SOUTHERN CALIFORNIA ASSOCATION OF MARINE INVERTEBRATE TAXONOMISTS

Jan/Feb/March/April, 2010 SCAMIT Newsletter Vol. 28, No. 5&6

Figure 1- *Lirobittium* sp shell (left) with "brood" attached (detail right) (tick marks = 1 mm); photo by K. Barwick

This Issue

11 JANUARY 2010, B'08 CRUSTACEA, CSD

The meeting was opened by President Larry Lovell with SCAMIT announcements. Upcoming meetings are as follows: 25 January 2010, will be a B'08 Polychaete review at NHMLAC; 8 February 2010, will be a Bight'08 mollusk review at CSD; Wednesday, 17 Feb 2010, will be a DNA Barcoding Seminar at SCCWRP; 22 February 2010, will be a Bight'08 polychaete review at NHMLAC, with guest speaker Sergio Salazar-Vallejo; 8 March 2010 will be a meeting which will address any potential name changes based on papers presented at the 9th International Polychaete Conference. Non SCAMIT meetings are as follows: Saturday, 23 January 2010 is the annual SCUM meeting; 20-26 June 2010 will be the 10th International Polychaete Conference in Lecce, Italy, and our lucky fearless leader, Larry Lovell, is attending; 26 June – 2 July will be the annual WSM meetings in combination with the annual AMS meetings, at San Diego State University.

UPCOMING MEETINGS

Monday 15 November 2010 9:30 AM.
Mollusk literature review and Taxonomic Database testbed demo at OCSD meeting room.

Friday, 10 December 2010 (note the date) 9:30-3:30.
Don Cadien, at LACSD, will lead a review of new Arthropoda - Crustacea literature with emphasis on papers reporting newly described/reported species to S. Cal. or revisionary papers effecting name usage or taxonomic hierarchy of our local fauna. Dr. Mary Wicksten will be attending the meeting to contribute and discuss her recent work on Eastern Pacific decapods.

Saturday 11 December 2010 5:30–9:00 PM
SCAMIT Christmas Party at Cabrillo Marine Aquarium. All SCAMIT members and their families are invited to attend. In addition, the officers decided it would be neighborly to invite members and their families of our two sister groups to join us. Invitations will be extended to the members of the Southwestern Association of Freshwater Invertebrate Taxonomists (SAFIT) and the Southern California Association of Ichthyological Taxonomists and Ecologists (SCAITE). It should make for a lively event.

Larry then announced that SCAMIT was creating a membership list server which will replace google groups. Larry will be emailing the members to let them know of this change
It was noted that the Barnard workshop minutes need to be posted on the website.
Tony Phillips announced that the previously rumored job opening at Hyperion (CLAEMD) had run into a snag and was not currently open. Tony also stated the work he'd been doing on *Cirriformia* during Bight'08 had been "enlightening". He will comment further at the next polychaete meeting.

Dean Pasko (OCSD) commented on the differences between the nemertean genera *Carinoma* and *Carinomella*, both of which are found at OCSD deep annual stations. He reminded everyone to check the musculature and lateral nerve chord placement for separation of the genera. Don Cadien commented that there were also differences between the two with regards to head shape and mouth.

With that it was time for Tim Stebbins (CSD) to take over and lead the day's meeting which was dealing with B'08 Crustacea.

Tim had made a check list of problematic specimens which he shared with the group.
We started with *Ampelisca eoa* and *A. coeca* – Due to the fact that *A. eoa* is poorly described, its validity should be considered. *A. cataliensis* is also involved as it is a synonym of *A. eao* by Barnard. Neither of the potential names are on Ed 5. We examined a large, 15 mm specimen from B'08 station 7175, 820m; Antenna 2 wispy, P7 Article 5 with strong notch, carination on head. The group consensus was *A. coeca*. LACSD reported *A. coeca* in Bight'03 from 868m.

John Byrne, CSD, brought an *Ampelisca* specimen from Bight'08 station 7688, 43m. This station was just west of Ventura. After taking it through the key, despite the fact that it was missing U3, it was decided it was probably *A. pacifica*.

Ron Velarde showed two *Byblis* specimens from B'08 station 7079, 465m. After examination they were determined to be *B. thyabalis*.

More Oedicerotidae FID from Tim Stebbins were next. This time there were 3 specimens from B'08 station 7188. The final consensus was 1 - *Oediceropsis elsula*, 1 - *Bathymedon pumilus*, and 1 - *B*. sp.

Ron Velarde had brought an odd specimen of *Bathymedon pumilus* from B'08 station 7092, 940m. The animal had a conical epistome which is not as described, and the setation of the coaxa was different.

Tim continued providing unusual specimens for examination. First was a specimen of *Photis* sp from B'08 station 7520, 82m. It was determined to be *P. parvidons*.

An oedicerotid specimen was next to be examined. It was collected at B'08 station 7175, 820m. Although provisionally (mis)identified by Tim as "*Monoculodes necopinus*," it was subsequently determined to be *Oediceropsis elsula*.

A deepwater phoxocephalid tentatively identified as *Harpiniopsis* cf. *naiadis* (B'08 station 7173, 670m) was examined and considered similar to *H. epistomata* except for lacking a distinctly produced epistome. Consequently, this animal was given the provisional name of *Harpiniopsis* sp WS1 with Tim expected to prepare a voucher sheet.

Next was a Gammarid FID from the same station. The consensus was for a new genus in the family Hadziidae; one of the characters was U3=rami.

A Phoxocephalid FID from the same station was next. The final ID was *Eobrolegus* ? *chumashi.*

Next another Gammarid FID, this time from B'08 station 6335, 3.9m. It was determined to be *Grandidiella japonica.*

A *Stenothoe valida*, was verified from the same station.

There were some FID Caprellids from B'08 station 7173 which turned out to be *Tritella tenuissima.*

John Byrne brought an unidentified caprellid from B'08 station 7624, 128m. Upon examination it was called *C. mendax*.

Ross Duggan shared an Ischyroceridae from a CSD monitoring station, SBOO I-22, 29m. The specimen was determined to be a *Microjassa* sp, female.

