

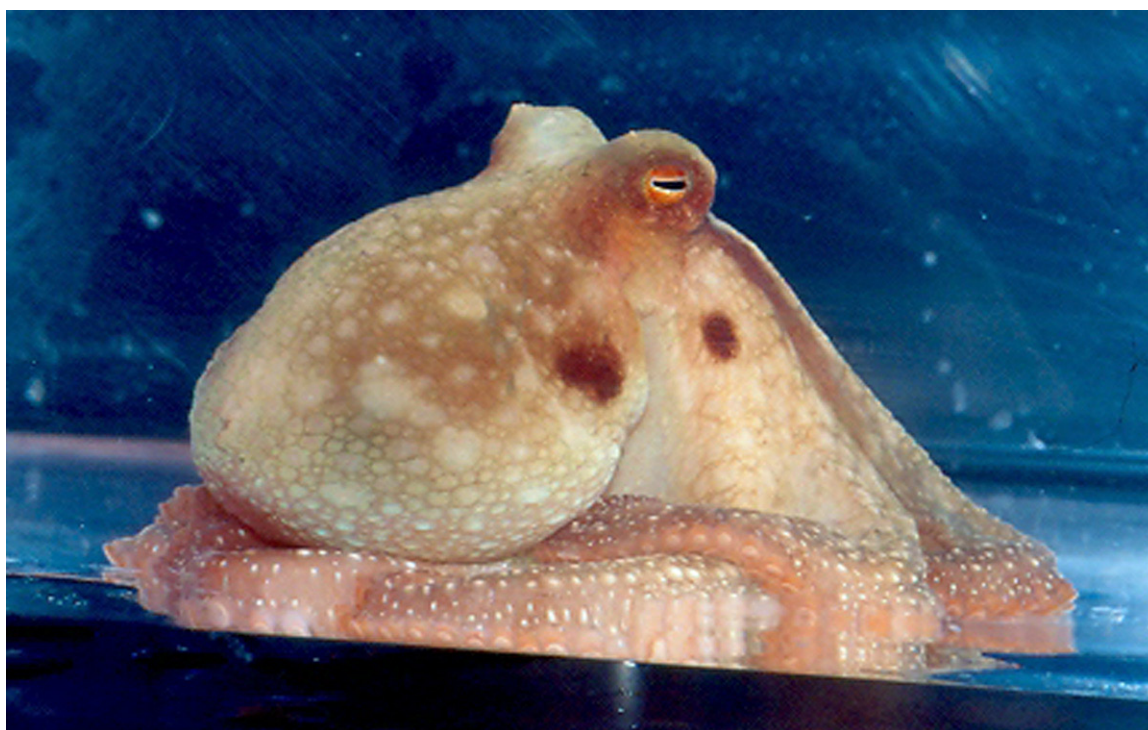
SOUTHERN
CALIFORNIA
ASSOCIATION OF
MARINE
INVERTEBRATE
TAXONOMISTS



Sept–October, 2016

SCAMIT Newsletter

Vol. 35 No. 3



Octopus veligero: Submature female (45 mm ML)
 Captured in 100m off San Diego, CA; January 1997
 Photo by D. Norris.

This Issue

13 SEPTEMBER 2016, SCAMIT GENERAL MEETING, SCCWRP.....	2
11 OCTOBER 2016, MOLLUSK TOOLBOX REVIEW, OCSD.....	10
18 OCTOBER 2016, SCAMIT SPECIES LIST REVIEW, SCCWRP.....	12
SCAMIT TREASURY SUMMARY, 2015 – 2016.....	20
SCAMIT OFFICERS.....	22

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

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13 SEPTEMBER 2016, SCAMIT GENERAL MEETING, SCCWRP

Attendees: Ricardo Martinez-Lara, Veronica Rodriguez, Ron Velarde, Wendy Enright, Megan Lilly, Katie Beauchamp, (CSD); Ken Sakamoto, Benjamin Ferraro, Danny Tang, Kelvin Barwick, Mike McCarthy (OCSD); Greg Lyon (CLA-EMD); Dean Pentcheff, Leslie Harris (NHMLAC); Don Cadien, Bill Furlong, Brent Haggin, Jovairia (Jojo) Loan, Larry Lovell (LACSD); Dean Pasko, Tony Phillips (Private Consultants)

UPCOMING MEETINGS

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

Remote attendees: Dany Burgess, Angela Eagleston (WADOE); Dave Vilas (MBC); Mary Wicksten (Texas A&M); Kathy Langan (CSD); Cheryl Brantley, Dot Norris (Retirees); Michelle Knowlen (Ramboll)

