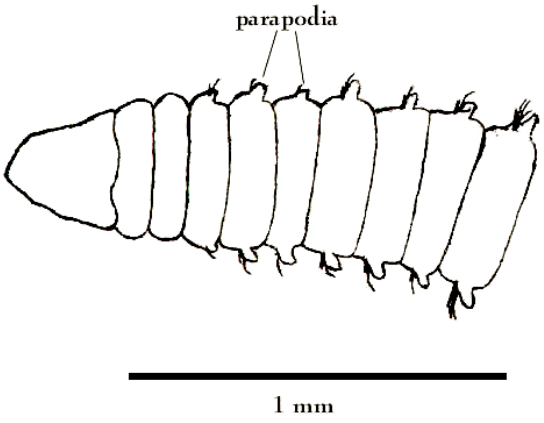
Drilonereis filum
Maxillae I and maxillae carriers

b. Maxillae I with 2 to 4 distinct basal teeth. ……....**5**

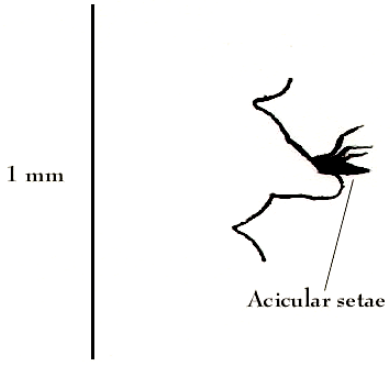
5a. Parapodia not evident on anterior end, as setae appear to arise directly from the body (see below); mandibles very small or absent;*helpful hint*: parapodia begin to become evident around setiger 18, or more posteriorly……..**Drilonereis longa**



b. Parapodia small, but evident, on anterior end (see below, left); mandibles present and evident; *helpful hint*: parapodia begin to become evident well before setiger 18 ……....**Drilonereis magna**



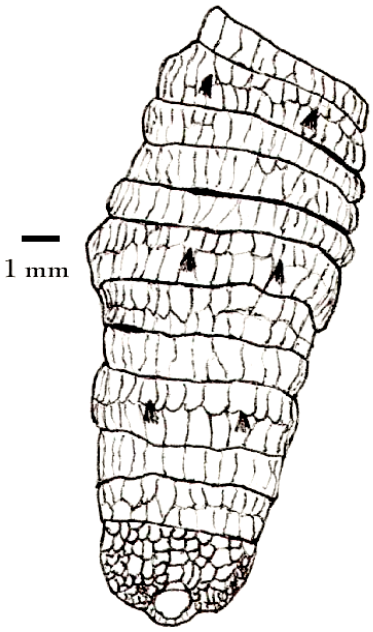
Drilonereis magna, anterior end



Drilonereis magna
middle setiger

Arenicolidae

Arenicola cristata (below) is the only species from Virginia



Arenicola cristata
anterior end, dorsal view

Capitellidae

1a. Capillary setae present. ……...……..**2**

b. Capillary setae absent.. ……**Amastigos caperatus**

2a. Only the first 3 setigers with capillary setae.……**Capitella jonesi**

b. More than the first 3 setigers with capillary setae. ……....**3**

3a. Only the first 4 setigers with capillary setae.. ……...**4**

b. More than the first 4 setigers with capillary setae. ……....**5**

4a. Posterior abdominal region with hooks only…….....**Mediomastus californiensis**

b. Posterior abdominal region with both hooks and capillary setae, or with capillary setae only; *helpful hint*: the anterior region of the abdomen has no capillary setae, and can be therefore be confused with M. californiensis. You generally need a specimen with the first 26 setigers to see the capillary setae ……...**Mediomastus ambiseta**

5a. Only the first 5 setigers with capillary setae……...**Heteromastus filiformis**

b. More than the first 5 setigers with capillary setae.…….**6**

6a. First 11 setigers with capillary setae...……...**7**

b. Less than first 11 setigers with capillary setae…….**10**

7a. Setiger 1 with capillary setae in both the noto- and neuropodia……....**8**

b. Setiger 1 without capillary setae in the neuropodia, and with capillary setae in the notopodia. ……..……..**9**

8a. Abdomen with both neuro- and notopodial hooded hooks; *helpful hints*: hoods on hooks are not especially large; branchiae are bulbous or rounded outgrowths .. ……..**Notomastus latericeus**

b. Abdomen without notopodial hooded hooks, with neuropodial hooded hooks; *helpful hints*: hoods on hooks are especially large; branchiae strap-like ….....**Notomastus lobatus**

9a. Branchiae present; minute eyespots absent; *helpful hint*: anterior end of body is a dark, purplish-brown color.. ……....**Notomastus luridus**

b. Branchiae absent; minute eyespots present *helpful hints*: eyespots are difficult to see. ……..**Notomastus hemipodous**

10a. Genital spines absent from setigers 8 and/or 9…….....**Capitella capitata** (female)

b. Genital spines present on setigers 8 and/or 9…….....**11**

11a. Genital spines only present on setiger 9……....**Capitomastus aciculatus** (female)

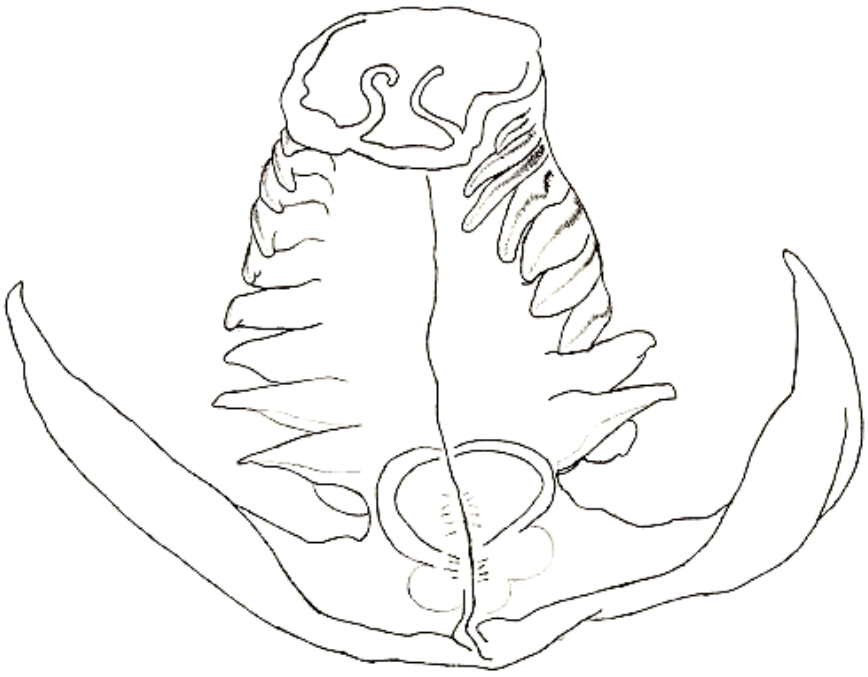
b. Genital spines present on setigers 8 and 9…….**12**

12a. Neuropodia of setiger 8 with some capillary setae ..**Capitomastus aciculatus** (male)

b. Neuropodia of setiger 8 without capillary setae, with hooks only . ……....**Capitella capitata** (male)

Chaetopteridae

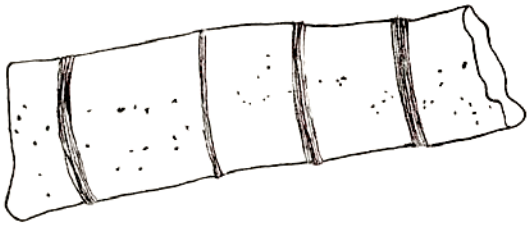
1a. Three very distinct body regions of worm are immediately apparent; notopodia of middle body region wing-like on segment 1, cup-like on segment 2, and paddle-like on segments 3 to 5; tube U-shaped and parchment-like; *helpful hints*: this is generally a large, thick worm (see below)…….....**Chaetopterus pergamentaceous**



Chaetopterous pergamentaceous, anterior end

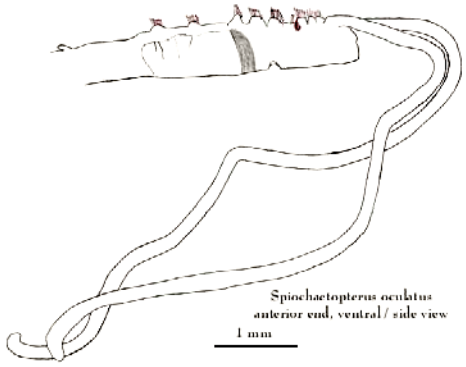
1 mm

b. Three very distinct body regions of worm are not immediately apparent; notopodia of middle body region otherwise; tube vertical, long and translucent, with annulations (see below, left); *helpful hints*: this is generally a small, thin worm (see below, right) ……...……..**Spiochaetopoterus oculatus**



Part of a Spiochaetopterus oculatus tube

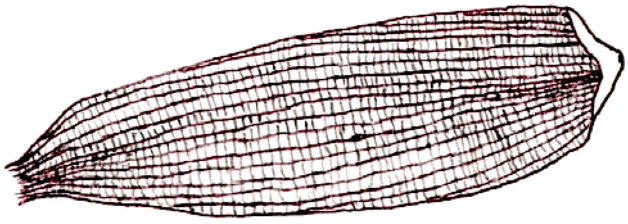
1 mm



Spiochaetopterus oculatus
anterior end, ventral / side view
1 mm

Chrysopetalidae

1a. Two different groups of paleae present on each side: a dorsal set, and a more lateral set; prostomium visible between paleae; paleae ribs are all similar (see below); *helpful hint*: the worm is short, with relatively few segments ……...……..**Paleanotus heteroseta**



Paleanotus heteroseta
dorsal palae

0.5 mm

b. One single group of paleae present on each side; prostomium hidden beneath a dorsal fold of skin; paleae with five major ribs that are larger than the others; *helpful hint*: the worm is relatively long, with many segments …….**Bhawania goodei**

Cirratulidae

1a. With two elongated grooved tentacular filaments arising from the junction of setiger 1 and the peristomium. ……...**3**

b. With several grooved tentacular filaments present above the first few setigers…….....**2**

2a. Grooved tentacular filaments arise above setiger 4, posterior to anteriormost branchial filament.. ……..**Timarete filigera**

b. Grooved tentacular filaments arise above setiger 1, the same segment as the anteriormost branchial filament.. …….**Cirratulus grandis**

3a. Acicular setae absent, all setae are distally pointed capillaries…….**4**

b. Acicular setae present in middle and/or posterior regions…….**5**

4a. Capillary setae of posterior region have saw-edged blades with minute teeth; minute eyespots absent…….**Monticellina annulosa**

b. Capillary setae of posterior region with smooth edges; minute eyespots present; *helpful hints*: eyespots are difficult to see.……**Tharyx acutus**

5a. Posterior acicular setae are long, with tips entire; *helpful hints*: worms tend to be relatively short; acicular setae almost completely encircle posterior segments.. ……....**Chaetozone setosa**

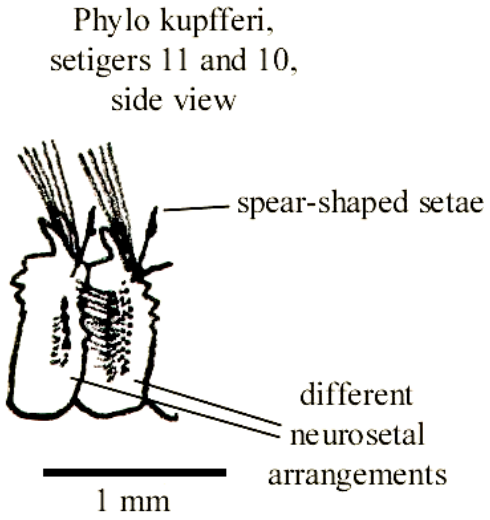
b. Posterior acicular setae are short, with slightly bifid tips; *helpful hints*: worms tend to be fairly long; acicular setae do not appear to encircle the posterior segments.. ……...**Tharyx killariensis**

Cossuridae

Cossura longocirrata is the only species from Virginia

Dorvilleidae

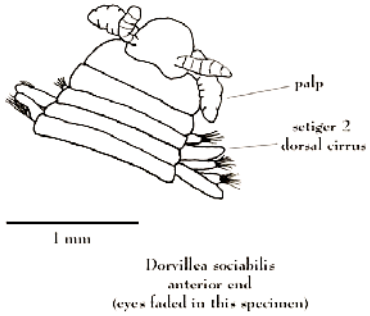
1a. Antennae short, with only a single, indistinct joint; noto acicula absent from dorsal cirri (see below); *helpful hints*: palps much longer than antennae, with terminal palpostyles; 1-2 pairs of small eyes present; forked (furcate) setae present…….**Protodorvillea kefersteini**



b. Antennae long and multi-jointed; noto acicula present in interior of dorsal cirri; *helpful hint*: palps subequal to, or shorter than antennae, with or without terminal palpostyles.. ……**2**

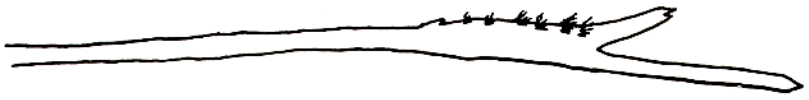
2a. Forked (furcate) setae present (do not confuse compound setae with furcate setae) ; *helpful hint*: antennae with up to 14 joints.. ……....**3**

b. Forked (furcate) setae absent (do not confuse compound setae with furcate setae) *helpful hints*: palps thick without distinct palpostyles (see below); dorsal cirrus absent from setiger 1; two pairs of eyes present, anteriormost are largest; antennae with about six joints .. ……...**Dorvillea sociabilis**



Dorvillea sociabilis
anterior end
(eyes faded in this specimen)

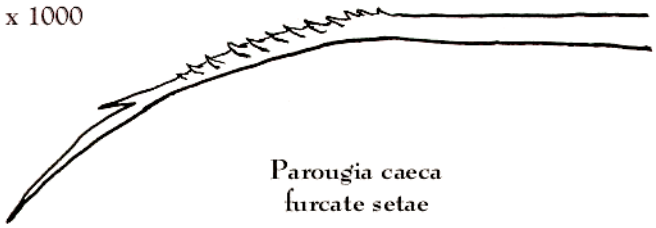
3a. Forked (furcate) setae with shorter branch roughly ½ the length of the longer branch (see below); dorsal cirrus on setiger 1 present; two pairs of eyes present.... ……...**Schistomerengos rudolphi**



x 1000

Schistomerengos rudolphi
furcate setae

b. Forked (furcate) setae with shorter branch roughly ¼ the length of the larger branch (see below); dorsal cirrus on setiger 1 absent; eyes absent …….**Parougia caeca**



x 1000

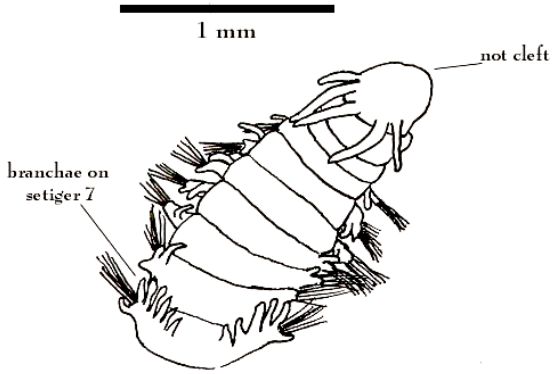
Parougia caeca
furcate setae

Eunicidae

1a. Single median occipital antennae present; branchiae absent...**Nematonereis unicornis**

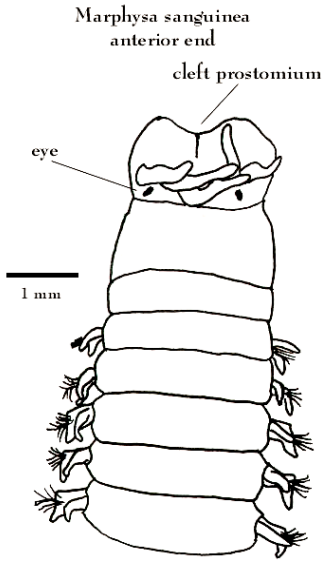
b. Five occipital antennae present; branchiae present, beginning in middle setigers…....**2**

2a. Branchiae begin on setigers 7 to 10 and continue to setigers 14 to 19 (see below); prostomium not cleft; eyes absent. ……...……..**Marphysa bellii**



Marphysa bellii
anterior end

b. Branchiae begin near setiger 21, and continue to near the posterior end; prostomium cleft anteriorly (see below); eyes present; *helpful hint*: eyes located in between the bases of 1st and 2nd, and 4th and 5th antennae …...……...**Marphysa sanguinea**

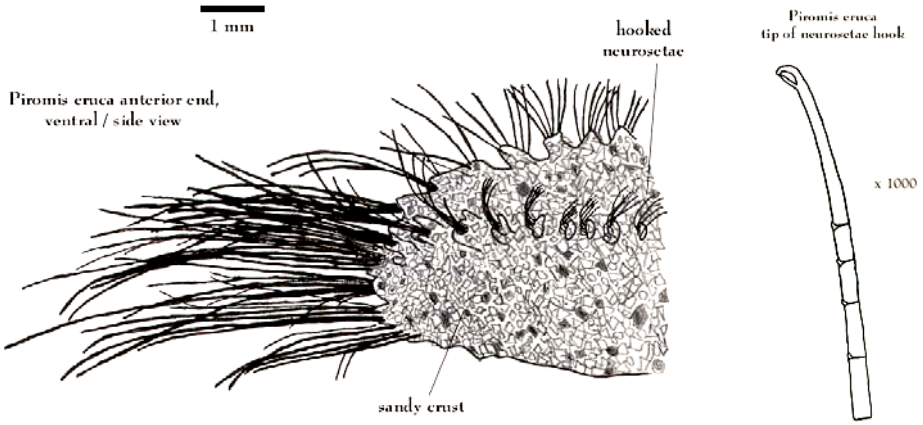


Flabelligeridae

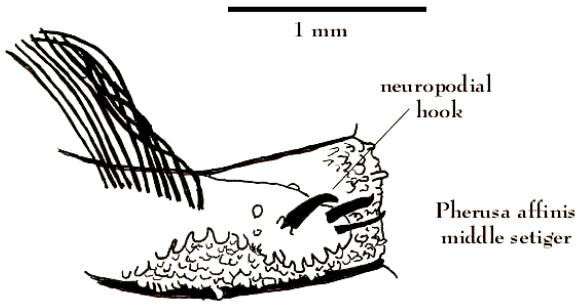
1a. Body covered with a thick, smooth, mucous sheath; stalked papillae with bulbous tips imbedded in mucous; hooked neurosetae are compound …….**Flabelligera affinis**

b. Mucous sheath absent; papillae are not stalked; hooked neurosetae are simple.……...**2**

2a. Hooks with bidentate tips from setiger 4 to posterior (see below, left); *helpful hints*: body covered with a sandy crust; bidentate tips may appear to form a small loop, like the eye of a needle (see below, right); cephalic cage composed of finer, golden setae……..……..**Piromis eruca**



b. Hooks with unidentate hooks throughout (see below); *helpful hints*: cephalic cage usually composed of stouter, reddish-bronze setae. ……..……..**3**



