

November, 1995

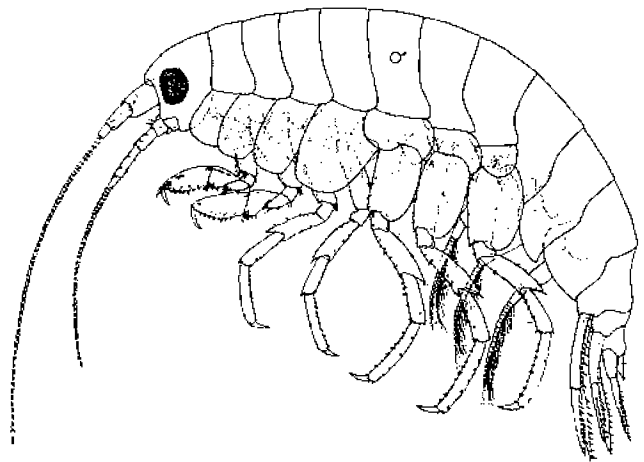
SCAMIT Newsletter

Vol. 14, No.7

NEXT MEETING:	Amphipods and Octopods
GUEST SPEAKER:	Megan Lilly from CSDMWWD on Octopods
DATE:	December 11, 1995
TIME:	9:30am - 3:30pm
LOCATION:	To Be Announced

DECEMBER 11th MEETING

This meeting will focus on amphipods from the families Pleustidae and Phoxocephalidae, especially the species, *Heterophoxus oculatus*. There have been some recent changes to the family Pleustidae and these will be discussed at the meeting. Members should bring any pleustids to the meeting that they need help in identifying. Also, the type specimen of *Heterophoxus oculatus* will be examined at the meeting, so members may want to bring specimens to compare against. Megan Lilly (CSDMWWD) will also present her recent findings on the southern California *Octopus* problem along with slides. Please see Megan's article later in this newsletter. The meeting location is still a secret so members planning on attending will need to call the Vice President.



Chromopleustes oculatus (Holmes 1908)
(from Bousfield & Hendrycks 1995)

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ARCO FOUNDATION, CHEVRON USA, AND TEXACO INC.
SCAMIT Newsletter is not deemed to be a valid publication for formal taxonomic purposes.

A GREAT LOSS

We report with sadness the passing of Dr. Janet Haig on November 15th. She is the second distinguished carcinologist from USC to leave us in the last few years. Although frail, Dr. Haig had seemed in relatively good health until a recent fall resulted in a broken hip. Her death was a complication of her nursing home recovery and treatment for the hip injury. It is unfortunate that she did not live to see the completion of the new *Decapods of California*, which she, along with Dr. Mary Wicksten and Dr. John Garth, had largely completed. This update and expansion of Schmitt's 1921 volume of the same name would have been a fitting cap to a lifetime of careful work on arthropod taxonomy and biology.

SPECIAL NEMERTEAN MEETING

On the 27th of October a special meeting of the "nemertean group" was held at John & Julie Ljubenkov's Dancing Coyote Ranch in the mountains behind Oceanside. Participants included John (MEC), Dean Pasko and Megan Lilly (CSDMWWD), Carol Paquette (MBC), Tony Phillips (HYP), and Don Cadien (CSDLAC). Despite the beauty of the surroundings much was accomplished. To our dismay (following two previous nemertean powwows) we still had considerable lack of agreement, even on some "well-known" taxa.

Of particular interest was the situation with *Prosorhochmus albidus*. We all thought we knew this animal well, and that it was adequately separated in the key provided by Pat Rowe during the SCCWRP Taxonomic Standardization Program meetings many years ago. There proved to be a basic dichotomy in concept of this species, with MEC and San Diego having common usage for one form and HYP and LA having common usage for another.

All four were being called *Prosorhochmus albidus* with confidence, but two forms were clearly

represented. To confound this problem it proved impossible to nail down what *P. albidus* really is because of discrepancies in Coe's 1905 description of the animal, and between his and Rowe's illustrations. The original description of the animal is by Bürger in a paper not yet located by any of us. Until this reference is found and evaluated, the true *P. albidus* will remain elusive (and may not even occur here!).

We were able to dispense with several overlapping provisionals since the authors were all present. By the end of the day, while somewhat daunted by the problems remaining, we felt much had been accomplished. Such meetings will need to continue as much work remains. Thanks from all participants for the opportunity to meet in such pleasant surroundings and for the kindness of our hosts.

NEW LITERATURE

Two recent articles dealing with the amphipod genus *Microjassa* were circulated at the meeting, both by Kathleen Conlan. In the first (Conlan 1995a) she erects a new genus *Neoischyrocerus*, describes several new taxa from the northeast Pacific, and reallocates several existing species. The second (Conlan 1995b) provides supporting cladistic and zoogeographical analysis for the changes.