A specimen of *Carpoapsuedes* sp WS1, from B'08 station 7175, 820m was verified.

A *Syrrhoe* sp OC1 from station C5, 310m was also verified.

Photis sp from B'08 stations 7529 and 7566 were examined and determined to be juvenile females. Tim Stebbins offered to reexamine the lots for any *P. parvidons.*

An unusual Pycnogonid FID from B'08 station 7520, 82m turned out to be a *Rhynchothorax phillopsammum*. For more information on this species see the MMS Atlas.

An FID Leuconidae from B'08 station 7168, 860m was brought forth for examination. The final ID was *Leucon (Crymoleucon) bishopi*; it had a denticulate anterior margin and was a male specimen. It was recommended for vouchering.

Lastly a damaged specimen of Munniospidae from B'08 station 7168, 860m was examined and the recommendation was to leave it at Family due to its damaged state.

25 JANUARY 2010, B'08 POLYCHAETA, NHMLAC

The first announcement was that the January 21 Taxonomic Database meeting at SCCWRP had been postponed. All other upcoming meetings are the same as those listed previously with the following exception - the 8 March meeting has been changed from a Polychaete literature review to a B'08 Crustacea meeting. Additionally a May 10 Barcoding taxonomic workshop at LACSD has been scheduled.

It was then announced that the website upgrade was complete and archived newsletters can now be searched.

Tony Phillips, CLAEMD, then had the floor to discuss some Bight'08 Cirratulid specimens. We started with *Cirriformia* sp LA1, which was described as a LACSD B'98 provisional species. It has a distinct ridge progressing from the peristomium through setiger 6 where the tentacular filaments are found. The ridge is wide, like that seen in *Chaetozone bansei* Blake 1996. There is a page posted in the SCAMIT website taxonomic toolbox on this provisional species.

Rick Rowe described a CSD B'98 provisional as *Cirriformia* sp SD1. This was a non-staining species. See Rick's character matrix table in the taxonomic toolbox for more information on this species and his *C*. sp SD2 mentioned below. Tony has found that the most common species found in bays and estuaries matched Rick's provisional, except that it has intense staining on the prostomium and peristomium, with intersegmental bands dorsally and ventrally from setiger 6 through the posterior abdominal segments. Tony had seen this animal in earlier surveys in Marina del Rey and Ballona Lagoon and had labeled them *C* sp. BL1 and BL2. The two forms relate to the start of the tentacular cirri (setigers 3/4 and 6 respectfully), which are most likely growth/size differences. Tony is currently calling this animal *Cirriformia* sp HYP1. The taxonomic toolbox has color drawings of the methyl green staining pattern and other information of both *C*. BL1 and *C*. BL2 posted under their new name *C*. HYP1. In reviewing an earlier email from Leslie (9/25/2000) she described an animal with these same characters and stain pattern in shallow water off the Chevron outfall in Santa Monica Bay. Rick has a provisonal *Cirriformia* sp SD3 Rowe 2005 which appears to match Tony's specimens with tentacular cirri starting on setiger 3. Tony is currently trying to get ahold of Rick's provisionals to try and clarify these differences.

Rick Rowe also described a second B'98 provisional as *C*. sp SD2. This animal has tentacular cirri starting on the third setiger with no obvious staining pattern.

Tony then described a species from the Goleta outfall which he is calling *Cirriformia* sp GOL1. This species has tentacular cirri starting on setiger 8/9. This animal has shown three different and distinct staining patterns. They match up well with Leslie's *Cirriformia* sp B. Tony is waiting to review further specimens from Leslie. The taxonomic toolbox has color drawings of the methyl green staining variability and other information is posted as well.

Tony reports *Eteone spilotus* as common from estuaries in northern Bight samples. He reports *Eteone* sp 11 as common in southern Bight samples.

Cirratulus spectibilis is most common in estuaries. However, up north (Santa Barbara area) *C. dillonensis* is found.

Next, LACSD specimens of *Chone duneri* and *Neoleprea californica* were examined. Leslie stated that *N. californica* will be in another genus based on the work she is conducting with Dr. João Nogueira. *N. japonica* in the MMS is incorrect. The characters do not match those from the syntype in Hutchings 1997. It is an undescribed species.

And lastly, a specimen of *Chone bimacuata* was stained and examined and the ID verified.

8 FEBRUARY 2010, B'08 MOLLUSCA, CSD

The meeting was opened by Secretary Megan Lilly. Upcoming meetings were announced as well as the news that SCUM 2011 will be held January 22 at SCCWRP in Costa Mesa.

The first person to show an unusual specimen was Wendy Enright (CSD). Wendy felt that she had collected 4 specimens of *Lirobittium calenum* at B'08 station 7111, 519m. Normally many of the SCB molluscan taxonomists leave *Lirobittium* ID's at just that, *Lirobittium* sp, as there are many difficulties with the group. Some people present weren't convinced of Wendy's species level identification and it was left that she would peruse the available literature and see if she could confirm, more thoroughly, her identification.

At this point John Ljubenkov wanted to take a quick side-trip into Cndiaria-land and talk about hydroids that are commensal on mollusks. *Lirobittium* are often seen with hydroids growing on their shells. John stated that many of the hydroids seen growing on mollusks are of the genus *Merona* but members of the family Bougainvilliidae are also frequently found, and on *Lirobittium* in particular. At this point Kelvin Barwick (OCSD) showed images that he'd taken showing hydroids and what appear to be brood sacks, on an apparently live *Lirobittium* (Fig 1). The image lead us into a curious life history discussion: Hydroids, obviously don't like or want to be buried under sediment as they need their tentacles in the water column in order to feed. Since *Lirobittium* is often covered with hydroids, many times on all different sides of the shell, what is the life style of this gastropod? It obviously can't be spending much time buried in muddy sediment, as its hydroid population would die off if that were the case. This is a similar conundrum with *Compressidens stearnsii*. Most scaphopods, it is assumed, are at least partially buried in the sediments, but the presence of live hydroids on their shells suggests otherwise.

