Southern California Association of
Marine Invertebrate Taxonomists

3720 Stephen White Drive
San Pedro, California 90731

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SCAMIT Newsletter

Vol. 17, No. 7

SUBJECT:	Part I, Island Copper Mine Collection, Dr. Derek Ellis. Part II, Bight'98 Polychaetes, discussion leaders, Ron Velarde & Tony Phillips
GUEST SPEAKER:	Dr. Derek Ellis
DATE:	19 January 1999
TIME:	9:30 a.m. to 3:30 p. m.
LOCATION:	Worm Lab Natural History Museum of Los Angeles County. 900 Exposition Blvd., Los Angeles, CA

Scolanthus sp A photo by D. Pasko specimen from City of San Diego Ocean Monitoring Program

NEXT MEETING

There was not a meeting in December, except for the Christmas Party at the Cabrillo Marine Aquarium. We have tentatively scheduled meetings for February, and March (see below) which await finalization of arrangements with participating speakers.

The January meeting will be held at the Worm Lab of the Natural History Museum of Los Angeles County on 19 January. We will have a speaker in the morning, and then will move on to consideration of new and interesting polychaetes from the Bight '98 sampling. Dr. Derek Ellis will begin the meeting with a presentation on the Island Copper Mine Collection, the fruits of decades of monitoring in British Columbia. Subsequently President Ron Velarde and Tony Phillips will co-lead the polychaete discussion. Tony has been working up some of the samples collected around

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Catalina and the Northern Channel Islands, and has found interesting new things. Ron has been closer to home, working on samples from San Diego Bay, but has also found that the benthic community in the south bay differs significantly from that he is used to offshore. If you have questions or questionable specimens from Bight '98 samples, bring them along for examination and discussion (polychaetes only please).

NON-SCAMIT MEETINGS

The National Conference on Marine Bioinvasions is scheduled for 24-27 January 1999 at MIT. Those interested in the latest on this increasingly important subject area should seriously consider attending. Information on talks to be presented, registration, and accommodations is available at:

http://massbay.mit.edu/exoticspecies/conference.html

or by calling Conventures, Inc at (617) 439-7700.

The Call for Papers for the 1999 meeting of the National Shellfisheries Association has been announced. The meetings will be held in Halifax, Nova Scotia, Canada April 18-22 1999. Members will receive information and abstract forms via the Fall1998 Newsletter. Non-members can find information on the meetings at their web site:

http://www.shellfish.org

Deadline for abstract submission and student travel award application has passed (DECEMBER 11, 1998).

SCBPP and Bight'98 participants may wish to consider attending or presenting a paper at a conference to be held April 6-8 1999 in San Francisco sponsored by EPA Office of Research and Development. Entitled "The EMAP Symposium on Western Ecological Systems: Status, Issues and New Approaches" Proceedings will be published in Environmental Monitoring and Assessment. Information on subject areas and registration is available from Dr. Brian Melzian, EPA Region IX, at TEL: 401-782-3188, by FAX at 401-782-3030, and by e-mail at Melzian.Brian@epamail.epa.gov, or at the website:

http://www.epa.gov/emap/html/news.html.

For those who don't get the Ecdysiast, the Crustacean Society will have its summer meeting on May 26-30 in Lafayette, LA. Information on the meeting can be had at nicely developed:

http://www.usl.edu/Departments/Biology/TCS/

You can also contact Darryl Felder at dlf4517@usl.edu for more info.

The Seventh International Conference on Artificial Reefs and Related Aquatic Habitats (7th CARAH) will be held October 7-11, 1999 in San Remo, Italy. Scheduled symposia will cover Planning, Function and Ecology, Options for Designing Habitat Systems, Habitat Protection, Evaluation of Reef Performance, Artificial Substrata Reefs, Monitoring and Assessment, Artisanal Fishing, Other Habitat Enhancement, and Mariculture. Since the deadline for abstracts is the end of February 1999 you still have plenty of time to conceptualize and write the abstract for a paper. Information on registration, abstract format, costs, etc. is available at the website:

http://www.soc.soton.ac.uk/SUDO/DEPT/7CARAH/7carah.html

POLYCHAETE CONFERENCE

The sixth International Polychaete Conference was held in Curitiba Brazil, 2-7 August 1998. The conference was hosted by Centro de Estudos do Mar - Universidade Federal do Paraná, Curitiba and superbly organized by Paulo da Cunha Lana <lana@cce.ufpr.br>. The conference web-pages provided information for

contributors. We have already had a brief overview provided by a member who attended (Leslie Harris of NHMLAC), but will pass on this note from the conference organizer as well:

"- About 130 contributions were presented, and 145 scientists (together with 20 accompanying persons) attended the conference. They came from 29 different countries. - There was a nice balance between taxonomic ('classic' and cladistics) and non-taxonomical contributions. Recent advances in polychaete cladistics were of course one of the hot topics of the conference. - About 25 graduate students had the chance to attend their first international meeting and to get in contact with their 'elders'. Special prizes were given to the best students' poster (won by Sabine Cochrane, from Norway) and oral presentation (won by Kim Last, from the United Kingdom). The meeting was specially important for South American students and researchers, mainly from Brazil, Argentina, Chile and Venezuela. Many of them had the chance to meet colleagues from the Northern Hemisphere for the first time. It is presumed that many scientific cooperation programs will result from these contacts, be they formal or informal. - There were three proposals to host the next meeting, coming from Iceland (Gudmundur Helgason and Ellin Sigvaldadóttir), Japan (prepared by a group of researchers and presented by Hiro Tsutsumi), and the United States (Jim Blake). Gudmundur will chair our next meeting, to be held in Iceland in 2001. - There were two associate polychaetological events just before and just after the conference. The pre-conference one was organized in Arraial do Cabo (Rio de Janeiro) by Paulo Paiva, who invited Paul Schroeder, Pei-Yuan Qian, Hiro Tsutsumi, and Edmundo Nonato for a series of conferences. A course on polychaete cladistics was offered to 13 students, from 8 different countries, for a two week period in Pontal do Sul, just after the conference. Course staff was made up by Greg Rouse, Kristian Fauchald, Kirk Fitzhugh, Fred Pleijel and Thomas Dahlgren. Despite the rain, the course was a most successful one. - Donald Reish was elected president of the International Polychaete Association, and Andy Mackie from Scotland was elected its secretary/ treasurer. The IPA Advisory Council was renewed. - There was a special session dedicated to Edmundo Ferraz Nonato, the father of Brazilian polychaetology. He had the chance to meet about 20 of his former students (and the students from his students) during the conference. A tribute to our late colleague Wu Bao-Ling was prepared by Pei-Yuan Qian, and also presented during an special session." - Paulo da Cunha Lana.

MEMBER COMMENTARY

A brief, but pertinent comment was received from a member concerning the format of the SCAMIT Newsletter. It is passed on below.

"I know this has been discussed before....and its more true now than ever...The footer 'Funds for this publication provided....' is not at all true. Unless very recent financial support has been provided there are no funds from these companies used to produce, publish, support etc the newsletter publication. All those funds from 1982-1984 are all gone! Keeping this footer really misrepresents the facts and misinforms the membership. Time to drop it" - Tom Parker (CSDLAC)

Cheryl Brantley passed on the following note of interest to members. Please implement her recommendations in your copies of the Ed 3 list.

"One of Blake's new synonymies from Vol. 6 of the MMS Atlas series was forgotten about when the 3rd edition of the SCAMIT Species list was finished. The spionid *Malacoceros punctata* (Hartman 1961) should be listed as *Malacoceros indicus* (Fauvel 1928). From notes in the SCAMIT Newsletter vol. 15(5) where SCAMIT members reviewed all the spionid changes it was agreed to accept Blake's new synonymy. I believe it was just forgotten about when it came

time to work on Ed. 3. A note has been made so this won't be forgotten about for Ed. 4, but members might want to edit their Ed. 3 lists so *Malacoceros punctata* won't be used."

NEW LITERATURE

As in the last issue of the Newsletter, I am beginning to incorporate as "new" older literature which has seemingly slipped through the cracks. Those of you who have kept abreast of these less commonly encountered publications please bear with me. As I play catch up I will be adding a number of older papers to the mix. Hopefully they will prove useful. The Editor.

The longest reach is back nearly 20 years to two sponge papers by Bergquist (1980a b). In the first she proposes the separation of a new group, Nepheliospongida, based on larval, biochemical, and structural characters. In the second she reexamines the horny sponges, and provides a concise discussion of the characters used in their taxonomy. Higher level taxa are reconsidered in the Orders Dictyoceratida, Dendroceratida and Verongida, but even generic level taxa are treated. Diagnoses of all are provided, but the author shied away from providing a key to any of the taxonomic levels considered.

Another comprehensive examination of a major group of sponges (this time the family Chalinidae) was provided by Weerdt (1989). She performed a cladistic analysis of the haplosclerid families, using a series of outgroups to establish character polarities. As in other cases where a fauna from a different ocean is considered, the main value to local users is in the discussion of characters and their variability.

