MINUTES FROM OCTOBER 10, 1983

Fund Raising Committee: The fund raising committee met a week before the general meeting to discuss goals and means of obtaining funds. The committee developed five goals that were approved at the meeting. They are:
- expand the video system to include color, taping, and editing abilities
- purchase computer and software to store the information generated by SCAMIT
- conduct workshops
- purchase permanent space for the voucher collection, equipment, and meetings
- money for publications

Members of the committee will be gathering more detailed information on the five goals to have a better idea how much money is needed.

The committee will also put together a slide show that tells about SCAMIT, its purpose, goals, and accomplishments. To do that we need two things:
- everyone is welcome to contribute their slides next month. Copies will be made so you can get them back
- photos will be taken at the next meeting, so, participate members and dress professionally at the November meeting!

CWPCA Conference: The slide show is already scheduled to be presented at the California Water Pollution Control Association annual meeting next year. Michael Carlin has agreed to add it to his ocean disposal section. More about this next spring.
Guest Speaker: Jack Engle who manages the Channel Island Research Program funded by the Tatman foundation, gave a delightful talk and slide presentation about the program. The program focuses on the shallow subtidal area of Southern California's eight channel islands. Diving surveys at the islands cover kelp bed, shifting sand, and stable sand habitats. Over 4,000 photos have been compiled on the various stations and species at the eight islands. Some of the highlights so far are the detection of warm water effects, monitoring urchin invasion of kelp beds and echinoderm disease, and the "rediscovery" of rarer species such as the orange-throat pikeblenny (Chaenopsis alepidota).

Jack mentioned the program is able to offer ship time for people to work on projects and can also accept grant work. Anyone interested can contact him at

Jack Engle
Channel Island Research Project
Catalina Marine Science Center
P.O. Box 398
Avalon, CA 90704

New Literature: SCAMIT has received surplus issues of the SCCWRP Keys to Invertebrates Vol. I and II thanks to SCCWRP. These are now available through SCAMIT at $6.00 each plus postage.

List of October 10, 1983 Topic Specimens:

| AHF 15 | Boccardia basilaria |
| AHF 16 | Caraziella citrona |
| HYP 28 | Polydora brachycephala |
| PL 30  | Polydora sp. |
| PL 29  | Caraziella citrona |

Travels with Olga: Los Angeles, 23 Feb. 1939 - Purchasing books abroad:
--------. Perhaps you know that is you purchase books from Germany you are entitled to tourist marks instead of Reichs-marks. This means a difference of 25¢-27¢ as against 40¢ or more. The french franc is at present at its greatest buying power. We have been getting it at 2.54¢; the dutch guilder, on the other hand, around 55¢-60¢, and the danish crown runs around 25¢-27¢. One simply has to watch the monetary market to capitalize on these differences. The market fluctuates constantly. I am debating now whether I should buy a round trip ticket or wait to purchase return ticket at Naples. If the Italian lira should drop in value during coming years I might make some money.

Los Angeles, 4 March 1939

Dear Frieda: I have very much enjoyed your letters, and thrilled in the delights you must have had during all the festivities.----During the past few days, I have been examining tourist folders, comparing prices, visiting bureaus, and after first reserving on the East Asiatic lines, finally cancelled that and got one on the Knutsen Lines- the Margarethe Bakke. The cost of steamer tickets is terribly high, and that is only the beginning. Then, the fellowship does not take effect until July 1st, and hence I will have to wait until London to receive the first installment. The ticket from
Los Angeles to Manchester, and from Naples to New York is $400, and as you see, that is only a small part of the expense.---- I should say that my boat sails June 6th, and arrives in Manchester about July 1st.------ Another matter I should like to ask you about. I have to get a passport and it calls for a witness who has known me personally for at least two years. There is no such person in or near L.A., and I am at a loss as how to proceed. The post office is open only from 9-4 ----

