Southern California Association of
Marine Invertebrate Taxonomists

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SCAMIT Newsletter

Vol. 21, No. 8/9

SUBJECT:	The Genus *Spiophanes*
GUEST SPEAKER:	Dr. Karin Meissner
DATE:	14 March 2003 - **Friday**
TIME:	9:30 a.m. to 3:30 p. m.
LOCATION:	LACMNH - Polychaete Collections Room 900 Exposition Blvd.

Rudilemboides stenopropodus
Male and female
Image by D. Pasko (CSD)

MORE LOSSES

Once again it is our sad duty to bring to your attention the death of several very prominent researchers; one local and one not. The first is Dr. Wheeler J. North who died of leukemia on 20 December of last year. Those of us fortunate enough to have known and worked with Wheeler over his long career (and there are a large number of biologists, algologists, ecologists and divers whose paths intersected his), knew that he was one of the family. When I was at MBC Applied Environmental Sciences he was part owner, collaborator on kelp survey work, and father of my co-worker Wheeler O. North. Of recent years Wheeler O. married Robin Gartman and she acquired "Big Wheeler" as her father-in-law. Many of us also heard Wheeler speak at conference after conference as he passed on his accumulated wisdom and experience to yet another generation of investigators. His pioneering work with the ecology and natural history of kelp beds remains to help us all. His recent

memorial service was held at the Orange County Ocean Institute at Dana Point Harbor on Saturday 22 February. All California coastal science workers are in his debt to one degree or another. He will certainly not be forgotten, but will be fondly remembered and missed by many. He was 80 at the time of his death.

The other loss is more recent; that of the ostracodologist Richard Benson, who died the morning of February 19th of an apparent heart attack. He was Curator of Ostracod(e)s at the Smithsonian Institution.

Interested parties are directed to the OSTRACON list server for a continuing series of reminiscences and comments on his life and regrets of his loss.

NEW BOOKS

- Thanks to Tim Stebbins (CSD) for providing the following information:

The first volume of CONTRIBUTIONS TO THE STUDY OF EAST PACIFIC CRUSTACEANS is now available and can be obtained from Michel E. Hendrickx for 25 US$ in Mexico and Latin America, and 35 US$ elsewhere, plus shipping cost. Shipment will be through regular air mail, book rate, unless the buyer requests special shipment (EXPRESS mail, special delivery service, etc…).

Request should be sent by e mail (michel@ola.icmyl.unam.mx) by FAX (addressed to Michel E. HENDRICKX, FAX 669 – 9 – 82 61 33) or by mail (Michel E. HENDRICKX, ICML – UNAM, P.O. Box 811 Mazatlan 82000 Sinaloa, Mexico). Please indicate your name, postal address or street address, FAX number, number of copies requested and the type of shipment we should use (regular air mail, DHL, UPS, etc …).

The first volume content and instructions to authors for the second volume are now available at the following web site:

http://ola.icmyl.unam.mx

"Someone also just sent me a copy of the book listed below, which may be relevant to those interested in crustaceans and/or introduced species. I'll have it available for perusal at the Jan 21 meeting here in San Diego. – T. Stebbins"

Galil, B., C. Froglia, and P. Noël. 2002. CIESM Atlas of Exotic Species in the Mediterranean. Vol. 2. Crustaceans: decapods and stomatopods. [F. Brand, Ed.]. 192 pages. CIESM Publishers, Monaco. ISBN: 92-990003-2-8

NEW LITERATURE

Acrobatic Digital Images

Jerry Sedgewick from the University of Minnesota has produced another helpful article on digital image methods in Microscopy Today. This article features the use of Adobe Acrobat to handle images and produce TIFF files. Below is a brief summary.

He recommends the use of the full Acrobat version as best for maintaining and controlling original resolution. He has found this is superior to relying on plug-ins from other programs. Acrobat also can be used to make files from programs such as PowerPoint and Excel into TIFF files.

When making files in Acrobat, do not use the Save or Export feature as this results in compression. Instead only have the files "Printed" to Acrobat. The resulting drop down box includes print of "acrobat distiller" or "create adobe PDF". Always choose "create adobe PDF" if this option is available.

