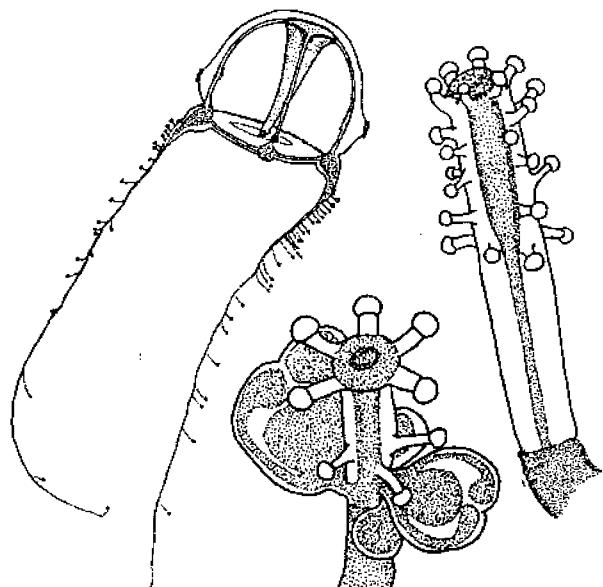


September, 1996

SCAMIT Newsletter

Vol. 15, No.5

NEXT MEETING:	Oedicerotid Amphipods
GUEST SPEAKER:	Don Cadien, CSDLAC
DATE:	October 21, 1996
TIME:	9:30 am - 3:30 pm
LOCATION:	Times Mirror Room Annex LA County Natural History Museum 900 Exposition Blvd



Medusa, budded hydranth, and hydranth of *Zanclea sessilis* (from Gravili et al 1996)

OCTOBER 21 MEETING

The recent revisionary paper by Bousfield and Chevrier on the taxonomy of Eastern Pacific oedicerotid amphipods will form the basis of the next meeting. We will examine the actions they took, the support for these actions, and impacts on our local taxonomic practice. Along the way we will follow a course of critical reexamination of the characters used by the authors in their revision. Errors will be identified and corrections suggested. Members who have been using the revision already are requested to gather their experiences with the paper, and their thoughts on its merits and difficulties for comparison at the meeting. We will not be examining specimens at the meeting.

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SCAMIT Newsletter is not deemed to be a valid publication for formal taxonomic purposes.

NEW LITERATURE

A new species of paraonid, *Aricidea (Allia) bryani* is described from shallow subtidal sediments along the northern shore of Mississippi Sound, an estuary of the northern Gulf of Mexico (Gaston and McLelland 1996). Dr. Gaston has done extensive research on the benthic ecology of the estuaries of the Gulf of Mexico.

Also new to science is a species of *Pholoe* described from the Yellow Sea (Wu et al 1994). This new species *Pholoe chinensis* differs from other species of the genus in having elytra with radiating rows of small surface papillae.

A paper on the effect of environmental conditions on the reproduction of the nereid *Perinereis nuntia* var. *brevicirrus* (Hardege et al 1994) should interest polychaetologists. The effects of temperature, day length, and moonlight were studied, spawning behaviour described, and sex pheromones identified.

Two papers on hydrozoans may be of interest, both from the recent volume *Advances in Hydrozoan Biology*. The first (Gravili et al. 1996) concerns speciation in the genus *Zanclea*, which is represented in the California fauna. Although previously thought composed of a single widely distributed species, it is shown to consist of at least three species in the Mediterranean alone.

The second (Boero et al. 1996) presents a phylogeny of the Hydroidomedusae, finding the situation too chaotic for resolution at the present state of knowledge. To quote from the abstract "Taxonomy must represent phylogenetic relationships among taxa, but has also to be a useful tool to name taxa and one of its included aims is nomenclatural stability. These two goals are difficult to achieve in hydroidomedusan systematics...". The authors suggest that the paraphyly their analysis indicates not be used as a basis for taxonomic change until the rate of new species and life-cycle description for the group drops, and a taxonomic stable state is approached.

Sexuality in the hippolytid shrimp genus *Thor* is described in another paper (Bauer and VanHoy 1996). These animals have a complex system involving both protandrous hermaphroditism and gonochorism. Details of the third pereopods allow the various types of males and females to be recognized morphologically.

The physiology of the clam *Solemya reidi*, and the chemical sleight-of-hand it uses to live half in an oxic environment and half in a sulfide environment are further investigated by Kraus et al. (1996). This juggling act is necessary to allow both respiration of the clam, and nutrient supply to its sulfide-oxidizing symbiotic bacteria.

Reproduction of cephalaspisid gastropods is reviewed by Schaefer (1996), who gathers together existing data from a multitude of sources into a comprehensive overview. Although his main focus is the bubble shell genus *Haminaea*, he includes data on all of the traditional cephalaspisid groups, including the acteonids, and hydatinids [now excluded from the cephalaspisids based on recent cladistic analysis]. A convenient entry point to the large literature on reproduction in this group.