Los Angeles, 30 March 1939

My plans for the European trip are gradually, though slowly, crystallizing themselves. Monro of the British Museum is to be there through July (vacation in August), hence I shall plan to be there as near as July 1st, as is feasible. During August I expect to continue there, but will perhaps be able to manage by that time with Monro's assistant. Dr. McCulloch's sister is now in Europe, and we expect to arrange a meeting sometime during July, in the vicinity of London. By that time she will be through the continent, and looking toward India. She is on a trip around the world. Professor Bok, of the Swedish Rijksmuseum, Stockholm, has assured me of excellent facilities while at Stockholm. I should be there during September and October; that sounds pretty late in the year, for by that time the nights are long, the weather not very agreeable, and conditions perhaps not optimum. However, the short summer may be unusually prolonged. Everyone that I have heard speak of Stockholm, from first hand information, speaks of it with glowing terms, that it is one of the most beautiful cities in Europe, and that living conditions are ideal. After that, my plans are rather sketchy, but there is sufficient time to give them more thought later.

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Price: $6.00 plus $2.50 postage each.

Total remitted: ___________ Make checks payable to SCAMIT.

Send to: Ann Martin 10844 Ellis Ave.
Fountain Valley, CA 92708
Literature for West Coast Polydora - Boccardia complex

L. Harris
So. Calif. Coastal Water Research Project
646 W. Pacific Coast Hwy
Long Beach, CA 90806
(213) 499-7071

References include original descriptions of all valid species and most synonymies.


Polydora commensalis


Polydora ciliata limicola


Boccardia columbiana, B. uncata. Polydora caeca magna, P. cardalia


Polydora socialis plena


Polydora ciliata spongicola


Polydora


Polydora (boccardia)


Polydora monilis


Boccardia lizereca


Polydora plena


Boccardia truncata, Polydora amarincola, P. brachycephala


Polydora tricosusa


Boccardia proboscidea
Hartman, O. 1941. Some contributions to the biology and life history of Spionidae from California, with keys to species and genera - descriptions of two new forms. AHPE, 7(4):289-324, pl. 45-46.

Polydora citrora

Polydora websteri

Boccardia basilaria, Polydora neocardalia


Polydora euryhalina

Polydora (Leucodors) polybranchia


Polydora redeki


Polydora quadrilibata


Polydora armata

Polydora narica, Pseudopolydora kempi

Polydora allconoris

Polydora webberi


Polydora giardi


Polydora uncatiformis


Polydora heterochasta


Polydora cirrosa


Leucodora socialis


Polydora californica


Polydora californica


Polydora tubifex


Polydora ligni


Polydora caeca, Polydora hamata


Polydora nuchalis


Polydora rickettsi


Polydora ciliata brevicalva
These tables were compiled from the information given in the references below and the original species description when available. When 2 or more authors disagreed on a character (such as the setiger the caruncle extended to), the majority view or that of the author who looked at type material was used.


CHECKLIST OF WEST COAST POLYDORA-BOCCARDIA COMPLEX

Leslie H. Harris

BOCCARDIA Carazzi, 1895
  = PARABOCCARDIA Rainer, 1973

BOCCARDIA ANOPHTHALMA (Rioja, 1962) Blake, 1981
  = POLYDORA ANOPHTHALMA Rioja, 1962
Near Puerto Penasco, Gulf of California; Asuncion Island; boring into mollusk shells (Blake, 1981).

BOCCARDIA BASILARIA Hartman, 1961
Santa Barbara, Palos Verdes and San Pedro areas, in shelf depths, in silt and fine sand (Hartman, 1969).

BOCCARDIA BERKELEYORUM Blake & Woodwick, 1971
Fort Bragg & Trinidad Head, northern California; Morro Bay, Cayucos & San Simeon Beach State Park, southern California. Burrows into TEGULA BRUNNEA shells with hermit crabs, shells of PODODESMUS MACHROSCHIMA, and in LITHOTHAMNIUM (Blake & Woodwick, 1971).