Kelvin Barwick then showed more images of the various *Lirobittium* species he'd come across during the B'08 project. It was thought that one of his species might be *L. rugatum* and another one possibly *L. fetellum*, but for the sake of the B'08 data, all instances of this gastropod will be left at the ID of *Lirobittium* sp, since getting consistent identification amongst the taxonomists was unlikely. It was suggested that perhaps a SCAMIT meeting just to deal with *Lirobittium* might be in order.

Next Kelvin showed images of a specimen he had called *Crockerella crystalline*. After much head scratching it was decided that since the animal was only 3-4mm long, and a juvenile, it should be left as *Crockerella* sp (juv).

The next animal Kelvin showed generated excitement to all present. It was a *Crenella decussata*, which wouldn't be exciting for many, but for those of us "down south" we usually only see its "look alike" *Solamen columbianum*. The specimen of *Crenella* that Kelvin brought nicely displayed the divarication of the ribs at the midpoint of the margin. Additionally the overall gestalt was different. This animal was collected from B'08 station 7493, 72m. Kelvin offered to photograph the specimen and make the images available.

John Ljubenkov took his turn at show and tell next. He had brought a small, juvenile gastropod that had smooth apical whorls which transitioned to cancellate sculpture. There was some thought that it looked like a *Thais emarginata*, but the depth range was wrong for this species.

Secondly we viewed a *Homalopoma berryi* which was an unusual find. John had also brought a juvenile bivalve which was guessed to possibly be a *Diplodonta*, but it was decided that the specimen needed to be opened and the hinge examined before any further attempts at an ID were made.

Bill Power (LACSD) brought a specimen of *Periploma rosewateri* which set off the second round of excited muttering for the day. This animal was collected at B'08 station 7296, 610m, off Ventura. If the ID does turn out to be correct, this will be a range extension for the species which normally occurs from Newport Oregon to the Farallon Islands.

A large specimen of *Tagelus californicus* was passed around by Kelvin. It was collected at B'08 station 6355, in only 1.2m of water.

John then passed around a nice, large specimen of *Antalis pretiosum* which is not unheard of, but not seen as often as some of the other species of scaphopods.

Megan Lilly passed around a small, beautiful gastropod from B'08 station 7235, 147m, which turned out to be a *Granulina margaritula* based on the lack of spire and the outline of the shell. Also from this same station she showed an unusual gastropod. After much discussion it was decided that it was a Fusininae and Don Cadien went so far as to suggest it belonging to the genus *Harfordia.*

The last discussion of the day involved scaphopods. Kelvin Barwick pointed out some discrepancies between figures in the literature, specifically - Pilsbry H. A. & Sharp B. 1897-1898, Scaphopoda, in Manual of Conchology. Vol. 17. Conchological Section, Academy of Natural Sciences, Philadelphia: 1-280. He was worried about *Polyschides tolmei* and *P.californicus* potentially being misidentified. According to the literature *P. californicus* widens more abruptly than *P. tolmei*. Many people present were concerned that they had been confusing these two species. Bill Power (LACSD) feels confident in the way he's been identifying these species and offered to photograph *P. californicus* (which some agencies don't feel they are sampling) and send the images out. It was discussed that perhaps there needs to be another SCAMIT meeting on scaphopods.

With that we finished our day and realized that there are future SCAMIT mollusk meetings that need to be in the works.

17 FEBRUARY 2010, DNA BARCODING COLLOQUIUM, SCCWRP

Dr. Peter Miller from SCCWRP organized the workshop. There were an estimated 50 attendees with POTW's, academia, NHMLAC, governmental agencies, and private industry represented.

Dr. Miller opened the meeting with an overview of his SCCWRP DNA barcoding projects. The first, working in the Southern California Bight, is on benthic invertebrate barcoding as a potential bioassessment tool. And the second, in collaboration with the Stroud Water Research Center, is on barcoding Southern California freshwater stream invertebrates for developing a bioassessment tool. He provided an overview of the idea for this colloquium and introduced the guest speakers.

Dr. Paul Hebert, Canadian Centre for DNA Barcoding, gave a talk entitled "One Gene – All Life: DNA Barcoding Overview and Progress, and the Marine Barcode of Life Initiative." He presented an overview of the upgrade of technology from Darwin to E. O. Wilson, using microscope improvement as an example. He then discussed the development of new age DNA processing machines a "Kodak processing" type of approach in that upgrading of technology context. For barcoding, the CO1 mitochondrial gene was chosen because it is slow to mutate, not being in the nucleus. The Canadian Centre has undertaken barcoding projects ranging from their backyard (literally) to Costa Rica looking at butterflies and moths. They have been able to genetically detect greater diversity than morphology alone. Several examples of cryptic species complexes were revealed genetically, and then supported by more closely examined distribution data. Dr. Hebert discussed the Barcode Of Life Database (BOLD), an online resource for submittal, storage, and retrieval of DNA barcode information. He then went on to outline the goal of using a barcode "blender approach" to augment morphological taxonomic analysis of freshwater and marine invertebrate samples. Currently, the goal of determining the diversity of a sample is possible, once a library of species for a given area is established. However, the abundance of those species detected cannot yet be determined. Dr. Hebert estimates that it may be 5 years before abundances can be determined. There is a worldwide Marine Barcode of Life Initiative underway. It is in the process of recruiting countries to sign on and provide funding contributions.

Dr. Bernard Sweeney from the Stroud Water Research Center, PA, presented his talk "Water Quality Analysis using Macroinvertebrates with and without DNA Barcoding." White Clay Creek in PA has a 40 yr study history and the species that occur are well known by Stroud taxonomists. The study area has 2 sites that are 2 miles apart. While they are in relatively close proximity to each other there are significant land use differences separating them. There were 3 identification methods compared: amateur level, expert level, and DNA barcoding. Collected samples were processed and preserved in 95% EtOH. They were then analyzed with the three identification methods. There was an improvement in percentage identification level with each subsequent method. The expert taxonomists (20 yr average experience) were in disbelief initially of the greater resolution provided by DNA results. DNA results found two species of chironomid the taxonomists recognized as a single species. When the taxonomists reexamined the DNA discriminated species, they discovered differentiating morphological characters that had been overlooked. This study was not a labor savings over traditional taxonomy. Each of the 1600 specimens were processed individually. They were each identified, individually vialed/labeled, and had a leg pulled and vialed separately for DNA processing. This meticulous specimen handling was necessary to provide the abundance figures for the taxa reported.