You will need to search through the Acrobat settings tools under "Options", "Settings", or "Edit" until you find the dialogue box that includes "downsampling". Uncheck the "downsampling" box and save these settings.

Search also for the tab that sets "Color or Grayscale" and correctly specify.

When creating files from PowerPoint or Word documents containing images, you likely will need to create PDF files page by page. Change the print options to "Background printing" to direct machine resources to the printing.

Once "printed" to a PDF file, it can be opened in Acrobat or PhotoShop for inspection and to set resolution between 300-400 dpi. The screen resolution is much less and displays reductions in clarity for some horizontal lines and small lettering. Zoom to see these features of the underlying file.

You may save the file as a PDF with the "Save As" command or as a TIFF. When choosing TIFF be sure to check the compression button to "None".

If the resulting file is too large for the final use, a copy can be saved as a JPEG in PhotoShop. Choose the "Quality: Maximum" slider when using this feature.

Some problems may occur. "Bulleted" items may be converted to symbols due to the odd font used to create "bullets". Use the Text Touch Up tool in Acrobat to delete any symbol and the Circle Tool to make "bullet circles". Some images, drawings, or objects may be shifted or lost. This is more common when files are transferred between PC and Mac operating systems. Original images may have to be reinserted or the PDF can be opened in PhotoShop and re-saved as a "PhotoShop PDF". – Tom Parker (CSDLAC)

FORMALDEHYDE FACTS

Also from Microscopy Today, is a concise review of formaldehyde penetration and fixation reactions. Below is a brief summary.

Formaldehyde penetrates tissue rapidly, but chemically "fixes" tissues slowly. Peter Medawar (Noble Prize winning immunologist- and author of "Memoirs of a Thinking Radish") studied penetration rates using plasma clots and determined that fixatives obey diffusion laws, where penetration is proportional to the square root of time. Thus the formaldehyde constant is 27.5 mm of tissue penetration in 25 hours. Denser tissues likely take somewhat longer. Lipid levels in cell membranes appear to reduce penetration rates. Results from other tissues produced penetrations of 18 mm in 25 hours and 3.9 mm in 25 hours. Using the more conservative rates, penetration rates are likely:

1 hour = 3.6mm
9 hours = 10.8 mm
16 hours = 14.4 m
100 hours = 36 mm

Fixation rate is actually a combination of both penetration and binding time. Using carbon-14 labeled formaldehyde, equilibrium binding occurred in 24 hours at 25 C, but took only 18 hours at 37 C. When using tissues of brain and kidney as thick as 8mm, equilibrium was not reached until 50 hours. Formaldehyde fixes by reaction with basic amino acids (e.g. lysine and arginine) resulting in hydroxymethyl groups capable of forming stable methylene lines between proteins. This creates the cross-linking termed fixation.

Both 1mm and 4mm tissue slices reach minimum stabilization in 24-25 hours at ambient temperatures. This is not complete fixation as the fixation cross-links are relatively weak and can be reversed by water or alcohol. Opinions on complete tissue fixation range from 48 hours to 7 days.
– Tom Parker (CSDLAC)

MEMBERSHIP RENEWALS

It has recently been decided by the SCAMIT Officers and those members that attended the "Future of SCAMIT" meeting in February that starting this year membership renewals will be due once a year in May. This is the beginning of our fiscal year and this will hopefully simplify the renewal process for not only the

Treasurer but all members. This also allows SCAMIT a general yearly operating budget with which to plan major expenses. General reminders will be posted on the website and in the newsletter and if members haven't renewed by the end of May, separate personal reminders will be sent in June. Since the majority of our membership renews between April and June we feel this change will impact the least number of members. If you have just recently renewed we will give you 4 - 5 months of free membership, so your membership would last until May of 2004. New members may join at any time and will be informed of our annual dues then.

It has always been SCAMIT's policy not to drop members late with their dues, especially long term members. This will continue. As always if this presents any sort of difficulty for anyone please contact the Treasurer, Cheryl Brantley (cbrantley@lacsd.org or 310-830-2400 ext. 5500) directly to see what can be worked out.