BOOKS ON-LINE

For those of you who are web browsers (surfers, etc.) you may want to check out the National Academy Press (NAP) web site. (URL: <http://www.nap.edu/>) It offers non-fiction books in full-text, not just sample chapters. (And claims to be the only publisher that does, so far.) The reading room area of the site houses all on-line books from the National Academy of Sciences and its affiliate institutions; National Academy of Engineering, Institute of Medicine, and National Research Council. The site also includes a "Fresh Paint" section which not only features new books on-line in full text format, but it showcases books making the headlines and all sorts of fascinating science sites on the web. There is also an "auditorium" where visitors may chat with expert weekly guests. Of course, there

is also an order section that uses encryption security.

NEW WEB VERSION OF PRO

Version 5 of Polychaete Researchers Online (PRO), which is an international directory of researchers with an interest in the biology, ecology, or taxonomy of polychaete worms, has now been put on the web. (URL: <http://www.keil.ukans.edu/~worms/pro.html>). This version has "live" mail and web links. It should also be easier to locate researchers within the list.

MINUTES OF SEPTEMBER 16 MEETING

This meeting was spent reviewing volume 6 of the MMS Atlas on the annelida part 3- Orbiniidae to Cossuridae. Larry Lovell lead the discussion of the atlas chapter by chapter. He had a few general comments about the volume as a whole. The introductory sections on the particular families are very informative. Members should keep in mind that the MMS project used smaller sampling screens (0.3 and 0.5 mm) than most of us generally use for benthic sampling. Therefore, some of the material covered in the atlas is not only smaller in size, but species are represented that we may not encounter. Also, several of the descriptions are based on the examination of only a few specimens. For some species SCAMIT members have probably examined more material and have more information on character states and their variability.

The first chapter on the Orbiniidae includes a new synonymy; *Naineris nannobranchia* with *Naineris dendritica*, which is one of our common so. Calif. species and is included on the SCAMIT species list.

Larry pointed out to members present at the meeting an inconsistency he noticed in Blake's information on *Leitoscoloplos pugettensis*. Material was examined from stations deeper than

the depth distribution states. Larry also remarked that the illustration on pg. 21 figure 1.8 of *Naineris cf. grubei* could be a juvenile.

The section on taxonomic problems on pg. 3 of the Orbiniidae chapter describes the problem of species assigned to the subfamily Protoariciinae. Some species assigned to genera of Protoariciinae are actually juveniles of the species of Orbiniinae. Hence, this puts the validity of several of the genera also in question. Blake sums up the problem by stating, "It is possible that a single species can be known under several species names in different genera depending upon its stage of development." Because this problem needs further investigation Blake does not include orbiniid subfamilies in this chapter.

The Paraonidae chapter includes a new species, *Aricidea (Allia) hartleyi*, a new combination, *Paradoneis spinifera*, and *Aricidea (Acmira) rubra* has been given new status. It was decided at the meeting that for the next SCAMIT species list (edition 3) that we will list *Allia*, *Acmira*, and *Aedicira* as subgenera of *Aricidea*.

Blake does not include either *Paradoneis eliasoni* or *Paradoneis lyra*, in the chapter. He does mention their occurrence in Calif. in the remarks section under the diagnosis of the genus *Paradoneis*.

Blake places the species *Paraonis spinifera* in the genus *Paradoneis*. The genus *Cirrophorus* differs mainly from *Paradoneis* by having a median antenna present, so *P. spinifera*, which is lacking a median antenna better fits the genus *Paradoneis*. As for why it is not included under *Levinsenia* the modified acicular spines are notopodial, not neuropodial, and therefore, agree with the definition of *Paradoneis*, not *Levinsenia*. Dr. Blake also pointed out that there is, however, nothing in the definition of either *Cirrophorus* or *Paradoneis* to suggest that the modified notosetae must only be lyrate. It should also be noted that Hobson and Banse (1981) had referred *Paraonis spinifera* to the genus *Paraonella* without explanation.

Larry suggested SCAMIT members may want to add a few handwritten additions or comments to the key provided on pgs. 29-32. To couplet 3 add these comments. 3A - lyrate setae on setiger 5 and transition to spines by setigers 9, 10 or 11. 3B- modified spines lyrate throughout the body. To line 6A add, may be as low as 11 pairs and up to 20 or more, to the phrase more than 20 pairs (of branchiae). (Remember that for paraonids smaller specimens may have fewer branchial pairs.) To line 7B add, 9-22, to the phrase branchial segments number 8 -11. Line 14A should read, bilobed notopodial postsetal lobes. *Levinsenia gracilis* and *L. oculata* may have branchiae that are not necessarily 4 or 7 times long as wide as stated in couplet 7 of the key.

