

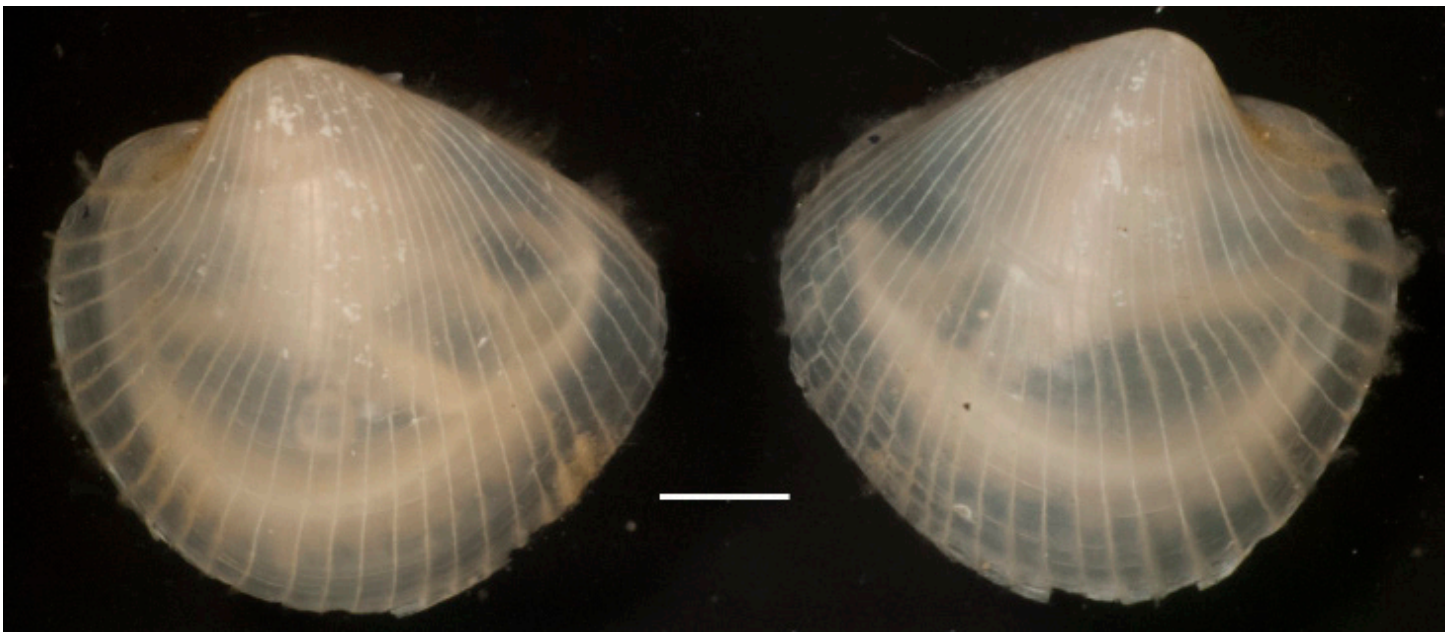
SOUTHERN CALIFORNIA ASSOCIATION OF MARINE INVERTEBRATE TAXONOMISTS



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SCAMIT Newsletter

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Policordia sp A - Exterior left valve and right valve, respectively (Scale bar 1 mm). Photo by K. Barwick.

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

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BIGHT'13 MISCELLANEOUS PHYLA FID, 8 SEPTEMBER 2014, CSD

Attendees: Larry Lovell, Don Cadien (LACSD); Megan Lilly, Wendy Enright, Nick Haring (CSD); Laura Terriquez, Ken Sakamoto, (OCSO); Greg Lyon, Erin Oderlin (CLA-EMD); Matt Hill (EcoAnalysts); Tony Phillips, Dean Pasko (DCE).

Business

The business meeting was brief with Larry announcing that this would be a busy month of multiple meetings to address the Bight'13 FIDs and voucher specimens from a variety of taxa.

UPCOMING MEETINGS

Visit the SCAMIT website at: www.scamit.org for the latest upcoming meetings announcements.

Meeting

We approached the meeting with a brief review of the Excel listing of all Bight'13 vouchers for the Miscellaneous or "Minor" phyla, except those of ABC Labs. Since the meeting was a scramble of multiple specimens being reviewed at the same time and your Secretary taking part in many of these as either the reviewer or review, the following notes are a synopsis of the resulting decisions, ordered by taxonomic group, not in the order that the reviews occurred. [As if it mattered.]

Incertae sedis – This turned out to be tissue from a cnidarian from Bight'13 Station 9201, 750m. It was a damaged mass of material seemingly representative of a complete organism that we could do nothing with except identify what we believed to be cnidoblasts.

Cnidaria – No anthozoans were reviewed at this meeting since many had been considered at the June Bight'13 Cnidarian meeting.

Nemertea – Many nemerteans were considered throughout the course of the day.

A specimen identified by Dean as *Zygeupolia rubens* from Bight'13 Station 8401 was found to be without a clear cerebral sense organ (CSO) other than that present at the end of the cephalic slit. Even though the CSO is not readily visible in specimens of *Z. rubens* where the head is in its typically contracted state, this specimen was not so contracted and the CSO should have been visible, if present. After some comparison to other taxa from the day, it was re-listed as *Heteronemertea* sp LAH1. Dean had a second "Heteronemertea sp" from Bight'13 Station 8151 that was subsequently confirmed as *Z. rubens*.

Dean also had several specimens from Bight'13 Stations 8163, 8151, 8008, all from shallow water bays and marinas with the following characteristics: Cream to olive-brown heteronemerteans with an elongate, tapering cephalon with shallow cephalic furrow; medium-sized, round mouth situated back from end of shallow cephalic groove (not at end); no separate CSO; and a cirrus present. He had designated these as *Heteronemertea* sp DC1, but upon review their identifications were changed to *Heteronemertea* sp LAH1 (=Lineidae sp LAH1 from the Feb 2014 Bight'13 Nemertean Meeting).

Dean continued his run with specimens of *Micrura alaskensis* from Bight'13 Station 8328. This identification was changed to juvenile *Cerebratulus californiensis* because of the large mouth with marginal ribbing and a flattened posterior (see below). A specimen of *Micrura wilsoni* from Station Bight'13 Station 9399 and *Palaeonemertea* sp SD2 from Bight'13 Station 9245 were confirmed.



Megan had designated one specimen from Bight'13 Marina Station 8426 (4m) as Lineidae sp LAH 1(?). The identification was confirmed and we re-designated the taxon as Heteronemertea sp LAH1 since a cephalic slit was very faint to non-existent, leaving placement in Lineidae a little uncertain.

Nick then brought forth another Lineid that he had simply left at the family-level. It was from Bight'13 Station 9373 (101m), had a thin cephalic slit, a light colored body with a cream anterior margin along the cephalon, and no eyes (verified by clearing). We left it at Lineidae.

We then reviewed a few tubulanids collected by the City of San Diego staff. One from Bight'13 Station 9122 (257m) was clearly a tubulanid, but no one could put a name on it, so it was left at Tubulanidae. Another from Bight'13 Station 9474 (87m) was changed to Tubulanidae sp SF1. In contrast, a couple of other specimens (Bight'13 Stations 9321, 45m and 9378, 100m) were changed from Tubulanidae sp SF1? to Palaeonemertea.

Megan also had a somewhat different looking specimen from Bight'13 Station 9378 (100m) that she had tentatively placed in *Tubulanus polymorphus*? and her hunch was confirmed and the identification left at *T. polymorphus*.

Matt also brought out a few animals for review. An Anopla sp (Bight'13 Station 9482) was changed to *Zygeupolia rubens*, as was a specimen from Bight'13 Station 9458, originally designated as Tubulanidae (with the comment "indeterminate"). His specimen of *Tubulanus polymorphus* from Bight'13 Station 9449 was confirmed, while a similar specimen from Bight'13 Station 9487 that he had noted had a "dark brownish purple preservation band in the esophageal region" was changed to *Tubulanus* sp A. Matt also had a specimen from Bight'13 Station 8338 that was generally white throughout the length of the body; the anterior epidermis was wrinkled; the lateral nerve chords (LNC) were located between the epidermis and outer circular muscle layer throughout length of body; and there were no lateral or cerebral sense organs visible. He had tentatively designated it as Palaeonemertea sp OC1, but the general consensus was to leave the record as Tubulanidae.