AMPHIPOD WORKERS

Dr. Victoria Diaz, a researcher with the ecology department at Cicese in Ensenada, B.C., is currently looking for some assistance in identifying amphipods for a project studying the macrofauna of Todos Santos Bay. The work would need to be completed before July 1996. Anyone with the interest and time available may contact Dr. Diaz by phone @ (617) 451-56 or fax @ (617) 451-54 for more information.

A SECOND *Ambidexter*

On November 8th, during night trawls to capture target fish for chemical analysis off Palos Verdes, a small unfamiliar shrimp was collected by Dave Montagne (CSDLAC). On return to the laboratory this gravid female was initially identified as *Ambidexter panamensis*, but reference to Abele's 1972 original description proved it to be *Ambidexter swifti*. This species was previously known only from the 1972 description from Panama. The single individual taken in south Santa Monica Bay represents a northern range extension of about 1500 miles .

Our specimen was taken in 50m of water over a fine sand bottom with *Lytechinus pictus* the dominant invertebrate. No other shrimp were taken, although this may only reflect net selectivity.

The type lot was taken from intertidal pools (Abele, 1972). Similarly the type lot of *Ambidexter panamensis* was taken on intertidal flats, living in burrows. Individuals of the latter species recently taken in San Diego Bay were in very shallow water, on submerged mudflats covered with algae (see "Southern Shrimp in San Diego", SCAMIT Newsletter Vol. 13#5, and "More on Shrimp", SCAMIT Newsletter Vol. 13 #6). It is not known if they were associated with burrows.

If the burrowing habitat of *A. panamensis* is also shared by *A. swifti* it is quite possible that the original collection in tide pools represented either a marginal habitat or displacement. It is also possible that a burrowing, nocturnally active shrimp species might remain undetected, even at substantial population density, in a regularly sampled area like the Southern California Bight. A similar case is known for the laomediid ghost shrimp *Naushonia macginitiei*. Although the adults are virtually unknown, having been taken only three times this century, the larvae are often taken and not uncommon in nearshore zooplankton samplings. This can be established

because larval morphology for the genus is both well known and unique (Thompson, 1903). The adult habitat remains unknown, but is assumed from the few clues available in larval and adult collection data to be in an ecotone area of rocks over sandy mud not sampled by existing programs.

We can only speculate concerning the present distribution, and relative abundance of *Ambidexter swifti*, but it's presence off southern California in a reproducing population is now demonstrable. The species is separable from *A. panamensis* on the basis of telson structure (presence of setose median lobe), rostrum (presence of terminal notch [bifid], and ventral blade; longer relative to eye), and epimeron of the fifth abdominal segment (obtusely pointed instead of broadly rounded).

RETURN OF THE APRICOT GHOST

During the CSDLAC November quarterly trawl series we reencountered an animal not seen for several years, the undescribed pelagic octopoid *Opisthoteuthis sp A*. This lovely animal is a benthic-pelagic species which lives on or near the bottom in deeper water (we take it in over 300m). Apparently, it makes feeding excursions off the bottom into near-bottom waters and parachutes down onto its benthic prey from above. This octopoid has very short arms, which are united almost to their ends by web. Although muscular, the body is relatively gelatinous in response to buoyancy requirements for energy conservation. The "head" of the animal bears two thin "micky-mouse-ear" shaped fins, which are used in a sculling motion both for raising the animal into the water column and for maneuvering.

Despite the depth at which the animals are taken, they have very large eyes, and may employ at least some visual predation. Their delicate translucent apricot color and general resemblance to the "ghosts" of Pacman video fame lead to the common name employed in the title. Dr. Eric

Hochberg of the Santa Barbara Museum of Natural History is currently working on this animal. The other *Opisthoteuthis* species from the northeast Pacific, *O. californicus*, is black, larger, and differs in many morphometric characters. Additional specimens of either would be welcomed at the museum, as would collection information related to this species.

A tentacle was taken from one of the animals and preserved appropriately for later genetic analysis. Once completed, this should contribute both to refined generic placement of this species, and better understanding of the relationships within the group of genera in which it fits. Dr. Hochberg surmises this species might actually belong to the related genus *Grimpoteuthis*.

INVASION UPDATE

It looked for a while like *Philine auriformis* was growing in size, but decreasing in population density in most places in the Bight. Our recent trawl series does not substantiate the density decline. In one 10 minute trawl at a depth of 137m off Palos Verdes we retained 766 *P. auriformis* in the net, and probably lost many others through the mesh. Specimens were found between 25 and 305m, although they were more common and also larger at 61-137m depths. The largest individuals were nearly 50mm in extended body length, considerably larger than in literature reports on New Zealand specimens. Despite examinations of stomachs from several co-occurring fish species, no other records of predation can be added to the original one of consumption by Pacific Sand Dab. Unless local predators get with it and either develop a better search image, or a taste for these animals, *P. auriformis* is poised to launch an even more massive intrusion into local benthic communities. Several size classes are present in most collections, and recruitment has clearly been good.