We began the meeting with updates from the Executive Committee. Larry provided the yearly President's update with a list of highlights from the year. The entire slate of SCAMIT officers had been re-elected in 2016 to serve out the 2016-17 year, with the addition of Erin Oderlin (CLA-EMD) taking over the Treasurer position for Laura Terriquez who had taken on other responsibilities at the Orange County Sanitation District and would no longer be performing taxonomy. The Treasurer's report is appended to the end of this NL. Also, SCAMIT worked with SCCWRP to hold the Bight' 13 Synoptic Data Review and QC meetings. The Species Review Committee succeeded in producing Ed 11 of the SCAMIT Species List, and did so on time! Although the List had already been superseded by the announcement that Jim Blake had recently reviewed the Cirratulids, which included several changes to the *Monticellina* group. SCAMIT members also participated in two meetings at the NHMLAC to identify unknown and poorly labeled specimens that the museum had inherited from the Alan Hancock Foundation. In addition, SCAMIT was represented at a couple of conferences (SCAS – with table attended by Erin Oderlin) as well as the International Polychaete Conference (attended by Leslie Harris, Larry Lovell, and Kirk Fitzhugh), and several members were actively involved in training local staff in taxonomy.

All of these accomplishments are in line with SCAMIT's mission to pursue standardization projects, such as Bight projects, taxonomy training, and getting newly trained individuals in conformance with existing work.

Leslie Harris then stepped forward to provide the Vice President's report. Leslie's main job as VP is to schedule workshops and/or coerce people into providing workshops and meetings. Leslie commented that many of the 2015-16 meetings were taken up by Bight' 13-related efforts, including the resolution of FID specimens, and QC and Synoptic Data Review meetings. Also, for the first time in a long time, we had one month without a meeting (November), which may have been a result of fatigue brought on by the series of 2-meetings/month that occur with every regional Bight survey.



Leslie asked for volunteers to lead workshops and topics. She suggested that it does not necessarily have to be just taxonomy; the meetings can focus on ecology, standardization, best practices, among other things.

The two currently scheduled meetings involve Mollusca. The first, scheduled for 11 October, will be a notebook review and toolbox clean-up and will be led by Kelvin Barwick (OCS D). The second meeting will be on 9 November, also at OCS D, and will cover the Pyramidellidae, subfamily Turbonillinae. This meeting will be led by Tony Phillips.

Dean then provided the Secretary's report. The SCAMIT Newsletters are in good shape, except that Dean Pentcheff had noticed that we were missing a few. [Secretary's Note: Fortunately, the missing NLs have since been found and posted to the website. All is good with status of SCAMIT] Dean also presented a list of the various Action Items that had been generated from several of the recent meetings where the Taxonomic Toolbox contents had been reviewed, as well as some of the other pending efforts from other meetings. Various people asked if the Action Items list could be posted to the General List Server. Tony then remembered one Action Item from the Ascidian meeting and volunteered to check with Gretchen Lambert to see if she will share her Ascidian pictures that had been taken during the SPAWAR project.

Larry gave the Treasurer's Report for Erin. SCAMIT received \$1,960 of income from dues and CDs (certificates of deposit, not Bruno Mars), but had expenses of about \$2,756. The expenses were mostly due to printing the backlog of NLs, with a few other items accounting for a small amount of expenditures. Larry reminded us that we have 25% of the available funds for publication grants, which is approximately \$6,600. Kelvin is the most recent recipient of such a grant. The SCAMIT grant supports publication costs for SEMs, re-prints, barcoding, page charges, etc.

Next our fearless Webmaster Dean Pentcheff had the floor. Dean would love to take time to tweak the website design a little. It would be nice to update photos. Our website host (Dreamhost) provides their service for free, including storage, back-up, and maintenance. As we think about legacy materials (e.g., the Jazz Drives of CSD), we can migrate all that material to the magnetic storage on the Web. Dean is happy to help individuals migrate that material, and suggested that we could archive many of these images and information to the SCAMIT server, rather than our own specific drives, CDs, etc. Where Jazz drives, CDs, etc. tend to become outdated or expire, magnetic archives simply transfer with the updated technologies.

Larry raised the idea of doing something similar with animal images. Larry thought we could start with the Mollusk meeting, and, with some reservation, Kelvin agreed to bring it up at the November meeting.

Ron suggested a repository for digital literature, but Kelvin raised the question of the licensing issues. Dean Pentcheff has been active in this area and urged us to have a



substantive discussion on this topic, and encouraged SCAMIT to consider a separate meeting to discuss it. Dreamhost does have the capacity to host such an electronic listing. We decided to have a meeting on 12 December to discuss the topic of digital literature and the SCAMIT website.