3a. Neuropodial hooks begin on setiger 4 (segments of cephalic cage count as setigers) *helpful hint*: anterior end has a transverse row of papillae along the frontal portion of each setiger. ……...**Pherusa inflata**

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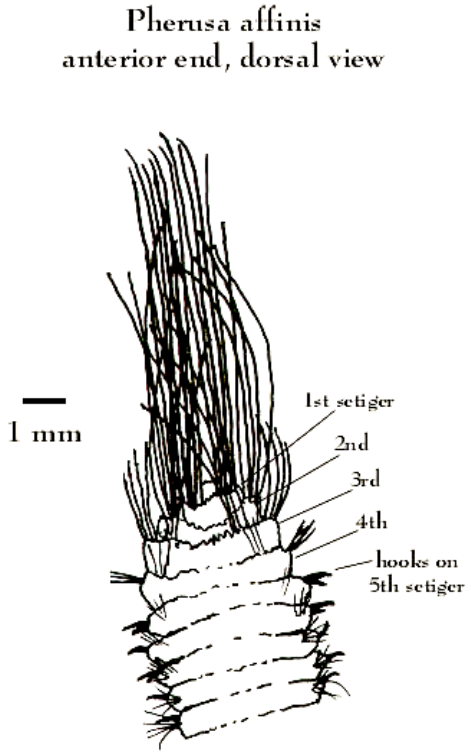
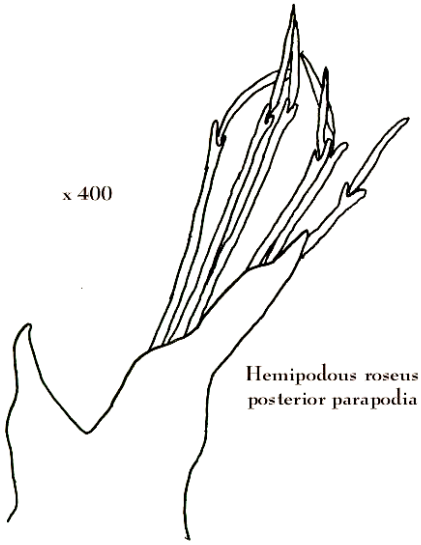
b. Neuropodial hooks begin on setiger 5 (see below; segments of cephalic cage count as setigers) *helpful hint*: papillae more scattered on anterior end ……..**Pherusa affinis**



Glyceridae

1a. Parapodia all uniramous; all setae are compound spinigers (see below) ……..**Hemipodous roseus**



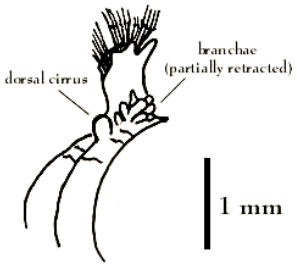
b. Parapodia biramous; setae are both simple capillaries and compound spinigers……...**2**

2a. Parapodia without branchiae; postsetal parapodial lobes are rounded and entire, not bilobed or cleft.. ……....**Glycera capitata**

b. Parapodia with branchiae (note: branchiae may be completely retracted in Glycera americana); postsetal parapodial lobes are slightly bilobed or deeply cleft.……...**3**

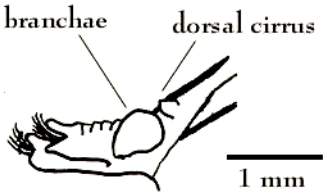
3a. Branchiae are retractile, when extended they are branched and digitiform (see below); *helpful hint*: if branchiae are retracted, there will be a small branchial pore on the posterior side of the parapodia, just below the dorsal cirri ……..**Glycera americana**

Glycera americana
middle setiger viewed
from posterior



b. Branchiae are non-retractile.. ……**4**

4a. Branchiae are blister-like, not elongated (see below); *helpful hint*: branchiae are present dorsally to parapodial bases; *helpful hint*: small, distal eyespots may be present ……....**Glycera robusta**

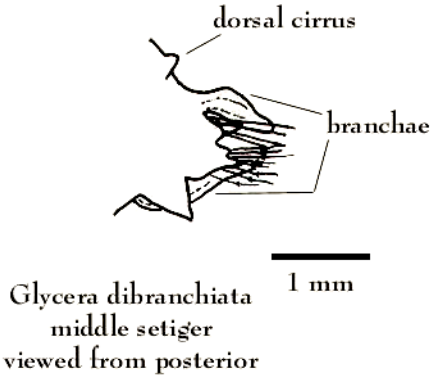


Glycera robusta
middle setiger
dorsal view

b. Branchiae are digitiform or conical, and are subequal to, or slightly longer than the pre and post setal lobes; *helpful hint*: eyespots always absent……..**5**

5a. Each parapodia with branchiae has one dorsally placed branchiae, and no ventrally placed branchiae. ……..**Glycera sphyrabrancha**

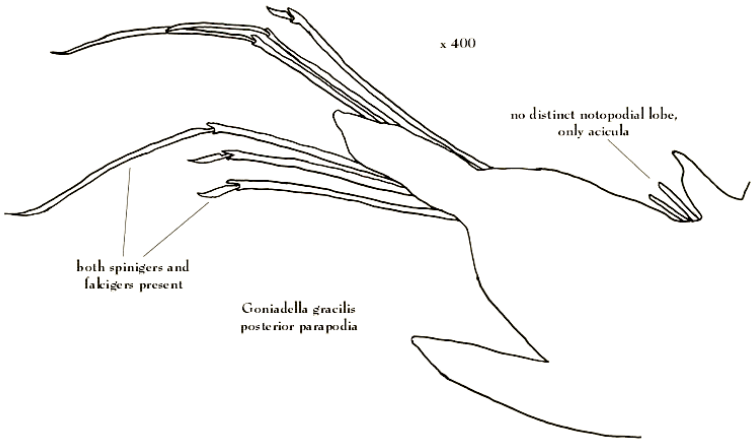
b. Each parapodia with branchiae has one dorsally placed branchiae, and one ventrally placed branchiae (see below) ……...**Glycera dibranchiata**



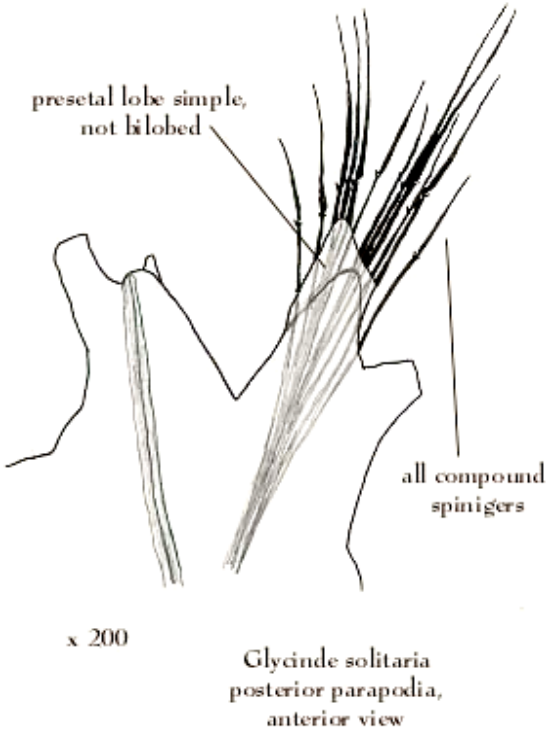
Goniadidae

1a. Posterior parapodia are clearly biramous, with notopodial lobes separate and distinct from neuropodial lobes. ……..**2**

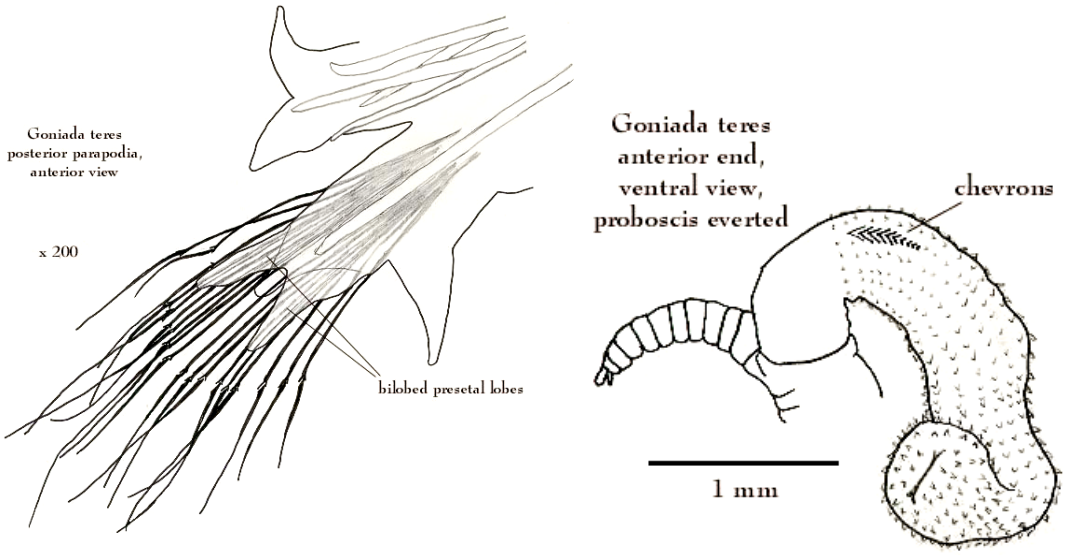
b. Posterior parapodia are not clearly biramous, notopodial lobes are indistinct, with notosetae as acicula projecting out from just below dorsal cirri (see below); *helpful hints*: both compound spinigers and falcigers present; proboscis with about 25-30 chevrons; neuropodial presetal lobes all simple; eyespots may be present on basal ring, and often on 3rd annulation also……...**Goniadella gracilis**



2a. All neuropodial presetal lobes are simple; neurosetae are compound spinigers only (see below); proboscis without chevrons; *helpful hint*: may have minute basal and distal eyespots. ……..**Glycinde solitaria**



b. All neuropodial presetal lobes are bilobed (see below, left), except the anteriormost two; anterior neurosetae are both compound spinigers and falcigers; proboscis with about 8-12 chevrons (see below, right); *helpful hint*: eyespots never present ……..**Goniada teres**



Hesionidae

1a. Distinct anal plate or disc present; prostomium with two rudimentary eyes, or eyes lacking; *helpful hint*: 6 tentacular cirri present, on 3 distinct segments……..**2**

b. Anal plate or disc lacking; prostomium with four eyes (note: eyes may appear to be partially fused); *helpful hint*: 6 or 8 tentacular cirri present, on 3 or four segments that may not appear distinct from each other. ……....**3**

2a. Anal plate rounded and entire; anal cirri are shorter than anal plate . ……....**Microphthalmus sckelkowii**

b. Anal plate bilobed; anal cirri extend beyond anal plate ….**Microphthalmus aberrans**

3a. Tentacular cirri 6 pairs...……....**4**

b. Tentacular cirri 8 pairs..…….…….**5**

4a. Prostomium with a median antennae; notopodia small, and not forming a distinct lobe, with only 0 to 3 furcate notosetae present (note: there is usually 1 furcate notosetae present). ……..……..**Podarke obscura**

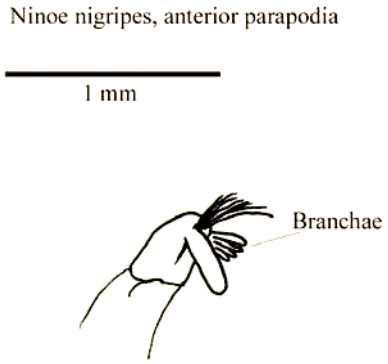
b. Prostomium without a median antennae; notopodia well developed, and forming a distinct lobe, with numerous notosetae present ……...**Parahesione luteola**

5a. Notosetae begin on setiger 1; median antennae arises medially from the prostomium.. ……....**Gyptis vittata**

b. Notosetae begin on setiger 5; median antennae arises from the anteriormost tip of the prostomium. ……....**Podarkeopsis levifuscina**

Lumbrineridae

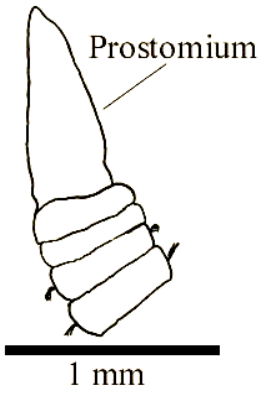
1a. Branchiae present, beginning as single lobes on setigers 3 to 4 and continuing up to setigers 24 to 30 as 6 to 7 lobes (see below) ……...**Ninoe nigripes**



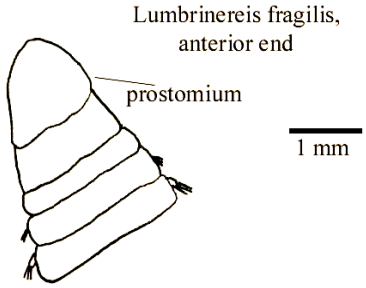
b. Branchiae entirely absent……**2**

2a. Prostomium exceptionally long, and acutely conical (see below); hooded hooks have bidentate tips; *helpful hint*: prostomium is 2 to 3 times longer than wide….……...**Lumbrinerides acuta**

Lumbrinerides acuta,
anterior end



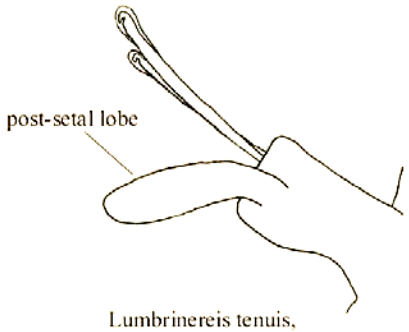
b. Prostomium is not exceptionally long, and is bluntly conical or rounded (see below); hooded hooks have multidentate tips; *helpful hint*: prostomium length less than 2 to 3 times as long as width. ……..…..**3**



3a. Acicula are black.. ……**Lumbrinereis fragilis**

b. Acicula are pale yellow or amber colored.. ……...**4**

4a. Hooded hooks begin to appear on setigers 9 to 20; posterior parapodia with elongate postsetal lobes extending upwards (see below) ……...**Lumbrinereis tenuis**



Lumbrinereis tenuis,
posterior parapodia,
dorsal view

b. Hooded hooks begin to appear on setigers 1 to 5; posterior parapodial lobes are not elongated and extending upwards. ……...**Lumbrineris impatiens**

Lysaretidae

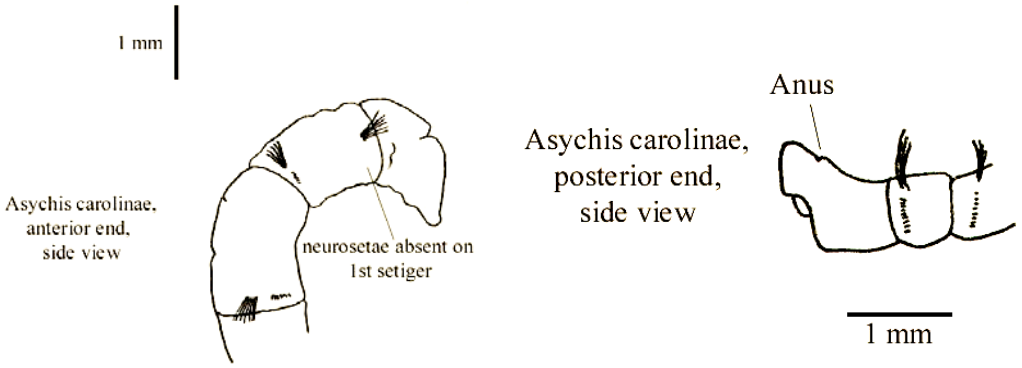
Lysarete brasiliensis is the only species from Virginia

Magelonidae

Magelona rosea is the only species from Virginia

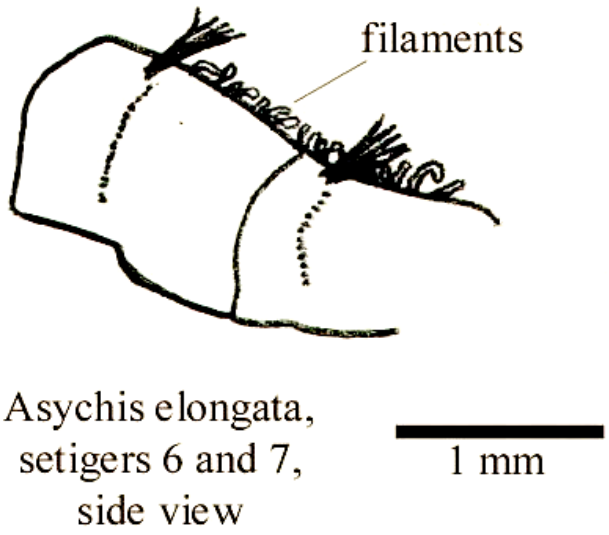
Maldanidae

1a. Neurosetae absent from setiger 1 (see below, left), beginning on setiger 2 as uncini; anal plaque with a long dorsal lobe, not ringed with digitiform cirri; anus emerges dorsally, just above the lobe (see below, right). ……....**2**



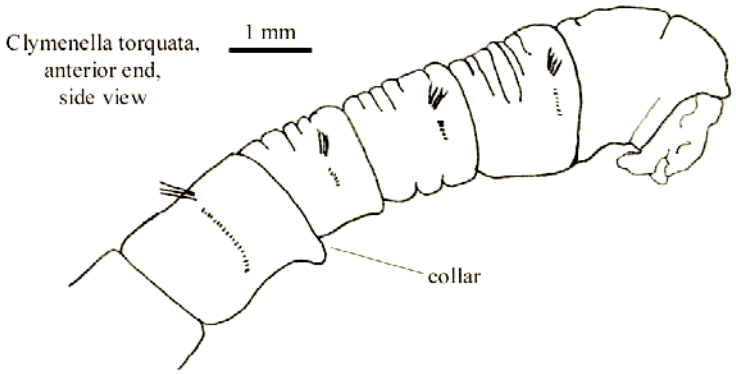
b. Neurosetae present on setiger 1 as uncini or acicula; anal plaque ringed with digitiform cirri; anus emerges terminally from the center of the ring …….....**3**

2a. 19 setigers present; large or small white tubercles may be present from setiger 6 to posterior end; numerous small filaments may be present dorsally from setiger 6 to 10 (see below); *helpful hint*: cephalic rim is short laterally, and forms a shallow pocket posteriorly. ……...**Asychis elongata**



b. 18 setigers present; tubercles always absent; small filaments always absent; *helpful hint*: cephalic rim is long laterally, and forms a deep pocket posteriorly.. …….**Asychis carolinae**

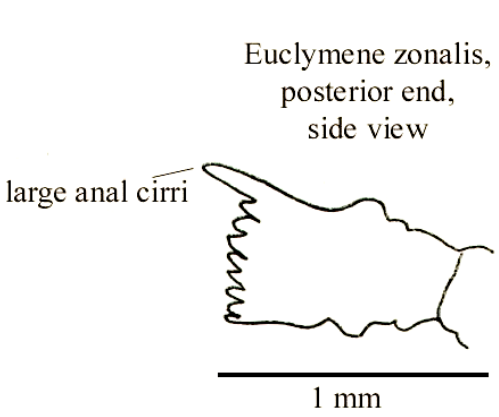
3a. Anterior portion of setiger 4 with a deep, membranous collar (see below); all anal cirri are subequal in length..……...……....**Clymenella torquata**

