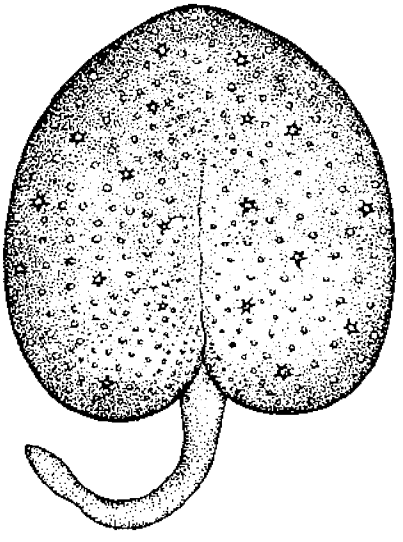
June, 1995 SCAMIT Newsletter Vol. 14, No.2

NEXT MEETING:	SCBPP QA/QC Reanalysis Problems
GUEST SPEAKER:	none
DATE:	July 17 and July 28
TIME:	9:30am - 3:30pm
LOCATION:	See below

JULY 17 & 28 MEETINGS

Both meetings in July will focus on problems arising from the QA\QC reanalysis of the SCBPP samples. The July 17th meeting on non-polychaete species will be held at SCCWRP in Westminster. The polychaete meeting will be on Friday, July 28th, to accommodate those members attending the Polychaete Conference in China. It will be at the worm lab of the Natural History Museum of LA County. Members are reminded that the August meeting will be a discussion of the utilization of staining patterns in polychaete taxonomy. Please give thought to the issue in the interim.



Renilla amethystina (from Williams, 1995)

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APOLOGY

As editor of the Newsletter it is my job to oversee not only content, but presentation. This last month we had a failure in that regard, and I must apologize to the membership for the very poor quality of the photocopy of the newsletter. We have taken some steps to assure there is no recurrence, but an apology is still in order. Several of the voucher sheets included with last months newsletter are being redistributed with this newsletter. If any member has other pages that are too difficult to read please contact the secretary for a better copy. - Don Cadien

INDEX

Member Faith Cole (EPA - Newport) has sent us a new index to the first 13 years of the Newsletter. The organization of the list is hierarchical taxonomic by higher categories (phylum, or class), and then alphabetical within category. Subjects indirectly related to taxonomy are listed first with no category code. We all owe Faith our appreciation for the tremendous effort that goes into the preparation of such an index. A copy is attached for your use.

DRAFT REVISION OF ICZN CODE

Included in the most recent American Association for Zoological Nomenclature (AAZN) newsletter (June 1995) is a discussion draft of the fourth edition of the International Code of Zoological Nomenclature (ICZN). SCAMIT members should participate in review and comment on this draft revision to the extent they are able. As users of the ICZN code who are bound by it's provisions, we have a marked self interest in conveying our point of view on the numerous substantive changes proposed for the new fourth edition. Those who have the time and interest for such critical review and comment can receive a copy of the proposed draft by writing to:

American Association for Zoological Nomenclature
C/O A. L. Norrbom
National Museum of Natural History
MRC 168, Washington, D. C.
20560
e-mail mnhen118@sivm.si.edu

Please enclose a check for $3.00 to defray the cost of shipping the draft to you.

SCAMIT members should consider joining the AAZN (annual dues $20.00) to support the activities of both the AAZN and the ICZN. A membership form and explanatory letter are attached.

SETTLEMENT OF "FAIR USE" COPYRIGHT CASE

We have several times previously (SCAMIT Newsletter Vol. 13#9, #11) had comments on this case. It has now been settled and to some extent the legal interpretation of fair use has now been more explicitly established. Although the case was designed to address corporate "fair use" in particular, the court decided that fair use applies to pure academic or research uses, and does not apply to uses resulting in commercial gain. In the later case the copy maker should either seek a license from the Copyright Clearance Center, or pay the usual fee for the right to copy the article. Interested parties should review the article by Lawler (1995) for added detail.

SCBPP COMPOSITE SPECIES LIST

Now that most of the samples from the SCBPP benthic program have been fully analyzed, it is time to begin examination of the data to look for differences in the treatment of species level taxonomy which have so far

escaped detection. A first step in this direction is preparation and distribution of an encountered species list for the SCBPP benthos. Lists are in hand for Orange County Sanitation (MEC), CLAEMD, and CSDLAC, with the list from CSDMWWD of necessity incomplete (they are still processing). There will be some further adjustment of the lists as taxonomic conflicts which surface during the QC sample exchange and reidentification are resolved. A compound list is in preparation at CSDLAC, and will be distributed to the participating agencies once completed.

SCAMIT CONTRIBUTIONS

Attached to the newsletter is a list of publications by members which have been financially supported by SCAMIT. We congratulate all of them on their contributions to marine invertebrate taxonomy. All members should be aware that grants from SCAMIT are available to assist with some of the costs associated with publishing, such as reprints, page charges, and illustrations. Members needing such assistance may request an application from the SCAMIT secretary.