Reports are coming in from both the San Diego area and from Orange County of an upsurge in the

population of the echiuroid *Listriolobus pelodes*. So far no comparable increase has been seen in Santa Monica Bay or the Los Angeles Area. Individuals are as yet small, and their impact will grow along with their dimensions. There is an indigenous predator for this species, the curl-fin turbot, but it may take a while for the fish to find the rich feeding grounds made available by the massive *L. pelodes* recruitment. A similar episode was witnessed and documented in the early eighties off Palos Verdes (Stull et al, 1986a,b). The species seems to recruit infrequently in any given locale, existing as a series of dense patches over a low-density background population throughout its range.

It remains to be seen if *Philine auriformis*, which the data to date seems to indicate is an opportunistic feeder using whatever prey resource is abundant nearby, will affect the course of the *Listriolobus* "bloom".

ANNELIDA NEWSGROUP

There was a recent communication on the Internet about the ANNELIDA mailing list/prototype newsgroup that was mentioned in the last volume of the SCAMIT newsletter (Vol. 14 no. 6). ANNELIDA mailing list is now available for subscriptions. It is currently only a prototype newsgroup that is distributed only by e-mail and not on USENET. It will remain this way for a 6 month trial period and then be voted on before it becomes an official newsgroup. It is being administered Dr. David Kristofferson, who is the project manager of BIOSCI, which is funded by the U.S. Department of Energy and the National Science Foundation. Dr. Geoff Read, editor of *Chaetozone*, will serve as group discussion leader.

ANNELIDA is not only for discussion of the scientific study of polychaetes, but also clitellates (oligochaetes and leeches), pogonophora, vestimentifera, sipunculans, and echiurids. Most discussions will probably focus on the ecology, taxonomy, and biodiversity of these groups. It is

expected that these discussions will be limited to annelids as whole organisms and not about annelid parts that are used in medical and biochemical research. To subscribe to ANNELIDA, if you are not already on the list through *Chaetozone*, you first need to log into the computer account in which you would like to receive e-mail and send a message to the Internet address biosci-server@net.bio.net. Leave the Subject: line of the message blank and enter the line:

subscribe annelida

into the body of the mail message. This will automatically enter your e-mail address to the mail list. Once you are a subscriber you can get information on how to post a message to the group and reply to a message. You may also find out about other biology newsgroups you might be interested in. For more information on ANNELIDA please contact the SCAMIT secretary.

**MINUTES FROM NOVEMBER 13
MEETING**

This meeting was held to review the proposed changes and additions to edition 1 of the SCAMIT Taxonomic Listing of Macroinvertebrates. At the meeting Dave Montagne (CSDLAC) passed out a list of the changes and additions to the list that he had compiled by group. The members present reviewed this list to see if an agreement could be reached concerning these changes and additions for the 2nd edition. It was decided that some of the changes would have to wait until edition 3 is produced next year. These are species whose publications are still in press or species that still have not been resolved and are awaiting further review. However, it was decided that several species should be left at the generic level until more specimens have been collected and further research can confirm their true identity. It was also decided at the meeting that trawl-caught invertebrates would be included in the 2nd

edition of the Taxa List.

Please Note: The December 11th meeting is the deadline for additions and emendations of edition 2 of the Taxa List. All voucher sheets on provisional species that are to be included in this 2nd edition are due. If voucher sheets are not submitted for distribution thru the newsletter at this time the species name will be dropped from the list. Remember provisionals do not have to be official SCAMIT vouchers, but they need some sort of substantial documentation that may be distributed to the membership as a whole. For example, included in this newsletter are several voucher sheets from the City of San Diego's biology lab. These were done on their own in-house voucher sheets and perfectly acceptable.

It was decided at the meeting that for flatworm provisionals, illustrations only would be accepted as substantial documentation for inclusion in edition 2, since that is mainly what is used to distinguish between species. For the 3rd edition, however, differential diagnoses should be written up.

It should be noted that 3 of San Diego's voucher sheets included with this newsletter refer to specimens from the SCBPP. They are Ampharetidae sp. SD 1, *Ophelina* sp. SD 1, and *Scoelelepis* sp. SD1. They won't be included in the taxa list because not enough specimens have been found that fit their descriptions yet. Anyone with specimens similar to these should contact the appropriate author at the San Diego lab, so they may conduct further research.

It is anticipated that edition 2 of the Taxonomic Listing will be completed by the end of 1995 and, hopefully, be distributed with the January newsletter.