Members of *Diala*, a genus of small prosobranch gastropods, have been reported to occur in our local fauna in the past (Oldroyd 1927, Grant & Gale 1931, etc). As suggested by the latter, and stated by Keen & Coan (1974), this is not the case. All the eastern Pacific taxa previously assigned to the genus belong in *Barleeia*. Ponder & de Keyzer (1992) revised the genus and discussed all its members, providing much better discrimination of its valid members from the local species previously assigned to it.

Beu & Cernohorsky (1986) lay groundwork for a review of the gastropod family Bursidae. This preliminary paper does not treat our local species, but covers the basis of the familial review, and the nomenclatural history of the group.

A series of nemertean species were analyzed by Härlin & Sundberg 1995 using cladistic methods. The results of this review suggest that most current nemertean families and even genera are paraphyletic! It is a commentary on the difficulty of character description in the group, and the nature of historical descriptive practice, that the authors considered only 34 taxa sufficiently well described for inclusion in the analysis.

While most of the above papers have no direct bearing on a member of the local fauna, that of de Broyer & Vader (1990) does. They reexamine the small symbiotic lysianassoid amphipod *Orchomenella recondita,* providing both a detailed description and information on the biology of the animal. This is an intertidal species taken in association with the aggregating anemone *Anthopleura elegantissima*, and so is not taken in our programs (as yet) and is not listed on the SCAMIT Ed 3 list. As the predominantly intertidal lysianassoid *Ocosingo borlus* has recently been taken offshore by CSDMWWD, who knows - we might see *O. recondita* as well!

16 NOVEMBER MEETING

Ron Velarde (CSDMWWD) called the meeting to order at approximately 10:00 a.m.. The morning began with a brief discussion of the Chinese mitten crab invasion in the San Francisco Bay-Delta region. Ron passed

around an article which revealed the staggering rate at which these crabs are reproducing and establishing themselves. The crabs are a threat to the system for numerous reasons, one being their potential destruction of the levee system by creating burrows which weaken the structures and as well, they compete for many of the same resources as the indigenous animals. A law was passed earlier which prohibited the fishing of the Chinese mitten crab in San Francisco area waters. However, it was felt by those present that the spirit of the law at the time was to prevent people from introducing the mitten crab in order to establish a fishery. Since that point is now moot and the crab seems firmly established, it may be time to reconsider that law and open a fishery on the mitten crab in order to control their burgeoning numbers. At least it is legal for individuals to catch and have mitten crabs as long as they are immediately killed. Possession and/or transport of live crabs is against regulations. However, the other concern regarding the fishing of the mitten crab is that it is known to carry a fluke parasitic to human beings and which causes tuberculosis like symptoms (so far no evidence that California crabs are infected). If you want to know more about this situation you can consult the California Fish and Game site:

http://www2.delta.dfg.ca.gov/mittencrtab/index.html

or the Marine Science Institute (Redwood City) site:

http://www.sfbaymsi.org/mcrab.htm

Information on monitoring efforts in the bay/delta system is available at:

http://iep.ca.gov/sdfg/mitten.htm

and a student consideration of the problem in Washington at:

http://weber.u.washington.edu/~goen/crab1c.htm.

Background to the San Francisco Bay invasion is provided in a Pacific Discovery article at:

http://www.calacademy.org/pacdis/issues/summer96/crab.htm

Since both the mitten crab and the European green grab have now been taken as far south along the outer coast as Morro Bay, we will all be seeing them at some time in the fairly near future. At least for the mitten crab, our exposure will be seasonal. During most of the year (when they are not reproducing) the animals stay in fresh water.

Speaking of introduced species, Don Cadien (CSDLAC) then mentioned that he recently had noticed a decline in the population of the introduced cephalaspid, *Philine auriformis***.** Tony Phillips agreed that the numbers have been decreasing in their samples as well. Megan Lilly (CSDMWWD) and Ron Velarde stated that San Diego has never seen large numbers of these animals in their samples, so it may not be as well established in this area. Don feels that perhaps one of our local species of fish has finally developed an appetite for the introduced mollusk.

Ron then passed around the November issue of the Festivus which announced the third annual meeting of SCUM (Southern California Unified Malacologists). The SCUM meeting will be hosted by Hans Bertsch at the Torrey Pines Campus of National University. It is an informal, one day meeting set for the 16 January 1999. For more information please contact Hans Bertsch at 619-642-8251 or email him at, hbertschsch@nunic.nu.edu.