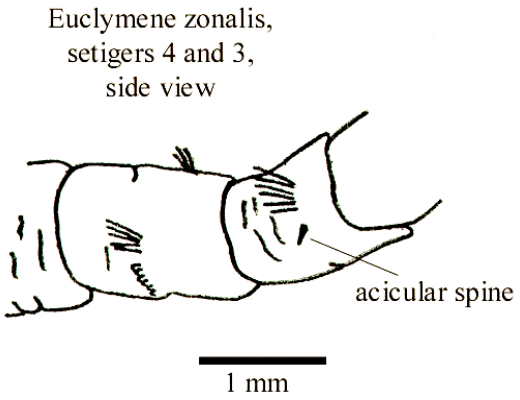


b. Setiger 4 without a membranous collar; one anal cirri is longer than the rest (see *E. zonalis*, below) …...…….....**4**

4a. Neurosetae of setigers 1 to 3 are uncini, and are similar to neurosetae of setiger 4 . ……....**Axiothella mucosa**

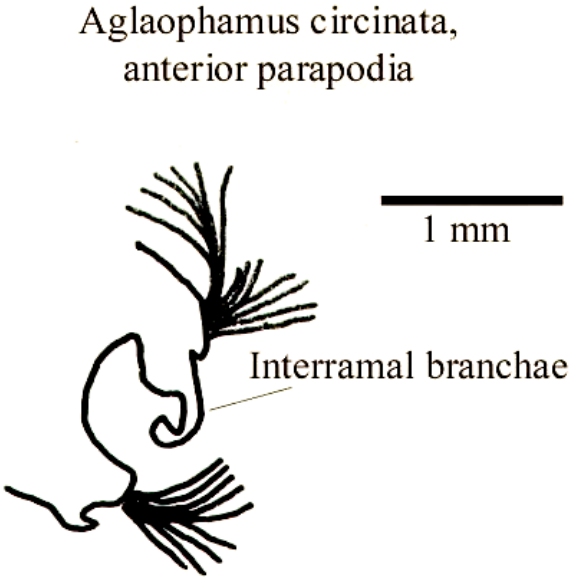
b. Neurosetae of setigers 1 to 3 are acicular spines, and are unlike neurosetae of setiger 4. ……....**Euclymene zonalis**





Nephtyidae

1a. Interramal branchiae spiral inwards toward the body.(see below) ……..**2**



b. Interramal branchiae spiral outward, away from the body; *helpful hint*: the branchiae may not curve very much, but they definitely do not spiral inwards……...**3**

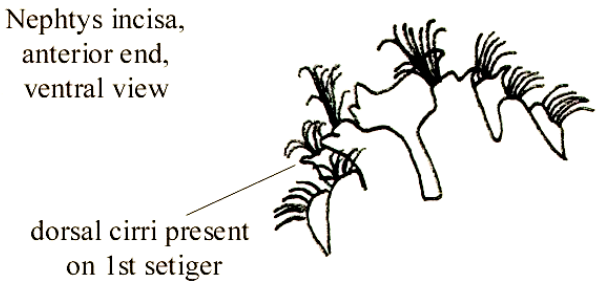
2a. Prostomium with two small, but distinct eyes present; neuropodia with digitiform accessory cirrus projecting upwards into the interramal space ….....**Aglaophamus verrilli**

b. Prostomium without any eyes; neuropodia without digitiform accessory cirrus projecting upwards into the interramal space……....**Aglaophamus circinata**

3a. Prostomium with two eyes on the posterior portion of the prostomium; *helpful hints*: eyes are located roughly between the third setigers, they are subdermal, and may not appear to be distinct, especially in larger individuals; anteriormost part of prostomium has a medial spot or streak of pigment……....**Nephtys cryptomma**

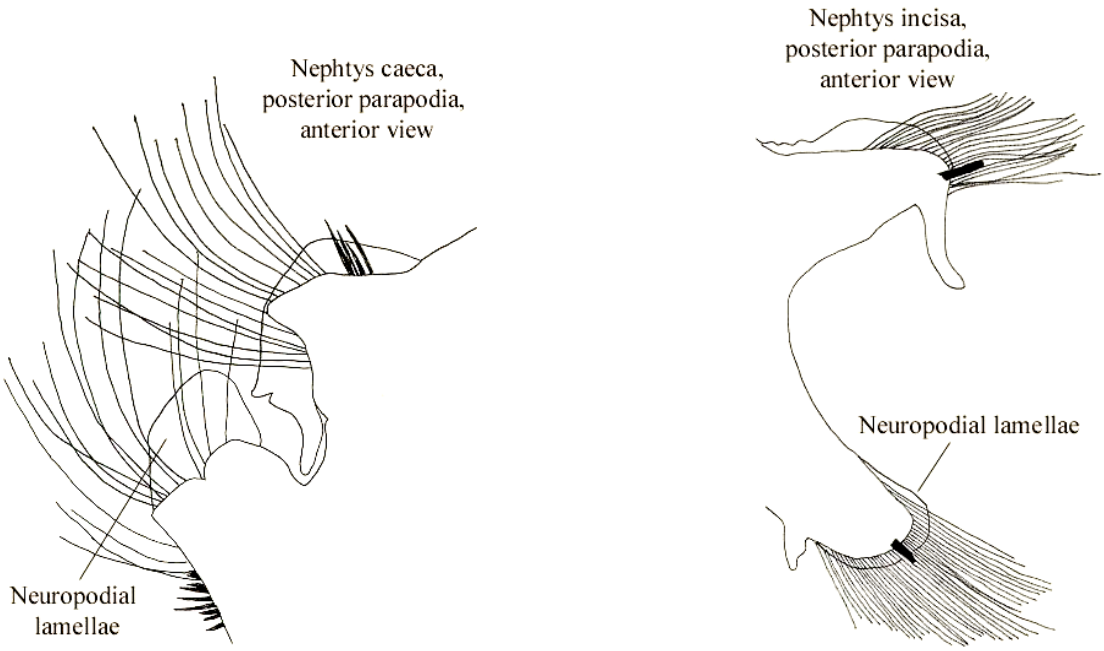
b. Prostomium without any eyes. ……..**4**

4a. Setiger 1 (tentacular segment) with dorsal (see below) and ventral cirri present; *helpful hint*: never has banded dark brown or gray pigment patterns on anterior dorsum…….....**5**



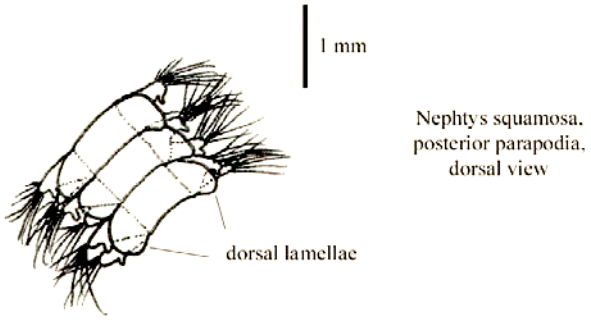
b. Setiger 1 (tentacular segment) without dorsal cirri, with ventral cirri only; *helpful hint*: may or may not have banded dark brown or gray pigment patterns on anterior dorsum...**6**

5a. Posterior parapodial lamellae are exceptionally large and prominent (see below, left), and are larger and more well developed than the rudimentary anterior parapodial lamellae; *helpful hint*: posterior parapodial lamellae are oval and foliaceous, neuropodial posterior parapodial lamellae are larger than notopodial posterior parapodial lamellae. ……..……..**Nephtys caeca**



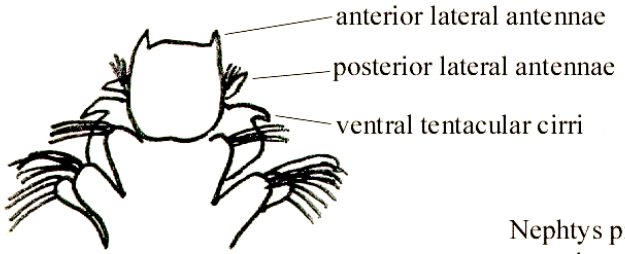
b. Posterior parapodial lamellae not exceptionally large and prominent (see above, right), anterior and posterior parapodial lamellae are about equal in size and development ……...**Nephtys incisa**

6a. Middle and posterior segments with anterior and posterior parapodial lamellae, and with additional dorsal lamellae that may overlap the following segments shingle-like (see below); *helpful hint*: additional dorsal lamellae start around setigers 12 to 17, and become larger posteriorly; banded dark brown or gray pigment patterns on anterior dorsum never present. ……..**Nephtys squamosa**



b. Middle and posterior segments with anteriror and posterior parapodial lamellae, but without additional dorsal lamellae; *helpful hint*: banded dark brown or gray pigment patterns on anterior dorsum almost always present in fresher specimens……...**7**

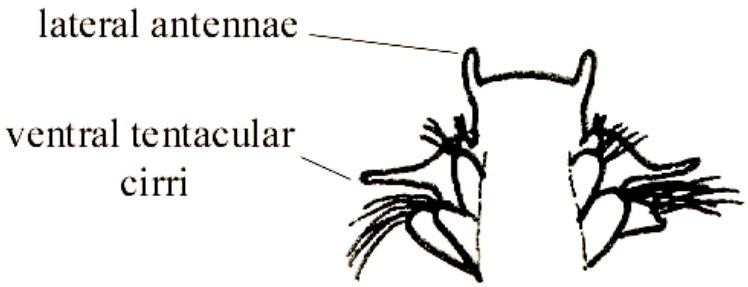
7a. Ventral tentacular cirri is anterior to widest part of enlarged tentacular segment on setiger 1 (see below); *helpful hint*: viewing the worm dorsally there are usually three pairs of "tentacular" projections visible on the anterior end: 1 the anteriormost lateral antennae, 2 the posterior lateral antennae that are partially obscured by setiger 1, 3 the ventraltentacular cirri.. ……...**Nephtys picta**



Nephtys picta,
anterior end,
dorsal view

1 mm

b. Ventral tentacular cirri is lateral and continuous with the widest part of enlarged tentacular segment on setiger 1 (see below); *helpful hint*: viewing the worm dorsally there are only two pairs of "tentacular" projections visible on the anterior end: 1 the anteriormost lateral antennae, 2 the ventral tentacular cirri, the posterior lateral antennae are small, and fully obscured.. ……**Nephtys bucera**



Nephtys bucera,
anterior end,
dorsal view

1 mm

Nereidae

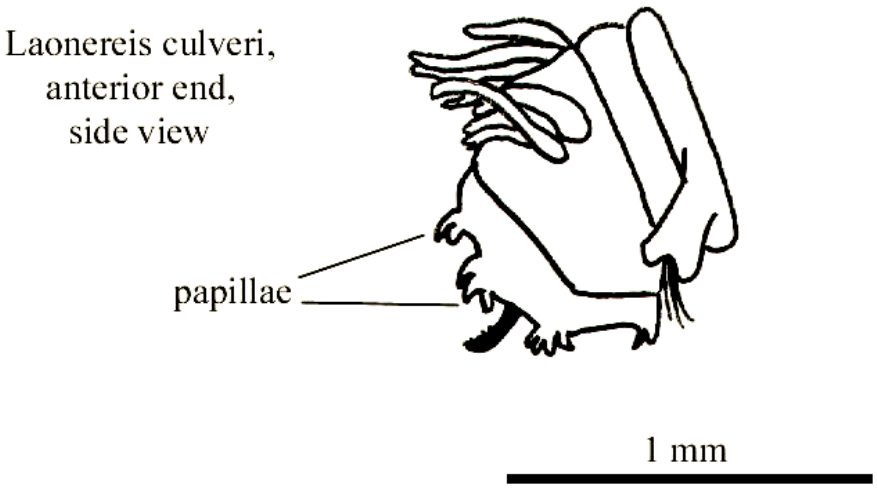
1a. Parapodia essentially uniramous throughout, with a single bundle of setae; three pairs of tentacular cirri present; proboscis without paragnaths or papillae; *helpful hint*: parapodia without ligules.. …….**Lycastopsis pontica**

b. Parapodia biramous except at anteriormost end, with two bundles of setae; four pairs of tentacular cirri present; proboscis with paragnaths or papillae; *helpful hint*: parapodia with ligules. ……....**2**

2a. Proboscis with black, chitinized paragnaths; posterior notosetae with compound spinigers, and with or without compound falcigers; *helpful hint*: tentacular cirri may or may not be exceptionally long, with the longest extending up to setiger 9…….....**4**

b. Proboscis without black, chitinized paragnaths; posterior notosetae with compound spinigers, without compound falcigers; *helpful hint*: tentacular cirri fairly short, with the longest rarely extending beyond setiger 5; proboscis has papillae, rather than paragnaths on it, these papillae may or may not be lightly chitinized, if they are lightly chitinized there will be seven circular papillae on the ventral side of the basal or oral ring of the proboscis that are light brown in color. ……..**3**

3a. Proboscis with tufts of papillae on maxillary or anteriormost ring (see below); oral or basal ring bare except for two conical papillae; no papillae are chitinous and light brown in color; posterior dorsal cirri are shorter than notopodial ligules……..**Laonereis culveri**

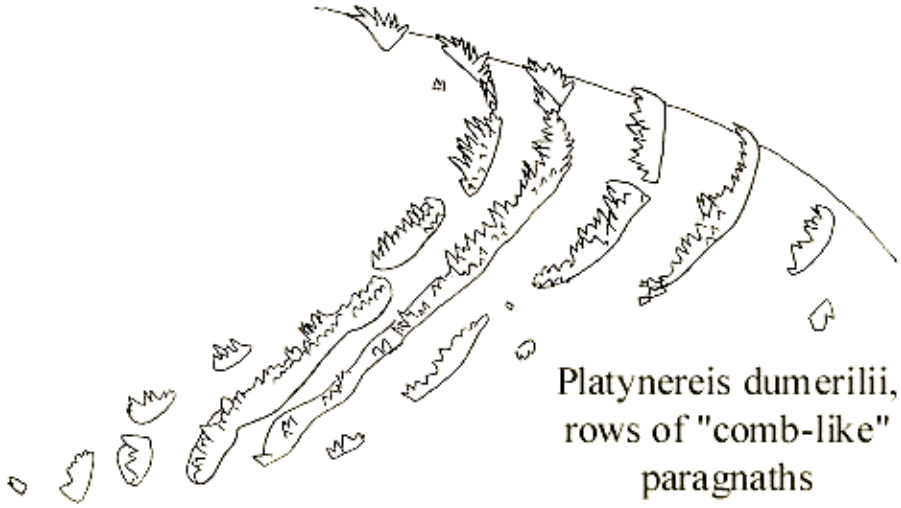


b. Proboscis with maxillary or anteriormost ring bare; oral or basal ring with seven circular papillae on ventral side; these seven are slightly chitinous, and light brown in color; posterior dorsal cirri longer or subequal to notopodial ligules…….....**Websterinereis tridentata**

4a. Paragnaths present on maxillary or anteriomost ring of proboscis only; *helpful hint*: longest tentacular cirri are usually quite long, and may extend up to setiger 9.. ……....**Ceratonereis irritabilis**

b. Paragnaths present on both maxillary or anteriormost ring of proboscis, and oral or basal ring of proboscis; *helpful hint*: longest tentacular cirri may or may not be quite long, and may or may not extend up to setiger 9; paragnaths on oral or basal ring may be small and few in number (6-8 total in 2 dorsal groups) . ……..**5**

5a. Paragnaths include comb-like bars and cones (see below); *helpful hint*: longest tentacular cirri are quite long, and may extend up to setiger 9. ……..**Platynereis dumerilii**

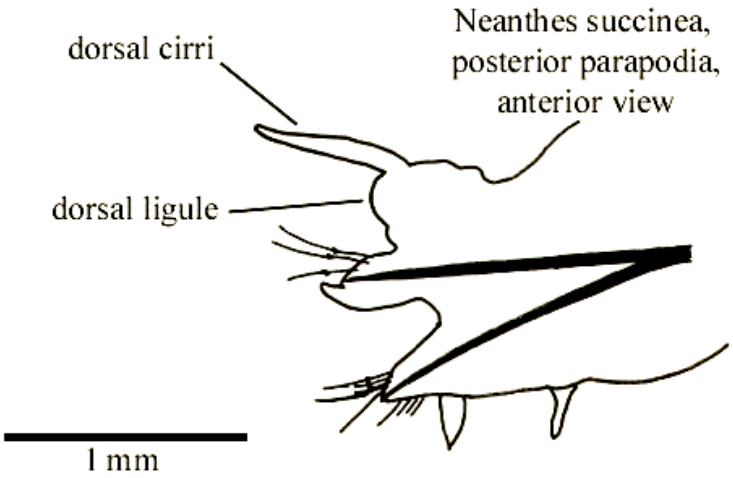


b. Paragnaths are cones only; *helpful hint*: longest tentacular cirri are not quite long, and usually do not exceed setiger 6. ……..**6**

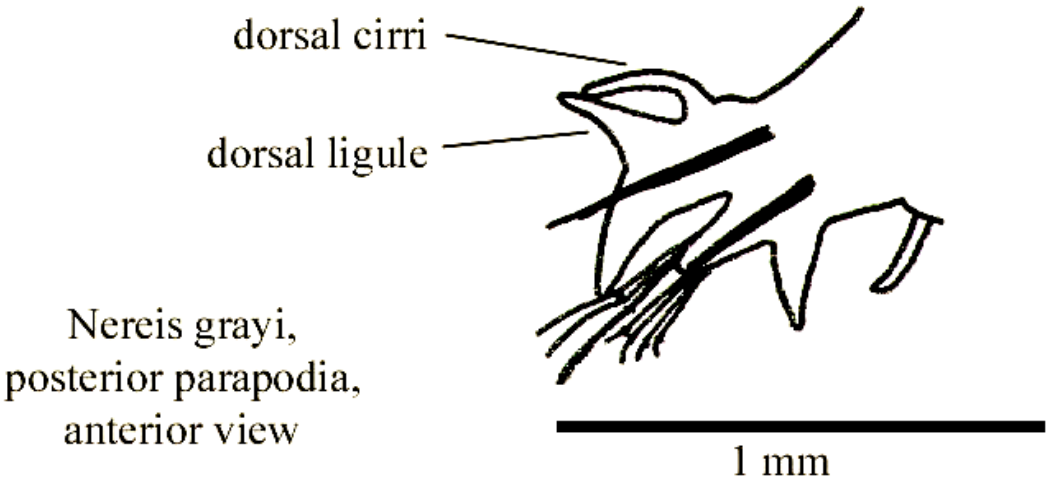
6a. Oral or basal ring of proboscis with a continuous ring of paragnaths; acicula are colorless.. …….**Neanthes arenaceodentata**

b. Oral or basal ring of proboscis with paragnaths in groups, not in a continuous band; acicula are dark or black. ……....**7**

7a. Ventral part of oral or basal ring with many paragnaths; dorsal parapodial ligules highly modified from anterior to posterior end, posterior dorsal ligules are elongate and flattened, with dorsal cirri that are subterminally attached to them (see below); posterior notosetae with compound spinigers, and without compound falcigers……..…..**Neanthes succinea**