Wendy had an enoplan from Bight'13 Station 9397 (26m) that she had left simply at Empletonematidae. Her identification was confirmed as something new to SCAMIT. It was unusual in that it had two anteriorly positioned, red, crescent-shaped eyes, and an elongate, narrow, stylet with three basal rings. We called it Empletonematidae sp SD1. Hopefully, Wendy will produce a voucher sheet to this effect.

In addition, OCSd staff brought specimens of *Zygeupolia rubens* and a *Carinomella lactea* from Bight'13 Station 9186 (47m) that were confirmed.

Of course, a lot of constructive banter and general sharing of knowledge and experience accompanied these nemertean reviews. One discussion in particular centered on the identifications of *Cerebratulus californiensis*, *C. marginatus*, and *Micrura* spp, sources of much consternation. The following is an account of the discussion.

C. californiensis is recognized by several SCAMIT members as having a large, muscular mouth, where the muscular nature of the mouth is indicated by the presence of a ribbed margin, particularly along the posterior margin. It also has more rounded lateral margins, and a uniform body color (i.e., does not have distinctly white lateral margins posteriorly).

In contrast, *C. marginatus* is recognized by the smaller, less muscular mouth (i.e., absence of ribbing along margin of mouth), more flattened lateral margins, particularly posteriorly, that are also distinctly lighter than the buff background color of the body.



Micrura can be distinguished from *Cerebratulus* by the less robust cephalic slit and a smaller, smooth, less muscular mouth.

The City of San Diego staff use a general convention relating to their use of the presence/absence of neurochord cells to distinguish between *Micrura* and *Cerebratulus* (see attached comparison sheet). The convention is that if the specimen is less than 3 mm in diameter, they do not attempt to cross-section the animal and instead leave the specimen at family-level identification, Lineidae, although, for practical purposes, some argued that 5 mm might be more reasonable.

In contrast, Tony noted several traits he uses to distinguish *Micrura* and *Cerebratulus*. *Micrura*, in his observations, has a more squared to quadrate-shaped anterior margin of the head, a more linear and rounded body (i.e., not widening or tapering markedly), and the caudal cirrus is typically short and attached to a more squared posterior end. In contrast, *Cerebratulus* has a more tapered or rounded anterior, broadened body that is raised mid-dorsally (due to the narrowing lateral margins), and a posterior end that narrows towards the caudal cirrus. He has also noticed that specimens he regularly refers to *Micrura* have a shorter cephalic slit than specimens of *Cerebratulus*. In *Micrura*, the slit only extends for a short distance, never reaching the mouth, while in *Cerebratulus* the slit usually extends very clearly to the level of the mouth.

In the end, there was no resolution as to which method, external morphology, histology of the neurochord cells, or gestalt was most reliable. [Secretary's note: On 11/20/2014, I examined a 40 mm long x 3 mm diameter specimen from OCSD Station 1, collected on 7/9/2014, that had a long, ribbed mouth, deep cephalic slits, broken cirrus, buff background color, and highly wrinkled body and was able to confirm the presence of neurochord cells by examination of a thin cross-section. In contrast, I've examined several other specimens, also from 3 to 5 mm in diameter that fit the above description, but did *not appear* to have neurochord cells.]

Finally, some in attendance shared the characters they use to distinguish Heteronemertea when attempting to identify various taxa:

- Presence/absence of lateral slits at proboscis pore (said to be present in *Baseodiscus*)

- Presence/absence of simple white line, cephalic furrow (very shallow depression), or cephalic slit (deep slit)

- Presence/absence of pit at end of cephalic line/furrow/slit

- Presence/absence of cerebral sense organ (CSO)

- Mouth size, shape, musculature

- Presence/absence of neurochord cells within the lateral nerve chord

- Caudal cirrus can be present in some genera

In some post-meeting voucher/FID reviews, Dean found that some Heteronemertea have the LNC external to the central circular muscle while others have the LNC within the inner longitudinal muscle (i.e., internal to middle circular layer). Unfortunately, Dean has not had time to pursue this character state further; but it may be something that can be considered during the identification process going forward.

Sipuncula – Several sipuncs were considered during the day. Matt brought a specimen from Bight'13 Station 8033 listed as *Golfingia* sp 1 that was reviewed and identified as *Thysanocardia nigra*. Dean also had several specimens that were designated as a provisional taxon (*Sipuncula* sp DC1) based upon the presence of elongated nephridia and thickened microvilli of the contractile vessel. The consensus for 3 of the 4 specimens from Bight'13 Station 9257 was to leave them at



Thysanocardia nigra (variant), while another much smaller specimen that had not been dissected was identified as *Apionsoma misakianum* due to the presence of the bilobed nephridia observable upon dissection.

Dean also had a specimen of *Nephasoma cf pellucidum* from Bight'13 Station 8033 (8.1m) that appeared to be the same as Megan's specimen distributed via the Bight'13 Listserver. Megan was able to confirm that Dean's specimen was the same as one she had collected. Her identification sheet of *Nephasoma* sp SD1 was distributed with SCAMIT NL Vol 33, No 2. Megan then brought out a specimen from Station 9321 (45m) that was confirmed as being *Siphonosoma ingens*.

Hemichordata - Moving on we reviewed a specimen originally identified as *Schizocardium* by Megan. The identity of the specimen, from Bight'13 Station 9148 (590m) was changed to *Balanoglossus* sp, but with some recognition that it was likely not the same as the shallow water specimens typically identified as *Balanoglossus* sp by the member monitoring agencies. There was even some discussion that it could represent another genus of Ptychoderidae, *Glossobalanus*. It's the Secretary's observation that more work is needed on the local taxa of Hemichordata: We may have more taxa represented than are being recorded.

Ascidians - One of Megan's favorite groups. Dean, who was dealing with many embayment stations, brought all of the specimens. *Ciona intestinalis* (Cionidae) and *Polyandrocarpa zorritensis* (Styelidae) from Bight'13 Station 8112 were confirmed. *Molgula verrucifera*, from Bight'13 Station 8102, was noted by Dean as having branched atrial tentacles, seven branchial folds, S-shaped dorsal tubercle, renal sack and a thick tunic with several "hairs". We left the identification as *Molgula* sp and charged Dean with comparing the specimen to the description in Van Name (1945) for *M. manhattensis*. [Dean was able to review Van Name 1945 and confirm this identification as *M. manhattensis*.]

Continuing on, we ran into the problem of an unfortunate mis-labeling of one of Megan's Ascidian identification aids. Dean brought specimens of *Molgula napiformis* for confirmation based on the branched tentacles, spiral stigmata, and long stolon. However, Megan changed the identification to *Molgula* sp SD1 based upon the position of the ovaries within the primary intestinal loop. Unfortunately, Megan's identification sheet that Dean had used for this identification had a specimen of *Molgula* sp SD1, with the ovaries within the primary intestinal loop, mistakenly labeled as *M. napiformis*. The issue was discussed at length and Megan volunteered to correct the comparison sheet and re-distribute it to the group.

SCAMIT EXECUTIVE COMMITTEE ANNUAL MEETING, SEPTEMBER 13, 2014

Attendees: Don Cadien, Dean Pencheff, Larry Lovell, Dean Pasko, Laura Terriquez, and Leslie Harris

Larry began the meeting by describing the year's three biggest accomplishments. SCAMIT organized and co-hosted the second EPA/USGS-sponsored CBRAT workshop to evaluate potential target species that could be impacted by Global Climate Change with warming water temperatures and increasing pH. This workshop netted SCAMIT \$4,500 for 2013/14, contributed to an important issue facing the nation, and involved the expertise of several SCAMIT members: Rick Brusca, Mary Wicksten, Doug Eernisse, Don Cadien, Tim Stebbins, Ron Velarde, and Paul Valentich-Scott.

SCAMIT also organized several workshops to review the local taxonomy of some difficult taxonomic groups in preparation for the Bight'13 regional survey. These workshops covered both trawl and infaunal organisms, with emphasis on the Cnidaria after the passing of our local expert



and colleague John Ljubenkov. Tony Phillips was commended for his excellent effort to review John's personal voucher collection of cnidarian specimens, dissecting and photographing them in an effort to share that expertise through two workshops on the subject. In its effort to standardize southern California taxonomy, SCAMIT also organized workshops to review Bight'13 survey vouchers and specimens requiring further identification (FIDs) from all the major taxonomic groups. These meetings have helped inter-calibrate name usage, avoid the mis-application of names, and, we hope, retain greater species-level identification during the post-data submission synoptic data review process.