Kelvin Barwick, the new Species List Review Committee Chair, gave a short presentation on the history of the SCAMIT Species List. Montagne & Velarde (1994) was the first Edition of The List, focusing on species reported by the four major POTWs operating in the SCB, and built upon the original SCB listing created by Straughan and Klink (1980). Edition 2 (Montagne & Velarde, 1996) came with the addition of trawl organisms. Don Cadien jumped in and took over Ron's role in 1998, with the publication of Edition 3 (Montagne & Cadien 1998). Ed 3 was the first to include synonyms. Montagne & Cadien (2001) put out Edition 4, and added a count of the included species (2076 nominal taxa). Cadien and Lovell took over the project and published Edition 5 in 2008. Cadien and Lovell (2008) added hard substrate taxa, and included all SCAMIT member-verified taxa, bringing the total to 2551 species-level taxa. 2010 brought about the formation of the Species Review Committee with Don serving as Chair, and consisting of 13 charter members. The committee had the lofty goal of yearly updates, beginning with Ed 6. Cadien and Lovell (2011) published Ed 6 and included red text to indicate changes. Editions 7 – 11 were published in successive years by Cadien & Lovell through 2016, with Ed 11 including 3227 species-level taxa from all large and small monitoring programs operating in the SCB, as well as the five regional Bight surveys, and five other species studies in the SCB.

Then Kelvin listed some of the new challenges that were facing the Committee:

- Keeping the List current.
- Don's departure leaves large shoes to fill
- Converting the List to an editable database
- Expanding coverage from SCB to all of CA or the entire West coast
- Recruiting Committee members

Kelvin then welcomed the newest sucker (recruit) to the Committee, Greg Lyon, (CLA-EMD), and later explained that Brent Haggin had also volunteered to participate on the Committee. [Editor's note: Go Brent and Greg!]

Kelvin noted Don's tremendous contributions to the existence of the List in its present form and that Don has been the lead on its propagation for many of the past iterations. In response, Don noted that it was time for the process to be de-centralized, and that was part of his goal in stepping down. Several people recognized Don's tremendous dedication to leading the Committee, and the self-less leadership he has provided over the past decade plus. The organization is truly indebted to his service.



Larry added that SCCWRP helped generate the first List in an effort to bring the Agencies in line with each other, generating a standardized listing of the reported species. He also added that the timing of the List publication was in part based on the Regional Bight Program completion and updates. The Species List Review meetings had been held here at SCCWRP from the beginning, and continuing to use this venue going forward would allow more participation from remote attendees.

Larry announced that the Cadien Library is finally coming up for sale. It includes 11,530 pieces of taxonomic, ecological, and general literature that has all been databased in Endnote and key word referenced. Most are originals, and there are some copies, and some duplicates. This database has tremendous value. Don added that he hoped someone would find this of interest because the purpose was to benefit SCAMIT. Don prefers to use hardcopy but due to space constraints now has to rely on digital pictures. A lot of the material had come from duplicates within Jan Stock's literature collection. The databasing took a minimum of 4 months of effort, so that alone is worth quite a lot of employee time (i.e., \$\$) to some individual, laboratory, or agency. SCAMIT would prefer to sell the library in mass via a silent auction through our on-line list-server. The starting minimum bid will be \$5,000, and the lucky bidder must arrange to move the material from the LACSD Marine Biology Laboratory to their own place of residence/business. Larry added that this effort supports the mission of SCAMIT to promote the standardization of the taxonomy among its members. [Editor's note: Sadly, as of this printing, the library remains unsold. If you know of any agency in need of a valuable collection, please contact the Secretary.]

Larry also noted that Mary Bergen had generously donated her echinoderm literature. It was available on the back table, but Megan announced that "she" was planning to take it all! In the end, everyone got a shot at it. Brent Haggin has gone through the LACSD literature and pulled out duplicates, which he also made available at the back of the room.

Larry then followed with a presentation on SCAMIT, *The Next Generation*. SCAMIT has been around for 34+ years, and with some in the room representing founding members. But, the future of SCAMIT is dependent on preparing for a change in the old guard. Many of the founding members in charge today won't be around forever.... So it is time to find replacement leaders to perpetuate SCAMIT's progress forward.

It was the 1972 Clean Water Act that gave rise to the need for working taxonomists, such as those that SCAMIT has come to support. Standardization was necessary in the SCB to deal with the messy nature of species, as well as the different methodologies for performing identifications used by different laboratories. Developing a system to share resources was necessary for the working taxonomists' progression. The importance of taxonomic standardization and inter-calibration was needed also for long-term data comparability and compatibility, and inter-regional regulation.

The Southern California Coastal Water Research Project (SCCWRP) Taxonomic Standardization Program (1973-1982) preceded SCAMIT. SCCWRP produced a few



publications, including some regional keys, and held inter-calibration meetings. The driving force in this effort was Jack Word, who was succeeded by Leslie Harris. In 1982, after SCCWRP's support waned somewhat, John Shisko saw a need to continue the tradition SCCWRP had initiated, and organized SCAMIT as a 501(c)(3) non-profit Organization. Larry then went on to describe the evolution of SCAMIT meetings to workshops, technology usage, voucher sheets, species listing, website and database, and toolbox.

Why is SCAMIT a success? There are a relatively large number of taxonomist jobs in the SCB. In addition, there is ample taxonomic work, including large regional monitoring, and a general spirit of cooperation among the taxonomists supported by the POTWs agencies. Other groups have tried something similar (NEAMIT and NAMIT), but they had difficulty sustaining themselves largely because of geographic barriers.