EDITORIAL NOTE

Sometimes it almost seems that the SCAMIT Newsletter is the house organ of whichever group

the editor and/or secretary belong to. Currently most of the information presented comes from the County Sanitation District of Los Angeles County, because both the editor and secretary are from there. It is important that a broader spectrum of opinion and comment be sought. In support of this goal we encourage all members and interested parties to contribute to the Newsletter. Contributions like that following are very valuable to the membership, providing the base of common experience that our recent SCBPP endeavor showed was often lacking. Thanks to Megan for submitting the description of her recent activities for distribution through the Newsletter. All articles which bear no authorship attribution are the product of either the editor or secretary.

Octopus OBSERVATIONS

During the 1994 Southern California Bight Pilot Project (SCBPP) trawls, two problems arose concerning local species of *Octopus*. The first being the confusion of *Octopus rubescens* Berry, 1953 with *Octopus californicus* (Berry, 1911), especially at young stages. The second problem developed with the appearance of a cryptic Mexican species, *Octopus veligero* Berry, 1953.

Octopus rubescens and *O. californicus* are fairly easy to distinguish as preserved adults, a task more difficult in the field, especially with juveniles. The depth ranges of the two species overlap with *O. rubescens* occurring from 0-300 m and *O. californicus* from 100-1000 m (but mainly between 200-500 m) (Hochberg, 1995, personal communication). The best distinguishing character is eye diameter in relationship to body size. *Octopus californicus* has extremely large eyes relative to body size while *O. rubescens* has smaller eyes relative to body size. *Octopus californicus* varies in color from orange to rust red but does not display mercurial chromatophore patterns. It also lacks well developed true papillae. The skin can appear rugose and bumpy, due to presence of stellate tubercles, but elongate papillae should be absent. In contrast, *O.*

rubescens can range in color from deep reddish brown to almost white, going through many stages of mottling and displaying complex (true) papillae patterns.

As small juveniles, the animals can be distinguished by funnel organ shape and founder chromatophore patterns. *Octopus californicus* has a "v v" (double "v") shaped funnel organ and no founder chromatophores. *Octopus rubescens* has a "w" shaped funnel organ, a row of paired founder chromatophores on the ventral surface of the arms, and scattered founder chromatophores on the ventral mantle surface.

A more difficult problem was encountered with the discovery of *Octopus veligero* in southern California waters. Twelve specimens of *O. veligero* have now been taken. Two specimens were collected in 1994 during the SCBPP survey; one at station PLAFT1175 on July 27, 1994 at a depth of 210 m, and the other at station PHYFT1028 on August 11, 1994 at a depth of 128 m. The other nine animals were collected in 1995. Two were collected by CSDMWWDD, one in July trawls at Station SD-11, at approximately 94 m, and the second in October trawls at Station SD-8 at approximately 100m. Seven specimens were collected by CSDLAC in August trawls at stations ranging in depth from 61-137 m, and an eighth at 137 m in south Santa Monica Bay in November.

Octopus veligero displays body patterns and behavior similar to *O. rubescens* and there is potential for confusion between these two species. The most distinctive feature of *O. veligero* which separates it from *O. rubescens* is gill lamellae count. *Octopus veligero* has 15-17 gill lamellae per demibranch where as *O. rubescens* has only 10-13 lamellae per demibranch. Another distinguishing characteristic of *O. veligero* is a pigment pattern of dark spots on the web below the eyes (they occur in the same region as false eye-spots in ocellate species) and on the lateral aspect of the mantle. The animals can be induced to display these spots in the field with manual

manipulation. The known distribution of *O. veligero* is now from the Los Angeles area south to the mouth of the Gulf of California, at depths of 61-210 m. The normal range for *O. rubescens* is from the Gulf of Alaska to approximately Pt. Eugenia, Baja California, Mexico, with the southern limit unsure at this time (Hochberg, 1995, personal communication).

In order to develop a better guide to identify *O. californicus* and *O. rubescens* in the field, and to explore the possible occurrence of *O. veligero* in San Diego waters, all octopus specimens (6 total) collected in the City of San Diego's April 1995 trawls were brought back to the lab and kept alive for approximately two months. Two *O. californicus* from CSDLAC trawls were also kept alive and observed during this period. Videotape and still photographs were taken of the animals hunting, feeding, resting, etc.

The animals were housed in 10 gallon plastic aquaria with recirculating, filtered sea water chilled to approximately 11 degrees C. Diet consisted of a variety of invertebrates and vertebrates, including *Pachygrapsus crassipes*, *Mytilus* sp. (with shells cracked to encourage feeding), "feeder" gold fish, and in one instance, *Lottia* sp. The animals were fed every two to three days on average.