NEW LITERATURE

A second revision of the molluscan family Corambidae was published in 1994. The first and more comprehensive of the two was by Martynov (1994). The local taxonomic impact of that revision was indicated in the December 1994 SCAMIT Newsletter. Now Swennen and Dekker (1994) have put forward another revision of the group based on reexamination and reinterpretation of the taxon *Corambe batava*. They do not appear aware of the Martynov revision, and their paper was probably already in press when he published in Zoologicheskii Zhurnal.

"NAMEIT"

The Northern Association of Marine Invertebrate Taxonomists, whose acronym is "NAMeIT", has produced their first newsletter and a mailing list of their membership. We at SCAMIT would like to congratulate them and wish them lots of luck. It will be nice for SCAMIT to have a sister organization and another group with which to discuss various issues in the field of taxonomy. SCAMIT has had many members that live and work in the Pacific Northwest and British Columbia for many years and this northern organization will hopefully give them a chance to actively participate at local meetings. The organization seems to be off to a great start with two successful workshops, a polychaete and a sponge and echinoderm, already this year. They also have a crustacean and a mollusc workshop planned for later this year. They are planning a quarterly newsletter for now. If you would like more information or would like to contribute to their newsletter please contact:

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MINUTES FROM JUNE 12 MEETING

Once again we examined and attempted to resolve problems with selected local amphipod species. Problems with identification of local species are few, but the simple ones have already been resolved, leaving the more complex and intractable ones to be dealt with. Following up our earlier examination of the genus *Photis*, Carol Paquette has provided voucher sheets (attached) for *Photis sp A* and

Photis sp B, which now become of SCAMIT 1995, with no change in letter designation.

Rhachotropis

Publication of a new treatment of the eusirid genus *Rhachotropis* (Bousfield & Hendrycks 1995) prompted a reexamination of specimens from the Southern California Bight, and reconsideration of the SCAMIT provisional species *R. sp A*. Ron Velarde (CSDMWWD) took the lead on this. Ron's examination of Barnard specimens of *R. inflata* showed the *R. inflata* record of Barnard 1971 to be *R. sp. A*. We need to add *R. barnardi* (the replacement name of Bousfield & Hendrycks for the species identified as eyed *R. clemens* by Barnard 1971) to the SCAMIT species list. We examined a fine specimen taken off Orange County during the meeting. In the process we found an error in the new Bousfield & Hendrycks key. In couplet 3 *R. barnardi* is credited with having a tooth on the third pleonal somite, but both the description and figures of the species contradict this.

Ron pointed out differences in the usage of the name *R. oculata* by Bousfield recently, and in his 1973 book on western Atlantic amphipods. There are a number of differences in fine detail, but three stand out: 1.) presence of a short acute lateral head lobe in B & H 1995, and a truncate, virtually non-existent lateral head lobe in B 1973; 2.) a more slender and elongate article 3 of antenna 2 in B & H 1995 than in B 1973; and 3.) presence of long basal and short mid-length plumose telson setae in B & H 1995 and not in B 1973, combined with presence of two rows of short setae at mid-telson in B 1973 and not in B & H 1995. Both descriptions were of mature females, so it may also be significant that the Atlantic specimens were much larger than those from the northeast Pacific.

Ampelisca nr. brevisimulata

For several years Carol Paquette (MBC) has been encountering specimens differing slightly from *A. brevisimulata*. The only consistent difference between this form and the nominate is lack of a tooth on the posteroventral corner of epimeron 2. This feature is illustrated for *A. brevisimulata* by Dickinson (1982), but was neither illustrated nor mentioned by Barnard in his original description (1954). The type should be reexamined, but we could not do so during the meeting (type is at LACMNH). The form lacking the epimeron 2 tooth comprises only a small proportion of the population: up to 10% off O.C., but closer to 1% elsewhere based on material Carol has examined. She will provide a voucher sheet for this provisional taxon next month.

Ampelisca careyi/unsocalae

At previous meetings dealing with amphipods we have wrestled with the separation of *A. careyi* and *A. unsocalae*. It was apparent that different criteria for this separation were in use in the Bight, with the result that specimens clearly identifiable as *A. careyi* by one group were just as clearly identifiable as *A. unsocalae* to another. During the meeting we examined specimens identified as *A. unsocalae* from 305 m. off Palos Verdes, the holotype of *A. unsocalae*, *A. careyi* from Puget Sound, and a CLAEMD specimen from Santa Monica Bay identified as *A. unsocalae*.