Finally, the Taxonomic Database Tool beta version was presented at both the SCAS Annual Meeting and the 10th International Polychaete Conference. The tool was generally well received by various attendees and some expressed interest for such a tool for their study areas. Unfortunately the Bight'13 efforts prevented the Committee from addressing some of the issues with the Toolbox, such as duplicate voucher sheets, voucher sheets with old names, etc. The Committee still believes that each monthly meeting could dedicate a small amount of time to reviewing the information in the toolbox that relates to the taxon being covered at the meeting. President Lovell volunteered to lead that effort since he will be present at all SCAMIT meetings. The discussion then migrated to SCAMIT's effort to build an image library, which is to be linked to the Taxonomic Database Tool. We discussed various ideas and options for this effort, such as how to make it less cumbersome to SCAMIT members so that there is a willingness to participate in the effort, how to develop a consistent file naming system, and the effort that would be involved. After some lengthy discussion there was general agreement to hold a separate meeting dedicated to the image library, what would be involved (e.g., data base, storage space, funding, on-going management), and development of a strategy for moving forward before attempting to bring in an intern. At the least, however, members may be asked for examples of their current image file naming system to see what examples are out there and look for any consistent conventions that might simplify the eventual collection and renaming of files.

This led to discussion of the need to build a tool to update the species list with the most recent edition of the SCAMIT species names that underpins the Taxonomic Data Base Tool. SCAMIT received a cost estimate of \$20,000 from SCCWRP to create that update tool; but a few SCAMIT members thought that estimate was excessive. There was no clear resolution on how to proceed. Some members believe it is the responsibility of the State to hold SCCWRP accountable for updates to the tool since several State-mandated and SCCWRP-developed biological assessment tools are tied to the list. Resolution of the issue will require a collaborative effort and Larry is working with SCCWRP and their CTAG representatives to resolve this funding issue.

Secretary Dean Pasko suggested that the Committee assign someone to lead each of these major tasks (e.g., the image library, name update tool, database tool clean-up) to ensure their successful completion. Further discussion was tabled until potential task leaders could be approached.

Dean Pasko provided the Secretary's report. Although we are behind in actual publication of the meeting minutes, all but one meeting has a complete set of minutes that has been reviewed by one or more participants. Unfortunately, Dean's commitment to Bight'13 taxonomy has also prevented him from taking the final step of preparing the final drafts of the minutes and getting them out to the Executive Committee for review. However, we are not as far behind as it may seem. In addition, Larry mentioned that Megan Lilly, past-Secretary, has begun work on the backlog of 2012 issues. She has sent several to Larry for review and is collecting commentary from other members.

Treasurer Laura Terriquez's report showed that SCAMIT is pretty healthy financially. After cleaning up the membership list and removing those members who were no longer paying, a reduction of about 20 names, there are now 150 paying members. Over the course of the year



SCAMIT generated \$6,887.91 in income, and had expenses totaling \$3,162.78 for newsletter production and distribution, meetings, and website expenses. SCAMIT's 2014 Operating Budget is \$26,043, which leaves \$6,510 available for publication grants (25% of the Operating Budget). We discussed the discrepancy of costs for mailing out hard copies of the newsletter, and that the \$15 differential doesn't really cover the printing and distribution charges. Laura also investigated the use of PayPal® for paying annual dues. There would be a very modest cost to SCAMIT and the Executive Board voted to adopt PayPal® as an option for payment of annual dues starting in 2015. The Board decided it would be necessary to raise dues by about \$1 per membership to help cover these additional charges. Laura will confirm the amount necessary to cover printing, postage, and Paypal fees and report to the Committee.

Leslie Harris, Vice President and Dean Pentcheff, Webmaster, provided their reports. Leslie commented on the meeting schedule the past year, the Bight'13 focus of upcoming meetings, and general difficulty in getting volunteers to lead meetings. Dean Pentcheff reported that his work the past year has been to keep the website updated, posting meetings, job listings, and new tool box files.

BIGHT'13 CNIDARIA, 15 OCTOBER 2014, CSD

Attendees: Ron Velarde, Megan Lilly, Wendy Enright, Nick Haring (CSD); Larry Lovell, Don Cadien, Terra Petry, Chase McDonald (LACSD); Dean Pasko (DCE).

Business:

Larry announced that there are no meetings planned for November or December because of the numerous Bight-related meetings that we have had in recent months. However, there was some discussion about holding a joint meeting to review images for the SCAMIT Toolbox as well as clean-up the toolbox. We discussed the idea of having everyone bring their images of sipunculids to share and confirm, and also review and edit the various identification aids in the Sipuncula section of the taxonomic toolbox. The idea of picking a relatively small group, such as sipunculids, might be a good way to work out the kinks of these toolbox cleanup meetings.

He then mentioned his recent discussion with Lisa Gilbane from Mineral Management Service who suggested hosting a meeting in Camarillo to verify trawl vouchers and other specimens from her recent surveys.

Larry also announced that Laura is resigning her Treasurer position after the 2015 term. She will be taking on other responsibilities for the Orange County Sanitation District Ocean Monitoring Program and will have to relinquish her taxonomic duties. Consequently, SCAMIT will need someone to run for Treasurer next session.

Dean announced some literature for the taking. Don has decided to downsize his literature collection and would have his excess literature, many thousands of pieces, available in the near future. The pieces are already cataloged and databased. He will be donating them to SCAMIT to use for fund raising with the goal of getting the literature in the hands of SCAMIT members before being dispensed to others.

Meeting

This meeting was dedicated to resolving any remaining Cnidarian specimens for further identification (FID). The taxonomic portion of the meeting started with us viewing pictures of John's Anthozoa sp 1? in Tony's February 2014 presentation of Big John's Cnidaria voucher collection. Megan noted that in the images it looked like the pigmented form of *Halcampa decemtentaculata* that she has seen from City of San Diego samples. *H. decemtentaculata* is



usually white but can come in variety of colors such as dull reddish brown with white spots seen on occasion (Hand 1954). Dean then pulled a specimen, which was similar to those pictured for Anthozoa sp 1?, but happened to be damaged. The animal had 10 round, short tentacles with pigment, similar to *H. decemtentaculata*, but had differences in the texture of the epidermis of the column. The incomplete specimen was from Bight'13 Station 9329 (98m), and Dean decided to leave it at Halcampidae.

Dean next brought out a specimen of *Ceriantharia* sp D; but others felt it was just *Ceriantharia* sp. This specimen was in a poor state of preservation. We couldn't reach consensus on whether the mesenteries truly ended half way down or if they were just "petering" out/damaged, which would put the *Ceriantharia* sp D designation in doubt. This brought us to a discussion regarding standardization of effort. Everyone present admitted that for the most part if they encounter a ceriantharid in a sample they dissect it to look for the presence of acontioids – an acontia-like structure appended to the base of a ceriantharian mesentery with the presumed function of an acontia – and if present at the base of the paired mesenteries identify it as *Arachnanthus* sp A, and if absent, they leave it at *Ceriantharia* sp; with the exception of large animals in good condition that might be identifiable to something like *Pachycerianthus*. Don Cadien then commented that for the most part the Bight'13 cerianthid ID's will be left at "sp" with the exception of the two mentioned above – *Arachnanthus* sp A and *Pachycerianthus fimbriatus*.

Actiniaria sp 1 is a species that is troubling people. Dean found 300+ cnidarian individuals in a shallow (10m) Bight'13 bay sample. He separated them into two groups; those with a pedal disk and a "wrinkled" column (i.e., with longitudinal folds), which he called Actiniaria sp 1, and those which had no pedal disk and a smooth column which he called *Diadumene* sp. Dean was volunteered to work with Tony on creating a definitive way to separate them. [As a side-note, he has since found Actiniaria sp 1 in samples from southern San Diego Bay, near the mouth of the Sweetwater River.]

Dean then brought out specimens of Zoanthidea sp A and Zoanthidea sp B of Ljubenkov (see SCAMIT NL, No 23, Vol 11) collected from Bight'13 Station 9329, 98m. He noted that some were attached/colonial and some were not. He was questioning the difference between the two species. We all agreed it was hard to discern based on the little information available. Dean had called them Zoanthidea sp A/B. But we decided to peruse John's Bight'03 slide show to see if we could sort things out a little further. John distinguished the two species by the base, with Zoanthidea sp A having a flattened base with a limbus and Zoanthidea sp B having a rounded base with no limbus. After review, we decided that Dean's specimens were Zoanthidea sp B (no limbus). We had some discussion as to why these had not been designated as *Epizoanthus*, as discussed in Cutress and Pequegnat (1960). We were intrigued by the description of *Epizoanthus* as being collected as individuals or colonies, which was the case for Dean's specimens: several were found as individuals while three others had formed a branching colony. After some review of other literature, Don found that these specimens may also fit within *Palythoa* based on the way they expand near the scapulus and are narrow and elongate proximally. This genus is mostly colonial, with one species being solitary. In addition we examined Plate 1 in Carlgren (1951) that contained a picture of *Palythoa preaelonga*. We agreed that *P. preaelonga* resembled the general morphology of the specimens at hand, but there was not enough information to verify this identification. Since there is no "true" description of Zoanthidea sp B (only a picture and some comments in John's presentation), and it is not in the SCAMIT species list, Dean will create a voucher and will call it Zoanthidea sp DC 1, listing Zoanthidea sp B Fide Ljubenkov 2003 as a synonym.