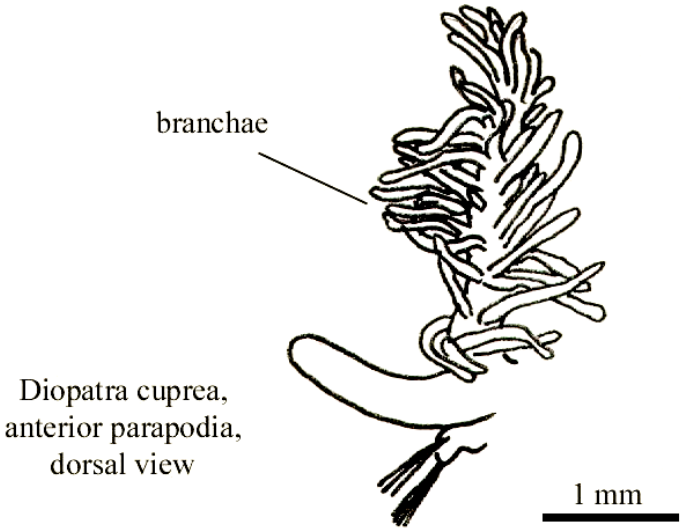


b. Ventral part of oral or basal ring with no paragnaths; dorsal parapodial ligules not highly modified from anterior to posterior, posterior ligules are acutely conical, with dorsal cirri that are basally attached to them (see blow); posterior notosetae with compound spinigers, and with compound falcigers. ……..**Nereis grayi**

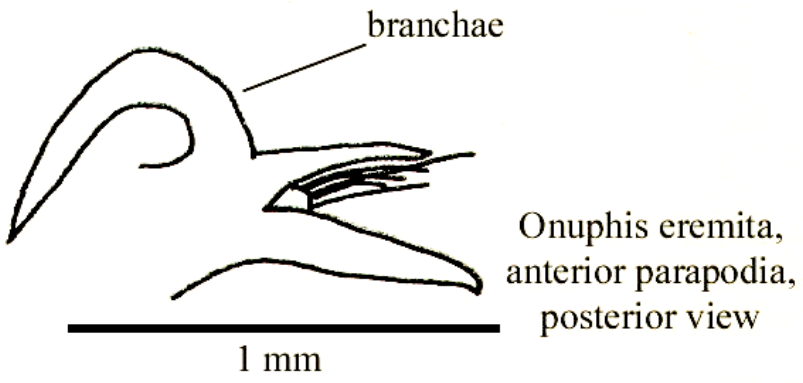


Onuphidae

1a. Branchiae begin on setigers 4 or 5, above dorsal cirri, as bushy, feathery tufts (see below), then gradually become less bushy and prominent posteriorly, until they disappear altogether ……..……..…….**Diopatra cuprea**



b. Branchiae begin on setiger 1, above dorsal cirri, as a single long filament (see below), becoming more branched posteriorly, with up to 7 filaments, then becoming less prominent, but continuing to nearly the posterior end…..……...….**Onuphis eremita**



Opheliidae

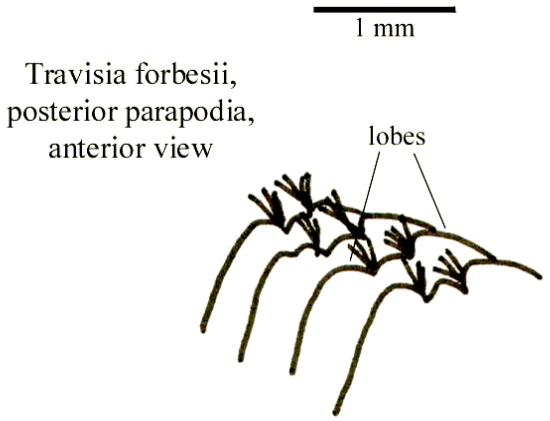
1a. Body without pronounced longitudinal, ventral groove; *helpful hint*: branchiae begin on setiger 2.. ……....**2**

b. Body with pronounced longitudinal ventral groove along the entire length of the body, or along posterior half only; *helpful hint*: branchiae may or may not begin on setiger 2....**4**

2a. 20 setigers present; *helpful hint*: lateral swellings above and below posterior parapodia present.. ……...**Travisia parva**

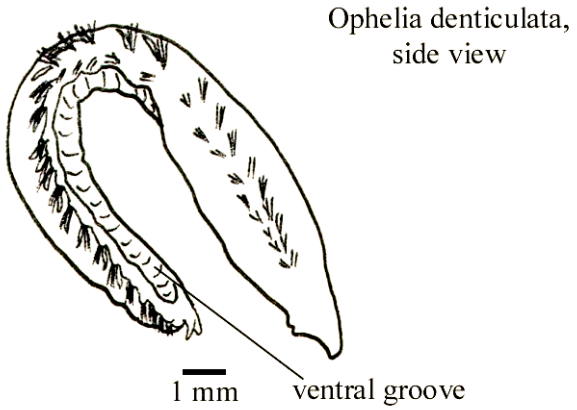
b. 22 or more setigers present; *helpful hint*: lateral swellings above and below posterior parapodia may or may not be present.. ……..…….**3**

3a. Lateral swellings or fleshy lobes above and below posterior parapodia present (see below) ..…….**Travisia forbesii**



b. Lateral swellings or fleshy lobes above and below posterior parapodia absent .. ……**Travisia carnea**

4a. Pronounced ventral groove present only in posterior half of body (see below); branchiae begin on setigers 10, 11 or 12; *helpful hint*: groove starts around setiger 10…….**5**



b. Pronounced ventral groove present along the entire length of the body; branchiae begin on setiger 2.. ……..**6**

5a. Branchiae begin on setiger 10; 18 pairs of branchiae present …...**Ophelia denticulata**

b. Branchiae begin on setiger 11 or 12; 11 to 15 pairs of branchiae present .. ……...**Ophelia bicornis**

6a. Small, lateral eyespots present between parapodia, starting from setiger 7……..**7**

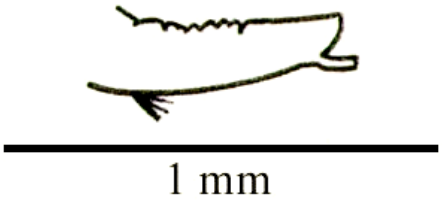
b. Small, lateral eyespots absent between parapodia.…….**8**

7a. Body with 29 or fewer setigers; anterior parapodia with short presetal lobes; *helpful hint*: prostomium conical, but usually not particularly long or acute. ……...……..**Armandia maculata**

b. Body with 35 or more setigers; anterior parapodia with long, pointed presetal lobes; *helpful hint*: prostomium conical, long and acute……..**Armandia agilis**

8a. 27 to 28 setigers present; anal tube at posteriormost end is simple and cylindrical (see below) ……....**Ophelina cylindricaudata**

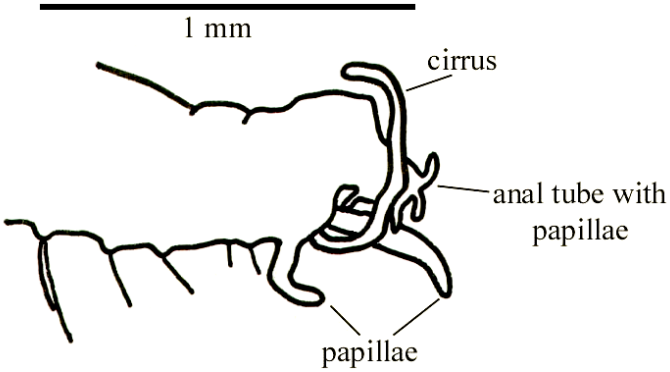
Ophelia cylindricaudata,
posterior end



1 mm

b. 35 to 43 setigers present; anal tube at posteriormost end is hood-like, with a papillose margin, and with a long, articulated midventral cirrus, flanked by two elongated papillae (see below) ……**Ophelina acuminata**

Ophelina acuminata, posterior end

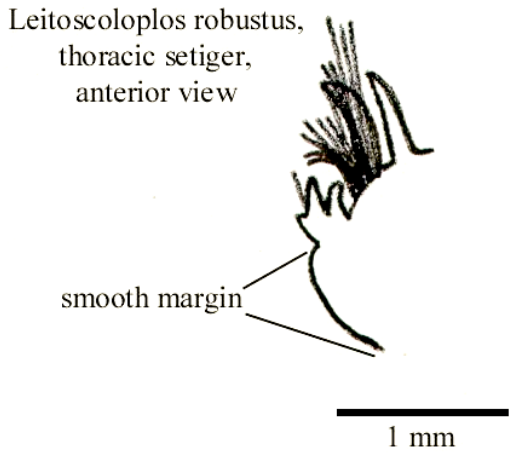


Orbiniidae

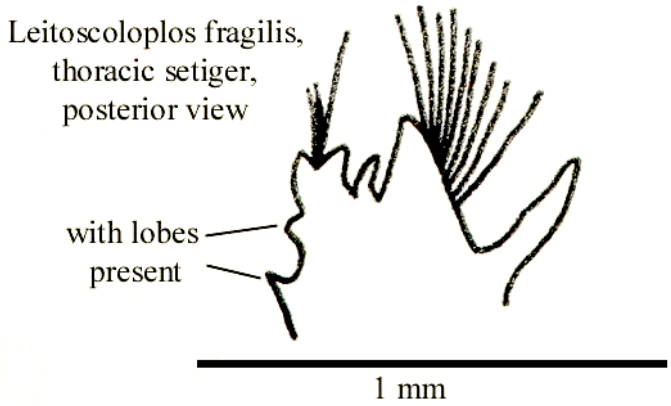
1a. Thoracic neurosetae are crenulated capillary setae only. ……..**2**

b. Thoracic neurosetae are crenulated capillary setae, and one or more rows of other setal types, in the form of blunt hooks or spines. ……....**3**

2a. Subpodal neuropodial flanges posterior to thoracic/abdominal transition region are smooth and entire (see below).. ……...…….**Leitoscoloplos robustus**

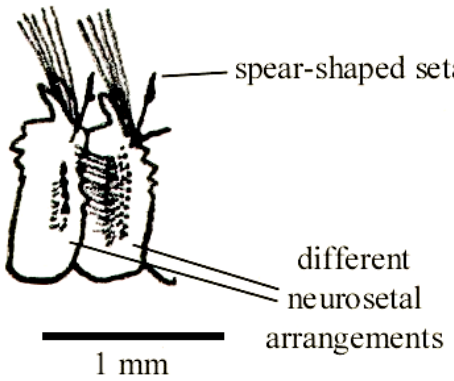


b. Subpodal neuropodial flanges posterior to thoracic/abdominal transition region are not smooth and entire, and form two small lobes (see below)……...**Leitoscoloplos fragilis**



3a. Posterior thoracic neuropodia with large, spear shaped acicular setae present; abrupt transition between two types of thoracic neurosetal arrangements present (see below); *helpful hints*: spear shaped acicular setae may be broken off; transition between thoracic neuropodial setal types occurs at about setiger 10 . ……....**4**

Phylo kupfferi,
setigers 11 and 10,
side view



b. Posterior thoracic neuropodia without large, spear shaped acicula; abrupt transition between thoracic neuropodial setal type arrangements absent……....**5**

4a. Single, interramal cirri present, beginning on anterior abdominal setigers ……....**Phylo felix**

b. Interramal cirri absent between abdominal setigers…….**Phylo kupfferi**

5a. Posterior thoracic region with 4 or more papillae on neuropodial post setal lobes and subpodal lobes combined (see below) ……...**6**

Orbinia riseri,
setigers 17-18,
side view

1 mm

b. Posterior thoracic region with no more than 2 papillae on neuropodial post setal lobes and subpodal lobes combined.. ……...**7**

6a. Interramal cirri present, beginning on posterior thoracic or anterior abdominal regions.. ……**Orbinia riseri**

b. Interramal cirri absent from abdominal region.……..**Orbinia ornata**

7a. Branchiae begin on setiger 6…….....**Scoloplos rubra**

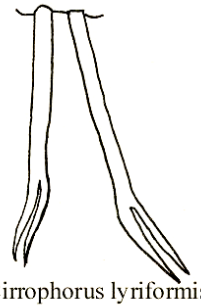
b. Branchiae begin on setiger 14 to 25……....**Scoloplos acmeceps**

Oweniidae

Owenia fusiformis is the only species from Virginia

Paraonidae

1a. Modified setae present in notopodia; *helpful hint*: modified setae are furcated (see below) …...……..**2**



Cirrophorus lyriformis, furcate notosetae

b. Modified setae, if present, in neuropodia, notopodia are usually all simple capillaries. ……..**3**

2a. Prostomium with a short median antennae present; 29-33 pairs of branchiae present ……....**Cirrophorus lyriformis**

b. Prostomium without a median antennae; 10-16 pairs of branchiae present ……..**Cirrophorus lyra**

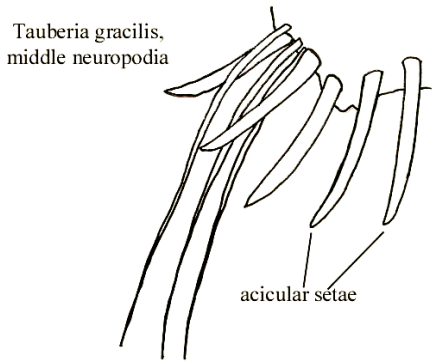
3a. Median antennae present on prostomium; *helpful hint*: antennae may be small, or broken off.. ……**6**

b. Median antennae not present on prostomium.. …….**4**

4a. 5 or more pre-branchial setigers present; *helpful hint*: 9-19 pairs of branchiae present. ……..**5**

b. Only 3 pre-branchial setigers present; *helpful hint*: 16-25 pairs of branchiae present.. ……...**Paraonis fulgens**

5a. 5-6 curved, hooked acicular setae in neuropodia, starting at about setiger 20 (see below); *helpful hint*: eyes absent.. …….**Tauberia gracilis**

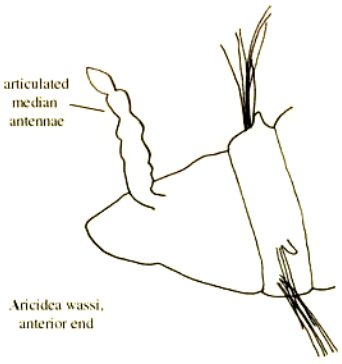


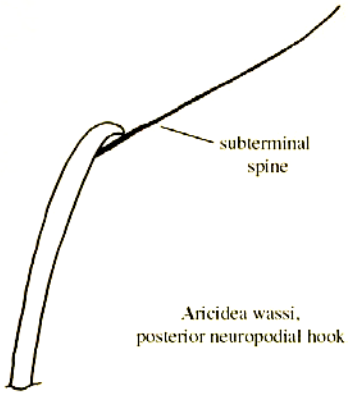
b. Curved, hooked setae absent from neuropodia; *helpful hint*: small eyes present …….**Paraonis pygoenigmatica**

6a. Distinct, conical neuropodial post setal lobes present on setigers 1-3; *helpful hint*: 26-30 pairs of branchiae present. ……....**Aricidea albatrossae**

b. Distinct neuropodial lobes absent from setigers 1-3... ……..**7**

7a. Median antennae articulated (see below, left); modified neurosetae are hooked (see below, right), with a subterminal spine on the concave side; *helpful hint*: median antennae is fairly long, extending to setigers 2-4; subterminal spine can be longer than the hooked neurosetae itself.. ……...**Aricidea wassi**

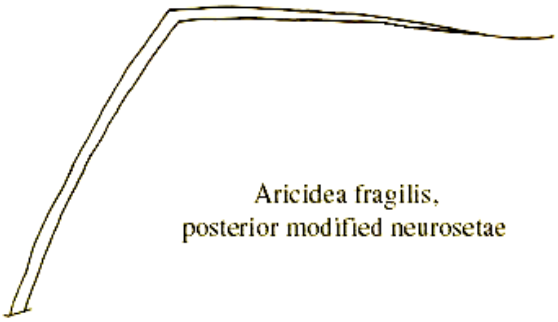




b. Median antennae not articulated; modified neurosetae otherwise; *helpful hint*: median antennae may be long or short. ……...**8**

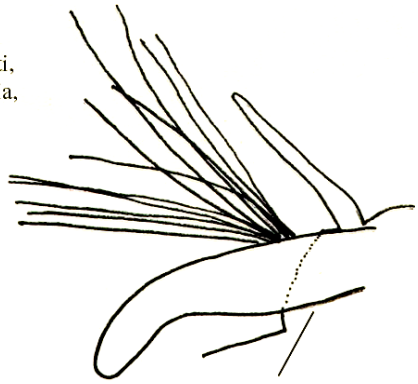
8a. Modified posterior neurosetae are stout hooks; median antennae is usually short, extending only to setiger 1.. ……....**9**

b. Modified posterior neurosetae are bent capillary setae, not stout hooks (see below); median antennae is long, extending to setigers 2-3. ……..**Aricidea fragilis**



Aricidea fragilis,
posterior modified neurosetae

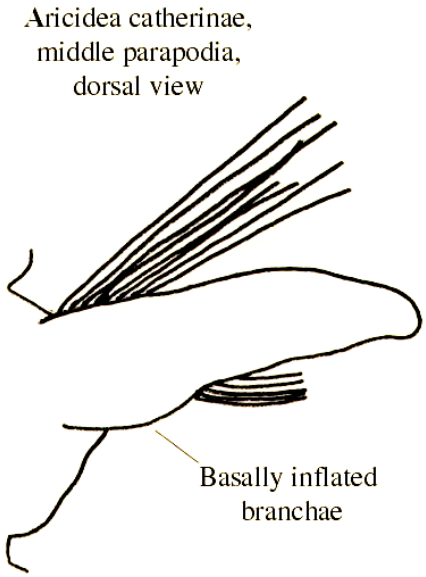
9a. Modified posterior neuropodial hooks are hooded; branchiae strap-like (see below) ……...**Aricidea cerrutti**



Aricidea cerrutti,
middle parapodia,
dorsal view

strap-like branchae

b. Modified posterior neuropodial hooks are not hooded; branchiae basally inflated (see below), foliaceous.. …….**Aricidea catherinae**



Pectinariidae

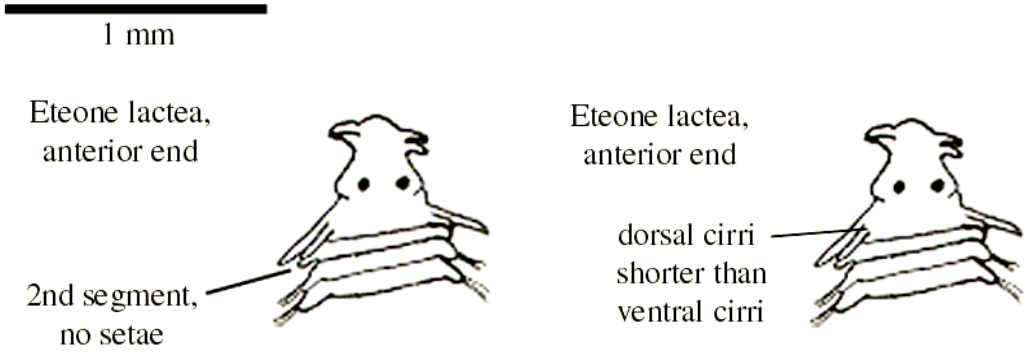
Pectinaria gouldii is the only species from Virginia