In his original description of *A. careyi* Dickinson lists the following characters which serve to separate it from *A. unsocalae*: head shape ("produced anteriorly into a dome-shaped process above antenna 1, lower front margin distinctly concave" vs. "upper front margin not produced forward, lower front margin oblique and convex"); length of tooth on pleon epimeron 3 ("posterior margin convex ending in short acute tooth" vs. "posterior edge convex ending in a long

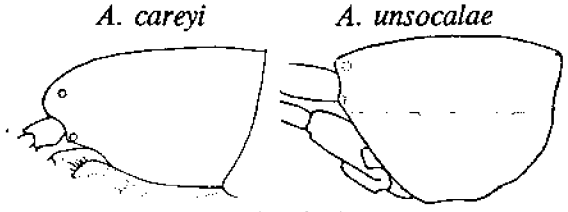
slender tooth"); length of antenna 1 ("extending just beyond end of peduncle of antenna 2" vs. "short, not reaching end of peduncle of antenna 2"); and position of the apical notch in the telson ("laterally notched apices" vs. "centrally notched apices").

It was suggested at the meeting that the antennal length character was at least potentially unreliable. The difference is between slightly less than and slightly more than the length of the antenna 2 peduncle. Loss of only one or two of the terminal flagellar articles is sufficient to change an animal from more than to less than. Since loss of and regeneration (in the next molt) of flagellar articles is very likely to occur, the importance of this character is doubtful. The other characters suggested by Dickinson should be more stable.

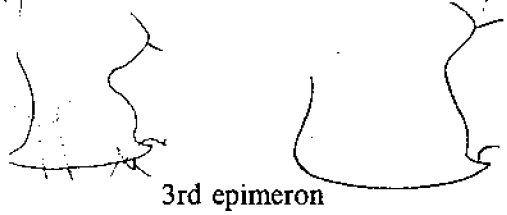
Prior to the meeting the differences in head shape had been interpreted as applying only to the ventral side of the head by some workers. During the direct comparisons the difference in dorsal head shape between the two species became apparent to all participants, and should help standardize identifications in the future. The *A. unsocalae* holotype proved a good match for the figures in Barnard 1960b, with the shape of the underside of the head straight, not convex as shown by Dickinson (1982).

We directly compared the holotype with an "unsocalae" specimen from Santa Monica Bay, one selected as intermediate, and not clearly either *A. unsocalae* or *A. careyi*. It proved to have the characteristic head shape of *A. careyi*, and to differ from the *A. unsocalae* type. The nature of the spination on the lateral face of the outer ramus of uropod 1 was also examined. According to Dickinson, both *A. careyi* and *A. unsocalae* have "basal spines only". This statement is in disagreement with the key of Coyle and Highsmith 1989 (which indicates *A. unsocalae* has spines beyond the midpoint of the ramus). We examined rami of *A. unsocalae* from 305m off Palos Verdes, and of *A. careyi* from southern Puget Sound with a compound microscope. Both these animals had similar spination patterns: spines well beyond 50% of the ramus length; six spines; and the interval between spines lengthening with distance from the base of the ramus. In *A. careyi* the spines did not extend as far distally as they did in *A. unsocalae*.

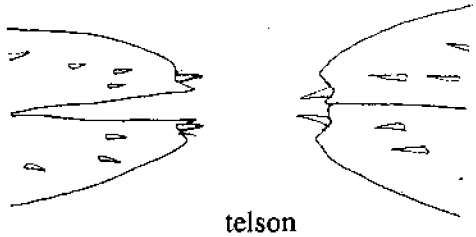
Although Jim Roney (CLAEMD) had not had any problem in application of this character as used in the Coyle & Highsmith key, he will now reexamine the relationship between U1 ramal spination and characters of the head, 3rd epimeron, and telson more closely. For the moment we suggest that use of the U1 spination character to discriminate between *A. careyi* and *A. unsocalae* be discontinued. Illustration of the contrasting character states for these two species is provided below.



head shape
(from Dickinson 1982 & Barnard 1960)



3rd epimeron
(from Dickinson 1982 & Barnard 1960)



telson
(from Dickinson 1982)

Heterophoxus spp

The recent revision of the northeastern Pacific *Heterophoxus* (Jarrett & Bousfield 1994) introduced several new taxa as well as separating as valid taxa several usually consigned to synonymy. This has considerably complicated identification of the genus in our area. Previously we thought we had only a single variable species (*H. oculatus*), but now we are faced with separation of up to four taxa (*H. affinis*, *H. conlanae*, *H. ellisi*, and *H. oculatus*). Three more are reported from either deep water in the Bight, or from adjacent waters.

In their introductory taxonomic commentary Jarrett & Bousfield posit three possible explanations for the morphological diversity observed in *Heterophoxus*. The first is the one which Barnard (1960a) had adopted and continued subsequently; wide variability and broad geographic range for Holmes' species. Their second suggests presence of additional taxa is masked by inadequacies of the descriptions given by Holmes and Barnard. Their third is that Holmes' species are southern forms not reaching into the northeast Pacific, and that northern forms differ at the species level from those in the Bight and off Mexico. They favor the latter explanation based on northern material, but did not reexamine either Holmes' type material or other material described and illustrated by Barnard from southern collections.