Larry then discussed the results of the Survey Monkey. About one-third responded (54 of roughly 144 members). The presentation will be available at the SCAMIT website. The survey covered a number of results, such as meeting preferences; member use of the SCAMIT webpage, Species List, Taxonomic Toolbox, and Newsletters; SCAMIT priorities; topics that should be covered, among others. Overall the results demonstrated that more than 90% of the respondents visited the website at least once monthly, and/or used the Toolbox or visited the Newsletters multiple times per month. Very few (<5%) of the respondents had never visited the site or used its content. Workshops with specimen reviews or that included hands-on work were some of the most popularly requested meeting formats.

We briefly discussed one of the other popular requests, remote access for our monthly meetings. Adding remote access would come at a cost. Systems such as GoToMeeting cost about \$500/yr, while BlueJeans has a cost structure based on number of participants, but would likely be similar. This, in combination with Newsletter production costs might require a small dues increase. SCAMIT dues are \$15/yr, and have not increased for quite some time.

Dean Pentcheff discussed the NHMLAC effort to bring together various organizations to substantiate the species concept that Kirk had recently debunked, particularly with the use of DNA barcoding (See SCAMIT NL Vol 35, No. 2). He is bringing this to SCAMIT since SCAMIT has the greatest taxonomic expertise that could be tapped to marry the taxonomy and barcoding. SCAMIT might also be one of the biggest beneficiaries of such an effort as it could be used to help resolve various taxonomic issues that SCAMIT wrestles with regularly (e.g., all of our provisional species). The DNA barcoding is only useful if you have correspondence between a barcode library and a specimen library. NHMLAC has some seed funding, but would like to partner with SCAMIT to move the project forwards.

Mary chimed in that here that Texas A&M has thousands of specimens preserved in formalin. She raised objections that the cost of barcoding is not cheap and cannot be



applied to formalin-fixed specimens. Dean agreed and mentioned that NHMLAC is trying to set itself up as the agency to facilitate that effort so that individuals could send specimens to the museum for analysis. He also indicated that the costs are coming down precipitously, and that the NHMLAC is working to develop a library of primers to facilitate the barcoding efforts and increase efficiencies.

Kelvin raised the issue that such efforts have been brought to SCAMIT before (e.g., Guelph), but have never contained enough money for the taxonomic effort. Until taxonomy is built into the budget with the coding money, we will continue to have problems. Dean countered that they are aware of the issue and are trying to address it. The museum is trying to set an objective that benefits the collaborative agency before it benefits itself. In addition, the museum would like to cooperate with SCAMIT members to resolve species problems.

After this rather interesting diversion, Larry got back to the presentation (What would you like SCAMIT to address in the Future). Regional Chapters was one idea that was listed in the survey. Dot mentioned that we should talk with Heather Peterson at San Francisco Water Authority for a discussion of Regional SCAMIT Chapters.

After a delicious SCAMIT-sponsored lunch, we came back to the discussion of the meeting format. Larry brought up the slide from the Survey on meeting preferences. Veronica suggested that the Workshop begin with a short general presentation of higher-level systematics of the taxa to be covered, followed by the problem taxa discussion and specimen review. Kelvin interjected that such workshops are the ideal situation for SCAMIT, but they take a lot of preparation time. Several alternative ideas were suggested: e.g., running the workshops in a collaborative nature, either between labs or within labs, or using Facetime and Skype as mechanisms to share information and allow remote access, or moving back to the video system format that has been successfully used in the past. We recognized that most agencies now have individual systems that allow video and image projection. Leslie mentioned that these video projects worked well, except when there are delays to take photos, and Kelvin noted that there is a fair amount of effort that goes into the set-up/break-down of the systems. Either way, the downtime created by pauses in the video generate opportunities for the meeting to succumb to entropy.

Ricardo recounted his experience with SCAMIT that began with education-oriented workshops that seemed to evolve into the more detailed and species-specific meetings of late as many of us have matured in our taxonomic skills. With the change in the introduction of more young taxonomists, we seem to have a greater need for the educational workshop method. He also noted that there are blue-tooth cameras that can broadcast images directly to laptops within wifi range. Perhaps SCAMIT can purchase such a camera that can be shared and travel to the meetings.

Dean Pentcheff interjected that there is no better way to learn than to teach. He suggested that the new members (new taxonomists) accept leadership roles for a workshop and that



some of the older SCAMIT members be available as mentors to the newer members. There might be a way to make this mentorship loosely organized so that the more experienced SCAMIT taxonomist be available to help answer questions and provide direction, not create the product or presentation. Megan added that the mentor need not provide everything to the mentee; but be available to utilize their own contacts to provide additional information. We suggested that perhaps SCAMIT could provide a listing of people willing to mentor others on the SCAMIT website (e.g., Mary for decapods, Leslie for polychaetes, etc.).