A great discussion came about as we reviewed Dean's specimen of the sea pen *Anthoptilum grandiflorum*. He initially thought it might be *Virgularia* sp B or *A. grandiflorum*. This specimen was small (about 5cm) relative to the cited maximum size of 80cm. After close examination it



was decided that it had no subdermal sclerites. The siphonozooids were difficult to see at first but were eventually viewed in rows on either side of the ventral groove on the rachis. There was some discussion as to whether *Virgularia* sp B is actually a juvenile *A. grandiflorum*. Upon review of the remarks section for *A. grandiflorum* in Hochberg and Ljubenkov (1998), we were able to confirm Dean's identification. However, in the process, we found that Dean's specimens matched the images of *Virgularia* sp B Ljubenkov 2011 very closely. John's images were taken from Bight'03 survey specimens (see SCAMIT NL, No 23, Vol 11). Upon review of John's specimens, which are in Tony Phillips collection, we may confirm this synonymy of *Virgularia* sp B under *A. grandiflorum* by looking for the presence of subdermal sclerites.

The sea pen fun was just beginning as Dean then showed a large specimen of *Virgularia agassizii* from Bight'13 Station 9190. That specimen was verified but he had also found two animals from Bight'13 Station 9284 (827m) that were vaguely similar but not "quite right". These other specimens had strange leaves with long thin polyps. Some leaves had only one polyp while other leaves had two or three extra long polyps. We reviewed John's Bight'03 presentation and found that they were very similar to John's "*Virgularia* sp". In doing so, we discovered that LACSD also sampled this animal as well at a deep station. The need to create a provisional for this species became quite obvious, but no volunteers emerged.

We then moved on to a few FIDs from City of San Diego. Nick Haring joined us and brought out a beautiful specimen of Actiniaria FID from Bight'13 Station 9377, 17m located just north of Malibu. We determined it to be *Urticina*, based upon the presence of verrucae and ridges (pseudoacrorhagi?) located along the margin of the oral disc and between the tentacles. A discussion then ensued about how to differentiate *Urticina* sp A McPeak 1978 from other described species of the genus, particularly *U. columbiana*. Megan and Wendy both remember Tony talking about it being based on the pattern of the verrucae. Unfortunately, none of us present had the expertise to distinguish the two, and we needed to check with Tony before trying to put a final identification on this specimen.

Nick then brought out a small, white/cream colored specimen from Bight'13 Station 9421 (5m), which turned out to be a juvenile *Ceriantharia*. Another poorly preserved specimen from Bight'13 Station 9443 (387m) was left at Actiniaria, as was another damaged specimen from Station 9084. One of two specimens from Station 9047, 668m was confirmed as *Halianthella* sp A, and Dean said the other was a perfect representation of Big John's *Ceriantharia* sp D; but others present were less convinced. *Ceriantharia* sp D was a large cerianthid with mesenteries that stopped mid-body and possessed up to three cycles of tentacles. Dean has seen this mesentery pattern several times before, but hadn't documented it well. We decided that an effort to document these differences would be of value, but, in the end, left the specimen at *Ceriantharia* sp.

We next dove headlong into the morass of *Edwardsia* spp. We reviewed *Edwardsia* sp SD1 from Bight'13 Station 9190, 154m that had been identified by Nick. Megan had originally designated this species from CSD regional stations as well as some routine monitoring stations. Dean performed a basotrich mount and confirmed that it was not *E. juliae* due to the very small club-shaped basotrichs of the nemathybomes, in addition to the larger nemathybome blisters and different looking physa. We set aside a semi-permanent slide of nemathybome basotrichs for Dean to photograph using the Motic compound camera. Megan will add this information to the species ID sheet.

Dean then shared his specimen of *Edwardsia* sp DC1, and again confirmed that the very strongly dimpled column and unique nemathybomes made this species different from anything else previously seen in the Southern California Bight (SCB). An identification sheet of this species was distributed to the Bight'13 taxon list server, but the pictures do not adequately show the very distinctive dimpled body.



Dean then brought out specimens of Anthozoa #49, commonly called the “brown tent anemone”. There were a few taxonomists present who had not seen this species. It is fairly distinctive and once seen is usually remembered.

Next we looked at specimens Dean had identified as *Cactosoma arenaria* from Bight’13 Station 9190, 690m. Megan and Wendy confirmed that the specimen very closely matched the photos from Tony’s February 2014 slide presentation, although we could not confirm the validity of the original ID. The generic description of *Cactosoma* in Carlgren (1949: page 34) discusses that *C. arenaria* is a shallow water species, and this single specimen was from 690m. We retained the ID but will make additional attempts to research the depth range of *Cactosoma*.

Megan brought out a large Actiniaria FID from Bight’13 station 9321. Upon examination we decided that it was just a very long, thin specimen of *Halcampa decemtentaculata*.

Dean then showed a specimen of Corallimorpharia that had been identified by Tony. It was not from a Bight’13 station, but the animal came from a station near Avalon. We all got the opportunity to examine the beast and discuss the non-retractile capitate tentacles (i.e., tentacles with dactylozooids distally) common to that Order. However, some actinarians also have capitate tentacles, such as *Anemonactis* (as do some members of the Madreporaria). More information is needed to help people identify corallimorphs. We were then treated to a few images of a live corallimorph on display in the CSD seawater tank.

With that, it was time to move on from anthozoans to other cnidaria. Dean started off by showing us his specimen of *Corymorpha* sp DC 1 from Bight’13 station 9354, 236m. This specimen, from near the Mugu submarine canyon, was determined to be *Corymorpha palma*. The reason Dean had hesitated to identify it as *C. palma* is that we have notes indicating that species as being a shallow bay species. However, Don and Larry both felt that bay species can live offshore if the environment is correct, i.e., the sediments are similar (fine), lack of wave action, etc. They gave examples of polychaetes and mollusks that range from bays to deep offshore environments. After that discussion we were more comfortable confirming Dean’s specimen as *C. palma*. We also confirmed *Corymorpha bigelowi* and *Euphysa* sp A that Dean brought for confirmation.

Having muddled our way through all the cnidarians, we moved on to one of Megan’s favorite groups: Ascidians. She had identified one specimen to *Eugyra arenosa californica*, but as this species is relatively uncommon in their monitoring stations she was seeking a second opinion. After being examined by other taxonomists Megan’s identification was confirmed. The animal was not from a Bight’13 station, but from CSD monitoring station E-19. We then reviewed Dean’s sets of *Molgula napiformis* specimens and confirmed that both represented *Molgula* sp SD1 because the gonads were located within the primary intestinal loop.

Dean commented that he was confused about the differences between *Molgula napiformis* vs. *Molgula* sp SD 1. His confusion was justified because the identification sheet posted in the Taxonomic Tools on the SCAMIT site was miss-labeled, as was noted above in the minutes of the September 8th meeting. We reviewed the different placement of the gonads (within the **primary** intestinal loop in *Molgula* sp SD 1 and within the **secondary** intestinal loop in *M. napiformis*) and checked the figures in Lambert 1993. Megan recognized that she needs to revise the new sheet discussing the differences between the two species and label the images properly. She will try to recheck with Gretchen Lambert to see if she can get some further insight into *Molgula* sp SD 1.

With the day coming to a close Megan quickly cornered Don into looking at a juvenile mollusk she had found in one of her Bight’13 samples (9377, 17m). Don identified it as a juvenile *Terebra danae*.



BIGHT'13 POLYCHAETES, 22 SEPTEMBER 2014, NHMLAC

Attendees: Bill Furlong, Larry Lovell, Brent Haggin (LACSD); Kathy Langan, Ricardo Martinez-Lara, Veronica Rodriguez, Ron Velarde (CSD); Kelvin Barwick, Rob Gamber, Ernest Ruckman (OCSD); Greg Lyon, Erin Oderlin (CLA-EMD); Chip Barret (EcoAnalysts); Tony Phillips, Dean Pasko (DCE); Dorothy Norris (SFPUC); Erica Keppel, Michelle Marraffini (SERC); Leslie Harris (NHMLAC).