Ron then passed around two polychaete identification sheets produced by the City of San Diego. The first sheet dealt with *Euchone limnicola***,** produced by Ricardo Martinez-Lara (CSDMWWD)(available in the next issue) and the second**,** *Diplocirrus* sp SD 1, produced by Rick Rowe (CSDMWWD) (see attachments). These worms are frequently encountered species in the San Diego Bay samples.

The Bight'98 trawl vouchers are starting to amass and are being examined by Don Cadien and Ron Velarde for quality control purposes. Much to Ron and Don's chagrin there was no money to hire outside taxonomic experts to examine the collection so QC is left to our two fearless leaders. Don said he expected a significant number of new (not in the SCAMIT Ed. 3 list) taxa in the Bight'98 voucher collection due to sampling in new areas and new substrates (Islands/Bays), with major additions of sponges and cnidarians.

Literature dealing with sponge classification and taxonomy was then passed around for all to peruse. Don again stressed the fact that so many of us have not kept current on sponge literature, preferring to rely on Gerry Bakus and Karen Green to keep us up to date. Now that we are seeing samples from different areas, including the Channel Islands, we should be making a more concerted effort to stay abreast of changes within this group.

As stated in the last Newsletter there will be no December meeting, but we set a tentative schedule for meetings to resume next year. The January meeting will be an information transfer meeting dealing with strange/difficult worms being encountered in the Bight'98 benthic samples.

The February meeting will hopefully be held at the Santa Barbara Museum of Natural History where the Coe Nemertean collection will be examined. March will be the first of two follow up meetings on the review of the Taxonomic Atlases. We will meet at Rancho Cuca with John Ljubenkov and hopefully Eric Hochberg to review Volume 3 - The Cnidaria. April will potentially have us back up at the SBMNH to review Volume 8 - The Mollusca, part I with the authors. During these months it may become necessary to have more than one meeting a month in order to accommodate the polychaete taxonomists in their struggles with new and difficult species.

Jay Shrake was next on the floor. He discussed the status of the SCAMIT web-page. Jay is pleased to announce that we are getting several hundred hits a day. He feels that the number of hits have increased since we signed on with the Yahoo search engine. We've also had 8 or 9 on-line membership requests. Jay stated that some of the hits are not only from out of state but out of the country, citing Russia as just one country of origin. Jay has done a wonderful job of establishing our web-page and spreading the name and idea of SCAMIT not only around the country, but around the globe. John Ljubenkov mentioned SCAMIT at the recent Cnidarian conferences at the Bodega Bay Marine Station. Some of our recent Russian, Dutch, and Italian website visits may be from international workers alerted to our existence by John. Thanks. Members take note. We depend on all of you to further SCAMIT through your personal contacts where you feel it might be of benefit to others.

Next, John Ljubenkov took the floor to suggest a new possible source of funding for SCAMIT. Recently, while attending a hydrozoan conference, he learned of NSF funding which was supporting the study of hydrozoan systematics. John suggested that we could potentially approach NSF under the auspices of SCAMIT in order to acquire funding for digitizing species lists, etc. He also felt that the NSF is not the only organization to be approached and that there are more sources of funding than previously realized, we just need to do a little research. However, someone cautioned that we would not want to duplicate the failed efforts of the National Biological Inventory. It is all interesting "food for thought".

The rest of the morning was spent reviewing the Hydrozoan section of the Cnidaria volume of the MMS Atlas series (Hochberg & Ljubenkov 1998a). After lunch the Anthozoan sections (Hochberg & Ljubenkov 1998b, Fautin 1998)were reviewed . For the most part those present had little or no comment

regarding inadequacies or errors in the sections (comments on a few typographic errors and editorial corrections are being forwarded to the authors for consideration in any future editions of the Atlas). We all wished for MORE, more coverage of more species than were encountered in the Santa Maria Basin collections. John Ljubenkov (and previously Eric Hochberg via telephone to D. Cadien) indicated that they wanted to go further, to provide coverage of other taxa, and to generally use the existing volume as a basis for a full reexamination of the fauna. These goals should be applauded, such a treatment is sorely needed.

Most commentary was directed to the section on anemones by Daphne Fautin. While the author brought a refreshing broad perspective to consideration of the local fauna, we felt that the predominance of cosmopolitan forms in her section was probably inaccurate. Based on experience with other groups we tend to disbelieve worldwide distributions unless they can be substantiated. In consequence, much of Chapter 3 of Volume 3 (Fautin 1998) will lie fallow until supporting information is forthcoming, or a more thorough consideration is given to a regional level review of these taxa. The material from the Santa Barbara Basin study was clearly not sufficient to allow one for this publication.