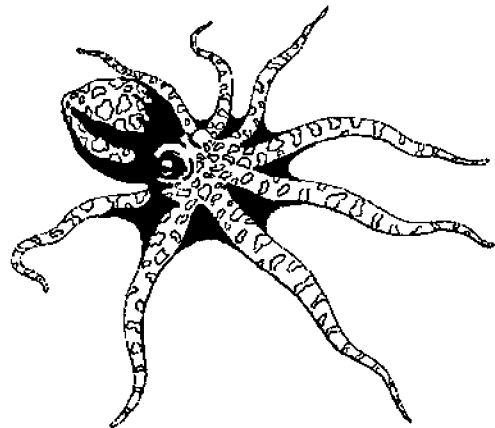
After about two months the animals started showing signs of illness (probably bacterial infection) and exhibited decreasing interest in prey items. The octopus were fixed in 10% formalin and then transferred to 75% ethanol. The six San Diego animals were dissected and identified as *Octopus rubescens* (verified by Dr. Eric Hochberg of the Santa Barbara Museum of Natural History).

The two CSDLAC animals had already been identified as *O. californicus* through live observations. The still photographs were used to create a field guide to help separate *O. rubescens* from *O. californicus*.

Still photographs were also taken of the *Octopus veligero* captured in CSDMWWD's October trawls and will be added to the original field guide (anyone interested in obtaining a copy of the field guide please contact Megan Lilly at the City of San Diego's Ocean Monitoring Program). CSDLAC is working on creating a field sheet from the observations made on the seven animals sampled in their August trawls, and will distribute them when completed.

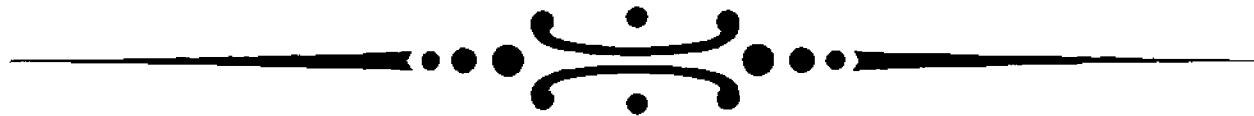
It is suspected that *O. veligero* is not an established resident of the Southern California Bight, and that its occurrence in these waters is associated with periodic changes in oceanographic conditions (El Niño). Further research is being conducted on this problem.

----- Megan Lilly, CSDMWWD



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SCAMIT OFFICERS:

If you need any other information concerning SCAMIT please feel free to contact any of the officers.

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Volumes 1 - 4 (compilation).....	\$ 30.00
Volumes 5 - 7 (compilation).....	\$ 15.00
Volumes 8 - 13	\$ 20.00/vol.

Single back issues are also available at cost.

CITY OF SAN DIEGO VOUCHER SHEET

Species: *Scolelepis* sp. SD 1
Authority: Point Loma provisional

Common Synonyms:
See Comments below..

Taxa: Annelida: Spionidae

Date: 10 Nov. 95

By: R. Rowe

Voucher Specimen(s):

Station	Date	Depth	Storage Location	Voucher #
E-26(2)	4/13/93	321 ft.	Pt. Loma	(see R. Velarde)

Characters (used in lab to confirm ID):

1. Body form- Broad flattened thorax, acutely pointed prostomium
2. Notosetae absent on the first setiger
3. Occipital (median) antenna present as a short knob behind the eyes (?partially missing)
4. Eyes - 4 in a straight transverse row
5. Hooded neurosetal hooks from setiger 14 (fig. 1)
6. Hooded neurosetal hooks multidentate, a large main fang and 3 smaller accessory teeth (fig. 1)

Full Description (cite sources):

Additional material needed
This species currently undescribed

Illustration :

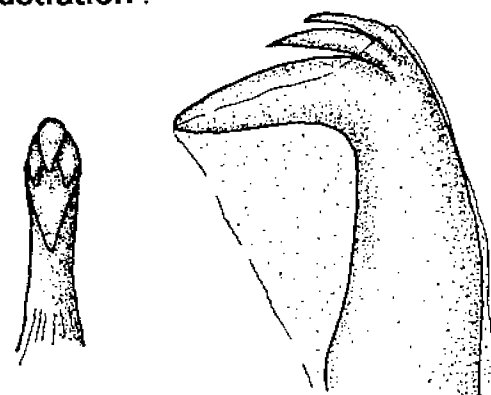


Fig. 1 Hooded neurosetal hook
(from a median setiger)
Original drawing

Related Species (include character differences):

Scolelepis tridentata- Has notosetae on the first setiger

S. occidentalis- Has notosetae on the first setiger + hooded hooks are uni- or bidentate

S. squamata- Median antenna absent + has notosetae on the first setiger

S. bullibranchia- Median antenna absent + has notosetae on the first setiger + hooded hooks are tridentate

S. sp. B (M. Rossi)- Median antenna absent + Eyes in trapezoidal pattern

Comments:

More material and a description of *S. sp. B* (M. Rossi) is needed. T. Phillips reports from 60m. in Santa Monica Bay (specimens not compared to Pt. Loma material).