Business:

We started with a round of introductions with so many visitors to the meeting. Erica Keppel, from Italy, and Michelle Morraffini were visiting the Museum from SERC (Smithsonian Environmental Research Center) and working on polychaete invasions. In addition, Dot was visiting from San Francisco and there have been a few new additions to the agency taxonomy staff since her last visit.

Meeting

The meeting kicked off with Larry showing images of various specimens for confirmation or FID.

- *Allia* sp DC1 has a reduced number of long branchiae, and bulbous antenna. The specimen was collected from 699m at Station 9295.
- A Euclymeninae with weird bumps scattered over the body, lateral notches on the prostomium, but stained similarly to Euclymeninae sp A. Larry left it at Euclymeninae sp because of the fragmented condition of the specimens. Kelvin suggested that the bumps might represent a parasite of some type. It was collected from a 666m station and other deep stations.
- *Levinsonia* ? *gracilis* had modified neurosetae that appeared differently shaped in that they were slightly thicker.
- *Laonice* sp DC1 (Leslie convinced Larry that this deserved provisional status) from 600m. The inter-ramal pouches start on setigers 5–6 and the specimen had very long branchiae, relative to *L. pugettensis*, which has short branchiae.
- A single specimen of Polynoidae, similar to *Lagisca extenuata* had unidentate notosetae with weak serrations, and a prostomium with bumps. It came from Bight'13 Station 9190, 690m and was not well preserved. It was left at Polynoidae.
- *Terebellides* sp. from station 9399, 258m stained dark laterally on setiger 3. It was potentially *T. kobei* or *Terebellides* sp D with the head also dark staining at the front of the prostomium. Leslie suggested that it was not *Terebellides* sp D, and we left it at *Terebellides* sp.
- *Schistocomus* sp DC1. There were two specimens from Bight'13 Station 9346 with different branchial patterns of either *S. hiltoni* or *Schistocomus* sp A SCAMIT 1987§. The branchiae arrangement is bipinnate 1st, 2nd, 4th, and cirriform 3rd. The bipinnate state of 1 and 2 required very close examination from all angles to determine them correctly as they are thinner and with less obvious pinnae.
- *Chaetozone* ? *gracilis* from 692m that did not have a prostomial ridge and only a limited staining pattern.

Unfortunately for Larry, no one else had seen any of these interesting species.



Kelvin then showed slides of a few animals that OCSD had collected at various Bight'13 survey stations.

- Spionidae sp OC1 is a Spionid without branchiae, four eyespots, two small occlusions of some kind, and hooded hooks present in the posterior of the body. Leslie commented that a lot of deepwater spionids lose their branchiae.
- He had excellent images of *Malmgreniella* sp A showing the neurosetae with bracts, and elytra with pads of spines/microtubercles.
- He also had several specimens of what he called *Malmgreniella sanpedroensis* where the tines of the neurosetae looked long for *M. sanpedroensis*, and there was no speckling on the ventrum. Several people suggested that these might instead be *Malmgreniella* sp A.

Kathy Langan then showed a few images from the San Diego sample set.

- *Leaena cf caeca* had a different number of thoracic uncinigers, 10 instead of nine, and came from a 942m station.
- *Neoleprea californica* was collected at a 634m station, but may be something else since *N. californica* was initially reported intertidally.
- *Asabellides cornuta*, collected from Bight'13 Station 9030 525m that had sharp corners extending from the lateral margins of prostomium. Kathy shared this specimen because they don't often see it in San Diego and it was the first specimen of the species that she had seen.
- *Spiophanes anoculata* was found at a 942m station, and would represent a first record for SCAMIT.

Veronica Rodriguez also had a number of specimens to show and tell.

- *Semiodera inflata* was collected from 89m (Bight'13 Station 9474). This specimen had the dorsal shield restricted to dorsal and lateral surfaces, often well developed, and projecting posteriorly. The anterior setigers have pseudo-compound or transitional falcate neurohooks, while the posterior region has 2–4 neurohooks per ramus. The noto- and neurosetal lobes have small papillae. The body is cylindrical, swollen anteriorly and tapering posteriorly, with papillae generally arranged in single rows with some additional, sparse larger ones.
- A specimen designated as *Flabelligera* sp Bight'13 was collected from Station 9025 at 77m and has a well-developed cephalic cage. The body is pale with a thick, soft transparent tunic with adherent fine sediment and debris. It is also covered with long, distally swollen papillae (fusiform or clavate with a short thin peduncle). The notosetae are multi-articulated capillaries as long as the body is wide, and the neuropodia have one or two hooks each. The first falcate neurohooks are present in setiger 2. The neurohooks have 2 or 3 handles markedly articulated, and are thick crested, falcate and entire.
- *Bradabyssa* sp came from 159m (Bight'13 Station 9476) of the Channel Island strata. *Bradabyssa* sp has a poorly developed cephalic cage. The body is covered dorsally by large papillae, and smaller, broadly domelike papillae that terminate in a filiform tip and which are arranged in at least three transverse rows per segment. Ventrally the body is



also covered by smaller sized papillae broadly domelike, also terminating in a filiform tip and arranged in at least three transverse rows per segment. The neuropodia and notopodia possess long, slender papillae. The acicular neurosetae have transverse bars and are distally pointed with the tip drawn out as a slender filament, while the notosetae are all capillary with intermittent transverse bars along their length.

Leslie performed the identifications of polychaetes from a series of Bight'13 stations collected near and around the Western Channel Islands, providing her an opportunity to see some interesting animals. She showed a number of images of the crazy specimens she encountered as part of this Channel Island stratum.

- *Aricidea* (*Acmira*) sp SD2 is not a synonymy of *A. (Acmira) lopezi*. *A.(A.) lopezi* has a short antenna that does not extend to setiger 1, where as the antenna of *Aricidea* (*A.*) sp SD2 extends to setiger 2.
- *Dipolydora barbilla* was collected from one of the Channel Island stations. Kelvin commented that he might have called it *D. bidentata*, noting that the staining pattern, although striking, is not unique.
- *Polydora socialis* with spotting, a juvenile pigment pattern maintained into adulthood. The specimen also had gizzard plates, but these are not unique to *P. socialis*. In *P. socialis*, however, they are calcified and ridged where as in other species they are "soft."
- *Euchone* sp B Harris 1985 looks similar to *E. hancocki*, but differs in having eight abdominal setigers, with three in the anal area, but lacks an abdominal girdle. This species has two bands across the ventral margin of the anterior setigers, but the staining is faint and breaks up posteriorly.
- *Eusyllis* sp 17 Harris has a straight pharynx, linear body with long antennae, long tentacular cirri, and ventral cirri on setiger 1 that are enlarged and touching. This species is most likely being mistaken for *E. habei*.
- *Lumbrineriopsis* sp DC1 was tentatively left at Lumbrineridae.
- *Opisthodontia* sp 2 Harris is a fat bodied organism with long mid-dorsal cirri, and two conspicuous mid-dorsal papillae that form a "V" within the circum-oral ring of soft papillae. It also has gradation from long to short setae going from dorsum to ventrum.
- *Sigambra setosa* from a 788m Bight'13 station had sub-equal antennae, with orange coloration on the first several setigers and orange spots dorso-laterally on other setigers.
- *Streptodontia* sp 1 Harris (= *Opisthodontia* sp SD1) has extremely long antennae, tentacular, and dorsal cirri. The details of this species are covered in Leslie's table of syllids. It has huge knobby-headed acicula in anterior setigers through setiger 20, but all the setal groups are equally sized (i.e., the short setae are all sub-equal, as are all the long setae).
- *Trichobranchus hancocki* (as *Artacamella* in Ed 10), although Leslie suggested that this synonymy needs to be reviewed. *Artacamella* seems to have an unusual set of pores running along dorsum, ventrum, and laterally on body that are not present in *Trichobranchus*.
- *Lumbrineriopsis* sp SD1 collected from a 95m station.. It had the limbate portion of spinigers broad, which continue to the pygidium. These images lead to an interesting and spirited discussion about *Lumbrineriopsis* sp SD1 and its origin.



- A specimen of *Hesiospina* that had non-emergent acicular spines.
- *Ocobranchus* sp A (Trichobranchidae)
- *Podarkeopsis* sp F looked more like a syllid, than a hesionid. The notopodia had single furcate seta where the upper tine was 4–6 times longer than the lower tine. It was collected from 90m depth in Channel Islands.