BOCCARDIA CHILENSIS Blake & Woodwick, 1971
  = BOCCARDIA SP. Hartman, 1948
  = POLYDORA POLYBRANCHIA of Fauvel, 1916 (not Haswell, 1885)
  = BOCCARDIA JUBATA Rainer, 1973
Australia; New Zealand; Chile; Falkland Islands; Macquarie Island (Blake & Kudenov, 1978). ?Southern California.

BOCCARDIA COLUMBIANA E. Berkeley, 1927
Central California and western Canada, in intertidal sands, and boring in hard shells and wood (Hartman, 1969). Sandy material in or on wood pilings, sand between barnacles, sand in holdfasts, sponge, rock, coralline algae, in TEGULA, PURPUREA, OLIVELLA, ACANTHINA, JATON & DIODORA (Woodwick, 1963).

BOCCARDIA POLYBRANCHIA (Haswell, 1885) Carazzi, 1895
  = POLYDORA POLYBRANCHIA Haswell, 1885
  = POLYDORA (LEUCODORE) POLYBRANCHIA Haswell, 1885
  = POLYDORA EURYHALINA Hartmann-Schroder, 1960
Morro Bay, estuarine; western Canada; in cosmopolitan areas, especially in estuarine and tidal streams; in silt and mud (Hartman, 1969). Also: Australia; Atlantic Ocean; Japan; Mediterranean Sea.

BOCCARDIA PROBOSCIDEA Hartman, 1940
  = POLYDORA CALIFORNICA Treadwell, 1914, 1922
British Columbia; Oregon; California; Humboldt Bay, Fort Bragg, Cayucos, Goleta, Santa Barbara, Morro Bay, Ballona Creek; on rocks among corallines, holdfasts, piling material, MYTILUS growth, TEGULA, JATON, ACANTHINA, OLIVELLA, MYTILUS (Woodwick, 1963). Also: Japan; Panama; Australia.
BOCCARDIA PUGETTENSIS Blake, 1979
British Columbia; Washington; in shallow subtidal and intertidal sand substrata (Blake, 1979).

BOCCARDIA TRICUSPA (Hartman, 1939) Woodwick, 1963
= POLYDORA TRICUSPA Hartman, 1939
Morro Bay south to La Jolla; western Mexico; Galapagos Islands; intertidal among encrusting organisms; boring in shells and algae (Hartman, 1969). Morro Bay; Cayucos; Santa Barbara; La Jolla; Galapagos Islands; in LITHOPHYLLUM, among serpulids, PHRAGMATOPOMA, sponges, TEGULA, CERATOSTOMA, OLIVELLA, THAIS (Woodwick, 1963).

BOCCARDIELLA Blake & Kudenov, 1978

BOCCARDIELLA HAMATA (Webster, 1879) Blake & Kudenov, 1978
= POLYDORA HAMATA Webster, 1879
= BOCCARDIA HAMATA (Webster, 1879) Blake, 1966
= BOCCARDIA UNCATA E. Berkeley, 1927
= POLYDORA (BOCCARDIA) UNCATA of Berkeley & Berkeley, 1952
Mission Bay and Tomales Point, intertidal, in oyster clumps, burrowing in outer shells, causing crescentic runways; western Canada (Hartman, 1969). British Columbia to Bahia de San Quintin, Baja; oyster beds, estuarine mud; DODECACERIA sp. masses; east and Gulf coasts of North America, oyster and gastropod shells; Uruguay; algal holdfasts; TEGULA (Blake, 1966).

BOCCARDIELLA LIGERICA (Ferroniere, 1879) Blake & Kudenov, 1978
= BOCCARDIA LIGERICA Ferroniere, 1879
= POLYDORA REDEKI Horst, 1920
= BOCCARDIA REDEKI (Horst, 1920)
= POLYDORA UNCATIFORMIS Monro, 1938, fide Blake & Kudenov, 1978
Mugu Lagoon and Mission Bay, in intertidal mud flats; Holland and western France (Hartman, 1969). "Hartman (1941; 1961; 1969) referred some posteriorly incomplete California specimens to B. REDEKI. BOCCARDIA LIGERICA is closely related to B. HAMATA... Because B. HAMATA is common in California waters, it is possible that the incomplete specimens described by Hartman are B. HAMATA." Brackish waters of mud flats of western Europe...Holland, France, Germany; S. Africa (Blake & Woodwick, 1971). San Francisco Bay vicinity, southern California, Alamitos Bay (Light, 1978).