SCAMIT WEB WORLD

We have been noticed. SCAMIT web is currently listed on the NOAA web site (U. S. Dept Commerce) as an "Oceanography Resource". SCAMIT appears and is described in the Electronic Journal Miner web site. SCAMIT is also listed as a resource by Hypography- Gateway to Sci-Tech , the Journal of International Wildlife Law and Policy, and the National Biological Information Infrastructure (part of USGS). In keeping with this international influence, SCAMIT has just been added by UNESCO (United Nations) to its International Oceanographic Commission (IOC) directory.
– Tom Parker (CSDLAC)

JANUARY MINUTES

Don Cadien opened the meeting at the request of Kelvin Barwick who was unable to attend as he was out sampling in the field. Kelvin had sent Don an email listing of things he wanted mentioned. First, he thanked LACMNH for providing space for SCAMIT's collections. He also wanted to thank Tom Parker (LACSD) and his fellow officers for helping with the move.

Secondly, Don will be making a preliminary assessment of our literature collection and is hoping to get everything into Procite. Eventually the goal is to establish some sort of lending policy for the members.

Tim Stebbins (CSD) then had the floor and reviewed some of the plans for the upcoming Bight'03 project. More details will be given on this in the February newsletter as this issue was raised again at that meeting and covered in detail by Dave Montagne.

Don Cadien then had the floor and started the Crustacea meeting. The purpose of this meeting was to review the deeper water fauna that might potentially be encountered during this summer's Bight project. He passed around hand-outs which accompanied his presentation and which have been included below. Some additional notes and comments have been added which were discussed at the meeting.

Introductory Comments

While preparing for this meeting I reviewed the literature regarding the division of the offshore environment by depth. There was little agreement as to zone boundaries or nomenclature. I decided to adopt divisions that seemed to match what we see locally in terms of change in communities with depth. I suggest the following:

Sublittoral zone – 2-200 meters. Essentially the continental shelf. While the shelf break (where the angle of the bottom changes, and depth increases more rapidly with increasing distance from shore) can be as shallow in some areas as 80m, by 200m we have reached the outer edge of the shelf throughout the Bight.

Archibenthal transition zone – 201-800m. The upper slope. Change in community is gradual, with no dependable break points independent of local topography.

Archibenthal zone – 800m-2000m. The middle and lower slope.

Abyssal zone – 2000m-6000m. The abyssal plains and their shoreward aprons.

Hadal zone - >6000m

The existence of the Southern California Borderland with its complex topography of basins, canyons, sea valleys, banks and islands complicates this classification somewhat since we view the "slopes" as ending at the rims of the nearshore basins. The shallowest nearshore basin has a sill depth of 735m, so we typically conceive of the slope as ending at these basins. Only the upper slope does, the descent continues at the seaward edge of the Borderland, with nearly all mid and lower slope zone located seaward of the Patton Escarpment.

We are currently concerned then with only the upper slope.

Arthropods of the Upper Continental Slope of the Southern California Bight: A Resource guide.
Donald B. Cadien, CSDLAC, 21 January 2003

With Bight '03 sampling scheduled for this year, the Quality Assurance process for taxonomic identifications which SCAMIT performed in previous regional monitoring efforts must begin. Plans are not finalized, and technical committees have yet to meet, but sampling on the upper Continental Slope as well as the Continental Shelf is anticipated. In Bight'98 sampling extended no deeper than 200m, with few sites near that depth. Projected sampling for Bight'03 will extend down to 500m. Since the biota of slope and shelf differ, and POTW monitoring programs seldom sample the slope, taxonomists participating in B'03 will need to familiarize themselves with new animals. The CSDLAC sampling grid incorporates a line of stations at 305m, so we have become familiar with some of the slope fauna. The material presented below will draw on that experience as well as slope sampling associated with other programs. Two goals will be pursued: presentation of the known arthropod fauna of slope depths in the Bight and adjacent portions of the Eastern Pacific, and presentation of a bibliography of relevant source articles on which participating taxonomists can draw.