Phyllodocidae

1a. Only two pairs of tentacular cirri present, all are on 1st segment only……....**2**

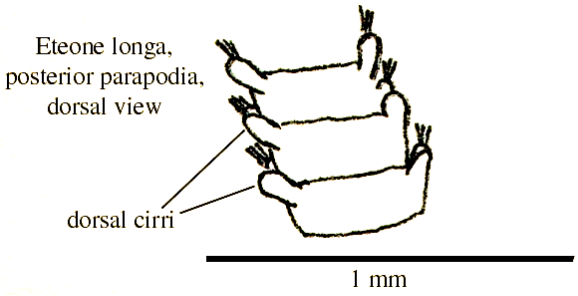
b. More than two pairs of tentacular cirri present, on 2 or 3 anteriormost segments…….**4**

2a. Setae absent from 2nd segment (see below, left); ventral tentacular cirri are longer than dorsal tentacular cirri (see below, right) ……....**Eteone lactea**

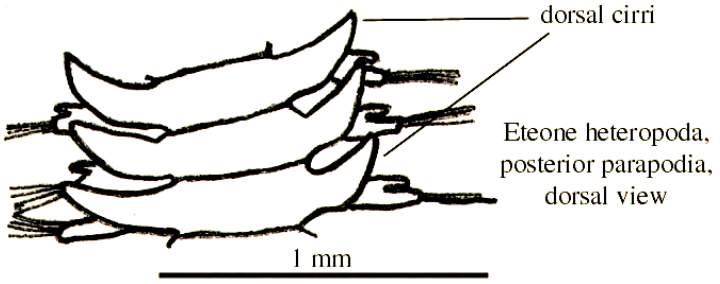


b. Setae present on 2nd segment; dorsal tentacular cirri are longer than, or subequal to, ventral tentacular cirri..……...…….**3**

3a. Posterior dorsal cirri are broad and oval shaped, with rounded edges (see below) ……...**Eteone longa**



b. Posterior dorsal cirri are elongate and triangular or conical in shape, and come to a distinct point (see below)……...……...**Eteone heteropoda**



4a. Only three pairs of tentacular cirri present, on 1st two segments…..…….**5**

b. Four pairs of tentacular cirri present, on 1st three segments; *helpful hint*: segments may not be clearly distinct……..…….**6**

5a. Setae absent from 2nd segment; prostomium elongated, about two times longer than wide; eyespots small and indistinct; tentacular cirri are basally filiform.. ……..**Hesionura elongata**

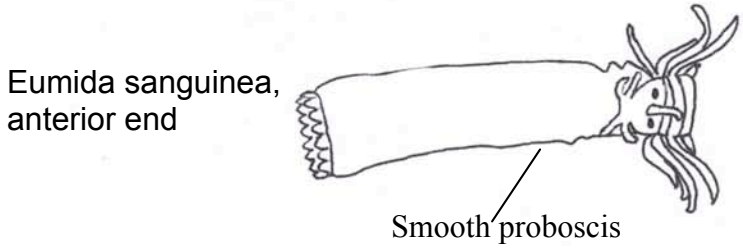
b. Setae present on 2nd segment; prostomium about as long as it is wide; eyes large and distinct; tentacular cirri are basally inflated…….**Mystides borealis**

6a. Median antennae present. ……..**7**

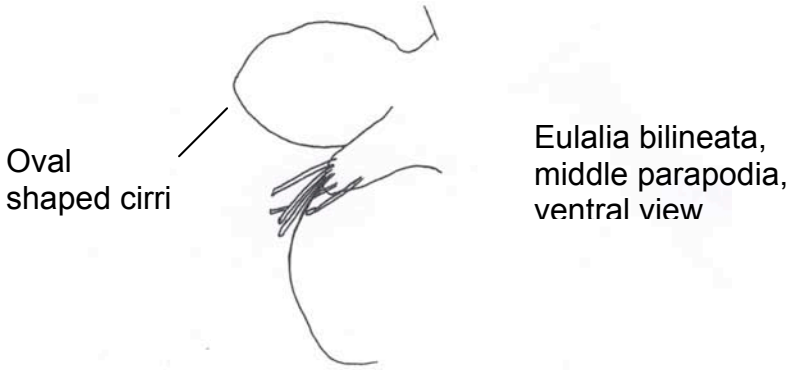
b. Median antennae absent…….……**9**

7a. Tentacular cirri appear as follows: one pair originating from a distinct 1st segment, two pair originating from the second segment, and one pair originating from the third segment; proboscis is densely papillated, with large papillae…….**8**

b. 1st segment is not distinct, so the tentacular cirri appear to arise as follows: three pairs originating from the 1st segment (which is really the 1st and 2nd segments combined), and one pair originating from the 2nd segment (which is really the 3rd segment); proboscis is sparsely papillated with small papillae, or is nearly smooth (see below). ……....**Eumida sanguinea**



8a. Dorsal cirri are oval shaped, with rounded tips (see below); median antennae is smaller than frontal antennae; *helpful hint*: in fresh specimens there is pigmentation at the bases of the dorsal cirri, which form two longitudinal stripes ……..**Eulalia bilineata**



b. Dorsal cirri are elongated, with pointed tips; median antennae is smaller than frontal antennae; *helpful hint*: longitudinal stripes absent in fresh specimens……..**Eulalia viridis**

9a. Dorsal cirri from midregion are heart-shaped, with a blunt point; *helpful hint*: dorsal cirri are highly pigmented, and when they are preserved in alcohol they have a brownish red, or purplish color…….…….**10**

b. Dorsal cirri from midregion are shaped otherwise, usually with rounded edges ….....**11**

10a. Anteriormost dorsal cirri are narrow oval shaped, becoming more heart shaped around segment 7; dorsal tentacular cirri are flattened in cross section; *helpful hint*: color in life is greenish-yellow.. ……..….**Nereiphylla fragilis**

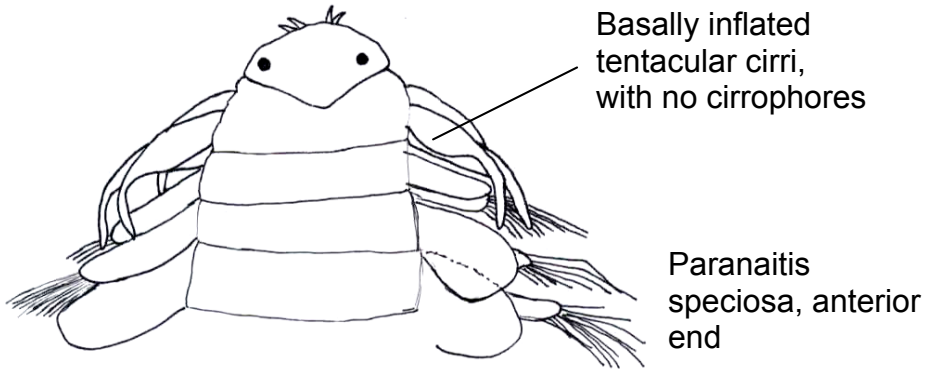
b. Anteriormost dorsal cirri are broadly heart shaped; dorsal tentacular cirri are cylindrical in cross section; *helpful hint*: color in life is red ……...**Genetyllis castanea**

11a. Prostomium heart shaped, with a posterior incision or notch……..**13**

b. Prostomium lacking posterior incision or notch; *helpful hint*: dorsal cirri are large and broad, overlapping each other scale-like on dorsum……...**12**

12a. Small nuchal tubercle present on posterior margin of prostomium; anal cirri are long and tapered; *helpful hint*: tentacular cirri are filiform, with cirrophores.. ……**Paranaitis polynoides**

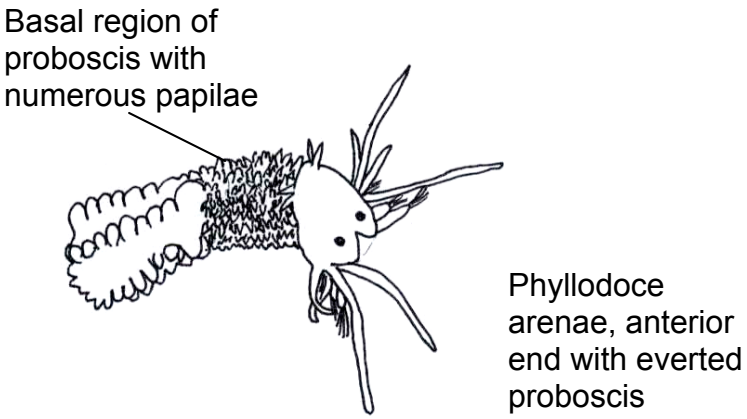
b. Small nuchal tubercle absent from prostomium; anal cirri short and rounded; *helpful hint*: tentacular cirri are often basally inflated, tapering to fine tips, and without cirrophores (see below). ……..……..**Paranaitis speciosa**



13a. Ventral cirri are distinctly pointed on the ends, and are longer than the parapodial lobes..
……**14**

b. Ventral cirri are rounded, and are subequal to the parapodial lobes in length. ……....**Anaitides groenlandica**

14a. Setae present on the segment with the third tentacular cirri; basal portion of proboscis has numerous papillae, not in distinct rows (see below). ….**Phyllodoce arenae**



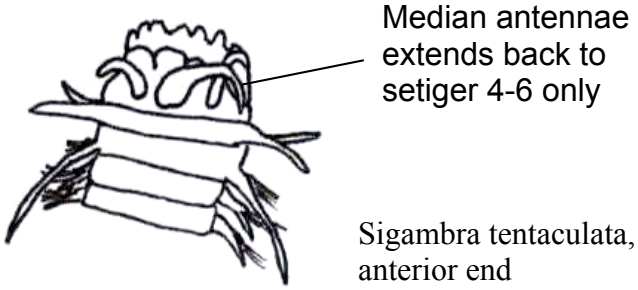
b. Setae absent from the segment with the third tentacular cirri; basal portion of proboscis has papillae in distinct rows. ……..**Anaitides mucosa**

Pilargidae

1a. Median antennae present and elongated, much longer than palps; dorsal cirri of setiger 1 are much longer than the subsequent dorsal cirri…….**2**

b. Median antennae, if present, is shorter than or subequal to length of the palps; dorsal cirri of setiger one are not more than about two times longer than the subsequent dorsal cirri..…….**3**

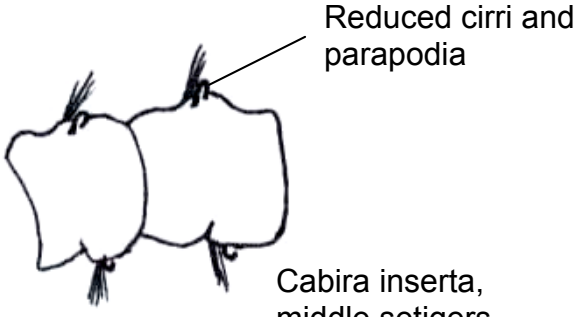
2a. Hooked notopodial setae begin on setiger 4; median antennae extends posteriorly to about setigers 4-6 (see below); *helpful hint*: occaisionally hooked setae begin on setigers 5 or 6. ……..**Sigambra tentaculata**



Sigambra tentaculata,
anterior end

b. Hooked notopodial setae begin on setigers 10-15; median antennae extends posteriorly up to setiger 12.
……....**Sigambra bassi**

3a. Dorsal and ventral cirri greatly reduced; parapodia greatly reduced, and not distinct from the body (see below); hooked setae begin on setigers 7-9; median antennae completely absent.. …….**Cabira incerta**



Cabira inserta,
middle setigers

b. Dorsal and ventral cirri evident, not greatly reduced; parapodia are distinct from body, and not greatly reduced, hooked setae begin on other setigers; median antennae present, although it may be quite small……....**4**

4a. Hooked notopodial setae begin on setigers 23-35; *helpful hint*: dorsal cirri of setiger 1 about twice as long as subsequent dorsal cirri ..…….**Sigambra wassi**

b. Hooked setae begin on setigers 3-6; *helpful hint*: dorsal cirri of setiger 1 may or may not be longer than subsequent dorsal cirri...……**5**

5a. Hooked setae begin on setiger 3..…….**Ancistrosyllis hartmanae**

b. Hooked setae begin on setigers 4-6..…….**6**

6a. Hooked setae begin on setiger 4 or 5; dorsal cirri of setiger 1 are about two times longer than subsequent dorsal cirri.…….**Ancistrosyllis groenlandica**

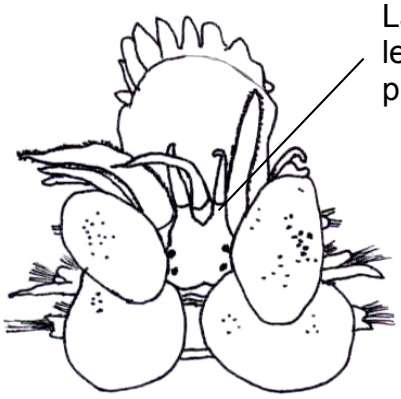
b. Hooked setae begin on setiger 6; dorsal cirri of setiger 1 are slightly longer than, or subequal to dorsal cirri of subsequent setigers. ……..**7**

7a. Ventral cirri begin on setiger 1; parapodia with a distinct notopodial lobe present, which is separated from the neuropodial lobe by a deep notch
…….…….**Ancistrosyllis commensalis**

b. Ventral cirri begin on setiger 3; parapodia without a distinct notopodial lobe separated from the neuropodial lobe by a deep notch ……..**Ancistrosyllis jonesi**

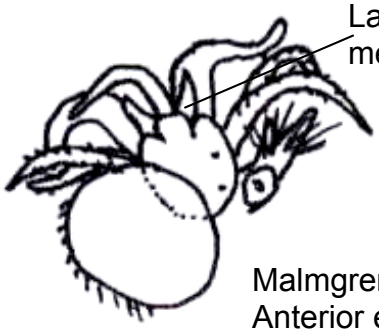
Polynoidae

1a. Lateral antennae are inserted terminally on anterior prolongations of the prostomium, at the same level as the median antennae (see below); 12 or numerous (more than 23) pairs of elytra present.…….……**2**



Lepidasthenia commensalis, anterior end

b. Lateral antennae are inserted ventral to median antennae (see below); 14-15 pairs of elytra present..……..…...……**5**



Malmgreniella taylori,
Anterior end, right elytra
removed

2a. 50 or more segments present; 23 or more pairs or elytra present; *helpful hint*: often found commensal with tube building polychaetes …….....**Lepidasthenia commensalis**

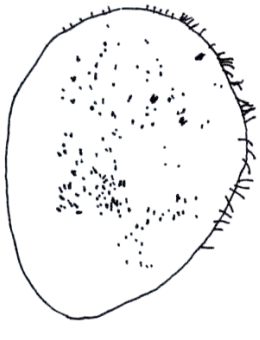
b. 26 segments present; 12 pairs of elytra present……..**3**

3a. Surface of elytra with small, roughly uniformly sized, conical or rounded microtubules only, that are fairly widely spaced, elytra without macrotubules. ……..**Lepidonotus sublevis**

b. Surface of elytra with microtubules and macrotubules of different sizes, micro and macrotubules are fairly dense on elytra.. ……....**4**

4a. Some neurosetae with distinctly bidentate tips (see below); last pair of elytra are not notched medially (see below).. ……..…….**Lepidonotus variabilis**

Lepidonotus variabilis,
bidentate tipped neurosetae



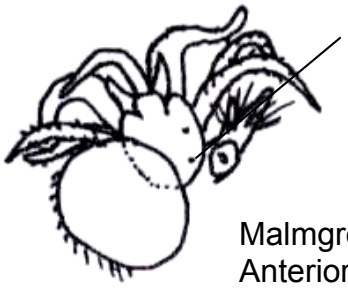
Lepidonotus variabilis,
Last elytra

b. No neurosetae with distinctly bidentate tips; last pair of elytra are medially notched..……...…….**Lepidonotus squamatus**

5a. Some neurosetae are slender, with fine, capillary tips, others are bluntly tipped and slightly curved; *helpful hint*: anteriormost pair of eyes are larger than posterior pair. ……..……..**Antinoella sarsi**

b. All neurosetae are stout, without fine, capillary tips; *helpful hint*: anteriormost eyes subequal to or larger than posteriormost eyes. ……..**6**

6a. 14 or 15 pairs of elytra present; 31 or less setigers present; elytra without tubercles; *helpful hint*: eyes are quite small (see below); usually found commensal with the brittle star Micropholis atra.. …….**Malmgreniella taylori**



Malmgreniella taylori,
Anterior end, right elytra
removed

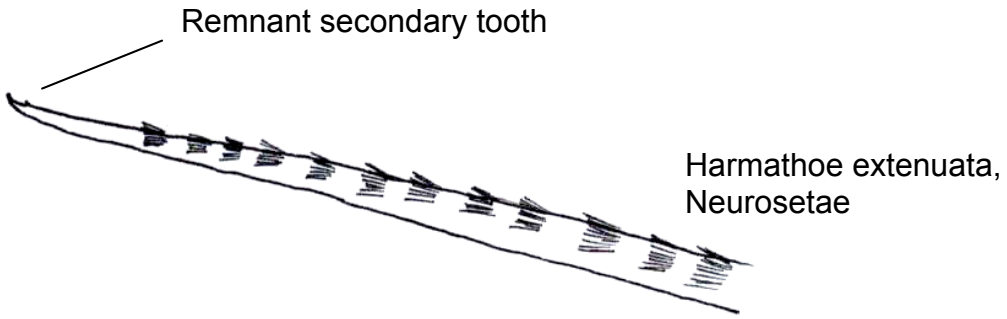
b. 15 pairs of elytra present; 34 or more setigers present; elytra with tubercles; *helpful hint*: eyes are not quite small.. …..…….**7**

7a. 48 or more setigers present; with only a few (4-10) stout notosetae present …….**Harmathoe acanellae**

b. 45 or less setigers present; with more numerous notosetae present…….**8**

8a. Some neurosetae are clearly bidentate; anteriormost pair of eyes are on the ventral side of the prostomium, and if visible dorsally, only through the prostomium …….**Harmathoe imbricata**

b. Some neurosetae with small, remnant secondary tooth only, not clearly bidentate (see below); anteriormost pair of eyes are on the dorsal side of the prostomium. ……..**Harmathoe extenuata**



Harmathoe extenuata,
Neurosetae

Sabellariidae

Sabellaria vulgaris is the only species from Virginia

Sabellidae

1a. Worm is very small, with 12 or less setigers. ……..**2**

b. Worm with more than 12 setigers.. ……..**3**

2a. Tentacular crown with 2 pair of radioles; pygidium without eyespots; *helpful hint*: this is a freshwater species.. …….**Manayunkia speciosa**