BOCCARDIELLA TRUNCATA (Hartman, 1936) Blake & Kudenov, 1978
= POLYDORA TRUNCATA Hartman, 1936
= BOCCARDIA TRUNCATA Hartman, 1936
(The 1936 description is entitled "POLYDORA TRUNCATA sp. nov.", but it is clearly of a BOCCARDIA and in the discussion the name B. TRUNCATA is used.)
Moss Beach, San Mateo County, intertidal in sandstone reefs (Hartman, 1969).
CARAZZIELLA Blake & Kudenov, 1978

CARAZZIELLA CITRONA (Hartman, 1941) Blake & Kudenov, 1978
  = POLYDORA CITRONA Hartman, 1941
Mission Bay, intertidal in sandy mud areas with UPOGEBIA (Blake, 1979). Also: Point Loma, 60 m, and King Harbor, southern California.

CARAZZIELLA CALAFIA Blake, 1979
  = PSEUDOPOLYDORA REISHI of Reish, 1968 (not Woodwick, 1964)
Monterey Bay (37m); Los Angeles Harbor (6-12 m); Catalina (12 m); Bahia de los Angeles (Blake, 1979). Also: Santa Monica Bay, 60 m.

POLYDORA Bosc, 1902 emended
  = DIPLITIS Montagu, 1813
  = LEUCODORE Johnston, 1838
  = LEIPOCERAS Mobius, 1874
  = DIPOLYDORA Verrill, 1881
  = PROTOPOLYDORA Czerniavsky, 1881
  = PSEUDEUCODORE Czerniavsky, 1881

POLYDORA ALLOPORIS Light, 1970
British Columbia to central California; in ALLOPORA CALIFORNICA & A. VENUSTA in central California, and A. nr. A. PETROGRAPTA off Vancouver Island (Light, 1970).

POLYDORA ARMATA Langerhans, 1880
  = POLYDORA MONILARIS Ehlers, 1905
Western Canada to western Mexico, in intertidal coralline or calcareous growths; cosmopolitan (Hartman, 1969).

POLYDORA BARBILLA Blake, 1981
Near Puerto Penasco, Gulf of California; boring into gastropod shells (Blake, 1981).

POLYDORA BIFURCATA Blake, 1981
Vicinity of Tomales Point, northern California; LITHOPHYLLUM crusts (Blake, 1981).

POLYDORA BIOCCIPITALIS Blake & Woodwick, 1971
Malibu Beach & Santa Barbara; OCENEBRA, OLIVELLA, MUREX, and POLINICES shells (Blake & Woodwick, 1971).

POLYDORA BRACHYCEPHALA Hartman, 1936
  = POLYDORA CAULLERYI auctt., not Mesnil, 1897
Central and southern California, intertidal in shallow littoral silts and clayey mud (Hartman, 1969).

POLYDORA CARDALIA E. Berkeley, 1927
British Columbia; southern California (Blake, 1979).

POLYDORA CIRROSA Rioja, 1962
Bays and estuaries, Pacific coast of Mexico; Oceanside, San Diego County (Light, 1978).
POLYDORA COMMENSALIS Andrews, 1891
  = POLYDORA CILIATA BREVIPALPA Zachs, 1933
  = POLYDORA sp. E. Berkeley, 1927
Southern California, in intertidal mud flats; western Canada to western Mexico; eastern United States (Hartman, 1969). Also: Curacao; North Japan Sea.