Examination of Southern California Bight *Heterophoxus* material, with an eye to the key in Jarrett & Bousfield, yields equivocal results. All the members at the meeting had found variance in leg and epimeron setal counts from those reported by Jarrett & Bousfield for *H. conlanae* and *H. oculatus*. Dean Pasko (CSDMWWD) documented setal counts of article six of periopod six and the ventral margin of the 3rd epimeron for 23 specimens taken at two SCBPP stations, finding little correspondence to counts reported from northern material. There was frequently lack of agreement between left and right legs of a single animal, although they often differed little. We agreed the most distal group on article 6 of periopod 6, whose setae extend out over the base of the dactyl, should not be considered in identifying animals. This group has additional setae, even in the smallest specimens, which do not fit the pattern (single, double, or triple) of group setation elsewhere on the article.

Jim Roney indicated that his experience in Puget Sound was that *H. conlanae* always had two or more setae per group on the posterior margin of article 6 of periopod 6, as illustrated by Jarrett & Bousfield (1994, fig.31) Examination of specimens in hand from Tacoma in the southern Sound showed that the most proximal setal group had but a single seta in most specimens, while more distal groups did have two. Both these Puget Sound specimens and those examined by Dean Pasko from off San Diego show a tendency for smaller animals to have fewer setae per group, and for very small animals to have fewer groups.

Number of setae per group appears to change with growth, with *H. conlanae* (and probably also *H. oculatus*) having more setae in a given group position in larger than in smaller animals. This addition appears to progress proximad, with the additional seta appearing first in the subdistal group, and subsequently in groups closer to the base of the article. Although this was the general pattern, it was not invariate. In the San Diego material (assumed to be *H. oculatus*) the most distal groups sometimes had only a single seta, while intermediate groups had doubly inserted setae.

Jim Roney's northern experience indicated to him that triply inserted setae were always found in *H. conlanae*. This, however, is at variance with the original description

("segment 6 with 3-5 clusters of doubly or triply grouped setae"). The specimens we examined from Tacoma in southern Puget Sound followed this pattern, with some specimens lacking and others having triply inserted setae in the most distal groups on article 6 of periopod 6. Even *Heterophoxus* specimens from San Diego occasionally had one setal group containing triply inserted setae in Dean Pasko's counts. Although strict application of the Jarrett & Bousfield key would place these in *H. conlanae*, the setal count on the ventral margin of the third epimeron in these specimens differed from that of *H. conlanae*.

The key indicates an epimeral setal count of 10 for *H. conlanae*, and 20 for *H. oculatus*. In the description of *H. conlanae* the count is given as 7-10. Holmes (1908) gives the count for the 8mm ♀ holotype of *H. oculatus* as "about 22". He had no other specimens, so the nature of his statement indicates that there was probably a slight difference between the left and right epimeral counts on his animal.

Although most participants had found intermediate epimeral setal counts, the only documented counts were those of Dean Pasko. In his smallest specimen, an unsexed 3mm juvenile, the count was only 4 setae. In four female and one male 5mm long animals Dean found counts of 8, 9, 12, 15, and 9 setae. All these animals had only doubly inserted setae on article 6 of periopod 6. Females of 5.5mm had setal counts of 9, 9, 11, and 12. Of these the last had a triply inserted group on one of it's sixth periopods. Counts on eight female and one male 6mm long animals were even more variable; 11, 11, 11, 12, 12, 13, 13, 14, 9. Two of the females (11, and 14 count) had a triply inserted group on both sixth periopods. Females 6.5 and 7mm in length had epimeral setal counts of 10, 14, and 12 respectively. The 6.5mm long specimen with 14 epimeral setae had a triply inserted group on one of it's sixth periopods.

About 2/3 of the specimens thus have epimeral counts which are too high for the stated range of *H. conlanae*, while none reach the number attributed to *H. oculatus*. We should remember, however, that Holmes' type of *H. oculatus* was a particularly large individual, probably of a later molt than those examined by Dean. Once again, as with the setal groups lining the posterior margin of article 6 of periopod 6, growth tends to bring additional setae. Setal counts did not appear to differ between the sexes, but only two males were examined.

The large percentage of intermediate counts in epimeral setae, and the lack of symmetry in doubly/triply inserted posterior marginal setae on the sixth legs of a single animal point to the possibility that *H. conlanae* is not adequately differentiated from *H. oculatus*. One other character used to differentiate the two in the key is dubious; the relative lengths of the fifth and sixth articles of periopod six. The key lists *H. conlanae* as having article five and six subequal and *H. oculatus* as having article six "distinctly longer" than article five, presumably on the basis of the illustration in Holmes 1908 (also in Jarrett & Bousfield 1994, fig. 29B). Since no mention is made in the text of relative article lengths of five and six, this illustration may be inaccurate. The text states that the dactyl is about 1/2 the length of article six, while the illustration shows it closer to 1/3 the length, suggesting attenuated rendering.

Every specimen examined at CSDLAC which should fit in *H. oculatus* has appeared to have article six longer than article five, but when measured with an optical micrometer the two are almost exactly the same length. I suspect that the longer appearance of article six is an optical illusion resulting from it's being more slender and tapering than article five. This character should probably not be used until the actual condition of the type of *H. oculatus* can be verified.