Dr. Mehrdad Hajibabaei – Biodiversity Institute of Ontario, presented his talk "Next Generation biodiversity Analysis" remotely from Ontario. He has been developing tools to allow DNA analysis of older museum specimens. These specimens usually produce shorter base pair lengths due to fragmentation of DNA. A new technique called Pyro PCR produces modified sequences that are able to resolve species. The technique is being applied to formalin preserved specimens with promising results. The ability to access the vast resource of formalin preserved material in museum collections would be a huge breakthrough. Dr. Hajibabaei also responsed to a question asking about the challenge of linking abundance to sequence counts.

Dr. Eric Pilgrim of the US EPA Molecular Ecology Branch in Cincinnati, OH presented the next talk "Barcoding Difficulties and Challenges." Dr. Pilgrim tried to answer questions and concerns raised on the SCAMIT list server regarding pseudo genes, Wolbachia infection, inaccurate Genbank archives, and hybrids. He stated that pseudogenes and Wolbachia are not big issues and the sequences can be discriminated. He readily admitted the QA issues with early Genbank submittals. Early submittals were not checked consistently. There are still issues with known inaccuracies that exist and have not been corrected. Discriminating hybrids is more of an issue because the mitochondrial DNA is female linked.

A Question and Answer session produced these two comments from Dr. Hebert. The cost of running a barcode is currently around $10/specimen with hopes to reduce it to $.50/specimen. He predicted that the issue of discriminating abundance from a "blender sample" would be solved in 2 years.

SCAMIT will hold a DNA Barcoding workshop in May to provide training for creating a DNA barcode library of reference specimens. Creating these voucher specimens consists of identifying species using traditional morphology-based taxonomy, collecting images, recording sample collection data, and extracting tissue for DNA barcode analysis. These activities are in support of SCCWRP's barcoding bioassessment tool project. The first step is to build the benthic invertebrate barcode library of species known to occur. Sample collection/preservation methods will be tested and multiple specimens of the same species will be processed comparing different stations, methods, and depths for repeatability of results.

22 FEBRUARY 2010, POLYCHAETA, NHMLAC

President Larry Lovell opened the meeting with the schedule of the upcoming meetings. The next order of business was the upcoming annual SCAMIT officers election. The current officers were nominated via email by Kelvin Barwick, and seconded by Robin Gartman. At this time, nominations are still open, but they will close on March 8.

Leslie Harris then introduced our guest speaker Dr. Sergio Salazar-Vallejo, visiting polychaete researcher from ECOSUR, Quintana Roo, Mexico. He presented his recent work on the polychaete family Flabelligeridae. Sergio provided a handout "New comments about California flabelligerids", with comments on the genera, publication history, new key, and an update to the names found in Hartman's Atlas (1969).

Sergio launched into a historical review of the taxonomy and character states used to define genera of flabelligerids. He has reviewed type and other materials in museum collections, resulting in important revisions to the understanding of the family. He found that a correct understanding of the branchial arrangement was lacking for many described species. As a result, many subsequent authors have resorted to broadly defining genera and lumped species into "super" genera and the taxonomic history of many species is confused.

Here are some details from Sergio's literature review: Hansen (1880) erected *Tryphonia* and defined it on the type of neurosetae (blunt tipped) without consideration of the branchiae. Chamberlin (1919) worked on the Albatross material and presented 5 new genera. Fauchald (1972) presented material from Western Mexico. He presented *Pherusa* as a complex, a super genus. It contained three major divisions A) with 4 pairs of branchiae, B) with many pairs of branchiae (further subdivided by presence of a dorsal shield), and C) branchial numbers and distribution unknown. Spies (1973) looked at anterior ends and illustrated the branchial and palp configuration. Fauchald (1977) presented *Pherusa* and *Piromis* as valid in the super *Pherusa* complex. Sergio then went on to comment on our local fauna and name changes he recommends. His findings are not yet published, so they are not presented herein.

Sergio did provide some insight into his handling of specimens. Many flabelligerids will adhere sediment to their bodies which covers important structures. He uses a vinegar solution (white commercial vinegar mixed 50/50 with 70% EtOH) as a deflocculating agent to dissolve and clean specimens. Place the animal for just a few seconds in the solution, lightly brush it off or swish it back and forth to clean.

The group then broke for lunch and returned to continue our Bight'08 specimen review for the afternoon.

Capitellidae - B'08 station 6549C 4m, Channel Islands Marina. It had a tiny palode, with eyespots present, 13 biannulate thoracic setigers, 10 setigers with capillary noto/neuro setae (long), the last three 3 with hooks, the 1st setiger was complete. Abdominal set wrinkled not obviously biannulate. Setigers 4/5 were possibly damaged. No staining pattern yet known. It was decided to leave the ID at *Decamastus* sp.

Terebellides sp Type D – a specimen provided by LACSD from a deeper water Bight sample. The ID was verified.

Terebellides kobei – another specimen provided by LACSD was determined to be *T*. Type C

There was discussion of *Leitoscoloplos pugettensis* vs *L*. sp A and the issue of start of branchiae. The branchiae can be very small and difficult to see in the early setigers. Mackie (1987) was reviewed for assistance. He had viewed AHF paratypes of *L. pugettensis*. A close inspection of where branchiae begin and comparison with body size (width) is needed. The same problems may apply to *Scoloplos acmeceps* vs *S. acmeceps profundus*.

Terebellides sp – CSD B'08 station 7632, 440m, with long setae, all fragments, most missing branchiae. All agreed that they were interesting specimens, but due to their small size and incomplete condition, we left them at genus.

Aricidea (*Acmira*) sp – Goleta 30m – was determined to be *Aricidea* (*Acmira*) *rubra*.