The fauna of the slope, especially the upper slope, shares many species with the outer Continental Shelf. There is no clear line of demarcation between the two, and change is gradual along the gradient of increasing depth. There are special assemblages interspersed along the general soft-bottom gradient, such as the pavement/coarse sediment assemblage which occupies the current-swept shelf break below which the slope begins. Other variants are also associated with differences in bottom topography and/or sediment type (such as the "deep water coarse" assemblage identified in SCBPP data). General population trends with increasing depth from the shelf to the slope are decrease in abundance (see Barnard 1966) and decrease in average size of individuals. More and more of the arthropod diversity will be missed with increasing depth as adult size of many species approaches mesh size of the 1mm screens used on shelf depth sediment samples in virtually all programs. This was demonstrated by use of nested 1.0mm and 0.5mm screens in some previous programs. The effect was particularly noticeable with peracarid crustaceans; less so with polychaete worms, mollusks, and echinoderms.

The fauna of the Bight reported by previous investigators in the literature, or sampled directly in the CSDLAC deep stations (305m), will be presented below by taxonomic group,

with range information if available. Species whose distribution reaches no shallower than 200m are included, as are those which occur as shallow as 500m.

Pycnogonida
Ammothella setosa
Nymphon stipulum

Ostracoda
no additional species known from local slopes not already represented on the shelf

Copepoda- no comment

Cirripedia
no additional species known from between 200-500m (see Pilsbry 1907, 1916)

Leptostraca
no additional species known from this depth segment in the SCB

Stomatopoda
no additional species added to shallow water biota

Mysida
only bathypelagic species added in this depth range

Cumacea
Diastylis sp C
Diastylis quadriplicata
Eudorella redacticruris
Leucon armata
Leucon bishopi
Leucon declivis
Leucon magnadentata
Leucon sp G
Leucon sp J

Tanaidacea
no additional taxa added in this depth range to the list from the shelf (see Dojiri & Sieg 1997)

Isopoda
Ananthura luna
Belonectes sp A
Caecognathia sanctaecrucis
Desmosoma sp A
Eurycope californiensis
Ilyarachna profunda
Metacirolana joanneae
Momedossa symmetrica
Munna magnifica
Munnopsurus sp A
Nannonisconis latipleonis
Paramunna quadratifrons
Prochelator sp A

Amphipoda
Ampelisca furcigera
Bathymedon kassites
Bathymedon vulpeculus
Byblis bathyalis
Harpiniopsis emeryi
Harpiniopsis epistomata
Harpiniopsis naiadis
Heterophoxus affinis
Leptophoxus falcatus icelus
Liljeborgia cota
Melphidippa amorita
Mesometopa neglecta roya
Monoculodes glyconica
Monoculodes latissimanus
Paraphoxus oculatus
Pseudharpinia excavata
Uristes californicus
Valettiopsis dentatus

Decapoda
Calocarides quinqueseriatus
Calocarides sp A

Discussion of the Species

The species identified above as members of the upper slope fauna will not all be familiar to you, particularly the provisional species. They will be discussed below by group:

PYCNOGONIDA – Shelf and upper slope species are the same for the most part. Two species are added in the 200-500m portion of the slope which interests us here. Child's 1994 paper deals with species from much greater depths, and is not applicable to the current bathymetric zone.

Ammothella setosa. Poorly described by Hilton (1942) and more completely redescribed as *Ammothella killix* (Dojiri et al 1991). The synonymy was established during reexamination of Hilton's types by Child 1996. The species is known to occur at 366-372m, but the depth of Hilton's type lot has not been established.

Nymphon stipulum has been taken but once, off the northern Channel Islands in 375m. Child (1990) provides good illustrations and differentiates his new species from other *Nymphon* species.

CUMACEA – Bodotriids are generally shallow water (with vaunthompsonines being an exception), as are lampropids. Nannastacids are usually at shelf depths, although they also range down to the upper slope. All of the slope taxa not also known at shelf depths in the SCB come from either the Diastylidae or the Leuconidae**.** In terms of literature, the cumacean descriptions in the MMS Atlas are brief and lacking in detail. Use the keys and descriptions with a grain of salt. In regards to the Leucons, also see Cadien's SCAMIT key from 1986 which includes the provisional species mentioned here. If voucher sheets are needed, contact Don Cadien.

Diastylis sp C was originally taken from the LA 2 Dump Site in 197m. It has subsequently been taken off Palos Verdes just to the west of the original capture site. A voucher sheet was prepared and is available to those who have not seen this form. This provisional species is not discussed or illustrated in any published source.