L. gracilis and *L. multibranchiata* have modified neurosetae with a fringe of bristles, or a fringing sheath as described by Blake, on the convex side. The fringe is made up of setal fibrils. *L. oculata* doesn't have these bristles. Larry's personal observations have found that the modified setae of *L. oculata* transition to long with a straight tip in the superior part of a fascicle to short with a recurved tip in the inferior part of the same fascicle. The inferior part of the fascicle is also double rowed in far posterior setigers. Blake notes this double rowed condition on pg. 33 under remarks for the genus and on pg. 34 under remarks for *L. gracilis*. In Larry's opinion there is still confusion regarding the number and length of branchial pairs and the condition of modified setae of these species of *Levinsenia*. He hopes to reexamine type material soon and make his results known.

Dean Pasko (CSDMWWD) found that *Levinsenia oculata* has a methyl green stain pattern with a ventral transverse band on the posterior one-third of each segment in the branchial region and patches of stain appear immediately posterior to each setal fascicle on post-branchial segments. Stain also appears along the ventral margin of each branchiae. *L. gracilis* does not exhibit the patches. However, it does have a ventral transverse band on the posterior one-third of each segment in the branchial region, like *L. oculata*.

More specimens of these two species and *L. multibranchiata* need to be stained to verify the validity of this technique. It is hoped that these stain patterns might be used to identify anterior fragments that do not possess the diagnostic posterior fascicles of setae.

Larry commented that *Aricidea (Aricidea) pseudoarticulata* has multiple setal types and the median antenna may not be exactly as pictured on pg. 46 figure 2.8 A.

While *Aricidea (Aedicira) pacifica* has been reported from so. Calif., the Yellow Sea, and Japan no specimens with posterior ends have been reported. None were encountered in the MMS project. Those of us with *A. pacifica* specimens that have posterior ends may be able to confirm the presence of modified setae on the far posterior segments and hence resolve the issue of the validity of this species as questioned by Hartley (1984).

Aricidea (Allia) quadrilobata of Strelzov 1973 is in part a synonym of *Aricidea antennata*. Strelzov (1973) included *A. antennata* as a junior synonym for *A. quadrilobata* along with all other Atlantic and Pacific forms. Blake examined both Atlantic and Pacific specimens to verify Strelzov's synonymy and found there were definitely two separate species present. He concluded that the Atlantic form should be called *A. quadrilobata* while the Pacific form should be called *A. antennata*, at least until Annenkova's type specimens are located, if ever, and examined. Refer to the remarks section on page 50 for more detail. SCAMIT members should note that Larry has reported seeing specimens of *A. quadrilobata* off our coast.

Blake's new paraonid species *Aricidea (Allia) hartleyi* is the same as *Allia cf. nolani* of Lovell, referred to as *Allia* sp. A in edition 2 of the SCAMIT species list. Larry pointed out that the branchia are spaced farther apart in the posterior branchial setigers in animals he has seen. This condition is not mentioned in Blake's description.

Aricidea (Allia) ramosa, our common so. Calif. species does not have the fringed setae as described in Annenkova's original description. Most authors seem to have considered anything with a branched median antennae *A. ramosa*. Members should refer to Tom Parker's article in volume 14(12) of the SCAMIT newsletter. He pointed out that Annenkova (1934), Strelzov (1973), Banse and Hobson (1968) and Hartman (1969) all illustrated very different median antennae for *A. ramosa*. It was proposed that SCAMIT should refer our local type, whose median antenna shape best matches Banse and Hobson (1968), to *Aricidea (Allia)* sp. A until the type specimens of all these authors can be examined. Tom Parker has done up a voucher sheet and it is included in this newsletter. Larry has recently seen material from Thailand which matches Annenkova's original description of the median antenna and modified setae (fringed). *A. (Allia) ramosa* of Blake in the MMS atlas probably represents a complex of species. Blake's remark on pg. 55 about *A. ramosa* being readily distinguishable from all other paraonids by the branched median antenna should be disregarded for now.

The description of *Aricidea (Acmira) catherinae* has a few additions/ changes that members may want to make to their editions of the atlas. Add to the description: postbranchial papillary protuberances, like those described for *A. rubra*, appear on some branchial segments just before the segmental furrow. They are very difficult to see and the exact number of setigers on which they occur has yet to be verified. The number of neuropodial modified setae in posterior postbranchial setigers reported in so. Calif. material is typically 3-5 and not 5-7. Blake has confirmed that there is a mistake in the second paragraph of the remarks section with the statement, "*A. catherinae* was found to be very similar to *A. lopezi* and *A. finitima*". *A. finitima* should be *A. rubra*, since *A. finitima* is placed in synonymy with *A. rubra* later in the chapter.

Aricidea (Acmira) lopezi is described as having branchiae from setiger 4 up to 50 pairs, which

seems excessive. In 1990 Larry examined the holotype and paratypes of *A. lopezi* at the Smithsonian. The holotype is a robust specimen and has 20 pairs of branchia present with perhaps a few pairs missing thereafter. The two paratypes had 18 and 19 pairs of branchia. Material from so. Calif. are smaller specimens and typically have 14-19 pairs of branchia.

Members present brought up a question about the spelling of the species *Aricidea (Acmira) horikoshi*. Should horikoshi end with one "i" or two, since it is derived from a person's name? Anyone with the correct answer, unfortunately, doesn't win a prize, but we will put your remark in the next newsletter.