References: Key to non-polydorid Spionidae from Southern California (unpublished)
by Dean Pasko and Larry Lovell

CITY OF SAN DIEGO VOUCHER SHEET

Species: *Ophelina sp. SD 1*

Authority: [fide Rowe, 1995]

Common Synonyms:

This may be synonymous with
Ophelina breviata (Ehlers, 1913)-see comments

Taxa: Annelida: Opheliidae

Date: 11 November 1995

By: R. Rowe

Voucher Specimen(s):

Station	Date	Depth	Storage Location	Voucher #
E-9(1)	25July95	378ft	Pt. Loma 'DLZ'	1001
SCBPP-103	18Aug94	93m	Pt. Loma Main	in progress

Characters (used in lab to confirm ID):

1. Ventral groove present along entire body
2. Branchiae present beginning on setiger 2 and continuing to setiger 27 (some may be missing)
3. 32 total setigers
4. No lateral eyespots
5. Proboscis fringed (similar to figure of *O. pallida* in Hartman, 1969)
6. Large 'nuchal' organs' just anterior to first setae
7. Anal tube approximately as long as last 5 setigers, opens terminally with approximately 8 evenly spaced short and two 3X longer (ventral) cirri (Longer cirrus broken off in one specimen)
8. All setae are long thin capillaries, approximately 10 per fascicle, some notosetae much longer on posterior setigers

Full Description :

Related Species (include character differences):

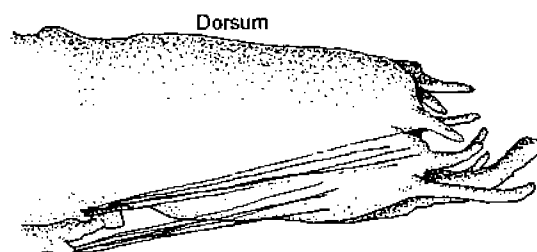
- O. acuminata*- Has open anal scoop, opening consists of a ventral slit lined with short cirri, proboscis is smooth
O. pallida- Has no anal tube-like structure
O. breviata- See comments below

Comments: The specimens of *O. sp. SD 1* fit the gross description in Hobson, 1977 and Hobson & Banse, 1981 for *O. breviata* (Ehlers). Pettibone, 1954 page 295 describes *O. breviata* with "proboscis saclike, smooth". A thorough description of *O. breviata* has not been found and specimens need to be compared to *O. sp. SD 1*.

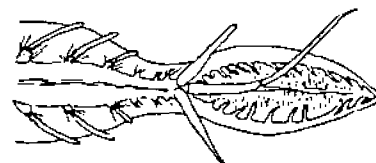
Specimens of *O. sp. SD 1* in S. Cal. Bight Pilot Project (Stations 103, 753, & 245) were reported as *Ophelina sp.*

- References:** Hobson, K.D. 1977. Notes on benthic sedentariate polychaeta from British Columbia and Washington. *Syesis* 9:135-142.
Hobson, K.D. & K. Banse. 1981. Sedentariate and archiannelid polychaetes of British Columbia and Washington. *Can. Bull. Fish. Aquat. Sci.* 209:144.
Pettibone, M.H. 1954 Marine polychaete worms from Point Barrow, Alaska with additional records from the north Atlantic and north Pacific. *Proc. U.S. Nat. Mus.* 103(3324):203-356.

Illustration :



Anal tube- *Ophelina sp. SD 1*
Lateral view
(Original drawing)



Anal scoop- *Opelina acuminata*
Ventral view
(from Hartman, 1969 as *Ammotrypane aulogaster*)



CITY OF SAN DIEGO VOUCHER SHEET

Species: Ampharetidae sp. SD 1

Authority: Point Loma, 1994

Common Synonyms:

Ampharetidae Genus A sp. A of Willams

Taxon: Polychaeta: Ampharetidae

Date: February, 1995

By: K. Barwick

Voucher Specimen(s):

Station
B13(2)

Date
10/6/94

Storage Location
Main

Voucher#
TBA

Characters:

1. 12 (sometimes 13) thoracic uncingers
2. Small palae present (flabellum)
3. Lower "lip" crenulated, tips free from one another
4. Crescent shape pigment patch posterior the eyespots on the dorsal surface of the prostomium
5. 4 pairs of branchiae

Illustration: (R. Rowe)

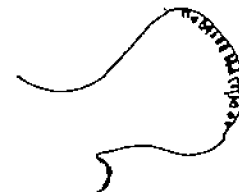
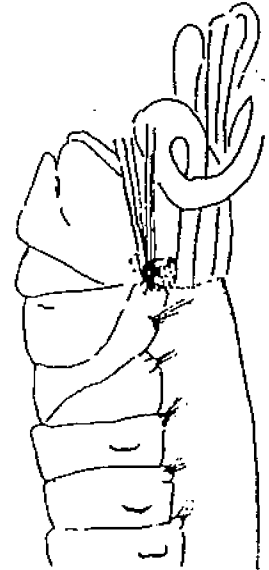
Prostomium



Dorsal View



Ventral View



Abdominal Parapodia



Pygidium

Full Description: (Personal communication Harris 4/18/94.)