One additional character (not discussed during the meeting) may help separate these two forms in our area. Jarrett & Bousfield clearly indicate that *H. conlanae* lacks setae on the dorsal side of the pleonal segments, using this character as an additional difference between *H. conlanae* and *H. ellisi* (which is dorsally "fuzzy"-see Jarrett & Bousfield 1994 fig. 32). Local specimens of *Heterophoxus* with doubly inserted (and the occasional triply inserted) setae on the posterior margin of article six of periopod six are dorsally fuzzy. As the presence or absence of dorsal setosity has proven to be a reliable character in some other phoxocephalids (in *Foxiphalus golfensis* for instance), it should be useful here as well.

Until the type of *H. oculatus* is reexamined it is suggested that specimens from the southern California Bight with doubly inserted setae on the hind margin of article 6 of periopod 6 be reported as *H. oculatus* if their pleon is dorsally setose, and as *H. conlanae* if dorsal pleonal setae are absent. *Heterophoxus affinis* is easily separated from it's congeners by absence of posterior marginal setae on article six of periopod six, while *H. ellisi* is recognized by it's dorsal pleon setosity, and absence of either doubly or triply inserted setae on the article six posterior margin.

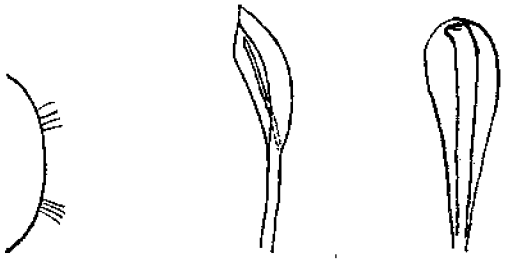
MINUTES FROM JUNE 19 MEETING

The meeting opened with member Leslie Harris (NHM-LAC) giving those present an update on her work with *Cossura*. She has had some difficulty finding reliable diagnostic characters (other than methyl green stain patterns) to use to distinguish between the species of *Cossura*. She is still working on a table comparing the species. She is also planning on putting together a sheet of methyl green staining patterns for *Cossura*. It was proposed that this might be a color xerox sheet that would be available to those members that work with polychaetes for a small fee, depending on the cost. This was proposed because black and white xeroxes of colored drawings do not turn out well. We hope to have both the table and staining pattern sheet available by the next newsletter.

We examined at the meeting a single, small, thread-like capitellid from the SCBPP samples that was identified by CSDLAC as *Heteromastus* sp. LA1. It was from SCBPP station 1256 at 23 meters. This specimen had capillary setae through the 5th setiger, setae in both the first noto- and neuropodia, and hooks with inflated hoods over most of their length.

Re-examination of this specimen during the SCAMIT meeting led to the conclusion that it was a *Mediomastus acutus*. This was based on it's thread-like body, long pointed prostomium, and the inflated hooks which are good matches for the paddle-like notosetae described for *M. acutus* (Warren *et al*, 1994). One comment noted that notopodial fascicles merge near setiger 8.

The paddle-like notosetae and merged notopodia are recent diagnostic characters and the specimen was therefore re-examined by CSDLAC. It should be noted these paddle-like notosetae are only visible under SEM according to Warren *et al*. From this last examination the following conditions were observed: The original count of capillary setigers in first 5 setigers was in error, and the specimen fits well into *Mediomastus*. The notopodia in setigers 8-10 do not appear merged (see illus. #1) . The setal hoods are inflated and extend along much of the setal shaft. They completely encase the setal shaft and do not resemble the shape illustrated by Warren *et al* in figures 3, 4, & 5. The shaft of this specimen's setae extend completely to the distal end of the hood and there appears to be some dentition at the end of this shaft. Below are illustrations of notosetae from (2): *Mediomastus acutus*- Warren *et al* 1994; (3): SCBPP specimen, station 1256.



(1) (2) (3)

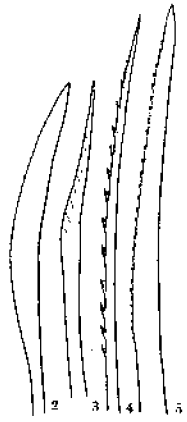
Clearly the setal hoods are not similar. Warren *et al* note the unique paddle-like hood's shape is only seen after preparation for SEM and they possess an "acicular type setae". It may be these setal shapes are actually the result of damage or collapse during preparation and therefore only seen during SEM. From their photographs of the setae, it does not appear to be so small or delicate a feature that only an SEM could resolve it. Such dramatically compressed setal hoods should be visible with a normal compound microscope examination. Hartman's illustration of *M. acutus* (1969, p.389 fig. 3) more closely resembles this specimen's setal condition. It may be prudent to rely upon other characters for this species until it can be demonstrated that this new setal hood structure is not an artifact of handling.

The degree of notopodial fusion illustrated above (fig. 1) and that found in figure 4f of Warren *et al* is considerably different. It may be this character is somewhat unstable for the taxa or also the result of changes during SEM preparation.