Mike McCarthy mentioned that he had benefited the most from meetings that start at a higher phylogenetic level (e.g., characteristics of the family), relative to species-specific workshops. Ben chimed in that the systematics of why animals belong together seems to help newer taxonomists. The general recommendation from a lively exchange was to provide context (systematic organization) at the beginning of the workshop, e.g., why are they the organized together in a family, what are the defining characteristics of the group (generally!), why are there problems.

Of course there was recognition that everyone should take some responsibility to familiarize themselves with the topic, especially since the meeting topic and speaker are often known beforehand. So no one need come to the meeting unfamiliar with the topic at hand which could help avoid confusion at the beginning.

Larry suggested we go around the room and recommend problem taxa in need of a workshop or review. Larry started off with Magelonidae and from there what was suggested is as follows: Ricardo – Paraonids; Dean Pasko – Heteronemertea; Veronica – Magelonids; Ron – Cirratulids; Wendy – Scaphopods; Megan – *Apostichopus*, holothuroids; Ben – didn't have anything yet as he was just beginning his training; Danny – *Photis*; Kelvin – Sabellids; Greg – Tellinids (Bivalves); JoJO – Anthozoans; Katie – *Photis* and *Rhepoxynius*; Don – Eusirid amphipods (Don also stated that there is no better way to learn than to jump into a taxon that you don't understand. That is how we all have learned); Leslie – cirratulids (we don't know enough about the development of character states with ontology); Mike McCarthy – polynoids and syllidae; Brett – Terribellidae; Bill – Syllids, Sabellidae, Magelonidae. Tony - ?; Dany (remote) – Pleusids, Sabellids; Dot (remote) – Capitellids.

Then Larry went back to learning modality: specimen review, such as blind reviews, as a first step towards inter-calibration. These are great but take some prep time (pulling specimens, etc.). However, they provide great value in helping identify where people differ in application of the same literature, etc. Individuals would bring identified specimens for exchange at the meeting being held prior to the meeting at which the mystery specimens would be discussed.

All of this gave Leslie an opening to pin down individuals to lead workshops in the coming year.



- Sabellids - Ricardo (January, 2017)
- Heteronemertea – Dean (February 2017)
- Magelonids - Larry/KB (March, 2017)
- *Photis* spp – Dean (April, 2017)
- *Apostichopus* (Holothuroidea) – Megan (May, 2017)
- *Monticellina* – Veronica (June 2017)
- Eusiroids – Don (August 2017)
- Terribellidae – Leslie (September, 2017)

Each of the meetings/workshops should incorporate some type of toolbox review. [Editor's note: original schedule presented here has changed, see the website for the updated meeting schedule.].

As we started to wrap up the day, the idea of funding for items such as - GoToMeeting; InDesign; WiFi access systems (SCAMIT purchase hotspot); a digital camera, was raised again. Dean Pasko asked if those in attendance would support a raise to the annual SCAMIT membership. Would members be willing to pay an additional \$5/year to accommodate these additional expenses? A \$5/year increase was unanimously approved by those in attendance, and a \$10 increase was less unanimous, but readily accepted.

Larry then moved into the demonstration of the live web-based microscope feed. Overall both individuals who responded to Larry's request for feedback of the remote system were **very** positive. They thought that the visual and audio worked well and that the video feed from the microscope was excellent, except when the specimen was being manipulated. The still image was clear, but the lag during specimen handling created a blurry image. In short, both said they would participate again if it were offered.

And lastly, there was some comment that those in attendance at the meeting might be more careful with their side comments, etc., as they were distracting and sometimes prevented the remote attendees from clearly hearing the discussion.



11 OCTOBER 2016, MOLLUSK TOOLBOX REVIEW, OCSD

Attendance: Kelvin Barwick (meeting lead), Danny Tang, Ernie Ruckman, Ben Ferraro, Mike McCarthy, OCSD; Ron Velarde, Wendy Enright, Megan Lilly, CSD; Greg Lyon, CLAEMD; Larry Lovell, Don Cadien, Chase McDonald, Terra Petry, LACSD; Carol Paquette, MBC.

Remote attendees: Heather Peterson, CCSFPUC; Angela Eagleston, WA Dept of Ecology.

Kelvin called the meeting to order and started by requesting a round of introductions for the benefit of the remote attendees. Once introductions were complete he turned the floor over to Larry Lovell for a quick summary of SCAMIT business. Larry started by thanking Kelvin and OCSD for hosting the meeting. The next meeting will be October 18th at SCCWRP and will be a meeting of the Species List Review Committee. Larry then went on to review upcoming meetings for the next few months; see the SCAMIT website for a complete listing of upcoming meetings.

