ARTIFICIAL KEY TO THE NEMERTEA FOUND OFF POINT LOMA

1a. mouth & proboscis pore separate → 2

1b. mouth & proboscis pore united → **GO TO PAGE 3**

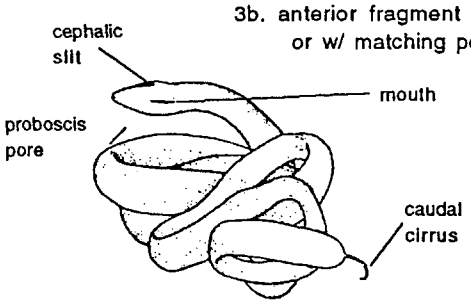
1c. mouth & proboscis pore absent (not apparent) → **GO TO PAGE 5**

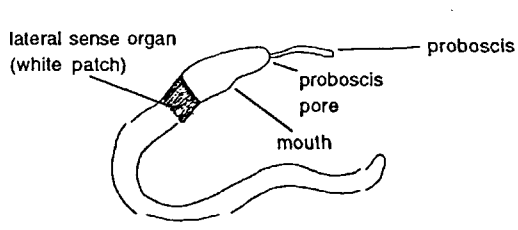
2a. cephalic slit absent → **GO TO PAGE 2**

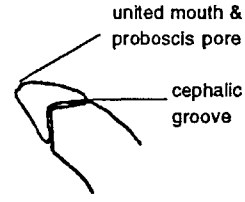
2b. cephalic slit present → 3

3a. anterior fragment w/o distinctive color pattern **AND** w/o matching posterior end → **Lineidae**

3b. anterior fragment w/ distinctive color pattern or w/ matching posterior end → SEE BELOW





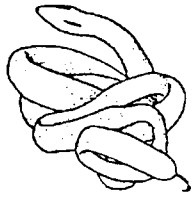


caudal cirrus present, lateral margins ribbon-like or rounded

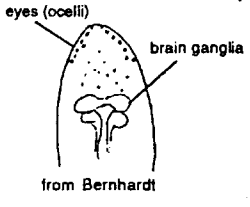
cephalic slit deep; lateral margins ribbon-like

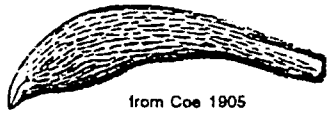
cephalic slit shallow; lateral margins rounded

→ cephalic slit deep; body cream colored; lateral margins flattened, ribbon-like (most pronounced posteriorly). ***Cerebratulus californiensis**** **(X-80)**

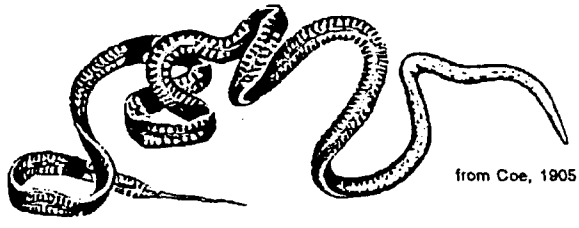


→ cephalic slit deep; body w/ longitudinal fine lines of olive-brown color; eyes present. ***Cerebratulus lineolatus*** **(X-77)**





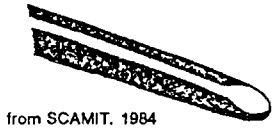
cephalic slit shallow, narrow; body rose-olive colored; lateral margins <u>not</u> ribbon-like, but may be somewhat flattened. ***Micrura ? alaskensis*** **(X-94)**



None of the above. Record as **Lineidae.** Give to Dean or Megan for FID.

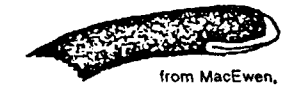
caudal cirrus absent, lateral margins rounded

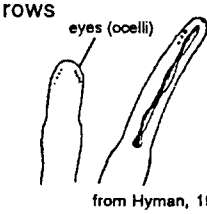
→ body olive color w/ white mid-dorsal stripe that extends on to the head (olive coloration may be very faint); head (and cephalic slit) may be elongate and tappered (includes our Lineidae sp. SD 1). ***Lineus bilineatus**** **(X-32)**



→ body light beige-tan w/ narrow white transverse band connecting posterior edges of cephalic slit; body generally plump and round. ***Lineus cf. torquatus*** **(X-108)**

→ body reddish-brown; tip of head and cephalic groove light color; 4-8 small eyes on each side of head forming 2 distinct rows ***Lineus ruber*** **(X-75)**





→ small specimen w/o coloration. Record as **Lineidae**

None of the above. Specimen entire or nearly so. Record as **Lineidae** Give to Dean or Megan for FID