Proclea sp – CSD B'08 station 7082, 1023m. With crenulations on dorsum, notosetae like *Lanassa/Proclea*. Specimen very damaged, hard to count thoracic setigers. Left at *Proclea* sp due to poor condition.

8 MARCH 2010, B'08 CRUSTACEA, OCSD

President Larry Lovell opened the meeting with his usual SCAMIT announcements covering upcoming meetings of the organization and other meetings of interest. He continued with other business. It is time for the annual election of officers. Today was the deadline for nominations. The floor was opened to additional nominations, none were made and nominations were closed Ballots will be distributed via email March 12th. The deadline for turning in ballots is March 26th.

The meeting continued with discussion on Bight '08 Crustacea led by Dean Pasko. A spreadsheet provided by Don Cadien was distributed. It presented a list of the taxa covered during the other Bight'08 crustacean workshops and what remained to be done.

The first discussion was on *Paradexamine* and *Colomastix*. Both occur in habitats that we generally do not sample, so most of us have no experience with them. Dean was not able to take the specimen(s) at hand any further. They likely represent a species complex, but will remain as *Colomastix* sp WS1. Dean is to prepare a voucher sheet based on existing material, using the character states identified as useful by Sara LeCroy in her revision of the group in the Western Atlantic (LeCroy 2004) (Don Cadien also recommended that people peruse LeCroy 1995 for additional information). It is likely that there are multiple species native to the area, which have been confused due to Barnard's use of *C. pusilla* for all such forms. It is also possible that one or more species have been introduced to the SCB. We can't decide how many we have without full characterization of the existing materials. In the interim (i.e., until a voucher sheet is prepared) we should either leave them as sp, or use *Colomastix* sp CMPLX.

Jim Roney (CLAEMD) asked about *Paradexamine* character states - mouth parts, article 1 of antennae 1, urosome. Dean reported that when comparing *Paradexamine* specimens from different samples and bays, he found variability in the characters of the racker spines, as well as other characters originally used to differentiate *Paradexamine* sp SD1. *Paradexamine* sp SD1 was determined to represent a complex of poorly defined species, likely including invasives.

Dean reviewed several taxa that he reexamined prior to the meeting leaving the IDs at his previous determinations with no need for further review.

Other B'08 species of interest discussed are as follows:

Tritella ? pilimana - determined to be *T. laevis*

Eusirus ? longipes - to be reported as *Eusirus sp*, with Ron Velarde to share notes on how *Eusirus* sp from the SCB differs from *E. longipes*. [This issue still remains to be resolved, although subsequent email exchanges may have addressed it more thoroughly]

Bruzelia cf tuberculata - to be reported as *B. tuberculata.*

Melitidae stands at family level ID.

Harbansus sp – rostrum curved down, carapus with pitting, dorsal and ventral posterior ridges. May be *H. bradmeyersi*. Dean will review. [Subsequent review confirmed *H. bradmeyersi*]

Alienacanthomysis sp WS1 – telson looks different, single specimen, damaged. Decided to leave at genus.

Protohyale longipalpa/frequens – B'08 station 6223, 1.5m, Mission Bay. Discussion of Chapman's key in Light and Smith's; length of maxilliped palp of article 4 shorter/longer than article 3. Not a good couplet. In contrast, Bousfield keys separate taxa to subgenus based upon sexually dimorphic character states (i.e., male and female maxillipedal palp same or different). Chapman's key is for Central California species and does not include Southern California species. It was decided it should be reported as *Protohyale* sp based on inability to consistently apply characters used to distinguish taxa (e.g., length of mxpd palp article 3 vs 4).

Caecianiropsis sp – Tim and Dean examined and found them to be *C*. sp LA2.

Erichsonella cf *crenulata* – determined to be *E. cortezi* Brusca and Wallerstein 1977.

Zeuxo vs *Synaptotanais* – issues differentiating between genera are poorly defined, reliant primarily on relative length of articles of uropods and/or articles of antenna. Variability in these characters, along with relative interpretations absent representatives demonstrating contrasting character states, were determined to be problematic. That said, one specimen of *Synaptotanais* from the Channel Islands was examined and determined to be correctly identified and distinct from *Zeuxo*; however the *Synaptotanais* specimen was over twice the size of comparable bay specimens identified as *Zeuxo* and *Synaptotanais*. Don showed one specimen identified as *Anatanais* based upon the character of the relative lengths of the antenna articles; however, this character is based upon females and male *Anatanais* have not been described. [Subsequent attempts to apply this character to other Bight'08 samples proved difficult] Generic differences need to be established including males. Don was to send emails to Heard, Larson, Bamber, and Dojiri, asking for help with this group. How are these animals handled in other parts of the world?

Cumella sp WS1 – was reviewed again. Determined to be similar to a Hyperion LA Harbor specimen - *Cumella* sp HYP1, which is similar to *C. californica*, except that uropodal endopod is shorter than peduncle. Jim Roney is to prepare a voucher sheet.

Diastylus sp - with teeth on ocular and frontal lobes, similar to *D. pellucida*. B'08 station 7477, 199m. Determined to be a new species with vermiculate surface sculpture on carapace, somewhat like *Diastylus* sp C, but lacking the large post-ocular hump of that taxon, and with the surface sculpture. Specimen brought by Jim Roney. It was given to Ron Velarde for digital imaging.

Ingolfiellidae – new record, no uropods (reduced). In Light and Smith's. B'08 station 7553, 51m, Channel Islands.

Monocorophium (*oaklandense*) *insidiosus* – B'08 station 6213, <5m, Mission Bay. Specimen brought by D. Pasko.

Pinnixa scamit - is now included in *P. occidentalis* CMPLX on Ed 5 listing.

Pagurus sp LA1 – Bight'08 deep water. 2mm specimen gravid, tuberculation different than described species *P. granosimanus*.

Diastylidae – B'08 station 7696, 140m. Thorax only. *Diastylus* or Gynodiastylidae. Male specimen. Brought by Ron Velarde.