Larry then segued in to discussing the Future of SCAMIT/General Membership meeting that had recently occurred in September. He felt the meeting went very well and overall received positive feedback from the members who attended whether in person or remotely. One of the best things to come out of the meeting was that Leslie Harris was able to get meetings scheduled through 2017. This happened because Larry had gone around the room, one person at a time, and asked them what they thought was a Phyla/subject that warranted a meeting. Afterwards certain individuals were asked if they'd be willing to host a meeting on one of the subjects mentioned and to everyone's delight and surprise, most of them said yes. Due to the success of the meeting, Larry is proposing that SCAMIT hold a general membership/future planning meeting annually, most likely in September.

With the business meeting complete, Kelvin took the floor again to start our work on the Mollusk portion of the Taxonomic Toolbox. During the first half of the meeting he hoped to address material that had been posted in the toolbox but had not been properly vetted by SCAMIT subject experts. These were noted online with the link in green font and an asterix. The second half of the meeting, if time allowed, would be to start a comparison of mollusk literature/notebooks amongst attendees.

To address the first task, he had created a spread sheet of all the files included in the Mollusca portion of the Toolbox. There was some discussion as to how/where to start and we decided to begin with the smaller groups. That led us to Cephalopoda. It quickly became apparent that SCAMIT needs protocols for how to deal with modifying historical documents and how to track those modifications. Due to the fact the material is in PDF format, the Toolbox contains many outdated names and other information. However, by simply removing them we lose the historical aspect of what had been done and when. During a pause while searching for a species, Megan filed a complaint regarding the organizational structure of the mollusk section of the Toolbox. It is organized



phylogenetically, so she has no room to fault it scientifically. However without the ability to have total recall of a given taxon's phylogeny she finds the process of drilling down unnecessarily cumbersome. She suggested that a search tool be added to the Toolbox page. Other attendees concurred.

Many species were addressed as we worked our way through Kelvin's spreadsheet. Wendy Enright started a listing of species for which CSD would look to see if they had the original images in their archive (since Kelvin was an employee of CSD at the time that many of the vouchers were created). The species addressed are too many to list here, but Megan kept a list of some of the action items created.

- It was requested that Megan upload a copy of her field guide to *Octopus* spp found in SCB trawl surveys. She will also send out a copy to representatives at all the POTW agencies.
- Wendy Enright will upload her ID sheet comparing juvenile moon snails
- Kelvin needs to upload his "Field Guide to Trawl Caught Gastropods"
- The voucher sheet created by Megan on *Propebela* sp during the B'13 project needs to be modified and returned to Turridae sp SD 1 since Don Cadien and Tony Phillips do not believe it to be a *Propebela*. [pending]
- Don or Kelvin need to upload the discussion and voucher sheet on *Philinoglossa* sp A
- Megan needs to add her images of *Calliostoma platinum* to the Field Guide for *Calliostoma* spp
- Kelvin will upload Don Cadien's Cephalaspidea Key, 1996
- Kelvin is going to pull and create separate voucher sheet files for the Aplacophora species addressed in Barwick and Cadien 2005 – SCAMIT Supplement Vol 23
- Kelvin agreed to follow up with the web master to update the Toolbox. [completed]

Once we had completed the review of the spreadsheet it was time to move on to data exchange. Since much of the day was gone by this point, the data exchange consisted of Kelvin reviewing some of his many wonderful images of mollusks and offering to download his image collection on to people's thumb drives. Everyone eagerly lined up to take advantage of his generous offer. For those who attended remotely Kelvin will work on a way to get them the images. There was a brief discussion about Dropbox, FTP



sites, etc. and how some of the agencies do not allow, by work place policy, access to some or all of these file sharing websites, but the images, regardless, are still available in Dropbox. The upcoming December meeting with SCAMIT webmaster Dean Pentcheff will hopefully allow us to brainstorm some solutions to some of SCAMIT's storage and file sharing dilemmas. And with that we adjourned after a productive malacology filled day.

18 OCTOBER 2016, SCAMIT SPECIES LIST REVIEW, SCCWRP

Attendees: Kelvin Barwick, Don Cadien, Larry Lovell, Brent Haggin, Ron Velarde, Wendy Enright, Megan Lilly, Leslie Harris, Tony Phillips, Dean Pasko

It was the first meeting during which the transition of the responsibility of chairing the Species List Review Committee (SLRC) officially transferred from Don Cadien to Kelvin Barwick. Kelvin opened the meeting with a review of the ambitious agenda and a general discussion of the goals.

Brent got the discussion going with a question about why the Species List leaves out pelagic organisms, a major component of the coastal ecosystem. Don, Kelvin, and others responded that since pelagic organisms have generally not been part of the NPDES monitoring programs and collectively SCAMIT members have little information and limited experience with zooplankton, SCAMIT has never felt the need to consider them. The restrictions of the SCAMIT Species List are covered in the front matter, which describes the limitation to benthic organisms. But a part of Brent's point was the absence of academic involvement in SCAMIT. Don noted that if and when zooplankton become part of any of the Southern California NPDES permits, SCAMIT will have to address the issue. We should also note that SCAITE is available for the identification of fish (www.scaite.org), the larvae of which form a large component of the planktonic community.