POLYDORA CONVEXA Blake & Woodwick, 1971
Santa Barbara, Avila, Morro Bay, Cayucos, Bodega Harbor and Trinidad Head; in TEGULA, OLIVELLA, PODODESMUS and DIODORA shells; rock scappings, holdfasts, sponges, DODECACERIA sp., bryozoa; intertidal to 18 m (Blake & Woodwick, 1971). Near Puerto Penasco, Gulf of California (Blake, 1981).

POLYDORA ELEGANTISSIMA Blake & Woodwick, 1971
Tomales Bay, Morro Bay, Malibu Beach; in TIVELA, OLIVELLA, hermit crab shells (Blake & Woodwick, 1971).

POLYDORA GIARDI Mesnil, 1896
Alaska south to western Mexico; intertidal to 20 fms, in coralline zones; boring into calcareous growths; cosmopolitan (Hartman, 1969). Also: Northeast Atlantic; Australia; New Zealand; Sonora, Mexico.

POLYDORA HETEROCHAETA Rioja, 1939
Mexico: Acapulco and Bahia de los Angeles, Gulf of California (Blake, 1981).

POLYDORA LIGNI Webster, 1879
  = POLYDORA AMARINCOLA Hartman, 1936
  = POLYDORA CILIATUM of Agassiz, 1867 (not Johnston, 1838)
  = POLYDORA LITTOREA Verrill, 1881
British Columbia to western Mexico; Northern Europe; New England to Florida; Gulf of Mexico; euryhaline, shallow water of estuaries; thin tubes in tidal flats or attached to rocks, shells and wharf pilings (Light, 1978). Also: Caribbean Sea (Foster, 1971).

POLYDORA LIMICOLA Annenkova, 1934
  = POLYDORA CILIATA LIMICOLA Annenkova, 1934
Los Angeles vicinity, intertidal, along breakwaters, in MYTILUS colonies, massed in crevices and forming muddy sheaths over rocks and other hard surfaces (Hartman, 1969).

POLYDORA NARICA Light, 1969
Carmel, California; 100-200' in association with an ampharetid (Light, 1969).

POLYDORA NEOCARDALIA Hartman, 1961
Santa Barbara south to San Pedro channel, in shelf depths, in mud, shale, and mixed sediments (Hartman, 1969).

POLYDORA NUCHALIS Woodwick, 1953
POLYDORA PYGIDIALIS Blake & Woodwick, 1971
Santa Barbara, Avila Beach, Morro Bay, Cayucos, California; British Columbia; in hermit crab shells, TEGULA, piling material, bryozoa; intertidal to 18 m (Blake & Woodwick, 1971).

POLYDORA QUADRILOBATA Jacobi, 1883
   = POLYDORA TUBIFEX Verrill, 1885
   = POLYDORA LITTOREA of Hartman, 1944 (not Verrill, 1881)
Southern California; eastern and western Canada; Europe; New England; Sea of Japan; Sea of Okhotsk; Bering Sea; ?San Francisco Bay; intertidal to shallow subtidal (to 210 m in Sea of Japan); in sandy and silty mud; forms dense interconnecting galleries of rust-colored tubes (Light, 1978).

POLYDORA RICKETTSI Woodwick, 1961
Cabo San Lucas, Baja California; in tube of SPIROBRANCHUS INCRASSATUS (Woodwick, 1961)

POLYDORA SOCIALIS (Schmarda, 1861)
   = LEUCODORE SOCIALIS Schmarda, 1861
   = POLYDORA CAECA VAR. MAGNA E. Berkeley, 1927
   = POLYDORA MAGNA of Berkeley & Berkeley, 1936, 1952
   = POLYDORA SOCIALIS PLENA Berkeley & Berkeley, 1936, 1952
   = POLYDORA CAECA of Berkeley & Berkeley, 1936, 1952 (not Orsted, 1843)
   = POLYDORA PLENA of Foster, 1971
   ?= POLYDORA GRACILIS Verrill, 1880
British Columbia; San Francisco Bay to Oceanside, California; Gulf of California; Gulf of Mexico; east coast of North America; Chile; Falkland Islands; Australia; in lagoons and depths to 68 m, in mud and silt; often forming large beds or boring in shells (Light, 1978).