Betaeus cf ensenadensis – found at various Bight'08 bay stations. Gaping fingers but shorter than palm, therefore not *B. longidactylus*. Keys to *B. ensenadensis* in the literature; Wicksten, Hendrickx, Word (old SCCWRP), Light and Smith's, but chela does not look right. Specimens are with scaphocerite narrowed distally and therefore not *B. herrimani* either.

Next for review were **NON-Bight 08** specimens:

Allorchestes rickeri – Jim's specimen from Ballona tidal gate wetlands. Article 4 of periopod 5 is as wide as long. See keys in Chapman, Light and Smith, or Bousfield and Hendricks.

Boreosignum sp – specimen was from SD Bay shipyard and not a Bight'08 sample. Dean is to produce a voucher sheet contrasting his specimen, *Boreosignum* sp 1 Pasko 2010, to *Boreosignum* sp LA1 of Cadien.

Diastylus sp LA1 - LACSD survey 0709. In complex with *D*. sp C. Don Cadien offered to edit the key and produce a voucher sheet. 3 males, one female; station 8C, 61m. New taxa.

Lamprops sp D vs *Mesolamprops* – LACSD specimens. Measurements needed to establish female ratios – percent of basis length to the entire limb. Equal or greater than, for *Lamprops*. Equal or less than, for *Mesolamprops*. *Hemilamprops* was also discussed. Presence and number of anterior marginal carapace serrations should be further explored. Dean commented on spines on P2 differences that he recently noticed.

Melita n sp? – Hyperion specimen. Tried Bousfield's (1996) key but there were problems with the key and illustrations matching up with the setation on G2. *Ablutomelita* complex, *Desmomelita* vs *Melita* vs *Quasimelita*. Barnard's (1962) key, original descriptions, were of no help. We had no success taking it through Don's key either. It was decided to call it *M*. sp POLA1. The specimen was from the SAIC work in LA Harbor in 2008, at station LARR3, lower.

16 MARCH 2010, SCAMIT TAXONOMIC DATABASE, SCCWRP

President Larry Lovell opened the meeting with a review of progress on the taxonomic database project. He showed the Visio graphic with the original idea and component parts. The SCAMIT species list was reissued two years ago and is the backbone of the database project. The species list links to a dynamic species page that will show basic taxonomic information, including synonyms, and Bight'03 occurrence data. The taxonomic tools and old newsletters sections of the website have been added to and improved upon this past year and will have links on the dynamic species page.

Katja Seltmann joined us remotely from North Carolina and gave an update on the dynamic species page progress. There was discussion on the levels of security that would be required for login users. Katja also would like feedback from beta testers on the use and design. The database group was asked to spend some time doing that. Cheryl Brantley presented a demo of the LACSD fish ID taxonomic database developed for use in the field. The Miller and Lea volume is the basis for the content including keys and images pulled (with permission) from the text and modified or augmented with digital images of fresh caught specimens. This fish ID tool incorporates many of the use concepts desired of the SCAMIT taxonomic database. Karen Stocks, UCSC, provided a brief report on the literature database project with SDSU. She has not had time to properly review the final product, but will do so by the next meeting. She did state that there were difficulties interacting with the students due to her lack of access to the file share system they were using.

We then discussed the next move to improve the dynamic species page. Additional datasets need to be added for more occurrence data. The other SCCWRP Bight datasets (SCBPP and Bight'98) will be included. POTW's will be approached next for permission to include their long term monitoring data. Additional holders of datasets that might be approached include POLA, POLB,

and NPDES program contract labs. OBIS USA is interested in the occurrence data we will be providing.

A demonstration version of the database is being developed for one taxa group, the aplacophorans. The text, keys, and detailed images produced by Cadien and Barwick for the Bight'03 aplacophorans are being used for this purpose. The images are being input into Morphbank using the spreadsheet method. Kelvin had been working on this with the assistance of Deb Paul at Morphbank. Issues with populating the spreadsheet are being resolved and submittal and upload at Morphbank should occur soon. Cheryl Brantley has a LACSD project on echinoderms that will produce similar information and images that will be an additional demonstration component when it is completed.

We need to identify tools we have already produced (voucher sheets, keys, taxonomic tables) that do not currently already reside on the website and get them submitted for uploading to the website. In addition, we need to get the hundreds of images that have been produced and reside in files on peoples' computers and load them into Morphbank.

Additional components of the database will include a section on BRI and P-codes. A library of P-codes will be accessible in the taxonomic database. Since P-codes are linked to the species list, they will be updated whenever updates are made to the species list. DNA barcode information produced by the SCCWRP Barcode project will be accessible from the website with links to information on the barcode voucher collection that will reside at NHMLAC.

Cheryl then provided an update on the remaining funds received from OCSD. OCSD provided a total of $15,000 to support development of the taxonomic database. We have been very frugal in spending that money. It has gone to support Katja's development efforts and the work of Dean Pentcheff updating and adding content to the website. We have just over $11,000 remaining. Additional funding sources will need to be sought in the future and Federal, State, and other grants, are all being considered.

The Google Groups list server used by the Taxonomic Database Group for the last couple of years is being replaced. A new discussion list server will be established at DreamHost, the SCAMIT website server. Kelvin Barwick will be doing this soon and all members should expect to get an invitation to link up.

The next meeting of this group will be scheduled for sometime in the late summer. Larry will notify everyone using the new list server and establish a date that will accommodate all who plan to attend.