Overall, the Channel Island samples yielded Leslie about 20 provisional species, including, in addition to those listed above, three provisional *Ephysiella* species and *Thelepus* sp C. Leslie also reminded everyone that she has four provisional species of *Pholoe* in addition to *Pholoe glabra*. For example *Pholoe* sp B has small papillae on elytra that number up to eight relative to the 4–5 large papillae found on *P. glabra*. *Phloe* sp B has been found in San Diego, Santa Monica Bay, and other shallow coastal waters of the SCB.

Leslie then showed her provisional species of *Terebellides* collected from the Chukchi Sea. She pulled together a table of the described species to demonstrate differences beyond the staining.

During the process of this review, Leslie shared that she often takes pictures of the small specimens using the compound scope with fiber optic lights projecting light from the side rather than using the sub-stage lighting.

We got into another discussion of the Shirlastain A orange stain and Leslie used a specimen of *Phylochaetopterus prolifica* to demonstrate the value of the stain.

After some discussion about the value, but difficulty of sharing all these high-resolution images, Larry mentioned that SCAMIT should consider designating a Dropbox folder for deposition of full sized images for sharing, especially on such complex surveys as these regional Bight surveys.

After lunch we reviewed many of the specimens that had been discussed more generally in the morning session. Kelvin kicked things off with a deepwater terebellid that could not be placed in genus, and will remain with Leslie for additional review. The specimen had 15 thoracic setigers according to Tony, but Larry counted 17. It was similar to *Pista wui*, but had a different lappet arrangement. *P. fasciata* was mentioned as one option, but later ruled out since it was collected from 603m. [A subsequent note from Kelvin indicated that Leslie believes this specimen to be *Pista disjuncta* Moore 1923.] Leslie then showed a picture of live *P. wui* showing the spiraled branchial filaments off the central stem, as well as some beautiful images of other live specimens.

Larry then brought out a mystery syllid from a shallow water station that turned out to be *Branchiosyllis exilis* Cmplx. It was collected in 18m of water, and had a black pharynx and distinctive claw-like setae.

Kelvin brought out the abbranchiate spionid that he had shared in the morning session. Leslie stained the specimen with orange stain to look for branchial scars, and was able to find scars and pouches on setigers 8–9. The specimen came from a 55m station, which is too shallow for *Prionospio ehlersi*, but there was some discussion about whether or not it might represent *P. lobata*. In the end, they decided to leave it at *Prionospio* sp.

Larry brought an *Arabella* with a dentate maxilla 1 ridge along its entire length, terminating in a bifid dentate tip. In response, Kelvin showed a voucher sheet of *A. endonata* created by Tom Parker. Larry's specimens were very similar. Leslie explained that many of Emerson's type specimens are missing and may never have been deposited to the museum. Emerson was a student of Fauchald's in the late 1970s and may have inadvertently left USC with the specimens in hand, never depositing them. Either way, there seems to be no way to verify his species.



Ron brought a specimen of *Pholoe* sp A with the numerous small papillae that Leslie confirmed.

Tony then brought out his “mystery beast” collected via shallow water vibra-cores off oil platforms. The specimen had paired spines at one end, with a transverse groove around the head end, and fine setae in the parapodia. After many eyes and a lot of rumination about head and rear ends, we brought in Kirk to get a definitive answer: an interesting looking rear end!

After that, the meeting deteriorated in a raucous adjournment.

BIGHT'13 CHAETODERMATIDS, 30 OCTOBER 2014, CSD

Attendees: Ron Velarde, Megan Lilly, Wendy Enright (CSD); Larry Lovell, Don Cadien, Terra Petry, Chase McDonald (LACSD); Kelvin Barwick (OCSD); Dean Pasko (DCE).

Business:

Larry announced that the next SCAMIT meeting would be Nov 17th at SCCWRP in the Medium Conference room to allow remote access. The meeting will be a review of the taxonomic toolbox that covers the Sipuncula, and be a forum to collect sipunculid images and new reference materials.

There will not be a December meeting since there have been many 2-meeting months this past year. In addition, we have no meetings scheduled for 2015 yet, which may create an opportunity to tackle other toolbox taxa. Don mentioned that he has been preparing a review of the northeastern Pacific tanaids and may be willing to lead a tanaid meeting sometime soon.

Larry noted that officer elections are around the corner, and we will need someone to take on Laura's duties as Treasurer. In response to Larry's review of the general Treasurer's duties with the addition of our new PayPal option, Kelvin mentioned that using PayPal, in addition to the existing check and cash methods of collecting dues, does complicate the process slightly. In general the Treasurer is responsible for the receipt of payments, SCAMIT's annual tax filing, keeping the membership list up to date, the disbursement of funds to cover expenditures, and the maintenance of the SCAMIT banking accounts.

Kelvin then discussed his trip to Oregon to visit Rae Rowe. Kelvin and Seth Jones visited Rae to collect Rick's taxonomic materials. Rae had requested that the bulk of the material, the voucher collection and personal notebooks be deposited at the City of San Diego's Marine Biology Laboratory with the understanding that they would make reasonable accommodation to all interested researchers. The trove of materials included all of Rick's personal voucher collection of over 900 databased taxa lots, his taxonomic notebooks, and a box of images on over 130 CDs. This taxonomic material is well cataloged, in that very detailed way that only Rick could do, which makes the material extremely valuable. Kelvin also found about 8–10 notebooks that included a list of distributional information by species relative to the Bureau of Land Management and perhaps the King Harbor work that Rick was involved in. It appeared to some that these notebooks were likely the beginning of the Straughan and Klink (1980) Species List, to which Rick contributed the polychaete section. We had some discussion as to how to organize this material to make it available to SCAMIT members (e.g., should it be digitized and put onto the SCAMIT list server, or left with the City of San Diego for people to access, etc.). Kelvin stated that he would follow up on this with the expressed goal of making as much of the information available to members as possible.



Meeting

The meeting was then transferred to our aplacophoran experts for specimen review. Wendy showed some simple whole animal images of *Falcidens hartmanae*, *Chaetoderma pacificum*, and several other specimens that required review, but we didn't get around to those specimens until later in the meeting.

Instead we jumped into the specimens that LACSD staff brought because they had pictures to share. We started with specimens from Bight'13 Station 9211, specimen A, an elongate animal with the head slightly broader than the neck. The images of the spicules were reviewed for thickness of the edges, the presences or absences of ridges, and overall shape. Initially, everyone was in agreement that these specimens appeared to be *Chaetoderma pacificum*. A second specimen (specimen B) from the same station had similar characteristics in body shape and spicule formation, and was also determined to be *C. pacificum*.

Confusion arose, however, due to some questions about the oral plaque and whether it was incised or entire. For example, the two specimens from Bight'13 station 9211 seemed to have an oral plaque that was entire while one out of four specimens from Bight'13 Stations 9205, 9250, and 9210 (see below) were considered incised; but all six specimens seemed to have similar characteristics. Since *Chaetoderma pacificum* is described as having an incised oral plaque, five of these specimens seem to represent new provisional taxon that would be best described as representing a *C. pacificum* with an entire oral plaque (*Chaetodermidae* sp LA1).

We then looked at images of a specimen from Bight'13 station 9205, which did have an incised oral plaque. The spicules were very much like those of the previous specimens, except that the spicules were browner in color relative to the Bight'13 station 9211 specimens, which Kelvin thought represented a thinner spicule. These specimens, after some discussion, were determined to be *Chaetoderma pacificum* due to the incised oral plaque.

Two specimens from Bight'13 station 9250 were also reviewed. The whole body images looked similar to the previous specimens, and oral plaques appeared to be entire in one specimen and cleft in another. The spicules of each were like those seen previously (elongate and thin). We reviewed the actual specimens to verify the nature of the plaques, which did turn out to be entire.

We examined a specimen from Bight'13 station 9210 which appeared to be thicker than the other specimens viewed thus far, but also had an oral plaque that seemed entire by the photos, although listed as incised according to Terra and Chase's notes. A review of these specimens also demonstrated that the plaque was entire, and thus lumped together with those from Bight'13 station 9211.

To confirm that we all had the same understanding of what an "incised" oral plaque looks like, Chase pulled a specimen from Bight'13 station 9205 that showed a clearly incised oral plaque based on the photographs that were displayed earlier in the meeting. Examination of the specimen found that the incision originating at the mouth seemed to reach the edge of the oral plaque, which we determined was representative of the "incised" condition. In that case, we were able to ID this specimen as *Chaetoderma pacificum*.