We then moved into a brief overview of the species list tracking system. The standard approach has been based on a flat file database (Excel) with an emend list to serve as a record of changes, including justification for a proposed change as well as the reason that a suggested change is denied or placed on hold. Don has graciously decided to continue as the keeper of the emend list with the understanding that in the coming years we will be transitioning to a database approach. We then reviewed the various worksheets within the Ed 11 mock-up, including the Proposals, On Hold, as well as the Non-Controversial sheets. These listings are used to keep track of the proposed changes, etc., so that we have historical records for reference.

Kelvin then brought up his phyletic listing for distribution of workload. The following assignments were made for preparation of Ed 12 of the species list. Question marks indicate members volunteered but not confirmed.



- Front Matter: Explanation of why SCAMIT follows a particular phyletic tree or system. L. Lovell, K. Barwick and D. Cadien
- Building List (Management of proposed changes, on hold items, etc.): D. Cadien, L. Lovell, K. Barwick and B. Haggin
- Chief Editors: K. Barwick, L. Lovell and D. Cadien
- WoRMS Cross-Check: N. Haring and W. Enright
- Annelids: L. Harris, L. Lovell, R. Velarde, T. Phillips, and B. Haggin
- Arthropoda: D. Cadien, T. Phillips, D. Pasko, R. Velarde, and D. Tang, (Expert: M. Wicksten?)
- Brachiopoda: M. Lilly, W. Enright, and D. Pasko
- Calcarea/Silicea: D. Cadien, B. Haggin, M. Lilly, and N. Haring
- Chordata: M. Lilly, D. Pasko (Expert: Gretchen Lambert ?)
- Cnidaria: T. Phillips, D. Cadien, and D. Pasko
- Echinodermata: M. Lilly, E. Oderlin, T. Phillips, and D. Cadien (Expert: R. Mooi? and G. Hendler?)
- Echiura: B. Haggin and W. Enright
- Bryozoa: D. Cadien and C. Paquette
- Entoprocta: K. Barwick
- Kinorhynca: K. Barwick and N. Haring
- Mollusca: K. Barwick, W. Enright, G. Lyon, R. Velarde, M. Lilly, and T. Phillips (Expert: P. V. Scott?)
- Nematoda: W. Enright and L. Lovell [Editor’s note: With tongue placed firmly in cheek]
- Nemertea: B. Haggin, M. Lilly, T. Phillips, and D. Pasko
- Phoronida: W. Enright and M. Lilly
- Platyhelminthes: T. Phillips and L. Harris
- Sipuncula: W. Enright, M. Lilly, and D. Pasko



Each category of responsibility included at least one person listed as a primary (the first person in each list above) who will be responsible for submitting a final change as well as submitting major changes to the full committee (such as whether or not the Sipuncula should be included in Annelids).

Each member of a working group will have responsibility for helping search out new literature and recommend changes to the listed literature governing the organization of a particular phylum. They will send new literature, etc. to others in their working group, as well as suggest changes to the list for the Phylum.

We discussed how a large number of in-house provisional species end up on the On Hold listing, since many of these provisionals have not been widely distributed. It turns out that Don and Larry add species reported in Bight projects and Ron reports City of San Diego provisionals if they were reported as part of their NPDES program, even if they are only reported internally (i.e., in-house). The current On Hold list has 188 taxa listed.

Wendy proposed that we create an “Orphaned” tab for the purposes of cleaning up the On Hold listing. This tab/listing would include those provisional names that have no hope of being processed further (either due to loss of specimens or loss of taxonomists). In the course of the discussion we realized that one of the first items for SLRC might be a review of the On Hold list for those taxa that should be removed and designated as “Obsolete” so that we do not lose their value as part of the historical metadata.

Brent also raised the question about whether or not resolution of provisional species should be addressed via the SLRC. The basic response was yes, the SLRC should address provisional taxa and make an effort to press the originating authors to publish a final voucher sheet.

We then discussed research strategies that Don and others use to keep current on taxonomic literature. Kelvin has access to Current Contents through OCS D’s subscription and has a search string that targets taxonomic literature. He then sends out literature requests with about a 75% return rate.

Don has a series of websites that he goes to regularly for pulling literature (listing provided below). He uses WoRMS for getting new literature and finding newly reported species and/or species synonymies. For example, for Ed 11 he did a line-by-line comparison of differences between WoRMS and SCAMIT, and then took account of their referenced literature. This led to a discussion that WoRMS has a mechanism for automated comparisons, and Wendy suggested that Nick Haring may have a script for comparing WoRMS to the SCAMIT listing and the City of San Diego species listing.

Don also uses Google Scholar. He mentioned that you can use parentheses to limit the search string, and limit those records to literature titles, not titles listed in the bibliographies of published literature. It can be set up for quasi-automation. Google doesn’t handle long search strings well, however.