Animal with 15-16 thoracic setigers; 12-13 thoracic uncingers [usually 12]; no modified notosetae; flabellum present (small palae); first notosetae small. Prostomium with golden brown pigment on dorsal surface: trilobed with median part somewhat flask shaped with an anterior incision; lower "lip" crenulated with tips free from one another. Four pairs of branchiae on high bases. Pygidium with two lateral cirri. Small species, ovigerous at 10mm.

Related Species:

Most closely resembles *Lysippe* sp. A. Ampharetidae sp. 1 has only 12 thoracic uncingers (usually) and there is no pigment on the branchiae. *Lysippe* sp. A has much less pigment on the prostomium and the flabellum is reduced.

Comments:

References:

(over)

Species: Amparetidae sp. SD 1

Taxon: Polychaeta: Ampharetidae

Date: February, 1995

Additional Illustrations:

Distribution—

Pt. Loma: Sta. B13, 280 ft

Geographic: Point Loma. Also reported from southern California in deeper water, 1970-3000ft.

Habitat:

CITY OF SAN DIEGO VOUCHER SHEET

Species: *Notomastus latericeus*
 Authority: Sars, 1851
 Common Synonyms:

Taxa: Annelida: Capitellidae
 Date: November 11, 1995
 By: R. Rowe

Voucher Specimen(s):

Station	Date	Depth	Storage Location	Voucher #
SCBPP-1776	27July94	24m.	Pt. Loma 'DLZ'	273
ITP 1-9(1)	11July95	94ft.	Pt. Loma 'DLZ'	273

Characters (used in lab to confirm ID):

1. Branchial lobes pointed (fig. 1)
2. Biramous first setiger
3. Eleven thoracic setigers with capillaries only
4. First segment asetigerous
5. No nephridial pores present in last several thoracic setigers (look in intersegmental furrow midlaterally)
6. Thoracic segments are biannulate=midsegmental furrow present
7. Methyl green staining pattern= double stripes encircle abdominal segments (one stripe ant. and one stripe post. of neurosetal fascicle) and large dark dorsal spots (one pair per segment) on large papillar organs (figs. 2 & 3)

Some similar size specimens from same sample w/o stain on papillar organs

Full Description (cite sources): *Uebelacker, 1984 pg.14-26*

"Prostomium broadly conical, tip blunt; ocular patches present. Thoracic epithelium distinctly areolated through setigers 6-8, becoming increasingly smooth thereafter; segments biannulate. Thorax with capillary setae only in both rami. Transition from thorax to abdomen abrupt. Abdomen with hooded hooks only in both rami. Conspicuous ovoid lateral organ between noto- and neuropodia of most abdominal segments; seven or more pairs of nephridial apertures (usually inconspicuous) from second abdominal segment. Branchiae rudimentary, represented by small dorsolateral swellings of notopodia and large triangular extensions of neuropodia. Hooded hooks multidentate with main fang surmounted by up to 18 minute denticles arranged in three or more rows. Pygidium without appendages."

Illustration :



Fig. 1 First abdominal segment (anterior view)



Fig. 2 Papillar organ (lateral view)

Prostomium tucked in under peristomium

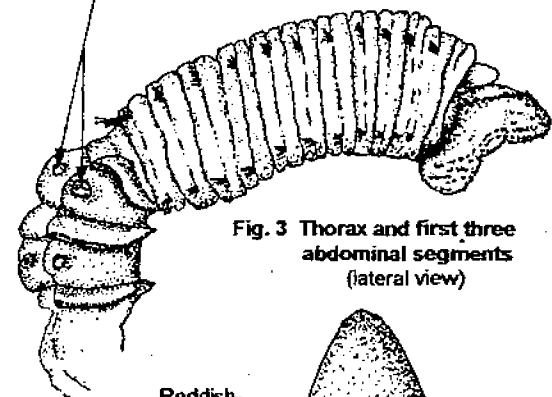


Fig. 3 Thorax and first three abdominal segments (lateral view)

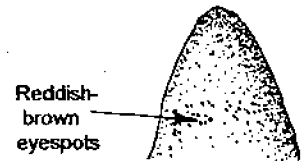


Fig. 4 Prostomium (dorsal view)

Drawings are originals of first listed voucher specimen

Related Species (include character differences):

Notomastus lineatus Claparede, 1870— **Branchial lobes** on first few abdominal segments are **rounded** not pointed, methyl green stain different, **nephridial pores present laterally, on last few thoracic setigers in intersegmental furrow**

Comments: Fairly large, usually thorax and anterior ~10 abdominal setiger fragments. Found in shallow benthic samples. This species has been confused with *N. lineatus* locally.