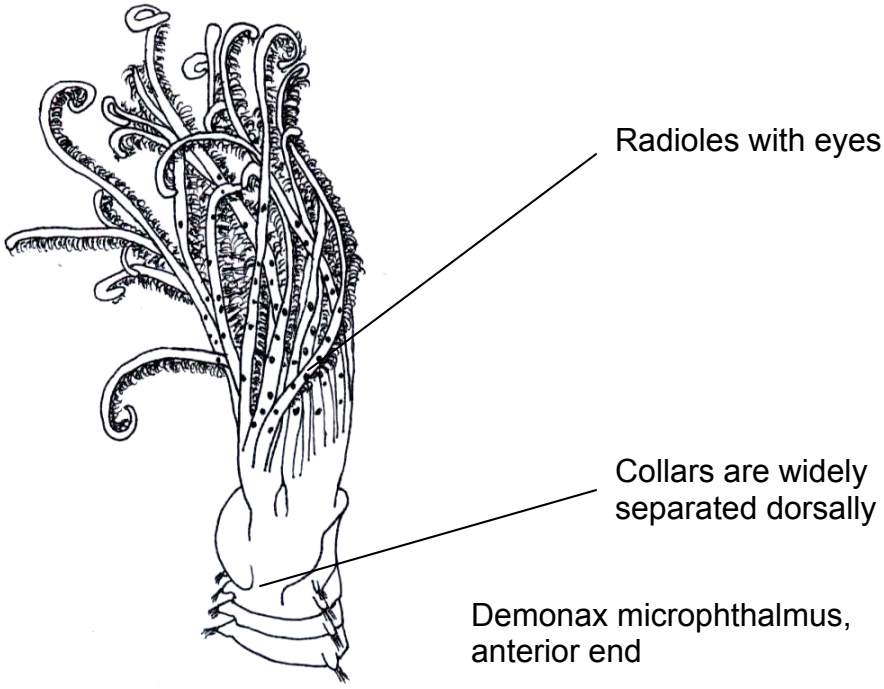
b. Tentacular crown with 3 pairs of radiaole; pygidium with eyespots; *helpful hint*: this is a species present in saline waters..…….**Fabricia sabella**

3a. Collar is 4 lobed; *helpful hint*: 1-8 large eyes present on radioles in a single row ……..…….**Pseudopotamilla reniformis**

b. Collar is bilobed; *helpful hint*: eyespots present or absent from radioles……...**4**

4a. Radioles without eyes; dorsally, collars come together at their bases, forming a v-shaped gap. ……....**Potamilla neglecta**

b. Radioles with numerous, scattered eyes; dorsally, collars are widely separated, and do not come together forming a v-shaped gap (see below)……...**Demonax microphthalmus**



Scalibregmidae

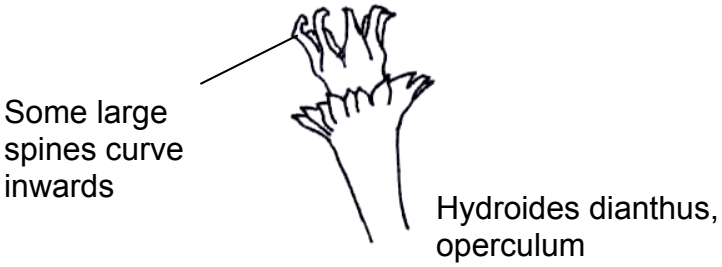
Scalibregma inflatum is the only species from Virginia

Serpulidae

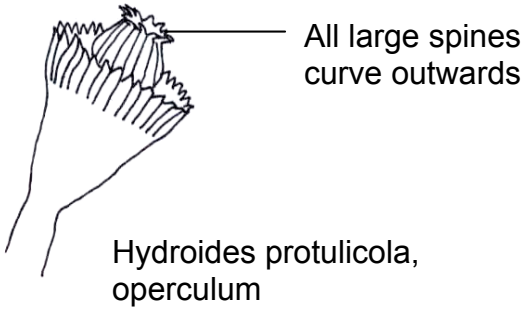
1a. Two spoonlike, membranous, transparent opercula present on two stalks dorsal to three pairs of radioles; barbules usually present on the stalks; *helpful hint*: tubes are small and quite thin, usually intertwining in a lacy, coral like network……..**Filograna implexa**

b. One operculum present, with a spiny, chitinous crown, on a single stalk formed from fused radii, dorsal to about 20 radioles; barbules absent from the stalks……....**2**

2a. Operculum with some large spines curving inwards, and some curving outwards from the center (see below).…….……....…….**Hydroides dianthus**



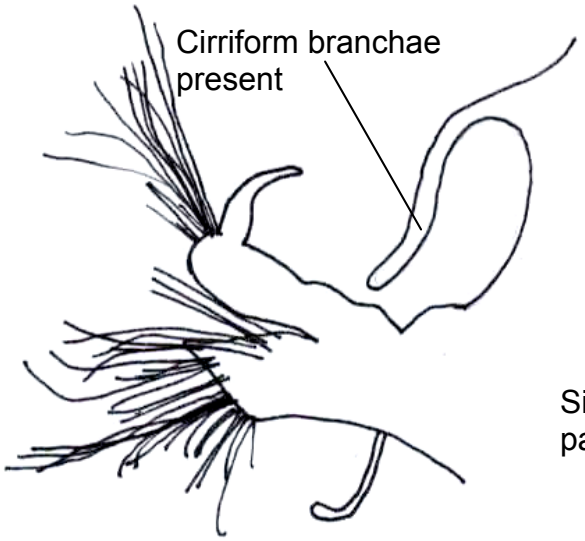
b. Operculum with all large spines curving outwards (see below).**Hydroides protulicola**



Siglionidae

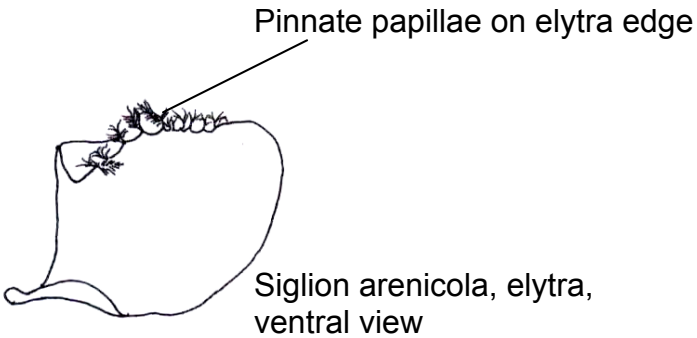
1a. Cirriform branchiae absent from notopodia. ……..**Phloe minuta**

b. Cirriform branchiae present on all but anteriormost notopodia (see below)……**2**



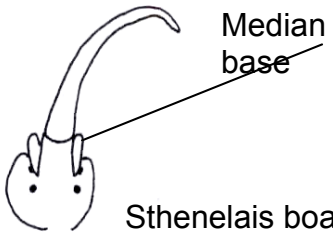
Sigalion arenicola, middle parapodia, view from posterior

2a. Prostomium without a median antennae, with two small lateral antennae on anterior edge of prostomium; elytra with a fringe of pinnate, branched papillae on the edge (see below); *helpful hint*: palps are usually quite long, about 4-5 times longer than tentacular cirri……..**Sigalion arenicola**

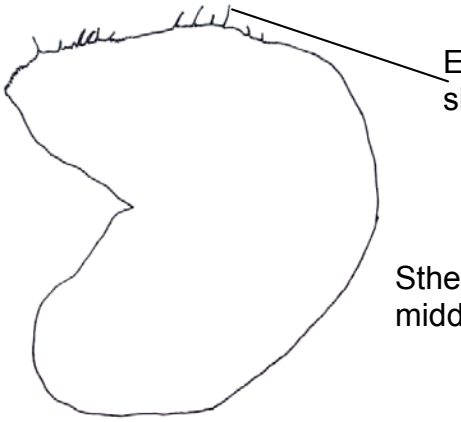


Siglion arenicola, elytra, ventral view

b. Prostomium with median antennae, with two small antennal ctenidia at base of median antennae (see below); elytra with a fringe of simple papillae (see below), or without any fringe of papillae; *helpful hint*: palps are long, but usually only 2-3 times longer than tentacular cirri…...……...**3**



Sthenelais boa, prostomium



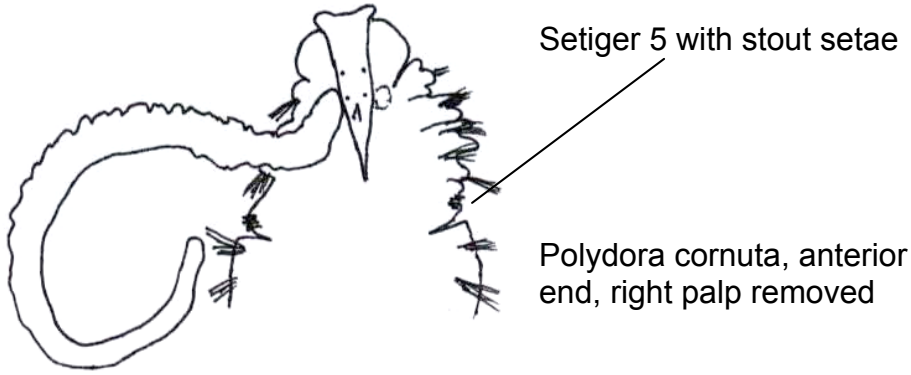
Sthenelais boa, middle elytra

3a. All elytra with an obvious fringe of simple papillae on the external border; elytra opaque, with microtubules. ……..**Sthenelais boa**

b. Anterior elytra with a small fringe of simple papillae on external boder, middle and posterior elyta without a fringe of papillae, but with a lateral notch; elytae translucent, without microtubules..…….**Sthenelais limicola**

Spionidae

1a. Setiger 5 enlarged relative to nearby setigers, with setae that are much stouter than nearby setigers (see below)...……..……...……**2**



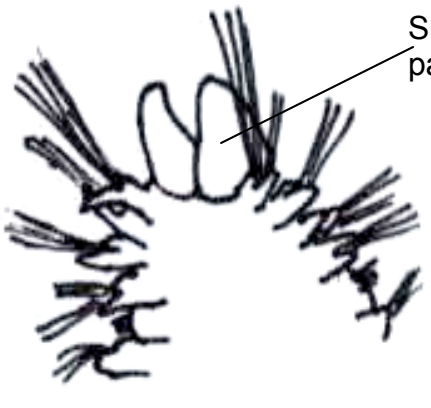
Polydora cornuta, anterior end, right palp removed

b. Setiger 5 not enlarged relative to nearby setigers, with setae that are as stout as nearby setigers……**7**

2a. Branchiae present on setigers 2, 3, 6 and subsequent setigers; notopodia of posterior segments with recurved, hook-like spines; *helpful hint*: often found in bivalve shells. ……....**Boccardia hamata**

b. Branchiae begin on setigers 6-8, and present on subsequent setigers; notopodia of posterior segments without recurved, hook-like spines..…….**3**

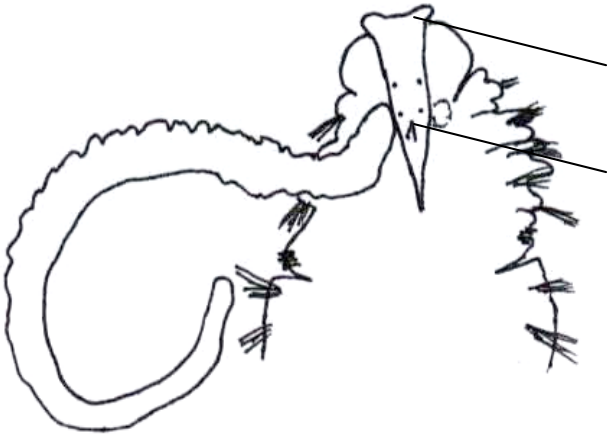
3a. Hooded hooks begin on setigers 10-17; palps fairly short, extending backwards only to setiger 6 at most (see below); caruncle absent; *helpful hint*: found in shells inhabited by hermit crabs.. ……..**Polydora commensalis**



Polydora commensalis, anterior end

b. Hooded hooks begin on setiger 7; palps are long, extending backwards beyond setiger 6; short or long caruncle present.……...……..**4**

4a. Small nuchal tentacle present (see below); *helpful hint*: anteriormost portion of prostomium usually T-shaped (see below); builds fragile mucus and mud tubes…….**Polydora cornuta**



Polydora cornuta, anterior end, right palp removed

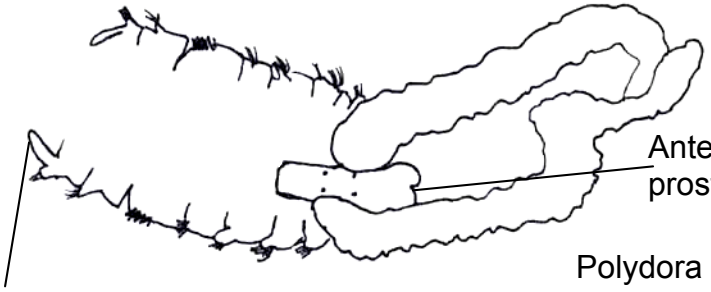
b. Small nuchal tentacle absent; *helpful hint*: anteriormost portion of prostomium usually cleft, but usually does not flare laterally, forming a T-shape; may or may not form mucus and mud tubes…….……**5**

5a. Modified setae of setiger 5 with pectinate, or bushy tops (see below); pygidium consists of 4 equal lobes; *helpful hint*: modified setae of setiger 5 are strongly falcate, and the tips are nearly at right angles to the shafts . ……...…..**Polydora caulleryi**

Polydora caulleryi, falcate 5th setae with pectinate tops

b. Modified setae of setiger 5 without pectinate, or bushy tips; pygidium usually cup shaped, with a dorsal gap in it; *helpful hint*: modified setae of setiger 5 may have slightly curved tips, but they are not strongly falcate..……**6**

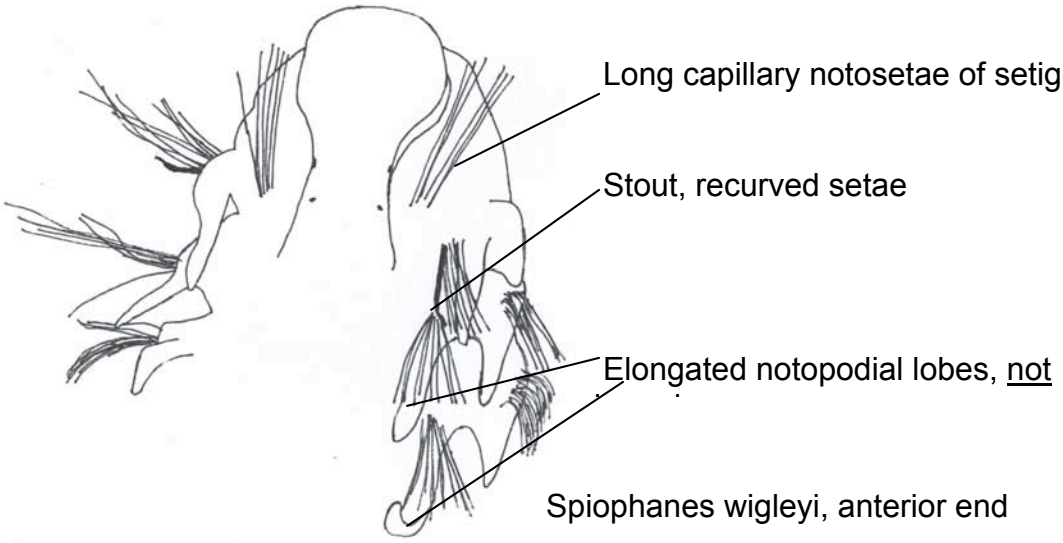
6a. Caruncle terminates at the beginning of setiger 3; anteriormost end of prostomium slightly notched or rounded (see below); branchiae begin on setiger 7 (see below); modified setae of setiger 5 with a lateral flange; *helpful hint*: bores into calcareous structures, most notably oyster shells.. …….……**Polydora websteri**



Polydora websteri, anterior end

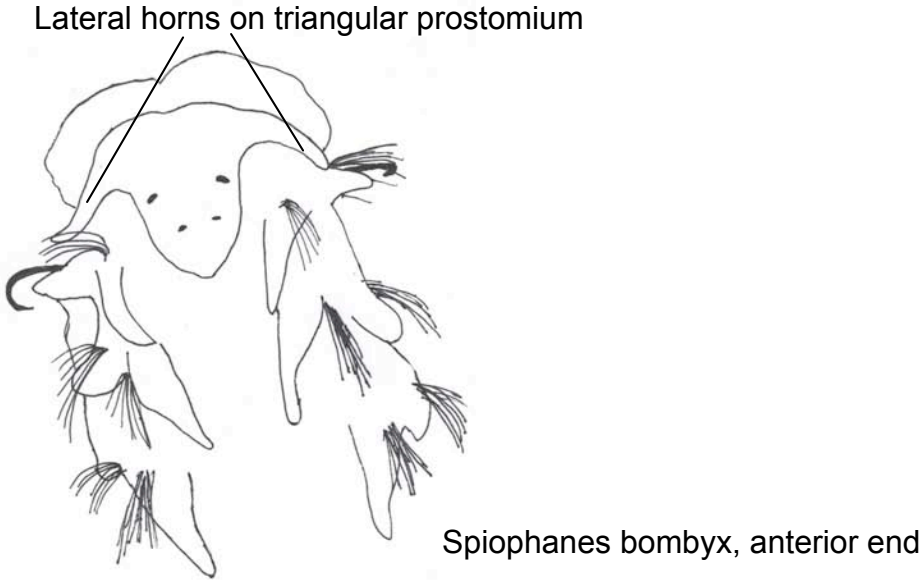
b. Caruncle terminates at setigers 4-9; anteriormost prostomium deeply cleft and V-shaped; branchiae usually begin on setiger 8 (rarely on setiger 7 or 9); modified setae of setiger 5 without a lateral flange ……**Polydora socialis**

7a. Branchiae entirely absent; neuropodia of setiger 1 includes 1-2 pairs of stout, recurved setae (see below), and capillary setae; *helpful hint*: capillary notosetae of setiger 1 are usually slightly longer than subsequent notosetae (see below); elongated notopodial lobes are present, beginning on setiger 1 (see below), and these should not be confused with branchiae……..**8**

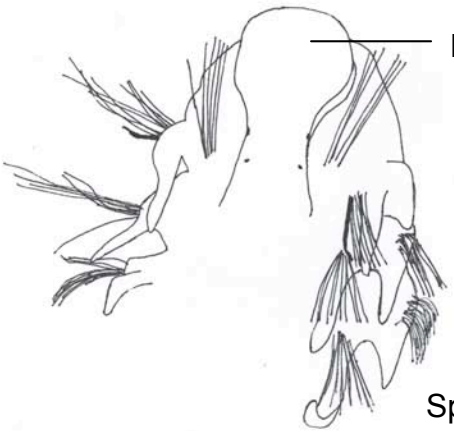


b. Branchiae present; neuropodia of setiger 1 without 1-2 pairs of stout, recurved setae. ……**9**

8a. Prostomium triangular, with conspicuous lateral horns (below)...**Spiophanes bombyx**



b. Prostomium oval, without conspicuous lateral horns (see below)...**Spiophanes wigleyi**