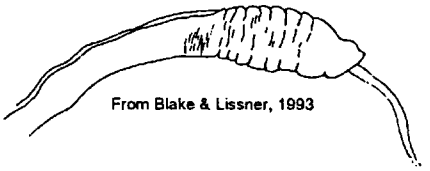
* = species most commonly encountered at 200 ft and deeper recovery and A.O. samles

Mouth and proboscis pore separate, **cephalic slit absent**

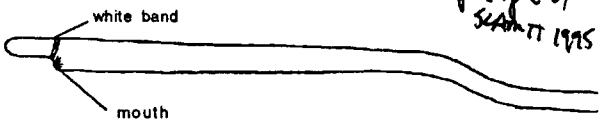
body w/o distinct color pattern (though a thin white band may be present anteriorly)

budt with distinct color pattern anteriorly

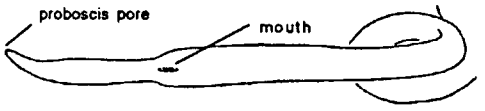
→ body thick, cream colored often coiled and "lumpy" posteriorly; head not elongated and pointed (though it may be flattened); proboscis pore and mouth close together; proboscis pore subterminal; w/o white band or lateral sense organ ***Carinoma mutabilis**** **(X-82)**



→ body light colored, thin, elongate, and thread-like; head elongated and rounded; proboscis pore moderately seperated from mouth; w/ white band present anteriorly, just anterior to mouth. **Anopla sp. SD 2* (X-113)** = Anopla sp C of SCAMIT 1995

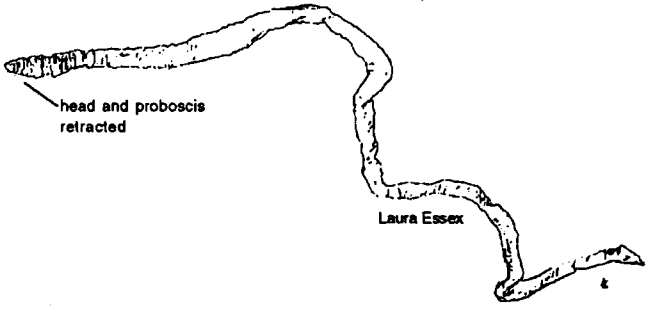


→ body white thin, elongate, and thread-like, smooth, and frequently coiled; head very elongated and pointed; proboscis pore well separated from slit-like mouth; w/o white band and lateral sense organ. **Anopla sp. SD 3* (X-102) (= Procephalothrix major)** = Anopla sp D SCAMIT 1995



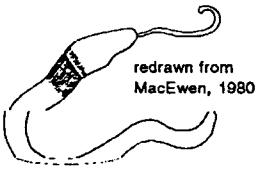
from Hyman, 1951 (as Procephalothrix major)

→ body white, thin, elongate (not thread-like), and extremely wrinkled anteriorly (due to contracted head); head elongated and pointed (*when not contracted)*; proboscis pore and mouth may not be apparent because of contracted nature of head; w/o white band or lateral sense organ ***Zygopolia rubens*** **(X-115)**

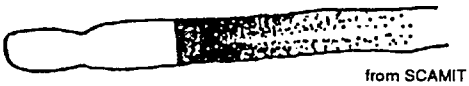


→ Not as above. Record as **Nemertea**. Give to Dean or Megan for FID

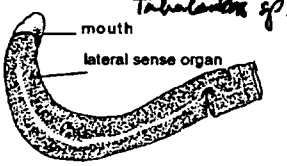
body generally large, rounded; head sometimes flattened and spatulate; body w/ thin white band anteriorly, followed by broad brown or tan band (may be faint); lateral sense organ apparent as lateral white ring w/in brown band (one on each side). ***Tubulanus polymorphus**** **(X-49)**



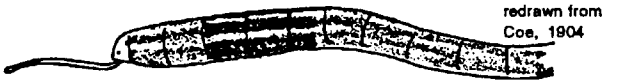
body generally small and thin (relative to *T. polymorphus*), rounded; head sometimes flattened; body w/ thin brownish-red band anteriorly, followed by broad purplish-brown band that fades to speckled pattern posteriorly; lateral sense organ apparent as white ring (one on each side) ***Tubulanus nothus**** **(X-48)**