Another odd SCBPP capitellid examined at the meeting was CSDLAC's Capitellidae LA1. The specimen was complete with one asetigerous segment present. It had 12 thoracic segments with capillary setae in the noto and neuropodia. The 13th setiger had only capillary setae in the notopodia. It also had notopodial lobes and nephridiopores developed in the first few abdominal segments. The uncini had small hoods in long fascicle. The most unusual characteristic of this specimen was the presence of small, digitate, branchia-like structures posteriorly at about the last 10 or so segments. It was thought that these were probably not branchia since they were not near the parapodia, but occurred mid-segment. However, no one had any idea just what these structures might be instead. This animal had been examined before at a previous SCAMIT meeting and it was thought that it might be a *Notomastus tenuis* with just an aberrant 13th setiger or it could also be *Notomastus magnus* if we accept those structures as being branchia. It was proposed by Leslie Harris that this might be something in the genus *Leiochrus* Ehlers 1908. *Leiochrus* is described as having a thorax with 12-14 segments with 1 asetigerous segment present, the first setiger complete. Up to segment 13 it has capillary setae only with the 14th segment having mixed setae and hooks in both rami. It also has no branchiae. For now CSDLAC has decided to leave it as Capitellidae LA1 pending further examination of the branchia-like structures.

Another odd SCBPP specimen found by CSDLAC was a scaleworm originally thought to be a *Eunoe* from station 1169 at 135m depth. It's diagnostic characters included two types of neurosetae and broad notosetae that were slightly serrated. It also had very long drawn out parapodia and very long dorsal cirri that extended well beyond the tips of the setae, which were also quite long. It was missing all of its elytra except for the first pair, which were very similar to those illustrated for *Eunoe uniseriata* in Banse and Hobson 1968. The elytra are distinct, with a row of cone shaped macrotubercles near the outer margin. Leslie Harris examined this specimen and felt the setae more closely matched those of *Antinoe*, with its two types of neurosetae, one of which was long and heavily pectinate, and its broad notosetae. (See illustrations below.)

We examined these setae at the meeting and agreed that they did look more like those of *Antinoe*. Also the prostomial peaks of this specimen while bluntly rounded were not as squared as those described for *Eunoe uniseriata*. Because this specimen was not whole and had only one pair of anterior elytra it must be left at the generic level.



Antinoe microps (from Hartman 1948)
2,5 - notosetae 3,4 - neurosetae

We also examined a few SCBPP problem specimens from San Diego. The first was a polydorid from station 753 at 137m depth. It was labelled as *Polydora* SD10 and seems to most closely fit the description for *Polydora armata* except for the setae of the modified 5th setiger. After several pairs of eyes examined the setae a flange, even a worn one, could not be found. The other main difference was that the posterior notosetae were in a pinwheel shape not a cone shaped bundle. None of the members present at the meeting had seen this before and were not sure if this may have just been the cone shaped bundle of spines expanded or something entirely different. The pygidium also had 4 lobes instead of a collar with 2 notches. It was decided that this should not be identified as *P. armata*, mainly because of the lack of a flange on the setae of the modified 5th setiger.

Another SCBPP specimen from the San Diego lab that we examined at the meeting was a magelonid. There were two specimens from off of Santa Barbara at depths of 56 and 49 meters. It had frontal horns and normal setae on the ninth. It also had trifid hooks. This animal would key out to *Magelona berkeleyi* except for the lobes on the ninth setiger. The superior lobe was well developed, long and digitate. There was also a small and triangular lobe or median lobe below the superior one. Also the methyl green stain pattern was not that of *M. berkeleyi*, which has a light even green stain on the ventrum and dark green staining spots around the mouth and from the posterior half of segment 4 on back. The first 4 setigers of these specimens stained dark. It was decided that this should probably not be called *Magelona berkeleyi*.

In the afternoon Larry Lovell gave members a preview of his presentation for the polychaete conference. His presentation is on problems associated with species of *Nephtys*. These problems have been detailed in the SCAMIT newsletter vol. 13(5). The biggest problem seems to be the counts associated with the subdistal papillae on the proboscis. Larry has looked at type specimens and determined that the actual number of papillae have been misinterpreted by previous authors. Included in this newsletter is a table comparing a few taxonomic characters between the four common species of *Nephtys* from California. Larry is also working on a paper synonymizing *Nephtys signifera* with *Nephtys ferruginea* and *Nephtys parva* with *Nephtys caecoides*. We wish Larry much success with his presentation at the conference.