Diastylis quadriplicata was originally known as *Diastylis* sp E, and later described by Watling & McCann (1997). The form is not yet recorded from the SCB, but occurs in the adjacent Santa Maria Basin. The depth range in the literature is 290-310m, but additional specimens were taken as shallow as 180m.

Eudorella redacticruris was also described by Watling & McCann (1997), from off the northern Channel Islands at 430m.

Leucon armatus was described by Given (1961), and SEMs are also presented in Watling & McCann (1997). Although it can be taken in waters shallower than 200m, it is mostly distributed lower on the slope. This species has fewer records than any other of the local *Leucon* species. These congeners are distributed in overlapping bathymetric ranges descending from the shelf down the slope, with each species first co-occurring with its predecessor, then replacing it at greater depths.

Leucon bishopi was originally referred to locally as *Leucon* sp. B, then as *Epileucon* sp. B, and finally as *Leucon (Crymoleucon) bishopi*. Records in the SCB are centered around 500m, with specimens from about 1000m in the Santa Maria Basin to the north. The species is discussed in Watling & McCann 1997.

Leucon declivis was known as *Leucon* sp. H prior to its description by Watling & McCann (1997). It is a very large species which is distributed throughout the SCB, and also to the north. The majority of records are centered around 400m, but the species also has been taken as deep as 1000m.

Leucon magnadentata Given 1961, overlaps much of the bathymetric distribution of *L. declivis*. Although it also occurs as shallow as 100m, it is typically taken at about 400m and deeper. Poorly represented in the SCB, it is quite common just to the north in the Santa Maria Basin. Its relative scarcity in our area may reflect only a lack of samples at appropriate depths. SEMs of the animal are available in Watling & McCann (1997).

Leucon sp. G MBC 1985 § was erected during the Santa Maria Basin project, and proved common in the area to the north of Pt. Conception. Several lots of specimens from the investigations of submarine canyons along

the California coast (Hartman 1963) identified as *Leucon* nr. *subnasica* may prove to be *L.* sp G on further examination. Only three verified records of the taxon in the SCB currently are known; two around 400m and one at approximately 700m. A voucher sheet is available. The species is included in the key prepared for a SCAMIT meeting back in 1986, as are all the leuconids discussed.

Leucon sp J Cadien 1985 § was also first noted during the Santa Maria Basin project, but remains represented by few individuals. It has not yet been taken in the SCB, and the few specimens known originated off Diablo Canyon in Central California at 406m. This is quite similar to *L. magnadentata* in most respects, but can be differentiated in both sexes by the truncation of the lower portion of the rostrum.

Given the broad continuity of the slope biota at these depths, it may show up in the SCB. A voucher sheet is available illustrating the carapaces and a few other details of both sexes.

ISOPODA – In the bathyal and abyssal zones, asellote isopods become particularly prominent in the isopod fauna. General handbooks for NEP isopods which include the slope fauna are those of Schultz (1969) and Kussakin (1979, 1982, 1999).

Although it has been taken as shallow as 70m within Santa Monica Canyon, normal distribution of the anthurid *Ananthura luna* is much deeper. The species was discussed and keyed by Cadien and Brusca in their SCAMIT handout on the group. The original description, as *Bathura luna*, is in Schultz (1966). An over all comment with regards to literature on the Isopods; the MMS Atlas is very valuable, however its focus is on males. As for Schultz, 1969, Don hesitates to use its key, but draws on it for illustrations. Be wary as the publication is saddled with errors and much of the taxonomy associated with the illustrations is out of date. There is also no discussion or description of species. In summary, it is a good resource for narrowing an animal down to a few choices.

******Belonectes* sp A is described as such in Wilson 1997. This species has been taken once off Palos Verdes at 305m. It is otherwise known from about 400m in the Santa Maria Basin.

Caecognathia sanctaecrucis (=*G. hirsuta* of Schultz 1966, not of Sars) is discussed in Wetzer and Brusca (1997) as *Gnathia sanctaecrucis*. It occupies the zone we are projected to sample, with the type locality at 226m. The key provided by the above authors will separate this form from other local gnathiids. It was transferred from *Gnathia* to *Caecognathia* by Cohen and Poore (1994).