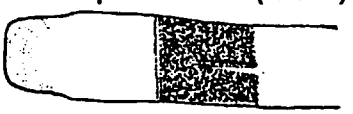
body generally large (like *T. polymorphus*), rounded, and dark reddish to brownish red w/ lighter lateral line running longitudinally; head rounded and much lighter than body, set off from body by deep transverse groove; lateral sense organ apparent as white ring (one on each side). **Tubulanidae sp. SD 1 (X-114)** Tubulanidae sp A SCAMIT 1995



body generally small, rounded; head with 2 dark spots anteriorly (they look like eyes); body w/ many thin black bands (rings) with broader brown band mid-body, and 4 longitudinal cream colored lines; lateral sense organ not apparent ***Tubulanus cingulatus**** **(X-103)**



body generally large, rounded; head sometimes flattened and spatulate; body w/o thin white band anteriorly, but w/ broad brown band which is broken dorsally by a thin triangular patch of white posteriorly; w/o lateral sense organ **Paleonemertea sp. SD 1* (X-104)**



Not as above. Record as **Nemertea**. Give to Dean or Megan for FID

NEMERTEANS COLLECTED FROM POINT LOMA
(as of July 1994)

Class Anopla:

Order Palaeonemertea

Family Carinomidae

Carinoma mutabilis	Griffin 1898

Family Cephalotrichidae

Procephalothrix major	(Coe 1930)

Family Tubulanidae

Tubulanus cingulatus	(Coe 1904)
Tubulanus nothus	(Berger 1892)
Tubulnaus polymorphus	Renier 1804

Family uncertain

Palaeonemertea sp. C*	Cadien

Order Heteronemertea

Family Baseodiscidae

Baseodiscus sp.*	

Family Lineidae

Cerebratulus californiensis	Coe 1905
*Cerebratulus lineolatus**	Coe 1905
*Cerebratulus marginatus**	Renier 1804
Lineidae sp. 1	City of San Diego 1994
Lineus bilineatus	(Renier 1804)
*Lineus ruber**	(O. F. Muller 1771)
Micrura alaskensis	Coe 1901

Class Enopla

Order Hoplonemertea

Suborder Monostyliferoidea

Family Ototyphlonemertidae

Ototyphlonemertes spiralis	Coe 1940

Family Emplaectonematidae

Paranemertes californica	Coe 1904

Family Prosorhochmidae

Oerstedia dorsalis	(Abildgaard 1806)
Prosorhochmus albidus	(Coe 1905)
Prosorhochmidae sp. 1	City of San Deigo 1994

Family Amphiporidae

Amphiporus bimaculatus	Coe 1901
Amphiporus imparispinosus	Griffin 1898

Family uncertain

Monostylifera sp. 1	City of San Diego 1994

Suborder Polystyliferoidea

Polystylifera sp. 1	City of San Diego 1994

*Voucher sheets not available for these species.

F:\procite\print

NEMERTEAN LITERATURE

*1. Taxonomic Atlas of the Benthic Fauna of the Santa Maria Basin and Western Santa Barbara Channel. Santa Barbara, CA: Santa Barbara Museum of Natural History; 1994; 1. (Blake, James A.; Lissner, Andrew; v. Introduction, Benthic Ecology, Oceanography, Platyhelminthes, and Nemertea).

*2. Bernhardt, Patricia. A Key to the Nemertea from the Intertidal Zone of the Coast of California. Unpublished literature. ; 1979.

3. Coe, Wesley R. Geographical distribution of the nemerteans of the Pacific coast of North America, with descriptions of two new species. Journal of the Washington Academy of Sciences. ; 1944; 34(1): 27-32.

*4. Coe, Wesley R. Revision of the Nemertean Fauna of the Pacific Coasts of North, Central, and Northern South America. Allan Hancock Pacific Expeditions. ; 1940; 2(13): 247-322.

5. Correa, Diva Diniz. Nemerteans from California and Oregon. Proceedings of the California Academy of Sciences. ; 1964; 31(19): 515-558.

6. Davis, Charles C. The Marine and Fresh-water Plankton. Michigan: Michigan State University Press; 1955.

*7. Gibson, Ray. Synopsis and classification of living organisms. Nemertea. ; 1982; 2: 823-846.

*8. Hyman, Libbie Henrietta. The Invertebrates: Platyhelminthes and Rhynchocoela, The acoelomate Bilateria. New York, New York: McGraw-Hill Book Company, Inc.; 1951; II.

9. Kirsteuer, Ernst. Marine, benthonic nemerteans: how to collect and preserve them. American Museum Novitates. ; 1967(2290): 1-10.

*10. MacEwen, Patricia. A Key to the Common Nemertea of Southern California. Unpublished literature. ; 1980.

11. Riser, Nathan W. The morphology and generic relationships of some fissiparous heteronemertines. Proceedings of the Biological Society of Washington. ; 1994; 107(3): 548-556.

* useful taxonomic references (illustrations, keys, group descriptions)