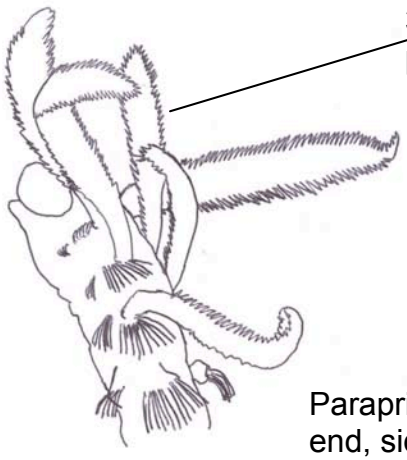


Spiophanes wigleyi, anterior end

9a. One pair of smooth branchiae present on setiger 1; conspicuous dorsal crest, or hood, present across setiger 2. ……..**Streblospio benedicti**

b. More than one pair of branchiae present; conspicuous dorsal crest, or hood, absent from setiger 2. ……...**10**

10a. Three pairs of pinnate branchiae present, on setigers 1 to 3 (see below); *helpful hint*: branchiae may be missing, look for scars; prostomium rounded, enclosed laterally by the peristomium in a collar-like fashion; ventral sabre setae present, beginning on setiger 9 ……...**Paraprionospio pinnata**



Paraprionospio pinnata, anterior end, side view

b. More than three pairs of branchiae present, on more setigers. …….**11**

11a. Branchiae present on 20 or more setigers; branchiae begin on setigers 1 or 2 …....**12**

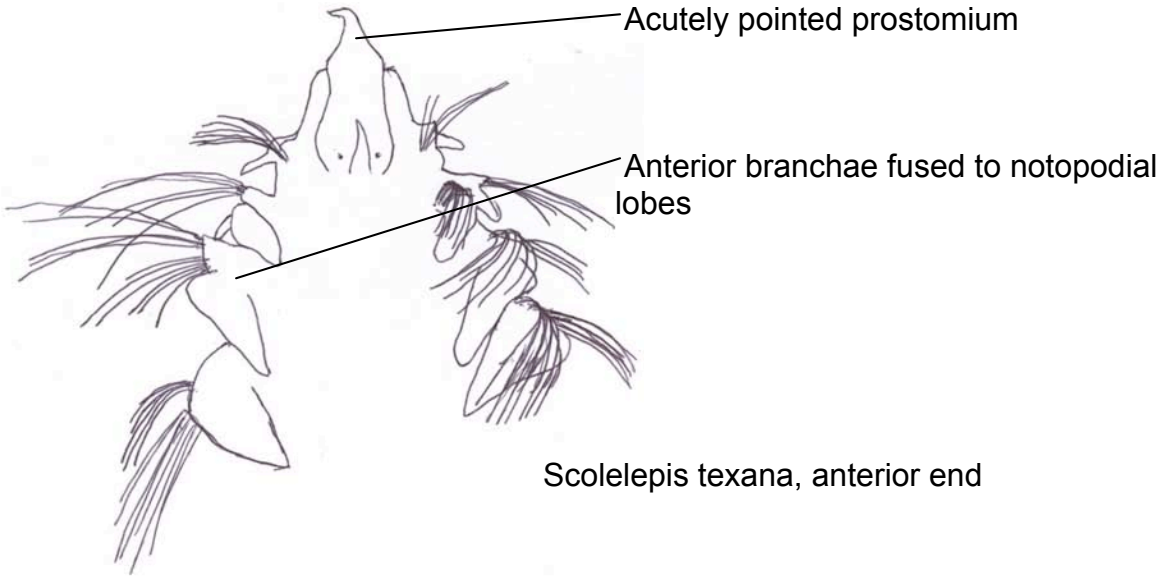
b. Branchiae present on 4 to 12 setigers; branchiae begin on setiger 2 only ……....**21**

12a. Branchiae begin on setiger 2. ……....**13**

b. Branchiae begin on setiger 1….……**17**

13a. Prostomium rounded or slightly bilobed anteriorly; anterior branchiae are completely separate from notopodial lobes……...**14**

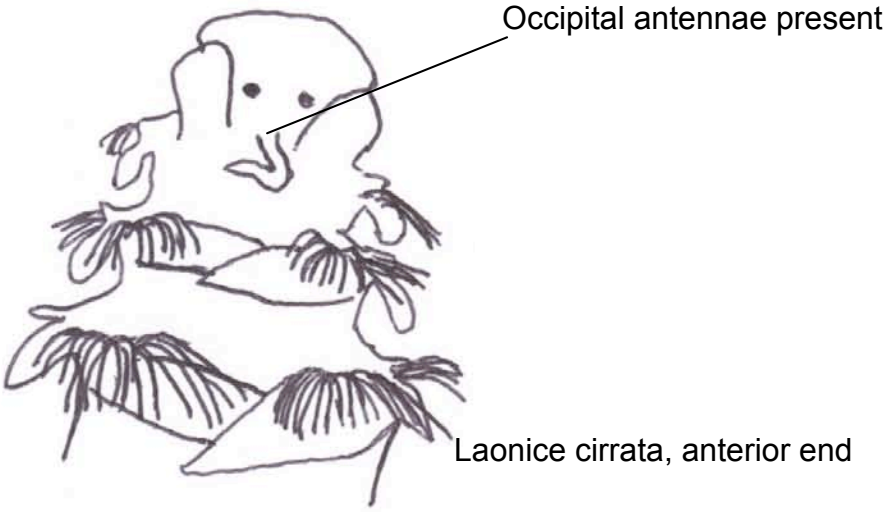
b. Prostomium is acutely pointed anteriorly (see below); anterior branchiae are completely or basally fused to notopodial lobes (see below).. ……**15**



Scolelepis texana, anterior end

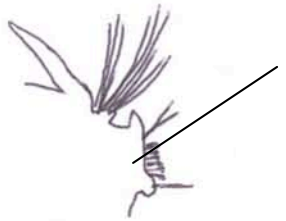
14a. Prostomium without occipital antennae; *helpful hint*: large pigment patch present on dorsal prostomium in fresh specimens…….**Microspio pigmentata**

b. Prostomium with occipital antennae (see below); *helpful hint*: large pigment patch absent from dorsal prostomium. ……...……..**Laonice cirrata**



Laonice cirrata, anterior end

15a. Occipital antennae absent; *helpful hint*: 1st setiger with notosetae present; neuropodial lamellae are notched and bilobed, beginning around setiger 18 (see below)..…….……..…….**Scolelepis squamata**



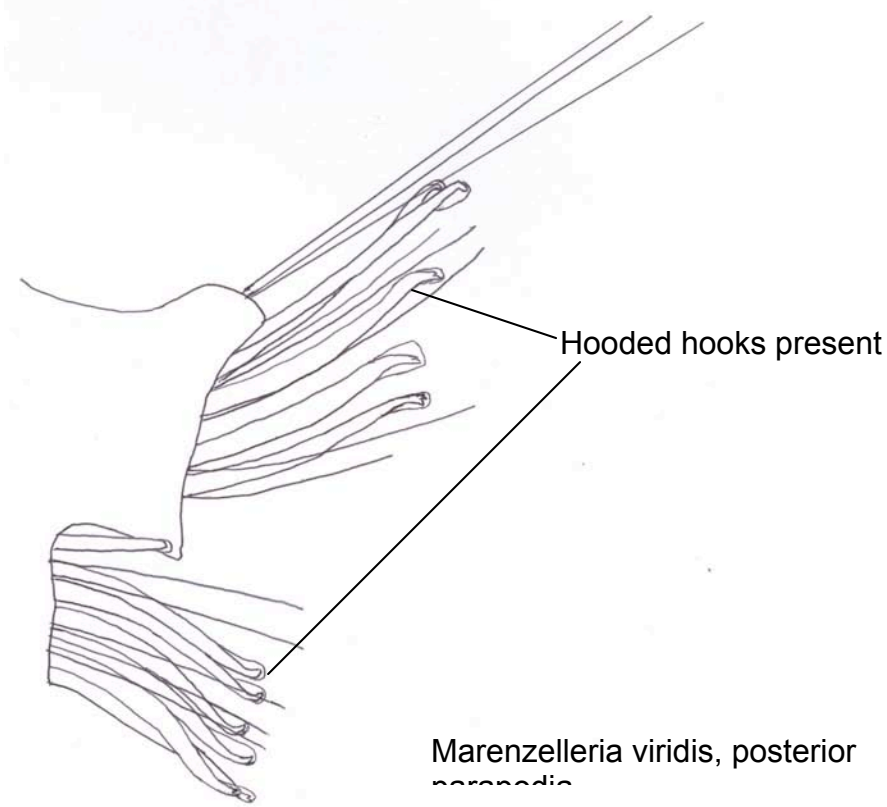
Scolelepis squamata, middle parapodia

b. Occipital antennae present..……..…….**16**

16a. 1st setiger without notosetae present; neuropodial lamellae are cleft, beginning around setiger 28..…….**Scolelepis texana**

b. 1st setiger with notosetae present; neuropodial lamellae remain entire throughout..…….**Scolelepis bousfieldi**

17a. Posterior notosetae include hooded hooks (see below); branchiae present on anterior 1/2 to 2/3 of body only; prostomium bilobed, and slightly T-shaped anteriorly; *helpful hint*: this is most common in oligohaline areas. ……....**Marenzelleria viridis**



Marenzelleria viridis, posterior parapodia

b. Posterior notosetae without hooded hooks; branchiae present to posterior segments; prostomium pointed or rounded anteriorly.. ……**18**

18a. Prostomium pointed anteriorly; small, accessory branchiae present as digitiform projections posterior to main branchiae, beginning on setigers 18-28; *helpful hint*: notosetae of setiger 1 are exceptionally long, subequal to, or extending beyond the tip of the prostomium.. ……....**Dispio uncinata**

b. Prostomium rounded anteriorly; small, accessory branchiae absent; *helpful hint*: notosetae of setiger 1 usually do not extend beyond the tip of the prostomium ……...**19**

19a. Neurosetal hooded hooks number from 15-20, beginning on about setigers 13-15 .. ……**Spio setosa**

b. Neurosetal hooded hooks number from 6-10, beginning on about setigers 10-15 …...**20**

20a. Neuropodial hooded hooks are tridentate..…….**Spio pettibonae**

b. Neuropodial hooded hooks are bidentate.. …….**Spio filicornis**

21a. 4 or 5 pairs of branchiae present; at least one pair of branchiae are pinnate ……..**22**

b. More than 5 pairs of branchiae present; all branchiae are apinnate…….**27**

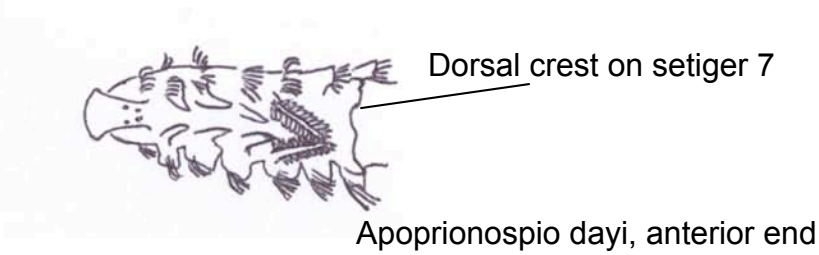
22a. 5 pairs of branchiae present, branchiae on setigers 2, 5 and 6 are pinnate; *helpful hint*: two pairs of eyes present in fresh specimens, with posterior pair quite large, larger than anterior pair..…….**Prionospio heterobranchia**

b. 4 pairs of branchiae present, pinnate branchiae otherwise; *helpful hint*: in fresh specimens, eyes, if present, with posterior pair small, usually subequal to anterior pair.. ……**23**

23a. Branchiae on setigers 2 to 4 apinnate, branchiae on setiger 5 pinnate, and longer than the other branchiae; pinnules on pinnate branchiae are plate-like, not digitiform……...**24**

b. Branchiae on setigers 3 and 4 apinnate, branchiae on setigers 2 and 5 pinnate; pinnules on pinnate branchiae are digitiform, not plate-like. ……**25**

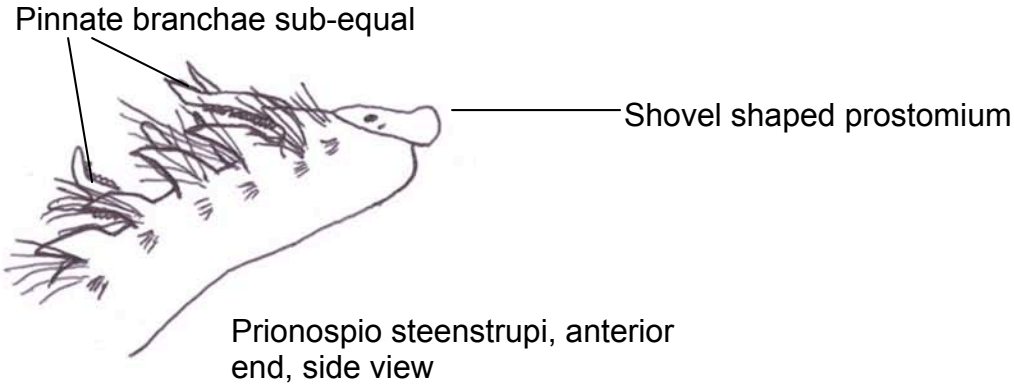
24a. Notopodial lamellae are connected in a large dorsal crest on setiger 7 (see below) ……**Apoprionospio dayi**



Apoprionospio dayi, anterior end

b. Notopodial lamellae are not connected in a dorsal crest on setiger 7 ……...……..**Apoprionospio pygmaea**

25a. Prostomium distinctly shovel shaped anteriorly, as it is broadest anteriorly, and with a straight edge (see below); *helpful hint*: pairs of pinnate branchiae are subequal in length (see below). ……**Prionospio steenstrupi**



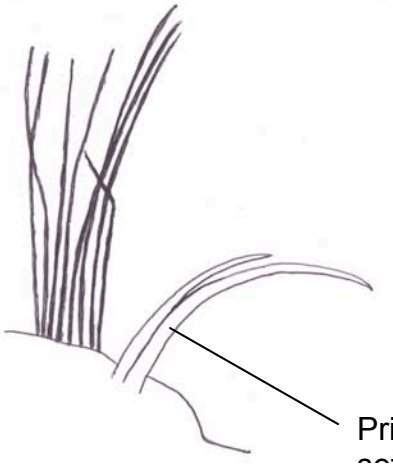
Prionospio steenstrupi, anterior end, side view

b. Prostomium otherwise, slightly narrower anteriorly than in mid-region, and rounded anteriorly; *helpful hint*: pinnate pairs of branchiae either subequal in length, or anteriormost pair are longer than posterior pair. ……..**26**

26a. Anteriormost pair of pinnate branchiae are larger than posterior pair; dorsal crests absent from setigers 7 and 9; without a pair of prominent nuchal organs fused over caruncle..…….…….**Prionospio dubia**

b. Pinnate pair of branchiae are subequal in length; notopodial lamellae form dorsal crests across setigers 7 and 9; with a pair of prominent nuchal organs fused over the caruncle..……..……**Prionospio cristata**

27a. Inward curving ventral sabre setae present, beginning on setiger 10; 6-8 pairs of branchiae present; *helpful hint*: hooded hooks are multidentate……..**Prionospio cirrifera**



Prionospio cirrifera, ventral sabre setae

b. Ventral sabre setae absent; 6-12 pairs of branchiae present; *helpful hint*: hooded hooks are either multi dentate, or bidentate……**28**

28a. Anteriormost 3 pairs of branchiae are obviously longer than subsequent branchiae; 6-10 pairs of branchiae present; hooded hooks are multidentate …...**Prionospio perkensi**

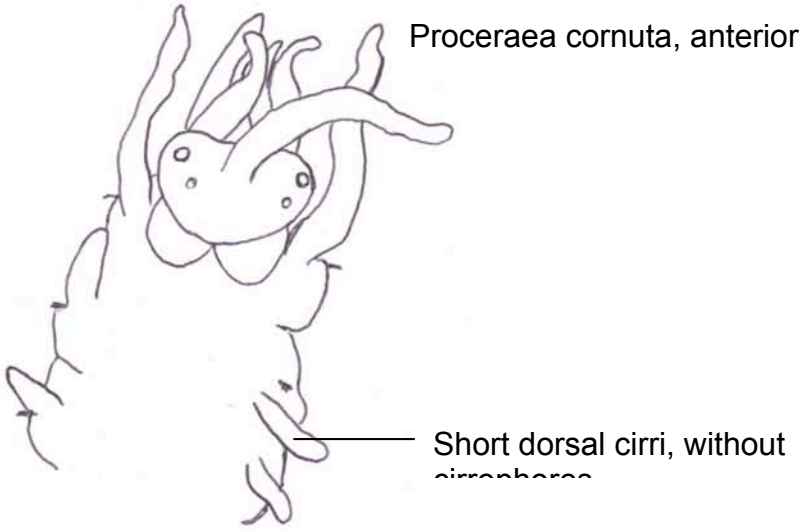
b. All branchiae are subequal; 10-12 pairs of branchiae present; hooded hooks are bidentate..……**Prionospio cirrobranchiata**

Syllidae

1a. Ventral cirri absent; pharyx coiled or sinuous; *helpful hints*: palps are completely fused; nuchal organs present as small or large epaulettes..……**2**

b. Ventral cirri present; pharyx usually straight; *helpful hints*: palps completely fused, or otherwise; nuchal organs usually not as epaulettes..……..……**6**

2a. Dorsal cirri short, shorter than width of body (except first two pairs); dorsal cirri without cirrophores (see below)……..……**3**

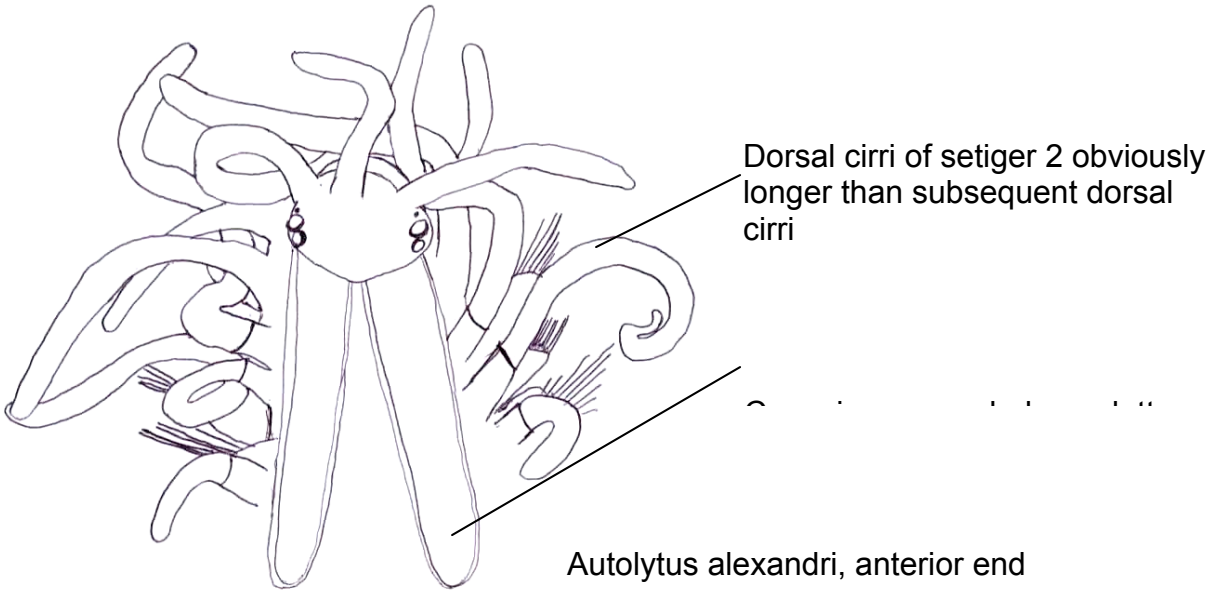


b. Some dorsal cirri long, equal to, or longer than, the width of the body; dorsal cirri with cirrophores..……**4**