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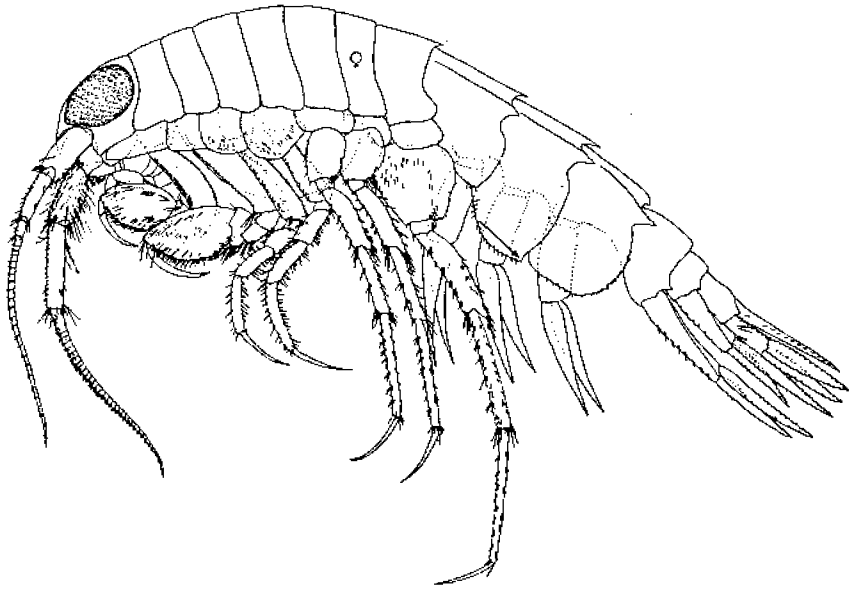

Rhachotropis oculata (from Bousfield, 1973)

SCAMIT OFFICERS:
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Volumes 5 - 7 (compilation)..... $ 15.00
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Single back issues are also available at cost.

SCAMIT CODE: none

Date examined: 13 March 1995
Voucher by: Carol Paquette

SYNONYMY: *Photis* sp A MBC 1972

LITERATURE: Conlan, K. E. 1983. The Amphipod Superfamily Corophioidea in the Northeastern Pacific Region, 3. Family Isaeidae: Systematics and Distributional Ecology, Nat. Mus. Canada, Publ. Nat. Sci., No. 4.

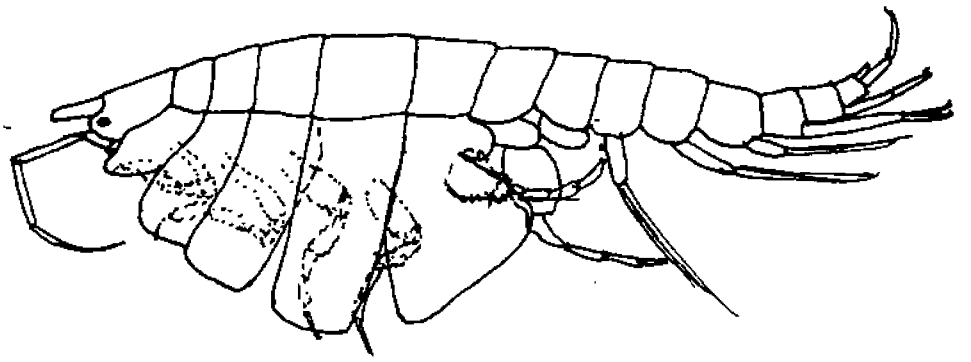
DIAGNOSTIC CHARACTERS:

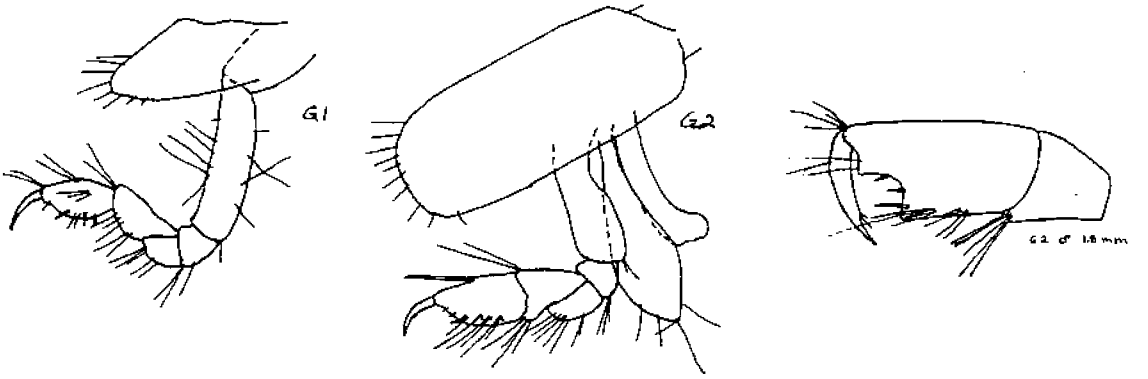
1. Coxae 2, 3, and 4 very long and strap-like, truncate ventrally, coxa 5 large and triangular; together the coxae form a "suitcase" enclosing the pereopods and brood plates.

2. Ventral margin of coxae sparsely setose (setae short and numbering 6-10).

3. Female gnathopods 1 and 2, palm oblique, not well demarcated, but with a defining spine. Male gnathopod 2, palm excavate, but without defining tooth; segment 6 not expanded, dactyl slightly exceeding the palm. (Male gnathopod characters based on probably immature male).