We were also somewhat surprised by the treatment of the edwardsiids. The report of *Edwardsia californica* from very deep water off Central California does not match at all with local experience on the distribution of the animal. Those present suspected, despite the author's assertion that the specimens exactly match the original description of McMurrich (1913), that more than one species was involved, and that none of them were actually *E. californica*. The comment that no members of the genus *Scolanthus* are known from California is reasonable if you add "in the published taxonomic literature", but is otherwise inaccurate. Specimens of the genus have been shown to and discussed with the author over a period of several decades. To local monitoring agencies and SCAMIT the presence (and community importance) of *Scolanthus* spp in the eastern Pacific is very apparent, and has been so for some time.

At 2:15 the constituent sections of the mollusc volume were discussed (Scheltema 1998, Eernisse 1998, Shimek 1998, Valentich Scott 1998, and Hochberg 1998). Kelvin Barwick (CSDMWWD) gave a demonstration of mounting chaetodermatid spicules and of subsequent examination under polarized light, a technique described and used by Scheltema (1998) in the Aplacophoran section of the Atlas. Kelvin is still working on using the technique to help him identify the animals to species. It is a difficult task at best. Trials by the members present did, however, demonstrate the sorts of polychromatic differences which refracted polarized light provides. We tested spicules from two closely related species which differed in the patterns of spicule thickening. The resulting color differences under polarization were very clear. A few editorial slip-ups and typos were found in the remaining sections, and will be forwarded to the authors for their consideration. We were delighted to have descriptions of several species which have been long time provisionals in our faunal lists. Examination of most sections was rather perfunctory, as those present found little to comment on. With more use perhaps some faults, questions, or difficulties will emerge. But for now there is general satisfaction with Volume 8.

Most potential difficulty lies in the aplacophore (Scheltema 1998) and chiton (Eernisse 1998) sections. With the former because of the nature of the characters used to distinguish the taxa, and in the latter because so much of the fauna was not represented in the Santa Maria Basin collections reported on. Tim Stebbins (CSDMWWD) is currently working on a project to supplement the Eernisse chiton

section with information on other species taken offshore in the Southern California Bight. If you haven't already sent him chiton specimens you should do so soon.

We have previously had the opportunity to examine the scaphopod section (Shimek 1998) in manuscript, and there appears to have been little or no change between our examination and publication. The Valentich Scott (1998) bivalve section was happily received, and will immediately be put to use. We expect it to soon be superseded by the California bivalve monograph he and Gene Coan are completing from Frank Bernard's manuscript. The cephalopod section (Hochberg 1998) was particularly strong on discussion of the biology of the animals: a most welcome resource for west coast workers. The discussion of octopods was very detailed, although *O. veligero* was addressed only comparatively (it was not included in the Santa Maria Basin material). Even the cover of the volume was outstanding, providing a terrific in situ photograph of *Octopus californicus* busy on the sea floor. The color of the animal, and the texture of its skin, are both clearly shown in the photograph. As both the color and texture are very useful field characters for this species (and difficult to adequately convey in words) this picture is a boon to field biologists sampling at the depths where *O. californicus* is taken.

CORRECTION

In the September issue of the Newsletter there was an error in one of the attatchments. On the second page of the voucher sheet for *Hartmanodes* sp SD1 the title (species name) is incorrect. It reads as *Monoculodes* sp SD 1 which is the former name for *H.* sp SD 1. We have re-issued the sheet as an attachment to this newsletter with the appropriate corrections.

My Life as a Biologist

Donald J. Reish

Chapter 11: Hartman years (conclusion) and my dissertation

As I was completing my dissertation, Dr. Hartman tried to obtain a position for me. She wrote to many people including Waldo L. Schmidt who was then director of zoology at the USNM. Nobody had an opening. While I was completing my dissertation, I went to work for the California Department of Fish & Game on funds obtained from the newly formed Water Pollution Control Boards (name changed later). It was a seasonal aid position which was good for only 9 months (more later). I was newly married, had my PhD, and was unemployed (despite my temporary job, I had no prospects for a permanent position). Dr. Hartman obtained a temporary position for me as her assistant. My duties were to take benthic samples from the harbor to Catalina Is. and sort the samples into animal groups. This was Dr. Hartman's last "official" dealings with me. I held this position for a few months until I went to Alaska (more later).