We breezed thru the chapter on apistobranchids with the only comments being that they are not commonly seen animals and they are found in deep water. However, members may still want to familiarize themselves with these rather unusual looking polychaetes that partly resemble a spionid or trochochaetid and partly a paraonid or orbiniid.

With the spionid chapter, many changes have been made to our local taxonomy, due to synonymies, new combinations, and new species descriptions. First, is a list of definite changes that members agreed with at the meeting (and they will be included in the next SCAMIT species list):

<i>Spio punctata</i>	→ <i>Malacoceros indicus</i>
<i>Laonice appelloefi</i>	→ <i>Laonice nuchala</i>
<i>Spiophanes japonicum</i>	→ <i>Spiophanes berkeleyorum</i>
<i>Spiophanes missionensis</i>	→ <i>Spiophanes duplex</i>
<i>Polydora giardi</i>	→ <i>Dipolydora giardi</i>
<i>Polydora bifurcata</i>	→ <i>Dipolydora bifurcata</i>
<i>Polydora socialis</i>	→ <i>Dipolydora socialis</i>
<i>Polydora cardalia</i>	→ <i>Dipolydora cardalia</i>
<i>Polydora bidentata</i>	→ <i>Dipolydora bidentata</i>
<i>Polydora armata</i>	→ <i>Dipolydora armata</i>
<i>Polydora caulleryi</i>	→ <i>Dipolydora caulleryi</i>
<i>Polydora quadrilobata</i>	→ <i>Dipolydora quadrilobata</i>

Polydora commensalis → *Dipolydora commensalis*

Polydora elegantissima → *Dipolydora elegantissima*

Ron Velarde and Rick Rowe (CSDMWWD) compared our local *Carazziella* sp. A to Blake's description of *Carazziella calafia* in the atlas on pgs. 204-205 and found several differences.

Members may want to add these different characters to the "Related species" section of their *Carazziella* sp. A voucher sheet (from the City of San Diego).

Carazziella sp. A has:

- 1) Caruncle split laterally at the anterior side of setiger 2 (compare to fig. 4.38 A pg. 205 in the atlas).
- 2) 6-7 bidentate hooks anteriorly: up to 15 in posterior setigers.
- 3) Bidentate hooks with main tooth more obtuse and larger (compare to fig. 4.38 G) and see figure b of the voucher sheet for *Carazziella* sp. A.
- 4) Dorsal row of major spines are of a different form. They are bent and falcate with a brushy top (compare to fig. 4.38 F).
- 5) Branchiae nearly meet middorsally. See setigers 8-10 (compare to fig. 4.38 A)

Spiro punctata Hartman was referred to *Malacoceros* by Maciolek (1990) and Blake examined the types and now provides us with this new synonymy. Please refer to the remarks on pg. 104.

The main difference between *Laonice appelloefi* and *Laonice nuchala* is that *L. appelloefi* has bidentate hooded hooks instead of quadridentate. *L. nuchala* is described as having a main fang surrounded by 3 smaller teeth, which matches our local animals.

Blake synonymized *Spiophanes japonicum* with

Spiophanes berkeleyorum noting there is nothing morphologically to distinguish Imajima's species from Light's already established species (refer to the remarks on pg. 145). The holotype of *Morants duplex* was finally discovered and examined. It matches *Spiophanes missionensis* resulting in the genus *Morants* being referred to *Spiophanes* and with the species name *duplex* having priority over *missionensis*.

Besides Pettibone (1962), both Light (1978) and Blake (1983) accepted the synonymy of *Spiophanes fimbriata* with *Spiophanes kroeyeri*. However, SCAMIT members have not due to the difference in the methyl green staining patterns of these two species and the difference in development of the interparapodial pouches.

SCAMIT's *Polydora* table is in the process of being completely revised and split into two tables, based on Dr. Blake's generic revision provided in the atlas. Hopefully, the new tables will be in the next newsletter. The main distinctions between the two genera are the presence or absence of notosetae on setiger 1 and the presence or absence of a constriction on the hooded hooks, other character states mentioned in the diagnosis are less clear cut. The new genus *Dipolydora* has notosetae on the first setiger and hooded hooks without a constriction.

Prionospio sp. A of SCAMIT might be either *Prionospio jubata* or *Prionospio steenstrupi*. One of the reasons P. sp. A was erected in the first place was because of the ventral prolongation of the second neuropodial lamella, which we had on our local species, and thought *P. steenstrupi* didn't possess. Our specimens do have the first pair of pinnate branchiae on the 2nd setiger that are longer than the apinnate pair of branchiae on the 3rd setiger, which fits *P. steenstrupi*. We need to compare our specimens with both *P. jubata* and *P. steenstrupi*.

Prionospio sp. B of SCAMIT is probably *Prionospio dubia*. There were no obvious differences noticed, but specimens still need to be compared.