3a. Body with transverse bands; nuchal epaulettes conspicuous, extending to posterior portion of setiger 1..……**Proceraea fasciata**

b. Body with lateral longitudinal bands; nuchal epaulettes inconspicuous, extending only to the tentacular segment..……**Proceraea cornuta**

4a. Dorsal cirri on setiger 2 are subequal to dorsal tentacular cirri and lateral antennae, obviously longer than subsequent dorsal cirri (see below); *helpful hint*: conspicuous nuchal epaulettes present, extending to setigers 2 to 4 (see below)….**Autolytus alexandri**



Autolytus alexandri, anterior end

b. Dorsal cirri on setiger 2 are shorter than dorsal tentacular cirri, and lateral antennae, only slightly longer than subsequent dorsal cirri; *helpful hint*: nuchal epaulettes may or may not be prominent..……..…….**5**

5a. Nuchal epaulettes prominent, extending to setigers 3-4; trepan with about 30 teeth. ……..…….**Autolytus dentalius**

b. Nuchal epaulettes not prominent, not extending beyond setiger1; trepan with 10 teeth. ……....**Autolytus prolifer**

6a. Two pairs of tentacular cirri present; *helpful hint*: dorsal cirri subequal to, or greatly exceeding the length of the parapodia; tentacles and/or dorsal cirri may or may not be clearly articulated; worm may or may not be large, exceeding 10 mm in length…….**13**

b. One pair of tentacular cirri present; *helpful hint*: dorsal cirri subequal to, or shorter than parapodia, never greatly exeeding the length of the parapodia; dorsal cirri and tentacles never clearly articulated; worm is always less than 10 mm in length……....**7**

7a. Body with a covering of adhesive papillae, usually encrusted with mud; *helpful hints*: dorsal cirri absent from setiger 2, and replaced by a small papillae; palps almost completely fused; tentacular cirri are well developed, and are similar to the dorsal cirri...**8**

b. Body smooth, without adhesive papillae; *helpful hints*: dorsal cirri present or not on setiger 2; palps completely or only partially fused; tentacular cirri well developed, or not..…….**9**

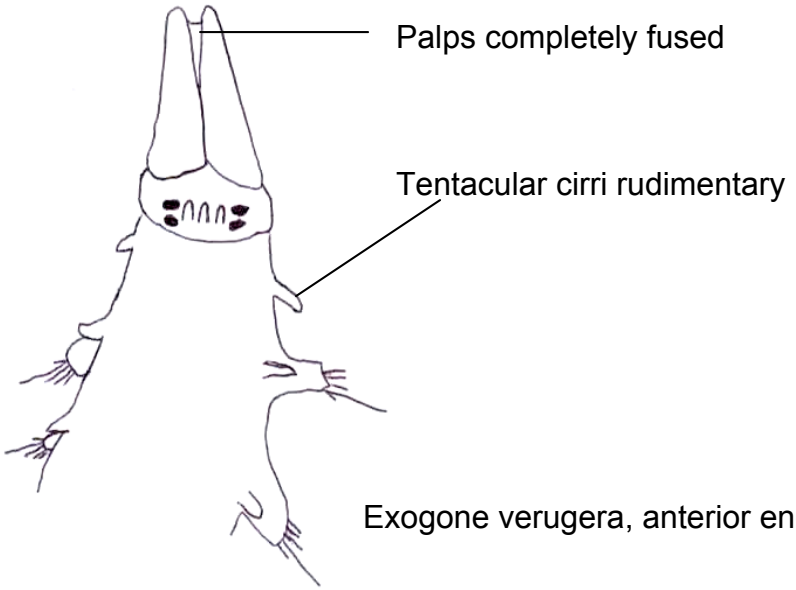
8a. 4 eyes present; spherical parapodial glands, containing needle-like rods present, beginning on setiger 4...……**Sphaerosyllis taylori**

b. 6 eyes present; spherical parapodial glands completely absent ……..……...**Sphaerosyllis longicauda**

9a. Palps fused on basal third only (see below); tentacular cirri well developed (see below); *helpful hint*: dorsal cirri present on setiger 2..……...**Parapionosyllis longicirrata**

Parapionosyllis longicirrata, anterior end

b. Palps completely fused (see below); tentacular cirri rudimentary (see below); *helpful hint*: dorsal cirri present or not on setiger 2..……**10**

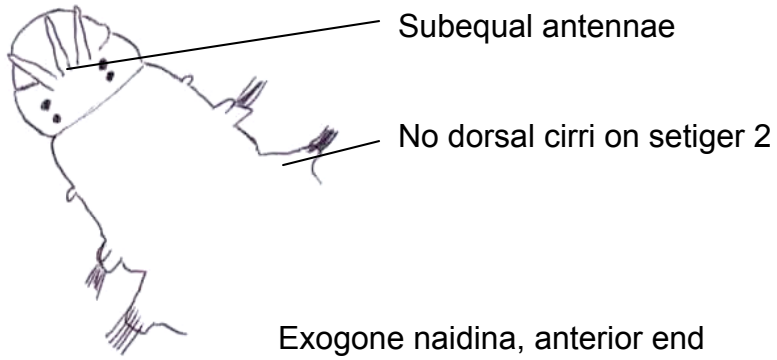


Exogone verugera, anterior end

10a. All 3 prostomial antennae are minute and subequal, much shorter than the length of the prostomium.……..**Exogone verugera**

b. At least one prostomial antennae is long, exceeding the length of the prostomium...**11**

11a. All 3 antennae on the prostomium are subequal in length (see below); *helpful hint*: dorsal cirri absent from setiger 2..…….**Exogone naidina**



Exogone naidina, anterior end

b. Median antennae is longer than two lateral antennae; *helpful hint*: dorsal cirri present or not on setiger 2…….…….**12**

12a. Dorsal cirri present on setiger 2 anterior parapodia with three types of setae: simple curved upper one, compound spinigers, and compound falcigers …….**Exogone dispar**

b. Dorsal cirri absent from setiger 2; anterior parapodia with all setae as compound falcigers..…….…….**Exogone hebes**

13a. Most dorsal cirri are clearly articulated, resembling a string of beads; *helpful hint*: antennae and tentacular cirri may or may not be articulated as well…….**14**

b. Most dorsal cirri are smooth, or with indistinct articulation; *helpful hint*: antennae and tentacular cirri never are articulated.……..……..**19**

14a. Antennae, tentacular cirri, and first two pairs of dorsal cirri are not distinctly articulated; worm is small, less than 5 mm in length……...**15**

b. Antennae, tentacular cirri and first two pairs of dorsal cirri are distinctly articulated; worm is usually large, 10 mm or more in length…….**16**

15a. Palps are short and scarcely visible dorsally; upper simple setae with bifurcated tips..…….**Streptosyllis verrilli**

b. Palps are large and clearly visible dorsally; upper simple setae with rounded tips..…….…….**Syllides fulvus**

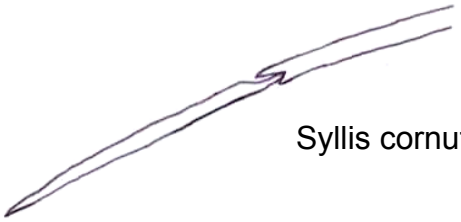
16a. All setae are simple..……..…….**Haplosyllis spongicola**

b. Some setae are compound. …….……..**17**

17a. Setae as follows: anterior setae entirely composite falcigers, replaced by thick simple setae beginning on setigers 14-21, posterior as composite falcigers and slender simple setae..…….…….**Syllis gracilis**

b. Setae otherwise, specifically: all parapodia have compound setae, and simple setae present posteriorly only..…….…….**18**

18a. Some compound setae with elongated, spinigerous blades (below).…**Syllis cornuta**



Syllis cornuta, compound spiniger

b. All compound setae with shorter, falcigerous blades (below)……**Syllis hyaline**

Syllis hyaline, compound falciger

19a. Antennae subequal to, or slightly exceeding the length of the palps, and dorsal cirri on setiger 1 subequal to, or slightly exceeding the length of the setae on setiger 1……..**20**

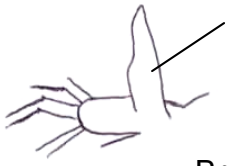
b. Antennae greatly exceeding the length of the palps, and/or the dorsal cirri on setiger 1 greatly exceeding the length of the setae on setiger 1……...**22**

20a. Dorsal cirri absent from setiger 2; *helpful hint*: fresh specimens without distinct eyespots…….…….**Brania wellfleetensis**

b. Dorsal cirri present on setiger 2; *helpful hint*: fresh specimens with distinct eyespots. ……**21**

21a. Dorsal cirri abruptly truncate at tips; compound falcigers with unidentate blades; *helpful hint*: prostomium with only 4 eyes..…….**Brania pusilla**

b. Dorsal cirri taper to a tip (see below); compound falcigers with minutely bidentate blades; *helpful hint*: prostomium with 4 eyes, and 2 small eyespots near the bases of the lateral antennae..……...**Brania clavata**

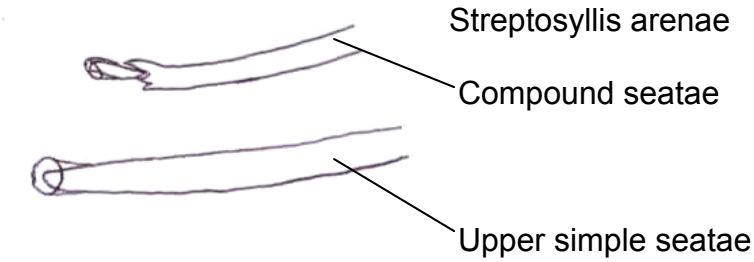


Brania clavata, middle parapodia

22a. Setigers 2 to 5 with enlarged acicula, with knobbed tips; *helpful hint*: some dorsal cirri may appear to be articulated..…….**23**

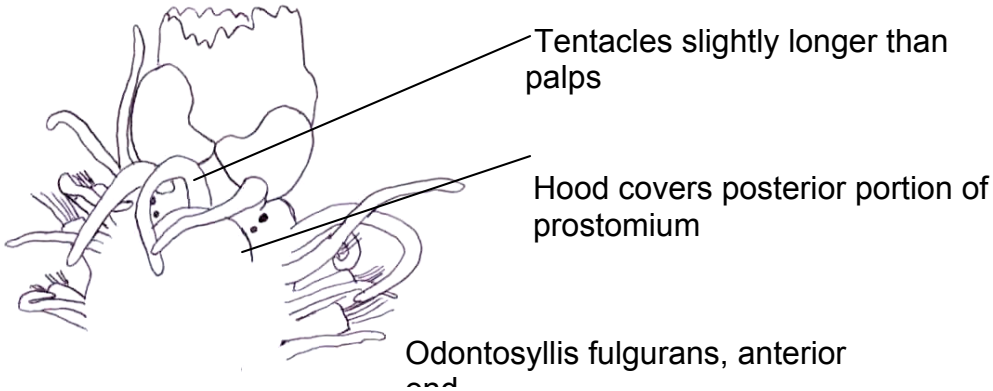
b. Acicula in setigers 2 to 5 otherwise; *helpful hint*: all dorsal cirri are smooth, or slightly wrinkled..……..…….**24**

23a. Compound setal blades with distictive circular hoods at tips; upper simple setae with circular, or semi-circular hood on tips (see below)…….….**Streptosyllis arenae**



b. Compound setal blades with bifid tips after setiger 5 or 6; upper simple setae with hood that is excavate at the tips…….**Streptosyllis pettibonae**

24a. Tentacles on prostomium are short, slightly longer than the lengths of the palps (see below); tentacular segment with a hood that covers the posterior portion of the prostomium (see below)..……**Odontosyllis fulgurans**



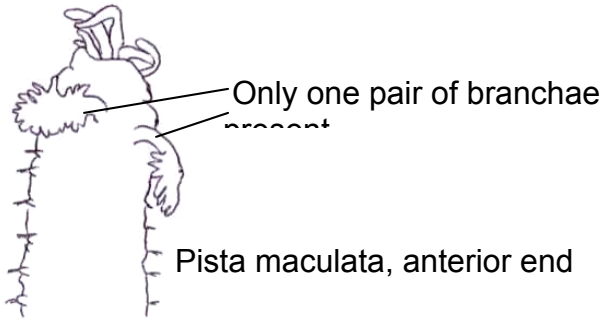
b. Tentacles on prostomium are long, greatly exceeding the length of the palps; tentacular segment without hood.…….**Eusyllis lamelligera**

Terebellidae

1a. Branched branchiae present on anteriormost segments ……**2**

b. Branchiae absent from anteriormost segments; *helpful hint* branchiae-like notopodia may be present in middle region, beginning on about segment 9…….**8**

2a. Only one pair of branched branchiae present on second segment (see below); *helpful hint*: numerous small eyespots present on first segment, in fresh specimens ……..**Pista maculata**

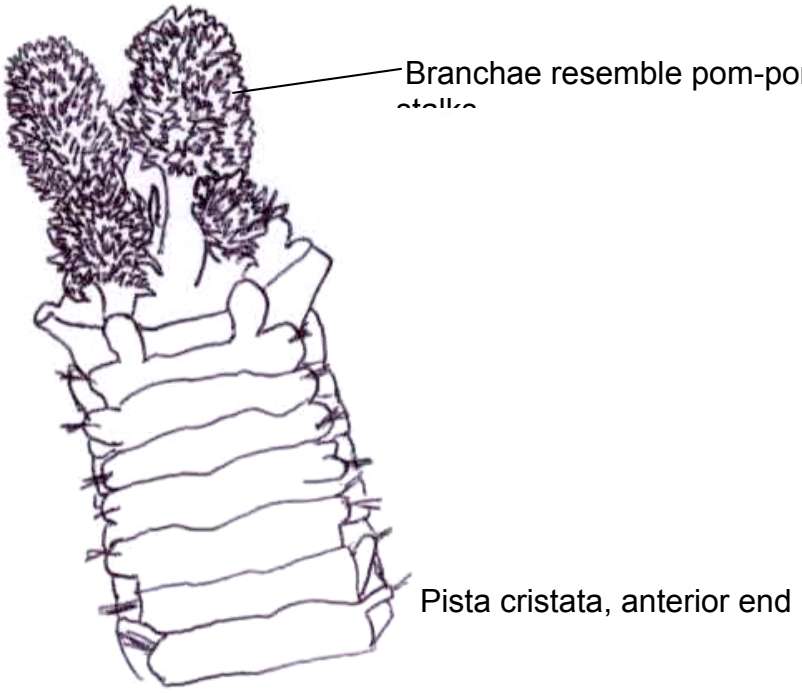


b. Two to three pairs of branched branchiae present on more segments; *helpful hint*: small eyespots present or absent in fresh specimens……...**3**

3a. Two pairs of branchiae present on segments 2 and 3..…….**4**

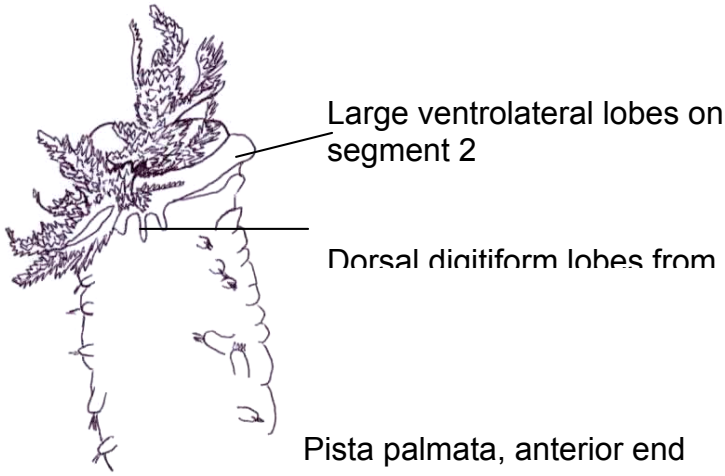
b. Three pairs of branchiae present on segments 2, 3 and 4..…….**6**

4a. Branchiae spirally branched, resembling oval pom-poms on long stalks (see below) ..……..…….**Pista cristata**



b. Branchiae are arborescent, not resembling pom-poms……..**5**

5a. Lateral lobes originating from segment 3 form small, digitiform lobes dorsally, directly posterior to branchiae (see below); first row of uncini without long necks; numerous eyespots absent from segment one in fresh specimens; *helpful hint*: segment two with large ventrolateral lobes (see below)..……...……..**Pista palmata**



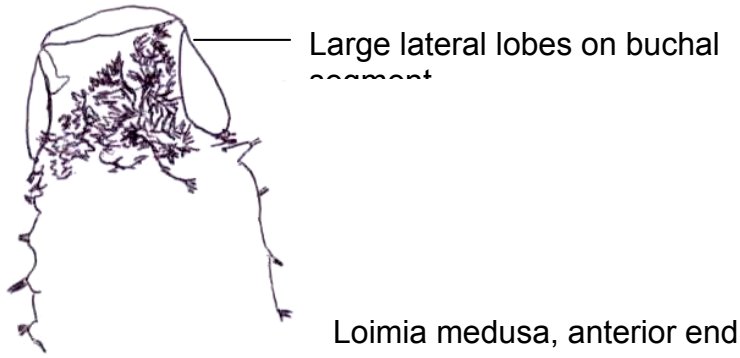
Pista palmata, anterior end

b. Lateral lobes from segment 3 not forming digitiform lobes dorsally; first row of uncini with long necks; numerous eyespots present on segment one in fresh specimens; *helpful hint*: segment 2 with small, or no ventrolateral lobes……...**Pista quadrilobata**

6a. Notopodia present on 17 segments only……...**7**

b. Notopodia present on 40 to 50 segments……..**Amphitrite ornata**

7a. Uncini with 4 to 6 teeth; *helpful hint*: buchal segment with large lateral lobes (see below)..……..……..**Loimia medusa**



Loimia medusa, anterior end

b. Uncini with 6 to 8 teeth; *helpful hint*: buchal segment with small lateral lobes. ……..**Loimia viridis**

8a. Branched, branchiae-like notopodia present in middle region, starting at about segment 9..…….**Enoplobranchus sanguineus**

b. Notopodia in middle region not branchiae-like. ……....**9**

9a. Uncini completely absent; notosetae very fine, and not immediately obvious……...**Lysilla alba**

b. Uncini present; notosetae readily apparent; *helpful hint*: uncini may be inconspicuous. ……..……..**10**

10a. Thorax with 16 or more notosetae; uncini begin on setiger 7 to 9 ..…….**Polycirrus eximius**

b. Thorax with 11 to 13 notosetae; uncini begin on setiger 15 to 16 ....**Polycirrus medusa**

Trichobranchidae

Terebellides stroemi is the only species from Virginia

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