As I indicated in an earlier chapter, I had wanted to study the life history of *Typosyllis*, but since I could never get the adult to eat or reproduce, I switched to *Nereis mediator* (as it was known then). It occurred in the same niche, and would eat and reproduce in the lab. I had two frustrations with this species: (1) it is only sexually mature for 12 hours and (2) I couldn't get the trochophores to eat. The first problem was solved by having 50-75 worms in separate petri dishes. I examined them daily and watched for the early signs for sexual metamorphosis. That problem was solved. The latter problem took me one year to solve. Trial and error research played a role. I tried many different foods to no avail. I tried to construct a plunger jar system like the one devised by D.P.Wilson. I didn't have the physical set-up to build this system, but I used his concept. I placed 5 gallon jars in the

window sill (north facing) with sea water and connected to a compressed air system. Since the trochophores of this species swim for several days and do not feed, by the time they were old enough to feed, there was a growth of phytoplankton on the side of the jar. The larvae fed and I had the basis for my dissertation. I used this technique with *Nereis grubei*, as it is now called, in the 1960s and again in 1998. As I indicated in an earlier chapter, I was able to correct many taxonomic problems with the southern California species of *Nereis* by studying the variability of its offspring. It also pointed out the usefulness of life history studies in solving taxonomic problems—a subject of my paper in the Hartman memorial volume. There is continual need for this type of study. The year I spent trying to get larvae to eat proved to be well spent; not only for completion of my dissertation, but also for culturing additional species by me and my graduate students over the years.

1951 was an important year in my life, and also a sad one. I will present events in a more-or-less chronological order. I mentioned my friend Paul in an earlier chapter. He had lived a block from me in Corvallis, but we were not close friends then. He moved to San Diego late in 1950 and we did many things together. I bought his 1935 Buick sedan from him which was my first car. One Saturday in February we decided to go skiing. We didn't know where to go so we went up Highway 39 which ended at Crystal Lake, but there is no skiing there. Then we went to Hollywood, rented skis and learned that there was skiing at Mt. Waterman. On Sunday (Feb. 25, 1951) we headed for Mt. Waterman. Ski conditions were poor, and Paul met a young lady. She learned that we were from Oregon. She called her friend over who had graduated from Univ. of Oregon. That was Janice, and the rest is history. That night she told her cousin that she had met the man she was going to marry!

I had already passed my French exam at Oregon State and I took the German exam in January but failed.. I began studying German night and day and I passed the exam in May. I was then able to take my prelims in July. Hyman's vol 2 and 3 came out in June and I spent much time studying her 3 vols [The Invertebrates: Vol. 1 - Protozoa to Ctenophora, Vol. 2 - Platyhelminthes and Rhynchocoela, Vol. 3 - Acanthocephala, Aschelminthes, and Entoprocta. Hyman coined the term Aschelminthes to include 6 phyla but she never discussed their relationships. I figured that Dr. Mohr would ask a question about the relationships between them. I guessed correctly. Written exams were 4 hours each for 4 days followed by an oral exam. During the orals Dr. Buchanan stayed for a few minutes then signed his ok. Dr. Martin asked me lots of questions about bioluminescence, of which I knew little. Next chapter: 1951 continued.

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CITY OF SAN DIEGO VOUCHER SHEET

Species: *Hartmanodes* sp SD1
Authority:
Common Synonyms:
Monoculodes sp SD1 of CSDMWWD

Taxon: Gammaridea: Oedicerotidae
Date: 15 May 1997
By: Dean Pasko
Voucher Specimen(s):

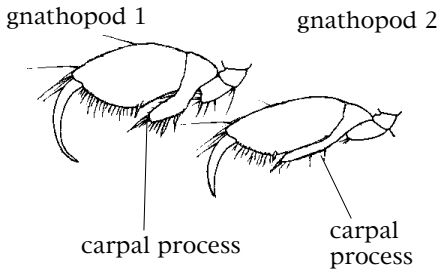
Station	Date	Storage Location	Voucher#
B-13	8 Jan 1997	Main	

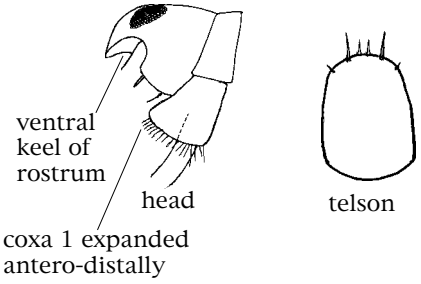
Characters: (Female only. Male unknown.)

White oedicerotid with well defined dorsal eye. Rostrum strongly deflexed (approx. 90 degrees), not acutely tapered, ventral keel slightly concave. Coxa 1, slightly produced antero-distally (ventrally broadened). Gnathopod 1, carpus (article 5) short (≤1/4 article 6 as measured along anterior margin); carpal lobe narrow and elongate. Gnathopod 2 carpal process narrow and moderately long (i.e., may extend up to, but not beyond, defining corner of palm). Gnathopod 1 and 2 with article 6 relatively broad (length = 2.3X width). Telson convex, with 4 terminal setae/spines, and two short setae on outer margin. Pereopod 7 basis without posterior ventral lobe. Posterior margin somewhat produced with medium length setae.