POLYDORA SPONGICOLA Berkeley & Berkeley, 1950
   = POLYDORA CILIATA SPONGICOLA Berkeley & Berkeley, 1950
Western Canada south to San Pedro, in intertidal depths northward and in slope depths at southern end; associated with sponges and in mixed sediments (Hartman, 1969)

POLYDORA WEBSTERI Hartman, 1943
   = POLYDORA CAECA Webster, 1879 (not Orsted, 1843)
   = POLYDORA CILIATA auctt. (not Johnston, 1838)
East coast of North America from Quebec and Newfoundland to Florida; Gulf of Mexico; California; Oregon and Hawaii; intertidal and shallow; boring into calcareous substrates, oysters, scallops, clams, gastropods (Blake, 1979).

POLYDORA WOBBERTI Light, 1970
Baja California; burrowing in LOPHOGORGIA sp. (Light, 1970).

PSEUDOPOLYDORA Czerniavsky, 1881
   = CARAZZIA Mesnil, 1896
   = POLYDORELLA Augener, 1914
   = NEOPYGOSPIO Berkeley & Berkeley, 1954
PSEUDOPOLYDORA KEMPI (Southern, 1921)
= POLYDORA (CARAZZIA) KEMPI Southern, 1921
= NEOPYGOSPIO LAMINIFERA Berkeley & Berkeley, 1954
= POLYDORA (PSEUDOPOLYDORA) KEMPI JAPONICA of Banse, 1972
= PSEUDOPOLYDORA KEMPI JAPONICA Imajima & Hartman, 1964
= PSEUDOPOLYDORA KEMPI CALIFORNICA Light, 1969
British Columbia and Puget Sound; California: Morro Bay, San Francisco Bay, Bolinas Lagoon, Bodega Harbor, Tomales Bay; India; South Africa; Japan; Korean Archipelago; in mud, sand, or sand and mud; intertidal to shallow subtidal (Light, 1978). Also: Australia (Blake & Kudenov, 1978).

PSEUDOPOLYDORA PAUCIBRANCHIATA (Okuda, 1937)
= POLYDORA (CARAZZIA) PAUCIBRANCHIATA Okuda, 1937
= POLYDORA (CARASSIA) (sic) PAUCIBRANCHIATA of Reish, 1954
= POLYDORA PAUCHIBRANCHIATA of Reish, 1961
California: Los Angeles-Long Beach Harbor, Newport Bay, Alamitos Bay, Elkhorn Slough, San Francisco Bay, Tomales, Bay; Japan; New Zealand; in sand; lower littoral to shallow subtidal (Light, 1978). Also: Australia; King Harbor, southern California.

ADDENDUM


BOCCARDIA BASILARIA Hartman, 1961
Spionidae

Voucher #AHF 15 10 October 1983


Synonymy: none

Primary diagnostic characters: Bifid prostomium; lacks notosetae on setiger 1; caruncle to end of setiger 3; branchiae on first half of body only; posterior notopodia with acicular spines; spines of modified 5th setiger include gently falcate ones and some bristle-topped with constricted neck; hooded hooks gradually change from bidentate to unidentate; pygidium a thin disk with two ventral lappets.

Related species and character differences: In southern California, B. BASILARIA is unique with its posterior unidentate hooks and notopodial acicular spines, however, it is closely related to B. PUGETTENSIS Blake, 1979, which also has these characters. B. PUGETTENSIS has thinner notopodial spines, its hooded hooks are nearly straight in the posterior and only sometimes unidentate, has notosetae on setiger 1, the pygidium has 4 lobes, and anterior branchiae reaching nearly to the midline of the dorsum. The branchiae of BASILARIA are short and reach no more than \(\frac{1}{3}\) of the body width to the midline. B. BERKELEY-ORUM Blake and Woodwick, 1971, is similar to BASILARIA in lacking notosetae on setiger 1, possession of posterior acicular spines and very short anterior branchiae, but it has bidentate hooded hooks throughout its body, 4 small lobes on the pygidium, and a rounded prostomium.
BOCCARDIA BASILARIA Hartman, 1961


Depth range: Shallow shelf depths.