Desmosoma sp A is also illustrated and described in Wilson 1997. The desmosomatids are a deep water group, and only begin to show up in the SCB near 200m. They are also small, and tend not to be retained on 1mm screens because of their size and elongate shape. This species is currently known only from the Santa Maria Basin, but probably also occurs locally. Also see Hessler, 1970**.**

******Eurycope californiensis* was originally described by Schultz from canyon samples at 478m. You can either consult the original description (Schultz 1966) or use that provided by Wilson (1997). It is presently known from Newport Canyon to the Santa Maria Basin.

Ilyarachna profunda is typically found deeper, but does occur in 400-500m depths in the SCB. Care must be exercised that specimens not be confused with *Ilyarachna acarina* which have had many or most of their pereonal spines knocked off. Briefly illustrated and keyed in Schultz 1969, with the original description in Schultz 1966. Carefully clean sediment from these animals as the spines come off easily.

Metacirolana joanneae was listed by Schultz in 1964, but not described until 1966 (as *Cirolana*). It was originally taken at 218m in the Santa Cruz Canyon in central California, but also occurs in the SCB. It is broadly distributed but limited to deeper waters.

Momedossa symmetrica is another desmosomatid which occurs in the SCB. Schultz (1966) described the taxon, illustrating a female. A male is illustrated by Wilson (1997). Originally described in *Desmosoma* by Schultz, it was transferred to his new genus *Momedossa* by Hessler (1970).

Munna magnifica is still known only from the type lot taken at 500m south of Santa Barbara Island. Schultz's 1964 original description provides the only illustrations. While sharing very long legs with *Munna* sp A (see Wilson 1997), it can be distinguished from that species easily by its concave frons and posteriorly narrowed pleotelson.

****Munnopsurus*** sp A, described and illustrated by Wilson (1997) has been taken once at 305m off Palos Verdes. It is otherwise known from 393-582m in the Santa Maria Basin, and is common at 732m in a sample from the Oregon slope.

Nannonisconus latipleonus is a rare animal, with two specimens known. The type came from 465m in the Redondo Submarine Canyon. It is also known from the Santa Maria Basin at 294m. Schultz (1966) illustrates and describes the type, and Wilson (1997) illustrates and describes the second specimen. Siebenhaller and Hessler (1981) provide additional information on the genus which remains monotypic as *Nannonisconus carinatus* Mezhov 1986 appears to be a synonym.

Paramunna quadratifrons was described from 197m in the SCB (Iverson & Wilson 1981). It has been taken again somewhat deeper (about 450m) also within the SCB. The original description is quite adequate to identify the animal, if any of us are fortunate enough to find it again during B'03. *Paramunna* sp A is found on the shelf rather than on the slope. It is differentiated from *P. quadratiforns* on the SCAMIT voucher sheet. See the SCAMIT web-site, taxonomic tools, for this sheet.

Prochelator sp. A is quite common in SCB samples, reportedly occurring as shallow as 154m. In the Gulf of the Farallones it is also common at depths of 2900-3000m (Wilson 1997). This third desmosomatid can be easily separated from *Desmosoma* and *Momedossa* by its parachelate pereopod 1. Wilson (1997) warns of another undescribed *Prochelator* found in the Gulf of the Farallones, and provides characters which should allow its separation if it also occurs on the slope in the SCB. These animals are small and are common on .5mm screens; only seen occasionally on 1.0mm screen samples**.**

** - compare these three images side by side as they are relatively similar animals.

AMPHIPODS - No comments will be offered on the amphipods on the list, as all come from references which we use routinely to identify shelf species. All the additional forms in the 200-500m slope bathymetric band are described, with descriptions and illustrations (and often keys) available for their identification. Phoxocephalids predominate (7 of 18 species), with 4 oedicerotids, 2 lysianassoids, 2 ampeliscids, a liljeborgiid, a melphidippid, and a stenothoid also among the listed forms.

DECAPODS – There are few additions to the shelf taxa among the decapods. Bathymetric distributions of decapods can be reviewed in Wicksten 1989.

Calocarides quinqueseriatus is taken occasionally off Palos Verdes at 305m which is close to the minimum depth recorded for this species of 288m (Martin & Zimmerman 1997).

It is keyed, along with the remaining SCB thalassinids, in the SCAMIT handout on the group. It has been taken from Point Sur in central California, to Palos Verdes.