Full Description:

Illustration: **Digital images** also available on the SCAMIT webpage: www.scamit.org





(See figures on page 2.)

Related Species:

The species can be easily confused with *Monoculodes emarginatus* or *Hartmanodes hartmanae*.

Hartmanodes sp SD1 resembles *M. emarginatus* in the basic characters of the gnathopods (e.g., somewhat broadened propodus of gnathopods 1 and 2), but differs in the shorter carpus and a more elongate carpal lobe on gnathopod 1, a strongly deflexed rostrum (~90 degrees vs. ≤45 degrees in *M. emarginatus*), and a convex rather than emarginate telson. Compare to figures on page 2.

Hatmanodes sp SD1 also resembles *H. hartmanae* which possesses a strongly deflexed rostrum and short carpi of gnathopods 1 and 2. *H. hartmanae* differs primarily in the much more elongate and much narrower propodus and carpal process of gnathopod 2: the propodus is 3.25 longer than wide, and the carpal process extends beyond the palm. Additionally, *H. hartmanae* has a convex ventral keel on the rostrum, a coxa 1 that is not antero-distally expanded (i.e., the sides are parallel), and a telson with a nearly straight posterior margin.

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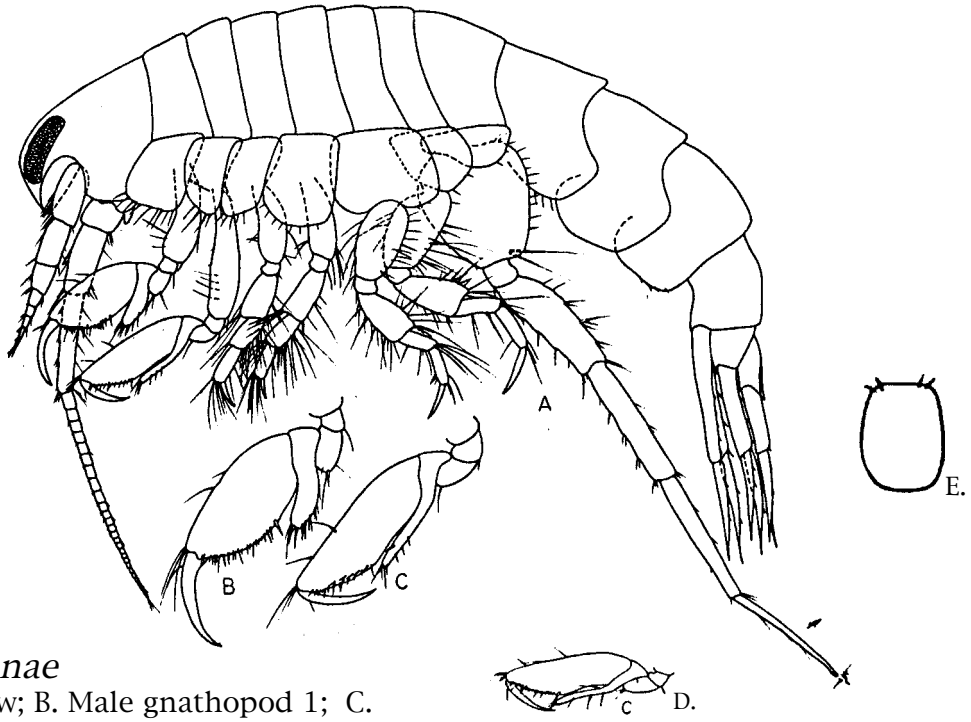
(over)