4. Antennal setae very short and located only at end of each peduncular article and on flagellum.





RELATED SPECIES AND CHARACTER DIFFERENCES:

This keys to *P. lacia* in Conlan's (1983) Key to Species of *Photis* of the North Pacific (Females).

DEPTH RANGE: 12-60 m

DISTRIBUTION: Goleta to San Onofre, California

SCAMIT CODE: none

Date Examined: 13 March 1995
Voucher by: Carol Paquette

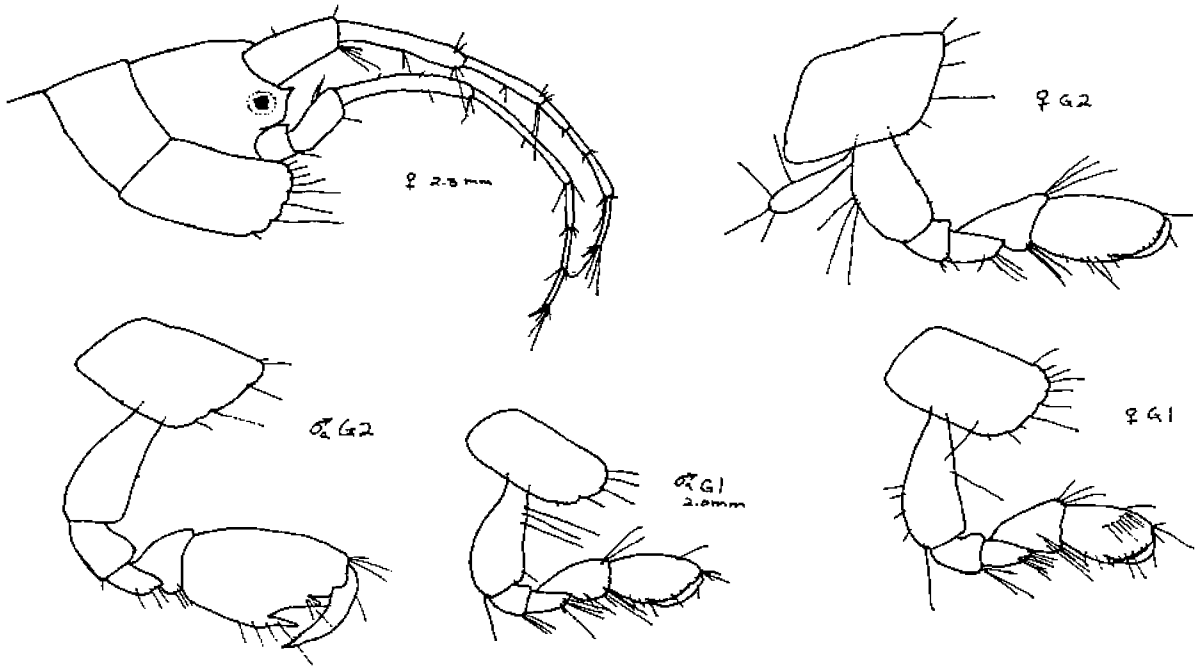
SYNONYMY: *Photis* sp B Paquette 1987

LITERATURE: Conlan, K. E. 1983. The Amphipod Superfamily Corophioidea in the Northeastern Pacific Region, 3. Family Isaeidae: Systematics and Distributional Ecology, Nat. Mus. Canada, Publ. Nat. Sci, No. 4.

SCAMIT newletter, Vol. 7, No. 9.

DIAGNOSTIC CHARACTERS:

1. Eyelobe acute and concavely sided.
2. Body pigmented greyish-white, similar to *Aoroides columbiae*.
3. Antennae sparsely setose, setae short.
4. Antenna 2 peduncle segments 2 and 3 very long and subequal.
5. Coxa 1 with rounded antero-ventral corner andscalloped ventral margin.
6. Eye small and diffuse.
7. Male gnathopod 2 with elongate article 6, dactyl overlapping both palm and the short defining tooth, and a more shallow "v" near the base of the dactyl caused by a large palmar tooth.



RELATED SPECIES AND CHARACTER DIFFERENCES:

1. Can be easily and quickly differentiated from all other local *Photis* by the shape of the eyelobe and body pigmentation.

2. Using Conlan's (1983) key, females key to *P. macinerneyi*, which also has weak antennal setation. However, the characters given above will differentiate them easily.

3. Using Conlan's key, males key to *P. lacia*, except that the gnathopod 2 palmar tooth is not square.

DEPTH RANGE: 30-66 m

DISTRIBUTION: Pt. Conception to Newport Beach, California

NOTES: Like *P. bifurcata*, this species is mature at very small size (2-2.5 mm). Specimens were taken at Goleta (the shallowest location recorded) from organically enriched sediment containing polychaete tubes, and both drift and attached algae. Co-occurring *Photis* species include *P. brevipes*, *P. californica*, *P. bifurcata*, *P. lacia*, and *P.* sp. A MBC 1972.