Distribution: Santa Barbara through San Pedro area, California.

Ecology: Soft bottom communities, in silt and fine sand.
CARAZZIELLA CITRONA (Hartman, 1941) Blake & Kudenov, 1978
Spionidae

Voucher #PL 29, AHF 16 10 October 1983

Literature citation: Hartman, 0. 1941. Some contributions to the biology and life history of Spionidae from California, with keys to species and genera and descriptions of two new forms. Allan Hancock Pac. Exped., 7(4): 289-324.

Synonymy: POLYDORA CITRONA Hartman, 1941

Primary diagnostic characters: Branchiae from setiger 7; 2 types of spines in setiger 5: ventral row with expanded bristled ends, dorsal row falcate with bristles and bare tip; bidentate hooded hooks in neurosetae from setiger 10; bidentate hooks gradually lose secondary tooth, become unidentate in posterior setigers.

Related species and character differences: Unique in genus in having unidentate posterior hooded hooks, with the hooks starting on setiger 10. CARAZZIELLA CALAFIA Blake, 1979 has bidentate hooded hooks throughout its body, the dorsal spines of setiger 5 have bristles covering their falcate tips, the ventral bristle-tipped spines have a terminal depression, and there is a "gizzard" in the digestive tract.

Variability: The prostomium may be entire anteriorly or slightly incised. The caruncle may stop at setiger 1 and then have an additional ridge on setiger 2, or the two may be fused into a single unit. The falcates spines of setiger appear to vary in shape, possibly due to the angle of observation and light refraction (see Blake, 1979): spines may look like those shown below, like those of POLYDORA BRACHYCEPHALA, or as in Hartman, 1969.
CARAZZIELLA CITRONA (Hartman, 1941)


Depth range: intertidal & 60 m.

Distribution: Sandy mud beds of UPOGEBIA in Mission Bay; silt/sand benthic communities off Point Loma, in 60 m.
POLYDORA BRACHYCEPHALA Hartman, 1936
Spionidae
Voucher #HYP 28 10 October 1983


Synonymy: POLYDORA CAULLERYI of auctt., not Mesnil, 1897

Primary diagnostic characters: Bifid prostomium; notosetae on first setiger; branchiae and hooded hooks begin c. setiger 7; caruncle extends to setiger 7 (incorrectly noted as to setiger 2 in description: Light, 1978); spines of modified fifth setiger stout, sharply falcate, topped by dense fringe of bristles; notosetae in posteriormost segments form conical fascicles of spines, usually completely retracted within notopodia.

Related species & character differences: P. CAULLERYI Mesnier, 1897, P. ARMATA Langerhans, 1880, P. QUADRILOBATA Jacobi, 1883, and P. ACICULATA Blake & Kudenov, 1978, form a group of species with acicular spines in posterior segments, hooded hooks lacking a shaft constriction, and spines of the modified 5th with a flange on the convex side and/or a crest of bristles. P. CAULLERYI & P. BRACHYCEPHALA are often synonymized because the adult forms appear identical. The larval forms show considerable differences in pigmentation, however, enough that P. BRACHYCEPHALA is now thought to be a distinct species (see Light, 1978).

The major spines of P. ARMATA & P. QUADRILOBATA have a flange on the convex side, P. CAULLERYI & P. ACICULATA have spines similar to those of P. BRACHYCEPHALA, but those of ACICULATA also have a definite lateral flange. The posterior acicular spines of BRACHYCEPHALA (and CAULLERYI) barely protrude from the notopodial lobe, while those of QUADRILOBATA protrude prominently when contracted, ARMATA's spines are usually not emergent except in two posterior setigers where they form highly conspicuous stellate fascicles (in southern California specimens). The stout acicular spines of ACICULATA begin in midbody, and there are only 2-3 per fascicle throughout the rest of the body.