So after much discussion of this suite of specimens, we were able to confidently identify specimens with an incised oral plaque as *Chaetoderma pacificum*, while those specimens from Bight'13 stations 9211, 9210, and two specimens from station 9250 represented a new provisional taxon (*Chaetodermidae* sp LA1) that is diagnosed as being very similar to *C. pacificum* in whole body shape and spicule type, but distinguished by the presence of a clearly entire oral plaque.



Overall the exercise brought about much discussion of the limits of our knowledge, and the need to hold another workshop in this group to work out some of the characteristics of the oral plaque, the spicules, and the body types to build a common terminology that we all understand.

Images of a specimen from Bight'13 station 9250 (660m) showed a flat, incised oral plaque, but the anterior and neck were much more slender and form a larger proportion of the body than in other specimens of *Chaetoderma pacificum*. For example, the oral plaque was only as wide as the neck, both of which seemed very narrow. The images of the spicules were like the other, and we identified these as *C. pacificum* based on the images alone. After some discussion of the validity of the character of the neck and annulus dimensions, LACSD staff decided to retain the ID as distinct from *C. pacificum*, *Cheatodermidae* sp LA2, so that it could be tracked for future reference.

We then looked at a separate specimen from Bight'13 station 9205 that was originally considered to be *Falcidens macracanthos*. However, upon review of the images of the whole animal and spicules, the group thought it looked more like *Chaetoderma marinelli*. The oral plaque was incised and the radula seemed to be slightly different. We examined the radula first hand to determine if the variation we saw in the image was true or not. Kelvin shared that he prefers to use a flat slide rather than a depression slide, and applies a little extra bit of glycerin to float the radula on the slide to allow for a little room to manipulate the radula on the slide. After re-bleaching the radula to remove the remaining tissue that was obstructing our view, Kelvin was able to see that there was no triangular plate, but confirmed the slight curvature of the base. As a result we confirmed the ID as *C. marinelli*.

We then reviewed two specimens from Bight'13 Station 9237. These thick aplacs had unusual spicules with an emarginated base and toothed margin. Megan mentioned that she had seen similar spicules but only when she had removed them from the wrong part of the body. Terra confirmed that in this case the spicules had been removed from the same part of the body as the others, noting that very few mid-anterior trunk spicules were present on the specimens. The seemingly unusual specimens will be designated as a new provisional species, *Chaetodermidae* sp LA3.

We then began review of specimens from the CSD sample group. Starting with a specimen from Bight'13 Station 9396 (460m), which had a divided oral plaque. The station had eight animals, several of which had been identified as *Falcidens hartmanae* and *Chaetoderma pacificum*. Wendy showed two specimens that were different; each had long anterior trunks and thick posteriors. The spicules were elongate with a broadened base that was reminiscent *C. nanulum*, but did not resemble it in body type. Kelvin suggested that Wendy review the radula to confirm *C. nanulum* or distinguish these specimens from it.

Several other specimens from the same station were distinguished from all the others by the presence of a long spicular fringe over the posterior skirt. The spicules were quite long and represented about $\frac{1}{2}$ the length of the posterior end of the animal. The oral plaque was distinctly incised, and looked a lot like *Falcidens longus*. Kelvin mounted some of the spicules, which were elongate and narrow, with longitudinal ridges, and a smooth posterior margin, like *F. longus*. After still having problems with a specific ID, Kelvin dissected the radula, which seemed to eliminate *Falcidens*. The radula was broadened laterally, but dorso-ventrally flattened. Still unable to resolve things Kelvin mounted yet another group of spicules. These seemed to show a prominent central ridge, and after some debate, turned the ID back to *F. longus* with the triangular plate missing or lost. The absence of the triangular plate suggested that it could sometimes be lost in adults. We should remember that presence of the plate confirms *Falcidens*, but absence does not preclude *Falcidens*.



Another specimen from Bight'13 station 9396 had distinctive regionalization of the body with a long specular fringe on the posterior, and a short neck. The spicules were interestingly patterned and elongate and narrow. Megan suggested that this was *C. nanulum*. After some debate, Megan, Kelvin, and Wendy agreed that *Chaetoderma nanulum* was an appropriate, conservative ID.

Megan also had a specimen or two for review, starting with a specimen from Bight'13 station 9201 (746m). The whole specimen showed a posterior with a short spicular fringe with dumbbell-shaped branchial aperture, which led us to consider *Chaetoderma hancocki*. Megan thought of calling it *C. hancocki* also, but hesitated due to the shape of the oral plaque. There seemed to be some confusion of the description in the MMS Atlas (Scheltema 1998) relative to the images. Spicules were removed and mounted, showing an elongate structure and asymmetrical color pattern similar to *C. hancocki*. Don suggested that the balloon-shaped head and absence of a neck argued against *C. hancocki*; but subsequent review of the whole animal confirmed similarity with the *C. hancocki* images and confirmation of the ID.

We ended our review with several specimens from CSD Bight'13 Station 9457 (449m). Several looked similar to the *Chaetoderma nanulum* from the previous station and *C. hancocki* from Bight'13 station 9201. We removed spicules from one specimen with the long spicular fringe and bulbous anterior. The spicules appeared different, showing a strong central ridge and lateral ridges with smaller ridges between these; however, these were not the predominant spicule type. Others were elongate with a central keel that broadens distally and fills over ½ of width of the spicule for about one-third the length of the spicule. The radula was dissected and found not have a triangular plate, and instead had an elongate, thickened radular cone, with two small, only slightly falcate and thickened distal jaws. The species was distinct enough to be considered to represent something new [at least to us], and will be considered for provisional species status, with other specimens possibly present at station 9396.

As the meeting was breaking up, some other specimens from Bight'13 station 9457 made it on to the microscope. These had elongate spicules surrounding the posterior, and turned out to be *Chaetoderma nanulum* by unanimous consent.

Kelvin then brought out the single specimen they had for FID from Bight'13 Station 9174 (345m). The specimen was short and thick for most its length. It did not have a particularly long spicular fringe, and a spicule mount confirmed another *Chaetoderma nanulum* by unanimous consent.

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**ATTACHMENTS: TRESURY REPORT, POLICORDIA SPA VOUCHER
SHEET**

SCAMIT Treasury Summary

2013 – 2014

Below is the treasurer's report for 2013-14. Once again we are **not** raising dues thanks to so much continued support from all of you! We have over 150 members across the US and worldwide. SCAMIT did not award any publication grants this past year but we have funds to do so. Please help get the word out that these funds are available. As stipulated in our grant policy, we have **\$6,510.96** or 25% of our operating budget of \$26,043.85, which does not include database funds, available for publication grants this year. *And just where did your dollars go this year?* SCAMIT helped organize and host a second EPA/CBRAT Workshop at SCCWRP in May 2013 with 7 expert taxonomists participating. SCAMIT received \$4,500.00 for writing the EPA/CBRAT report (see Larry for details). The taxonomic database support tools on our website were maintained by our webmaster. The database expense totaled \$1,462.50. The database was demonstrated at the SCAS meeting in May 2013 and at the International Polychaete Conference in Sydney, Australia and received much positive feedback!

Account Balances (as of 5/28/14)

Checking	\$15,955.01
Certificate of Deposit	\$10,012.91
Cash	\$ 75.93
Database Fund	<u>\$ 3,267.05</u>
Total	\$29,310.90

Income

2013 Membership dues	\$ 2,375.00
EPA/CBRAT Workshop	\$ 4,500.00
Interest from CD	<u>\$ 12.91</u>
Total	\$ 6,887.91

Expenses (General Account)

Hardcopy newsletter (printing/postage)	\$ 537.24
Meeting refreshments	\$ 288.40
Donations	\$ 300.00
Annual Luncheon + Picnic	\$ 401.98
Gifts	\$ 172.66
Website Content & Design	<u>\$ 1,462.50</u>
Total	\$ 3,162.78

SCAMIT Voucher Sheet

Species: *Policordia* sp A SCAMIT 2014

Family: Verticordiidae

Vol. 33 No. 3

Date examined: October 7, 2014

Vouchered by: K. Barwick

Material Examined: 1 spm: OCSD# 2167.5 Bight 2013; Sta. 9137; 30JUL2013; 411 m
(33°22.126"N -117°22.126"E)

Synonyms: *Policordia* sp OC1 Barwick 2014

Description: Shell thin, ovate, translucent; dorsal anterior margin produced upward (Fig. 1). Thick coat of fine silt adhering to the ventral margin of the shell exterior (removed before photographing). Umbones prosogyrate. Periostracum with numerous evenly spaced folds radiating from the umbones. Lunule heart shaped; not well defined. Escutcheon not evident. Lithodesma large. Hinge edentate. Ctenidium present (Fig. 2). Foot with single bysal thread attached. Inhalant aperture surrounded by 20 feathered tentacles coated in fine sediment. Exhalant aperture flanked by 4 - 5 conical tentacles.