Blake synonymizes the genus *Atherospio* with *Pygospioopsis*. Several SCAMIT members feel that the differences in the branchial placement warrant retaining them as separate genera. Retaining them as monotypic genera could be questioned, but additional unpublished species are known (A. Mackie, pers. comm.).

As for *Pseudatherospio fauchaldi*, the illustrations on pg. 156 figure 4.23 A and D are not good representations of this distinct animal. The prostomium of figure A looks damaged or perhaps it was regenerating. The modified neuroseta in figure D is different than Lovell's (1994) original illustration. Blake's illustration shows a cleft between the subapical tooth and the main fang. Blakes's illustration of the hook is more like those of *Uncispio* Green 1982 than *Atherospio* and is also missing its hood.

Larry thought that Blake's new species *Spio maciolekae* might be his *Spio* sp. A. However, after reviewing Blake's description and illustrations at the meeting SCAMIT members believe *Spio* sp. A is clearly different. The most obvious difference is the lack of the distinct zig-zag pigment pattern on the anterior dorsum that *Spio* sp. A possess. Also, the distinctive branchiae on setiger 1 of *S. maciolekae* has glandular lobes, while *S. sp. A* lacks these lobes, but has a ring of brown pigment at the base of the bulbous distal end of the branchiae.

Our only comment on the poecilochaetid chapter was that our local commonly seen *Poecilochaetus* sp. A is not the same as Blake's sp. A from northern Calif. His species does not have any accessory branchia, while ours does. Our animal is still waiting to be described for anyone with some time on their hands.

In the chaetopterid chapter the *Spiochaetopterus costarum* described is different from our common local species. This was discussed at a previous SCAMIT meeting in June of 1992. Please refer to vol. 11(2) of the newsletter for notes. The head region of our local *Spiochaetopterus costarum* is different. The peristomium has large "flaps" that

project anteriorly over the prostomium. These are not described in Claparede's original description (1870) or illustrated by Hartman (1969) and especially not illustrated by Blake in the atlas. As for the occurrence and size of the white ventral glandular shield, Blake discusses the variability and importance of this character in his remarks section on pg. 248. It is his opinion that the size of the glandular area is dependent on the size of the animal. Is it time to finally issue a SCAMIT voucher sheet on our local species? Any volunteers?

Our common *Mesochaetopterus* sp. is also not described in the atlas. Members may also refer to newsletter vol. 11(2) for notes on this animal. Our species differs from *Mesochaetopterus taylori* by having 6 mid-body segments instead of 3. Blake remarks about our undescribed species on pg. 240 of the atlas. Could this be a candidate for yet another SCAMIT voucher sheet?

As for the magelonid chapter, the only comment was that neither of San Diego's provisional species (*Magelona* sp. A and *Magelona* sp. SD10) are included. A brief description on *Magelona* sp. SD10 has been included as a handout with this newsletter for those not familiar with it. It was done by member Rick Rowe. When (or if) more specimens are found a more formal voucher sheet will be issued.

As for SCAMIT's *Magelona* sp. A, Dean Pasko (CSDMWW) provided a voucher sheet for it in November of 1991. Members may want to review any odd magelonids they have to see if they fit either of these descriptions. It is suspected that the occurrence of *Magelona longicornis* in the SCBPP and hence, the inclusion of it on the SCAMIT species list, is an error. The specimen is actually *Magelona* sp. SD10. It is difficult to see both of the two small teeth above the main fang on the hooded hooks. After more careful observation of the reported *M. longicornis* specimens they do indeed have tridentate hooded hooks. *M. longicornis* will be dropped from version 3 of the SCAMIT species list.

We did not have time to discuss the Cirratulidae and Cossuridae chapters in depth and will try to review these at another SCAMIT meeting later this year. The following comments were generated during an overview discussion of the entire volume at the beginning of the meeting. There does seem to be a great deal of overlap when comparing our local species of Cirratulidae with Blake's. This is especially true with regard to stain patterns for species of the genera, *Aphelochaeta*, *Chaetozone*, and *Monticellina*. Many of Blake's descriptions do not include illustrations of stain patterns only verbal descriptions, which are not always easy to interpret. More time needs to be spent comparing our local species to those newly described in the atlas.

In the last chapter on cossurids most of the material examined came from northern Calif. and British Columbia. Our commonly seen *Cossura* sp. A fits the description of the Hilbig's new species, *Cossura bansei*. However, this new species is based on a specimen of Karl Banse's from British Columbia that does not have a methyl green stain pattern. Hilbig states the reason might be because of the way it was preserved. SCAMIT members have no evidence to believe that preservation should have any effect on the stain pattern. Leslie Harris (NHM-LAC) and others have stained material from several museums and found that the uptake of stain is not affected by preservation differences or the length of time material has been stored in alcohol.

THE CREEP OF CRYPTIC SPECIES

Thorpe and Sole-Cava (1994) review allozyme electrophoresis in systematics and provide a table of invertebrate studies using this technique for systematic divergence. They contrast this to classical taxonomic work and point out succinctly that much taxonomic instability is a result of the subjective nature of phenotypic characters pre-selected as "diagnostic". One taxonomist puts emphasis on pigmentation, another on prostomial shape....and we're off to the races. The

separation between species will become confused.