12 APRIL 2010, B'08 POLYCHAETES, CSD

The meeting was a summation of any left over B'08 polychaete FID's as well as review of new polychaete literature. Larry Lovell opened the meeting by announcing that the current suite of SCAMIT Officers had been re-elected for another term. Upcoming meetings are as follows: May 24, 2010 will be the barcoding workshop at the Los Angeles County Sanitation Districts Marine Lab. There will be a presentation by Peter Miller. What participants need to bring are specimens in good condition that can be positively identified to species. The species will then be photo documented and then the DNA work will begin. The individual results of the barcoding will be linked in a database to the original specimen as well as the photo of the animal prior to dissection and/or tissue removal. All animals will be vouchered and then deposited/curated at the LACMNH. A discussion then ensued on the best way to establish work flow in order to incorporate the photo documentation, dissections, DNA analysis, specimen vouchering, etc, into one stream-lined process. Larry will be sending out a spread sheet to participants which will outline what gear needs to be brought by participants and what will be provided. June 14, 2010 will be the second imaging workshop held at the City of San Diego and hosted by Dan Ituarte and Nick haring. Be sure to bring specimens on which to practice your photography skills. The ultimate goal of the imaging workshops is to get people more comfortable with taking digital images of their specimens which can then be uploaded to morphbank and/or linked to SCAMIT's taxonomic database. July 12, 2010 is currently unscheduled. Larry took a moment here to say that in the future there will be a series of meetings to deal with emends to the SCAMIT species list, after new data/species have come in from the B'08 project. Edition 6 of the Species Listing will incorporate these changes. May 7-8, 2010 will be the SCAS meetings at CSULA. SCAMIT will have a table there with the purpose of spreading the word about SCAMIT and possibly garnering a few new members. Cheryl Brantley then briefly took the floor to remind those present that membership dues are due in May. With that the business portion of the meeting concluded and it was on to polychaetes.

Veronica Rodriguez-Villanueva shared images of two specimens from different stations she thought were *Monticellina serratiseta*. One specimen had a distinctive barred dorsal staining pattern which Larry thought was *Monticellina* sp 1 Lovell and Phillips 1995. We went to the taxonomic toolbox at the SCAMIT website, reviewed the voucher sheet for *Monticellina* sp 1, and thought it was a good match. Veronica's next specimen had teeth on the neurosetae that were more distinct and separated and we were not able to fully identify it. Veronica had pictures of other Bight cirratulid specimens that were problematic and not identified. She shared images of a specimen she had tentatively called *Aphelochaeta phillipsi*. She will send out photos to the Bight'08 group for review.

Kathy Langan then shared some interesting Terebellidae she had recently encountered in Bight'08 samples. She had specimens of *Neoleprea californica*, *Scionella japonica*, and *Thelepus hamatus*. Larry had reported *Neoleprea californica* for the first time from the LACSD July 2009 survey. He recommended reviewing the "Remarks" section of *Neoleprea japonica* on page 264 of the MMS Taxonomic Atlas, Volume 7, Chapter 9 Terebellidae for more information on this species.

Ricardo Martinez-Lara then showed everyone his Pentax camera system using fixed lenses with hood adaptors for photography through the eyepiece of the microscope. The advantages of his system are that he can quickly go from dissecting to compound microscope with no set up. Ricardo shared many high quality images he has taken using this system. There is minimal expense (hood adaptors) to converting a regular 35mm camera/lens system to this purpose.

The group then moved into the primary topic of the day, a review of recent papers with name change implications to species listed in Edition 5 of the SCAMIT species list. The following literature list was compiled by Larry Lovell and Leslie Harris. The content of each paper and the implications to name usage of local fauna were reviewed. Some of the literature citations are followed by a comment on their effect on the Ed 5 species list.

Aguado, T.M. and G. San Martin. 2008. Re-description of some enigmatic genera of Syllidae (Phyllodocida: Polychaeta). Journal of the Marine Biological Association of the United Kingdom 88(1): 35-56.

Parexogone brunnea (Hartman 1961) ----- new generic placement for *Exogonella brunnea*.

Brantley, C.A. 2009. A new species of *Poecilochaetus* (Polychaeta: Poecilochaetidae) from coastal waters off Southern California, USA. Zoosymposia 2: 81-89.

Poecilochaetus martini Brantley 2009 ----- formal description of *P.* sp A SCAMIT 2003 §.

Meißner, K. and M. Blank. 2009. *Spiophanes norrisi* sp. nov. (Polychaeta: Spionidae) – a new description from the NE Pacific coast, separated from the *Spiophanes bombyx* complex based on both morphological and genetic studies. Zootaxa 2278: 1-25.

Spiophanes norrisii Meißner and Blank 2009 -----replaces NEP usage of *Spiophanes bombyx* (not Claparede 1870).

Salazar-Vallejo, S. 2007. Revision of *Flabelliderma* Hartman 1969 (Polycheata: Flabelligeridae). Journal of Natural History. 41 (33-36): 2037-2061.

Flabelliderma ockeri Salazar-Vallejo 2007. -----new addition to list.

Flabelliderma papillosa Salizar-Vallejo 2007. -----new addition to list.

San Martin, G. et al 2009. Revision of the genus *Pionosyllis* (Polychaeta: Syllidae: Eusyllinae), with a cladistic analysis, and the description of five new genera and two new species. Journal of the Marine Biological Association of the United Kingdom 89(7): 1455-1498.

Paraehlersia articulata (Kundnov and Harris 1995) in San Martin 2006 ----- new generic placement for *Pionosyllis articulate.*

Opisthodonta uraga (Imajima 1966) ----- new generic placement for *Pionosyllis uraga.*

Tovar-Hernandez, M.A. 2008. Phylogeny of *Chone* Kroyer, 1856 (Polychaeta: Sabellidae) and related genera. Journal of Natural History 42(33): 2193-2226.
This paper removes several species from the genus *Chone* Kroyer 1856 by reestablishing one old genus, *Dialychone* Claparede 1870, and erecting a new one *Paradialychone* Tovar-Hernandez 2008. Complete lists of the new generic divisions are presented below. The species listed in Ed 5 are in **BOLD**.