Related Species: This is the southern most record for the genus. *Policordia* is differentiated from *Dallicordia* by the presences of a ctenidia. *Policordia jeffreysi* (Friele 1879), as illustrated by Allen and Turner (1974) and pictured by Coan et al. (2000), has clathrose sculpturing consisting of commarginal folds of the periostracum overlying radial folds. *Policordia pilula* (Pelseneer 1911) is described as having 5 simple conical tentacles external to 23 feathered tentacles around the inhalant opening (Coan et al. 2000). The present specimen appears to lack the outer tentacles. These features along with the scarcity of material and unique geographical locality supports the establishment of a provisional species.

Distribution: Only known from material examined.

Comments: The specimen was forwarded to Dr. Elena Krylova's PhD student, Luda Safonova in Russia for further examination. It will eventually be deposited at LACM.

Literature: **Coan, Eugene V., Paul Valentich-Scott and Frank R. Bernard. 2000.** Bivalve Seashells of Western North America: Marine Bivalve Mollusks from Arctic Alaska to Baja California. Santa Barbara Museum of Natural History, Santa Barbara, California. 764 pp.

Allen, J. A. and J. F. Turner. 1974. On the Functional Morphology of the Family Verticordiidae (Bivalvia) with Descriptions of New Species from the Abyssal Atlantic. Philosophical Transactions of the Royal Society of London B 286: 401-532.

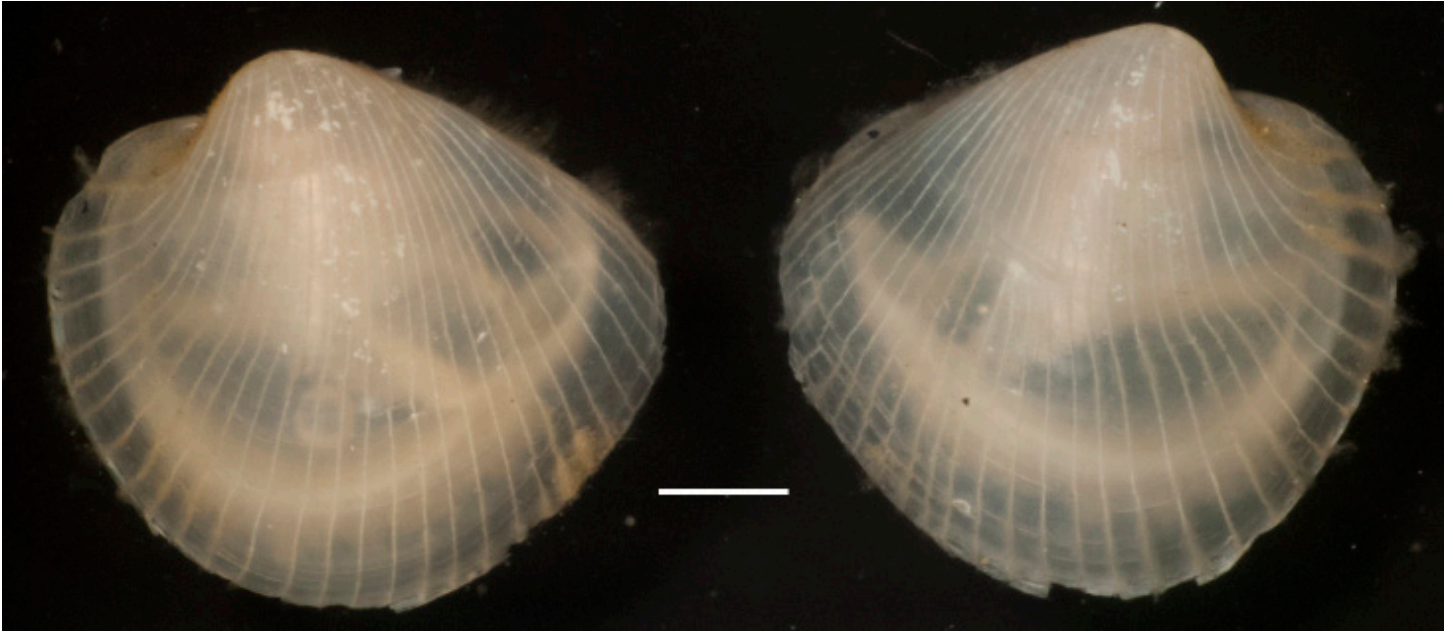


Fig. 1 – *Policordia* sp A - Exterior left valve and right valve, respectively (Scale bar 1 mm)

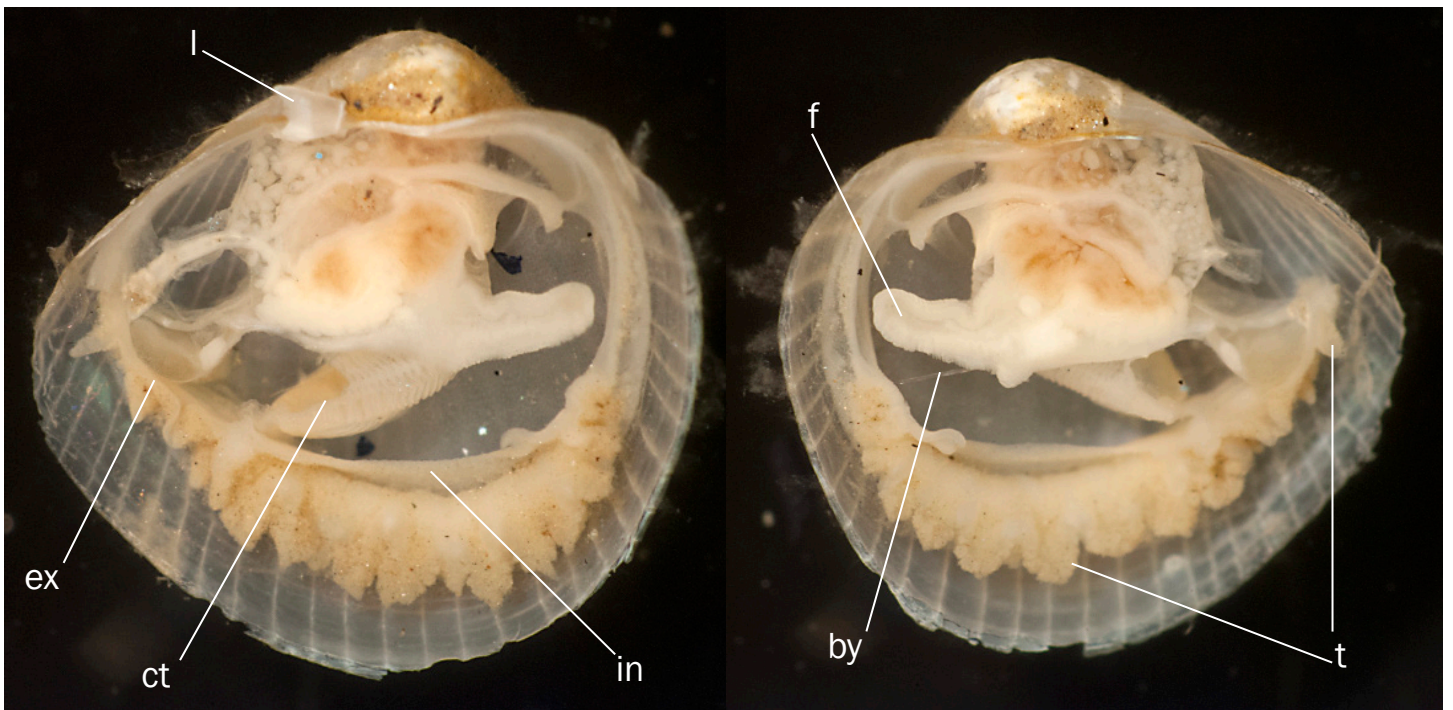


Fig. 2 – *Policordia* sp A - Longitudinal section, interior left valve and right valve, respectively

Abbreviations: **by** byssus; **ct** ctenidium; **ex** exhalant aperture; **f** foot; **in** inhalant aperture; **l** lithodesma; **t** tentacles