-Tom Parker

THE PITTER PATTER OF PATTERN PATTERNS or DISTINCTIVE PATTERNS MAY NOT BE DISTINCTIVE SPECIES

There is more use of stains to both describe and identify polychaete species than ever before. It is common for workers to collect stain pattern information on any taxa which has few obvious morphological characters. This is particularly true in families with relatively large number of species (i.e., Spionidae, Cirratulidae, and Maldanidae). Staining is popular because it often leaves an obvious pattern of stained tissue. There has been some review of the techniques used to formulate stain solutions and treat specimens in this newsletter. This was done in an attempt to help standardize the various methods workers have adopted and thus make these results more truly diagnostic. The danger remains that stain patterns may become just another subjective character relied upon by some workers as taxonomically important, only to be subsequently de-emphasized by others.

Several broad areas need to be considered to improve the diagnostic value of staining. All of these issues reflect the need to use methods that provide reproducible results.

Report the stain formulation and method.

Some have claimed that special "tips or tricks" are needed for best results. Specialized methods must be widely distributed to allow repeated testing and confirmation of the outcomes. This will help to demonstrate if the stain response has diagnostic value or is merely different.

Illustrate reported stain patterns.

Some reported patterns are inadequately illustrated. Any described stain pattern needs to

be well illustrated in color to allow comparison to other specimens in hand.

Construct a record of stain pattern variations.

Variability of results is poorly recorded. Some specimens within a lot may exhibit variability from previously reported patterns. This is often explained as reproductive, ontogenetic, or regenerative variability. The influence of preservation method has not been well documented. Some workers have not observed differences due to preservation techniques, while others have suggested possible interferences (e.g. in *Cossura bansei* Hilbig 1996) Reliance on these reasons to explain variability invalidates staining patterns as a reliable taxonomic cue. Such non-matching results may mean the technique is not taxonomically valid or that species diversity is higher than expected with many more localized or co-occurring taxa than previously assumed.

- Tom Parker

STILL USING BIOMASS?

In a now nearly ancient paper (1972), Howmiller examined the effect of preservatives on macrobenthic invertebrate biomass. He states it is often assumed that weights of preserved specimens closely approximates live weights and this does not change during preservation. He experimentally examined formalin (10%), ethanol (70%), and isopropanol (70%). The results indicate that these preservatives cause a great weight loss. From his data he concludes: "It seems obvious that many of the published weight determinations and estimates of standing crop based on work with preserved organisms are practically useless". - Tom Parker

[Editor's Note - Other problems, but with the same impact on biomass repeatability and precision, were experienced with wet weight determinations during the SCBPP. If you really need to know biomass accurately, ash-free dry weight is your best bet.]

DR. LINNAEUS, I PRESUME?

In the book, Birds, Beasts, and Men, H. R. Hays writes that Carl Linnaeus attended an inexpensive Dutch medical university in Harderijk to obtain his medical degree. Linnaeus wrote a dissertation on "intermittent fever" (concluded it came from living on clay soil) and received his silk hat, gold ring, and diploma in a couple of weeks. Among his non-medical accomplishments was the "boiling down of identifications to a few details or sentences." His description for the elephant, *Elephas maximus* was: "Habitat Ceylon, eats foliage, seeds, fruit. Eyes small, elongate upper canines, long hanging ears, skin very wrinkled, very thick, two breasts on chest, toes on edges of feet. Flexible knees, short neck." - Tom Parker

LINNAEUS UNDER FIRE

For several years de Queiroz and Gauthier have been calling for the abandonment of traditional Linnaean hierarchical ranking in favor of a more flexible and phylogenetically based rank independent system. Their suggestion that a cladistics based tree branching approach be substituted for Linnaeus' categories has received a new push from Dr. Michael Donoghue, outgoing president of the Society of Systematic Biologists (see Pennici 1996).

Statements that the traditional categories are often inappropriate or misleading in evolutionary studies are correct, but largely irrelevant to our taxonomic mission. Their call for replacement of the Linnaean hierarchy by a new tree-based rank free system would not serve applied taxonomy at all, while it would facilitate (or at least simplify) evolutionary research. First a suggestion to abandon the principle of priority in the new edition of the International Code of Zoological Nomenclature, and now a movement to abandon Linnaean taxonomy altogether! Can these monumental changes be accommodated into taxonomic practice? I think not, and recommend that we express ourselves in opposition to such moves. Comments and discussion from other

members, or suggestions as to how to combat these proposed changes would be most welcome.