Chone Kroyer 1856 - Type species: *Chone infundibuliformis* Kroyer 1856
C. aurantiaca (Johnson 1901) – Washington
C. duneri Malmgren 1867 – Spitzbergen – reported from the NEP but not confirmed by Tovar-Hernandez (2007) (see *P. bimaculata* below)

C. gracilis Moore 1906 – Alaska
C. infundibuliformis Kroyer 1856 – Greenland – reported from the NEP but not confirmed by Tovar-Hernandez
***C. magna* Moore 1923) – California**
***C. mollis* (Bush in Moore 1904) – California**
Chone sp Aleutian Islands of Tovar-Hernandez 2007
Dialychone Claparede 1870 (re-established Tovar-Hernandez 2008) - Type species: *Dialychone acustica* Claparede 1870
***D. albocincta* (Banse 1972) – California**
***D. veleronis* (Banse 1972) – California**
Paradialychone Tovar-Hernandez 2008 - Type species: *Chone americana* Day 1973
***P. bimaculata* (Banse and Nichols 1968) – Washington (and CA) – Synonymized with *C. duneri* by Banse 1972 (which accounts for NEP records of that species); re-validated by Tovar-Hernandez 2007, see Ed 5 listing**
***P. ecaudata* (Moore 1923) – California**
***Chone ecaudata* (Moore 1923) fide Banse 1972, Tovar-Hernandez 2008, reestablishes the jr synonmy status of *Chone minuta* Hartman 1944**
***P. eiffelturris* (Tovar-Hernandez 2007) – Panama & California**
***P. paramollis* (Tovar-Hernandez 2007) - California**

Other recent papers of interest to Southern California area polychaete taxonomists are:

Bakken, T. et al 2009. A review of paragnath morphology in Nereididae (Polychaeta). Zoosymposia 2: 305-316.

Blake, J.A. et al 2009. *Capitella teleta*, a new species designation for the opportunistic and experimental *Capitella* sp. I, with a review of the literature for confirmed records. Zoosymposia 2: 25-53.

Blake, J.A. 2009. Redescription of *Capitella capitata* (Fabricius) from West Greenland and designation of a new type (Polychaeta, Capitellidae). Zoosymposia 2: 55-80.

Bleidorn, C. et al 2006. Mitochondrial sequence data expose the putative cosmopolitan polychaete *Scoloplos armiger* (Annelida, Orbiniidae) as a species complex. BMC Evolutionary Biology 6: 47.

Bleidorn, C. et al 2009. On the role of character loss in orbiniid phylogeny (Annelida): Molecules vs. morphology. Molecular Phylogenetics and Evolution 52: 57-69.

Darbyshire, T. and A.S.Y. Mackie 2009. Two new species of *Diplocirrus* (Polychaeta: Flabelligeridae) from the southern Irish Sea and South Africa. Zoosymposia 2: 91-103.

Dean, H.K. and J.A. Blake 2007. *Chaetozone* and *Caulleriella* (Polychaeta: Cirratulidae) from the Pacific Coast of Costa Rica, with description of eight new species. Zootaxa 1451: 41-68.

Dean, H. and J.A. Blake 2009. *Monticellina* (Polychaeta: Cirratulidae) from the Pacific coast of Costa Rica with descriptions of six new species. Zoosymposia 2: 105-126.

Diaz-Castaneda, V. and S. Valenuela-Solano 2009. Polychaete fauna in the vicinity of bluefin tuna sea-cages in Ensenada, Baja California, Mexico. Zoosymposia 2: 505-526.

Doner, S.A. and J.A. Blake 2009. Two new species of *Aphelochaeta* (Polychaeta: Cirratulidae) from deep water off northern Calilfornia. Zoosymposia 2: 127-137.

Jirkov, I.A. 2008. Revision of Anpharetidae (Polychaeta) with modified thoracic notopodia. Invertebrate Zoology 2: 111-132.

Paxton, H. 2009. Phylogeny of Eunicida (Annelida) based on morphology of jaws. Zoosymposia 2: 2241-264.

Radashevsky, V.I. and P.C. Lana 2009. *Laonice* (Annelida: Spionidae) from South and Central America. Zoosymposia 2: 265-295.

Reuscher, M et al 2009. Four new species of Ampharetidae (Annelida: Polychaeta) from Pacific hot vents and cold seeps, with a key and synoptic table of characters for all genera. Zootaxa 2191: 1-40.

Salazar-Vallejo, S. and L.H. Harris 2006. Revision of *Pilargis* de Saint-Joseph, 1899 (Annelida, Polychaeta, Pilargidae). Journal of Natural History 40 (3-4): 119-159.

Schüller, M. and P.A Hutchings 2010. New insights in the taxonomy of Trichobranchidae (Polychaeta) with description of a new *Terebellides* species from Australia. Zootaxa 2395: 1-16.

BIBLIOGRAPHY

LeCroy, Sara E. 1995. Amphipod Crustacea III. Family Colomastigidae. Memoirs of the Hourglass Cruises 9(2):1-139.

LeCroy, S.E. (2004). An illustrated identification guide to the nearshore marine and estuarine gammaridean Amphipoda of Florida. Volume 3. Families Bateidae, Biancolinidae, Cheluridae, Colomastigidae, Corophiidae, Cyproideidae and Dexaminidae. *Annual Report, Contract Number WM724, Florida Department of Environmental Protection*, 1–88.

Please visit the SCAMIT Website at: www.scamit.org

SCAMIT OFFICERS

If you need any other information concerning SCAMIT please feel free to contact any of the officers at their e-mail addresses:

President	Larry Lovell	(310)830-2400X5613	llovell@lacsd.org
Vice-President	Leslie Harris	(213)763-3234	lharris@nhm.org
Secretary	Megan Lilly	(619)758-2336	mlilly@sandiego.gov
Treasurer	Cheryl Brantley	(310)830-2400x5605	cbrantley@lacsd.org

Hard copy back issues of the newsletter are available. Prices are as follows:

Volumes 1 - 4 (compilation)	$ 30.00
Volumes 5 - 7 (compilation)	$ 15.00
Volumes 8 - 15	$ 20.00/vol.

Single back issues are also available at cost.

The SCAMIT newsletter is published every two months and is distributed freely to members in good standing. Membership is $15 for an electronic copy of the newsletter, available via the web site at www.scamit.org, and $30 to receive a printed copy via USPS. Institutional membership, which includes a mailed printed copy, is $60. All correspondences can be sent to the Secretary at the email address above or to:

SCAMIT
C/O The Natural History Museum, Invertebrate Zoology
attn: Leslie Harris
900 Exposition Boulevard
Los Angeles, California, 90007