The provisional *Calocarides* sp A is listed as *Calocarides* sp in Martin & Zimmerman (1997), who illustrate salient characteristics. The species was taken originally at 394m in central California, and has since been taken once off Palos Verdes at 305m.

ADDITIONAL AMPHIPOD NOTES

Dean Pasko (CSDMWWD), Don Cadien (LACSD), Lisa Haney (LACSD) Tony Phillips (CLAEMD) and Jim Rooney (CLAEMD) met to address the problem of *Rudilemboides stenopropodus* vs *Rudilemboides* sp Hyp1 and *Rudilemboides* sp A. The group met at the Los Angeles County Museum of Natural History where the type specimen of *R. stenopropodus* J.L. Barnard 1959, as well as many other specimens examined by Dr. Barnard, reside. Upon careful examination of many specimens, the group determined that *R*. sp Hyp1 was actually a large, more mature specimen of *R. stenopropodus*. The original type specimen of *R. stenopropodus* is a damaged, immature male specimen. During their examination of the type, the group also discovered that Dr. Barnard had apparently missed one important character in his original examination and description of *R. stenopropodus*. It turned out that the type specimen does possess ventral processes on the sternum of several pereonites. The omission of this characteristic from the original description has been the cause of some confusion for years. Lisa Haney and Jim Rooney are now working on a re-description of *R. stenopropodus* based upon material recently collected during the Southern California Bight (SCB) regional sampling efforts.

In addition, Dean Pasko and Lisa Haney have been working on the formal description of *Rudilemboides* sp A SCAMIT 1998. This animal definitely represents a distinct species, and quite possibly a new genus. The characters of *Rudilemboides* sp A seem to fall somewhere between the genera of *Acuminodeutopus* and *Rudilemboides* (see the *R.* sp A voucher sheet). Lisa is in the process of conducting a cladistic analysis to determine *Rudilemboides* sp A's place within the Aoridae.

The often difficult and confusing genus *Americhelidium* (Amphipoda: Oedicerotidae) was also discussed. Taxonomists at the City of San Diego Marine Biology laboratory have been recognizing two species of *Americhelidium* over the past several years that had previously been identified as one, *A. shoemakeri*. The description of *A. shoemakeri* is not detailed enough to distinguish among the two forms occurring off San Diego, CA. *Americhelidium* sp SD1 and *Americhelidium* sp SD2 look very similar to *A. shoemakeri*, but differ from each other in two readily recognizable characters. First, *Americhelidium* sp SD1 has a pair of long, erect setae located dorsally along the posterior margin of pleonites 2, 3, and 5. These setae are generally equal to one-half the length of their respective pleonite/urosomite. In contrast, in *Americhelidium* sp SD2, these setae are either absent or very small (i.e., less than one-fifth the length of the pleonite or urosomite). Secondly, the propod of gnathopod 2 is more robust (L:W = 5 – 6) and sparsely setose in *Americhelidium* sp SD1. There are typically 0 – 3 setae along the ventral margin and 0 – 3 setae along the dorsal margin; excluding the distal most bundle of setae located at the junction between the propodus and dactyl. In *Americhelidium* sp SD2, the propod of gnathopod 2 is more slender (L:W = 8 – 9) and more setose (3 – 7 ventral marginal setae, and 2 – 4 dorsal setae). Dean Pasko will be making an effort to examine the type material in order to sort out the problem these three species present. In the meantime, Dean will produce provisional voucher sheets to help other taxonomists working in the SCB distinguish among the two provisional species.

REFERENCES FOR 200-500M SCB SLOPE ARTHROPODS

Barnard, J. Laurens. 1954e. Amphipoda of the family Ampeliscidae collected in the eastern Pacific Ocean by the Velero III and Velero IV. Allan Hancock Pacific Expeditions 18, no. 1: 1-137.

———. 1959a. Liljeborgiid amphipods of Southern California coastal bottoms, with a revision of the family. Pacific Naturalist 1, no. 3/4: 12-28.

———. 1960a. The amphipod family Phoxocephalidae in the Eastern Pacific Ocean, with analyses of other species and notes for a revision of the family. Allan Hancock Pacific Expeditions 18, no. 3: 175-375.

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