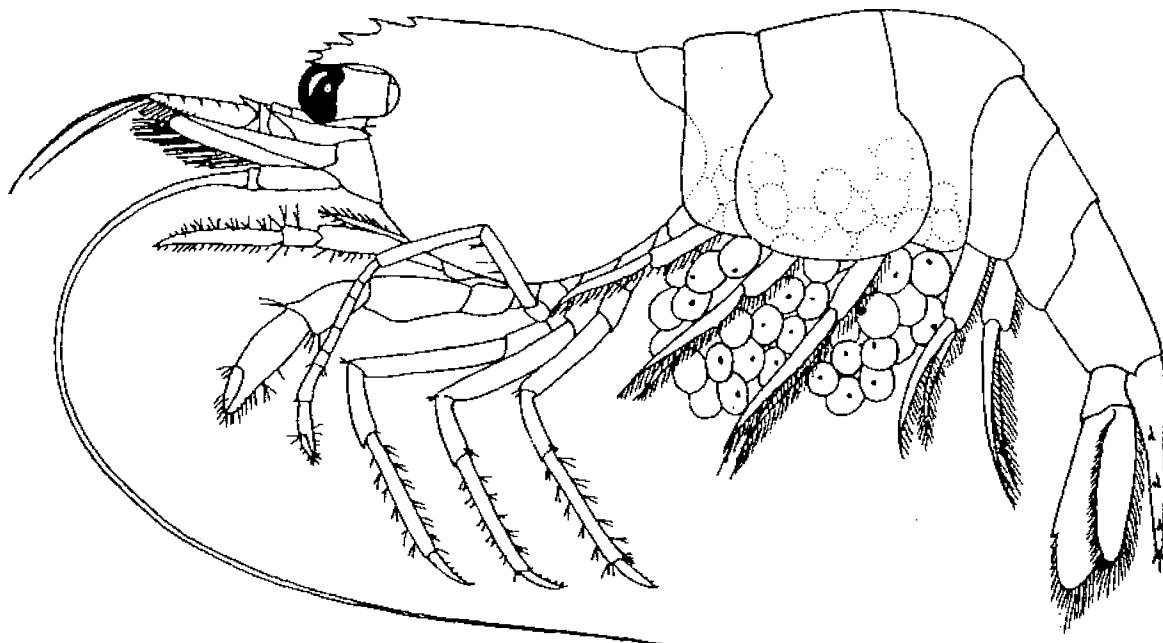
EAST MEETS WEST IN CYBERSPACE

For those who didn't get to China for the recent Polychaete Conference you can review the pre-publication abstracts from both the poster session, opening speeches, and formal papers by going to the cyberspace locality of <http://www.keill.ukans.edu/~worm/annelid.html> This web page also contains several other annelid focused files for your review. - Tom Parker

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March/Sept 1996
Examined by T. Parker

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- Synonymy:** *Aricidea ramosa* of Banse & Hobson 1968.
Allia ramosa of SCAMIT Taxonomic List editions 1 & 2

Diagnostic Characters:

1. Median antennae short, not exceeding first setiger in length.
2. Median antennae with slightly bulbous basal trunk, terminating in three blunt "fingers" (see Figure 1).
3. Modified setae with smooth shafted without fringe and terminating in long thin terminal spine by the 40-50th setiger (see Figure 2a-c). A specimen may have some setigers with worn setae and much shorter arista.

Related Taxa and Differences:

Aedicira ramosa of Hartman 1969: Median antennae with central stalk and filiform branches along its length and terminus.

Aricidea (Allia) ramosa of Strelzov 1973: Median antennae with short (~ setiger 1) stalk divided into about six short branches, some of which are bifurcated.

Related Taxa and Differences(cont'd):

- Aricidea ramosa* of Annenkova 1934: Median antennae with short central stalk palmately divided into several (5 illustrated) long filiform branches. Modified neurosetae with fringe along shaft.
- Aricidea (Allia) ramosa* of Blake 1996: With median antennae as in *Aricidea sp. A* SCAMIT. Illustration (B) adapted from Strelzov; it is unclear if this form was collected during the MMS survey, or represents the overly broad literature concept of *A. ramosa*.

Distribution: Puget Sound to San Diego, 30-100 M.

Comments: Local workers have routinely used the name "*Allia ramosa*" to represent these specimens. This usage follows the generic elevation proposed by Fauchald (1977). This was chiefly proposed based upon modified neurosetae morphology. The local use of the genus "*Allia*" is reflected in the SCAMIT Taxonomic List editions 1 and 2. More recently, other authors (e.g. Blake, Gaston & McLelland, Hartley) have continued to use the earlier designation and concepts that uses the term "*Allia*" as a subgenus. It is anticipated that the SCAMIT Taxonomic List list will be emended in edition 3 to reflect the more current and uniform usage of "*Allia*" as a subgenus of *Aricidea*. Please see SCAMIT Newsletter Vol 14, No. 12 for the introductory comments on the antennae

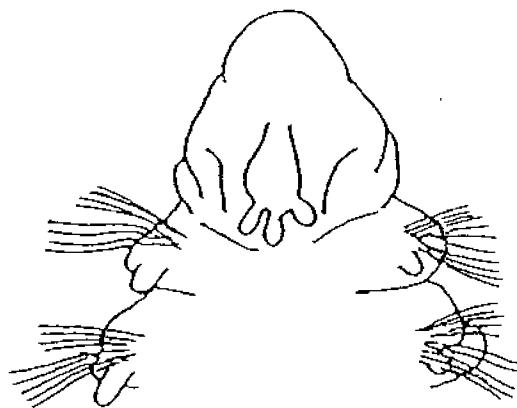


Figure 1. From Banse & Hobson 1968.