Variability: The pygidium has been described as 4 fleshy lobes and also as a disk with a middorsal notch. The notosetae of the first setiger may be abundant & obvious to sparse & nearly invisible. Hooded hooks may rarely start on setiger 6.
POLYDORA BRACHYCEPHALA Hartman, 1936


Depth range: Intertidal through shallow subtidal; one record at 150 m.

Distribution: Puget Sound, Washington; Yaquina Bay, Oregon (150 m); central and southern California, in bays & harbors (Los Angeles-Long Beach Harbor, King Harbor, Catalina Harbor).

Ecology: In soft bottom communities, on littoral silts, clayey mud, and silt/ooze mixtures.
POLYDORA nr. ARMATA Langerhans, 1880
Spionidae


Synonymy: POLYDORA MONILARIS Ehlers, 1905

Primary diagnostic characters: Bifid prostomium; eyes absent; 2-3 capillary notosetae present on first setiger; dorsal fascicles of 2-3(4) geniculata spines on modified 5th setiger, each spine bidentate, distally curved, with teeth connected by transverse flange; no companion setae; neuropodial hooded hooks begin setiger 7, each bidentate, 3-4 per fascicle; branchiae begin setiger 7, continue to setiger 12 at most; caruncle extends to end setiger 2; pygidium disk-shape, with dorsal gap, occasionally ventral gap as well; last 8-12 notopodia with 8-12(13) thick, acicular spines in cone-shaped bundles.

Related species & character differences: P. BRACHYCEPHALA Hartman, 1936; P. CAULLERYI Mesnil, 1897; P. QUADRILOBATA Jacobi, 1883; P. ACICULATA Blake & Kudenov, 1978. See discussion under P. BRACHYCEPHALA.

Variability: The spines of the modified 5th setiger may vary considerably in appearance due to the angle of observation and degree of erosion (see Woodwick, 1964 and Blake & Kudenov, 1978, for discussion; illustrations below). There also appears to be several variations found in the arrangement of the posterior notopodia with spines as stated in the literature. The number of such notopodia ranges from 6 (Hartman, 1941), 8 (Okuda, 1937) to 8-12 (Fauvel, 1927). Acicular spines per fascicle are 8-12 (Fauvel, 1927) or 10-13 (Okuda, 1937). The fascicles are usually said to be cone-shaped (Fauvel, 1927; Hartman, 1969; Day, 1967; Blake & Kudenov, 1978), but in Japanese specimens are arranged in a half-moon (Okuda, 1937; Imajima and Hartman, 1964). The fascicles can be almost completely retracted within the notopodial lobes (Fauvel, 1927; Blake & Kudenov, 1978; small specimens) or emergent (Okuda, 1937; Hartman, 1969); if emergent, the spines may be capable of extension into stellate or funnel-shaped fascicles (Hartman, 1969; Day, 1967).

Comments: The specimens brought to the SCAMIT meeting came from the Allan Hancock Foundation collections, courtesy of Sue Williams, were originally identified by Olga Hartman. Concerning the posterior notopodia, her 1941 description states: "Fascicles of heavy spines are present in notopodia of the last 6 segments; those in the fifth and sixth last segments are unusually conspicuous bundles; those in the last four segments are much smaller". Despite the wide range of variation noted world-wide, the differences in the southern California material seem enough to place it in a new taxa. Confirmation of this would require examination of type material and other specimens.
POLYDORA ARMATA Langerhans, 1880


Depth range: Intertidal - shallow subtidal.

Distribution: Western Canada to western Mexico (southern end of range unstated). Considered cosmopolitan but may represent several confused species.

Ecology: Boring into coralline & calcareous growths, limestone substrates, shells, sponges and coral; forms galleries covered with tubes of fine mud (Fauvel, 1927).