References: (See Uebelacker, 1984, vol. 14, page 14-26)

CITY OF SAN DIEGO VOUCHER SHEET

Species: *Carazziella sp. A*

Authority: [fide Velarde, 1995]

Common Synonyms:

Possibly *Carazziella phillipensis* Blake & Kudenov, 1978

Taxa: Annelida: Spionidae

Date: November 8, 1995

By: R. Rowe

Voucher Specimen(s):

Station	Date	Depth	Storage Location	Voucher #
A-8(2)	5 Jan 84	205 ft.	Pt Loma Main	P-312
SCBPP533	17 Aug 94	21m.	Pt Loma 'DLZ'	189

Characters (used in lab to confirm ID):

1. Two types of bristle-topped major spines on the fifth setiger
2. Branchiae begin on setiger 7, some nearly reach middorsum, present on 10-11 setigers
3. Bifid neuropodial hooks begin on setiger 8 (number ~4-7 per fascicle on anterior setigers)
4. Caruncle short, extending to posterior margin of setiger 2, split by transverse void or groove at posterior margin of setiger 1
5. Occipital tentacle is absent
6. Prostomium rounded with shallow incision at anterior margin
7. Full fascicle of capillary notosetae on first setiger
8. Few fine superior and more numerous inferior capillary setae on setiger 5
9. Two pair of eyes, the anterior larger
10. Pygidium with four subequal triangular lobes

Full Description:

See the original description of *Carazziella phillipensis*, Blake and Kudenov, 1978 and related species below. Voucher specimen from Pt. Loma 'DLZ'-189 is an entire worm (38 setigers) with a length of approximately 5mm.

Illustration (following figures from Blake and Kudenov, 1978 of *Carazziella phillipensis*)

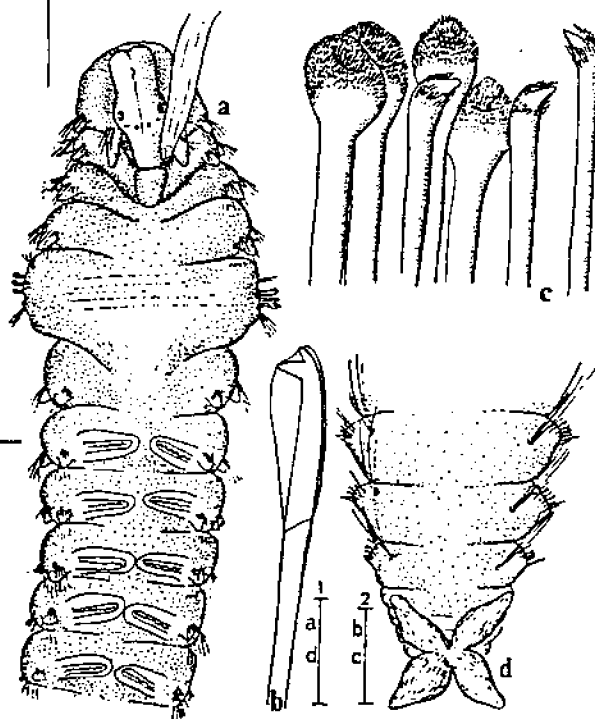


Figure 15.—*Carazziella phillipensis* sp. nov.—a, anterior end in dorsal view; b, hooded hook; c, group of spines from setiger 5; d, posterior end in dorsal view. (Scale 1 = 200 μ m; 2 = 20 μ m)

Related Species (character differences):

- C. phillipensis* - *C. sp. A* is nearly identical and may prove synonymous upon comparison of specimens. *C. sp. A* has a few more notosetae on the 1st setiger, and the hooded hooks are bifid throughout with a main fang that is slightly more obtuse. *C. phillipensis* branchiae on 5-6 setigers. See the original description of *C. phillipensis*.
- C. citrona* (Hartman, 1941) see Blake, 1979- Has prostomium with an entire anterior margin, hooks from setiger 10 number 15-18 per fascicle, and larger (to 30mm and 120 setigers). Branchiae present on 70 setigers
- C. calafia* Blake, 1979- No superior capillaries on setiger 5.
- C. hobsonae* Blake, 1979- No notosetae on setiger 1 and anterior setigers with only 3 hooks per fascicle.
- C. reishi* (Woodwick, 1964)- No eyes, only 2-3 hooks anteriorly, pygidium with 4 short lobes, and smooth spines on 5th Branchiae present on only 5 setigers.

- References:** Blake, J. A. & J.D. Kudenov, 1978. The Spionidae from southeastern Australia and adjacent seas with a revision of the genera. Mem. Nat. Mus. Vic.39:171-280.
 Blake, J. A. 1979. Four new species of *Carazziella* from North and South America, with a redescription of two previously described forms. Proc. Biol. Soc. Wash. 92(3):466-481.