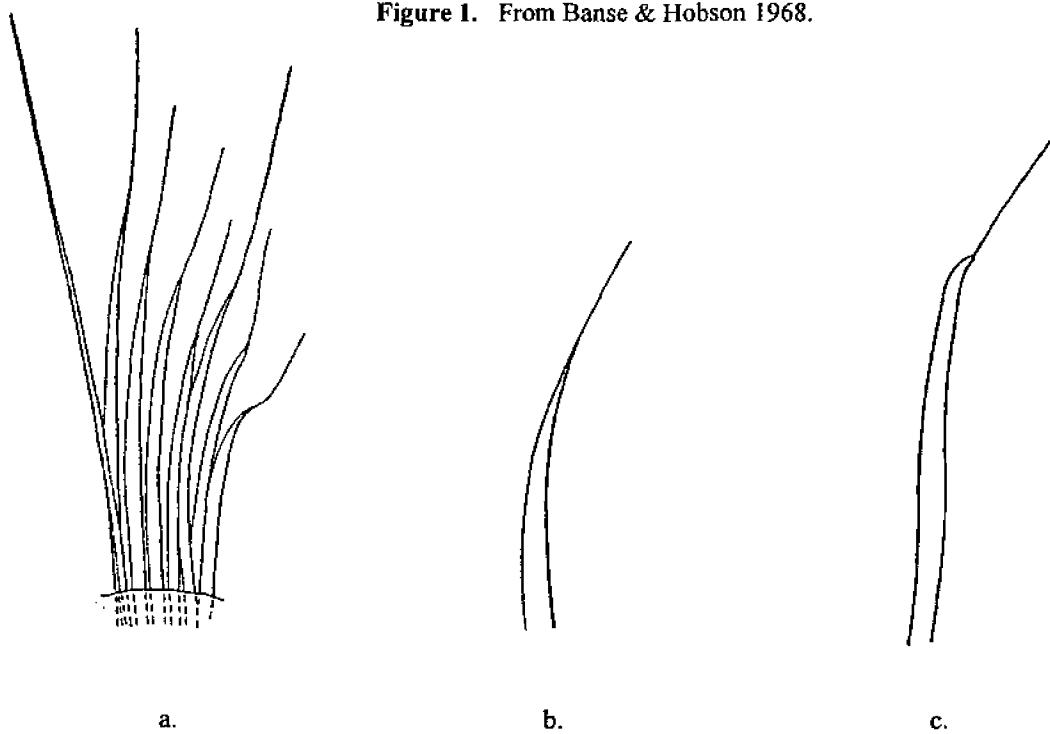


Figure 2. (a): Strelzov; (b) &(c):From Banse & Hobson 1968.

Magelona* sp SD 10*Character Summary**

Prostomium broad
 Frontal horns
 Setae of setiger 9 same as setiger 8
 Hooded hooks tridentate (two small teeth above larger main fang)
 Dorsal and ventral median lobes present on setiger 9
 Dorsal and ventral median lobes present after setiger 9 as pointed lobes
 (ventral are tiny or absent on setiger 10)
 Methyl green staining pattern
 from middle of setiger 1 (even with setal insertion) through midway
 between the insertion of the setae on the 4th and 5th setigers
 (Solid stain on the larger and speckled dots on the smaller
 specimens)

Comments: This is near *M. berkeleyi* except the stain pattern differs and a dorsal median lobe is present on setiger 9. The 9th setiger looks like Jones' figures of *M. longicornis* except that the inferior interramal lamellae are not so elongate.

The above information is based on specimens from the EMAP samples:

PSDBE232 8/19/95 56 meters and PSDBE228 8/19/95 49 meters

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The following information includes observations on additional specimens.

1) City of San Diego ITP I-18 rep 2 12July95 (small specimen)

Specimen fits characters listed above except the dorsal median lobe is present on only one side on the 9th setiger. It is unclear if a ventral median lobe is present or not (too small). This worm does not stain except faintly on the ventrum of setigers 4 and 5.

2) Orange County Sanitation District OCSD 95112 st.13 rep 3 59 meters

Specimen does have the dorsal and ventral median lobes on the 9th setiger, but virtually no inferior (neuropodial lamellae) lobe on the 9th setiger. The stain pattern is similar to above described specimens...it begins anteriorly and extends through a point between the setae on the 4th and 5th setigers.

3) LA Co. Sanitation District 0795-2c and 0191-00

Specimens fit the above description. There is a small but obvious inferior lobe on the 9th setiger. There is no ventral lobe on the 9th or 10th setiger. Additional specimens from 0795-3c1 and PSCBE 03710 fit the description above, including stain and presence of short inferior interramal lamellae.