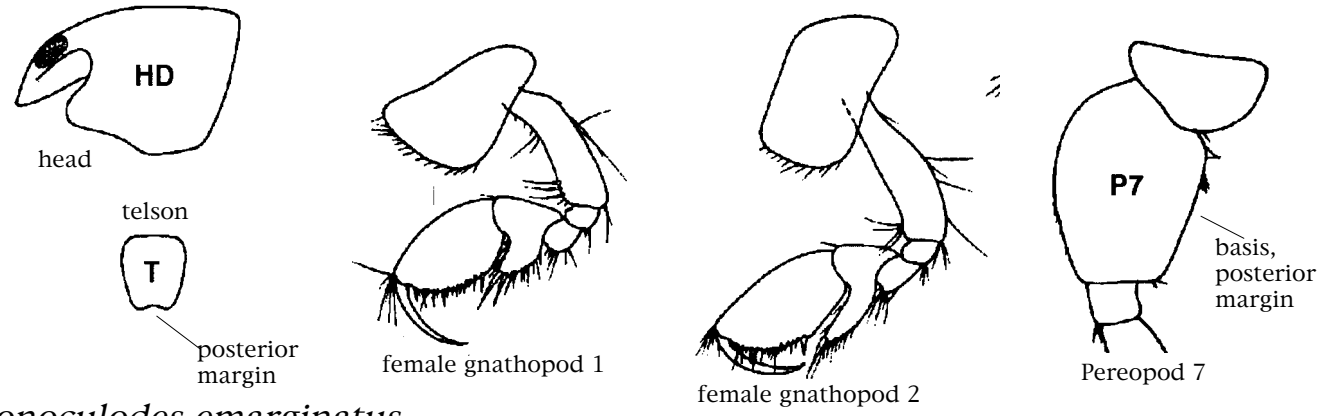
Species: *Hartmanodes* sp SD1

Taxon: Gammaridea: Oedicerotidae
Date: 15 May 1997

Additional Illustrations: From J.L. Barnard, 1962.



Hartmanodes hartmanae
A. entire male, lateral view; B. Male gnathopod 1; C. Male gnathopod 2; D. Female gnathopod 2; E. telson.



Monoculodes emarginatus

Distribution—

Pt. Loma: 100 - 320 ft; Imperial Beach to La Jolla, California

Geographic:

Habitat:

CITY OF SAN DIEGO
PROVISIONAL VOUCHER SHEET

Species: *Diplocirrus* sp SD 1
Authority:
Common Synonyms:

Taxon: Flabelligeridae
Date: 9 Nov 98
By: R. Rowe

Voucher Specimen(s):

	Station	Date	Storage Location	Depth	Voucher#
SD Bay (Bight'98)	2227	27JUL98	DLZ	8.8m	2049

Characters:

(Based on an entire, typical Bight 1998, San Diego Bay specimen with approximately 45 setigers and 19mm total length.)

1. Anterior nine setigers somewhat inflated w/o distinct intersegmental furrows. Intersegmental furrows more defined and the body tapers beginning on the tenth setiger. Posterior setigers well defined, nearly moniliform in appearance.

2. Body covered with flask shaped papillae. Papillae arranged in a random pattern, very dense posteriorly, but with open areas between them on the dorsum and ventrum especially on anterior setigers.

3. Up to four notosetae in each fascicle of the first setiger elongated and directed forward forming a minimal cephalic cage. (The elongate notosetae are missing on one or both sides of some individuals.)

4. Notosetae long thin, tapering with widely spaced crossbars. Neurosetae shorter, but long and thin, with similar crossbars and minutely hooked, blunt tips.

5. Eight branchiae present on retractile buccal lobe. Four outer ones large, squared and laterally adhered to each other. Four inner branchiae are cirriform, similar in length and free from one another.

6. Anal opening subterminal, dorsal, and without accessory structures.

Illustration:

Fig. 1 Entire specimen, dorsal view

Fig. 2 Anterior dorsolateral view

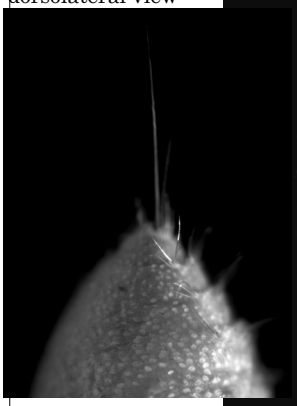
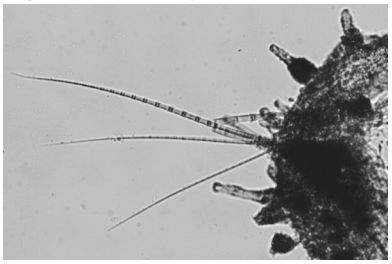


Fig. 3 Neurosetae median setiger

Fig. 4 Median notopodium



Related Species & Comments:

Preliminary literature search reveals that this species is nearest *Diplocirrus capensis* Day, 1961and has similar cephalic cage, setae, body form, and papillation. *D.* sp SD 1 has four each of two types of branchiae while *D. capensis* was described with eight subequal branchial filaments. Fauchald, 1972 describes a species (*D. micans*) of this genus from deep water (>450 fms) off western Mexico that differs in papillae structure and distribution, setae, number of segments, and other characters. An unpublished description of specimens identical to *D.*sp SD 1 collected April 1995 from Aqua Hedionda Lagoon (north San Diego County), was provided by Larry Lovell

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