Additionally, Don uses Ingenta Connect (www.ingentaconnect.com) which has repositories of a number of journal back issues. Brent interjected that WoRMS authors/contributors have also been responsive to queries regarding changes and updates.

Larry stated that he uses Research Gate. One must first set-up a user-profile, but it is a very useful tool. Many authors post their papers on Research Gate for free to share material with other researchers. Tony added that you can “follow” a specific author in Research Gate. Tony has had great success on this site and looks at his research interests quarterly.

Tony mentioned Biodiversity Heritage Library (BHL) for the older literature, and Kelvin interjected that you can request material not on BHL to be added. BHL will find the requested material, scan it and post it to their website.

Brent found that Academia (www.academia.edu) is similar to Research Gate.

Don mentioned the Smithsonian also has a vast resource of literature. They provide exportable pdf files of such valuable literature as The Galathea Reports, Danish Ingolf, and Challenger Reports.

Leslie added that when using Google Scholar, there is a small tab on the left side of the page where you can add “alerts” for the species that you’ve been recently searching. Leslie also has access to the USC library that allows her to search specific journals in pdf form.

As lunch neared, we quickly addressed the completion schedule. Larry suggested that we meet every 3 months, and everyone agreed. So the next meeting would be scheduled near the end of the each month in January, April, and June 2017 at SCCWRP.

After lunch we addressed the second half of Kelvin’s agenda: The Future Priorities of the SLRC. It was agreed that a database tool is needed to make future updates easier and more efficient. In order to define what will be required of a future database tool we began by identifying the end users and their requirements. We identified three groups: The committee itself, the general membership, and the participating agencies. Wendy recorded our decision on the whiteboard and has transcribed them below.

SLRC needs:

- I. Currently accepted species list (This is the big one)
 - A. This includes all valid species names, authorities, taxonomic hierarchy, synonyms, and accurate Front Matter
- II. Proposed changes to both the Species List and the front matter (Emend List) including:
 - A. Type of change (Insert, Delete, Split, Merge, Reorder, Orthography or similar minor modification)



- B. Flags for disposition (Hold, Proposed, Non-controversial)
- C. Historic changes and associated metadata
 - 1. What changed
 - 2. Why
 - 3. When
- III. “Orphaned” taxa
 - A. Old provisional species with no hope of development (missing specimens, etc.)
- IV. Version control
 - A. Maintain July 1 publication

For SCAMIT and its members:

- I. PDF of SLRC item I. (above)
- II. Updated Toolbox names and hierarchy
- III. Species page update
 - A. Linkage to Toolbox
 - B. Distribution/occurrence data (map)
 - C. Photos
- IV. Literature linkage
 - A. Part of the toolbox/species list
 - B. Questions regarding copyright, etc. (to be addressed at December, 2016 meeting with Dean Pentcheff)

For Agencies and Consulting Laboratories:

- I. CSV (or other format) flat files of SLRC item I. (above) excluding Front Matter
- II. p-code updates feeding into BRI, ITI, SQO, and other indices
- III. Web app for BRI calculation
- IV. The ability to revert to other versions of the Species List (older or newer) for their own work though one version may have been set as the standard for multi-year projects such as Regional Bight Surveys

The next topic was how we will be able to accomplish these goals. It was noted that this has eluded us in the past. The most fully realized tool was developed by Shelly Moore at SCCWRP but was dropped due to funding issues. However, Wendy noted that that work could be incorporated in future plans so as to jumpstart the process.



We agreed that we need to develop a detailed scope of work (SOW) in order to not only secure funding, but to get the product that we want within the constraints of time and money. Brent Haggin suggested that the SOW could be used to submit a request for proposal (RFP) that in turn could be used to develop the specifications for the final product that we would then put out to bid. Kelvin suggested that the entire SLRC need not be involved in this process; a smaller subcommittee could be formed. While there was general agreement the formation of said committee was tabled for our next meeting.

Kelvin announced that OCSD has pledged \$4000 to the effort. President L. Lovell said that SCAMIT would commit \$5000 to the project and still retains \$3500 from OCSD's earlier contributions. Other potential donors include: large and small POTWs, private environmental consulting firms, state and federal regulators, etc. Larry pointed out that past attempts had been unsuccessful but the effort might gain more traction if elements, such as BRI p-cope updates, are included in the final proposal. In that vein, Kelvin asked attendees to talk to their database managers to gauge their level of interest and their needs.

Before adjourning, Kelvin reviewed action items.

- SLRC members with particular expertise will share links and other information about literature research methods via the list server
- The Chair will schedule and organize the next meeting in late January, 2017
- The Chair, with the help of Secretary and others, will publish the minutes for review
- Wendy will transcribe the information gathered on the whiteboard during the meeting; (done and included here)
- The Chair will post the list of assignments; (done)
- Don, with Larry, Kelvin, and Brent's help will prepare and distribute the mock-up and emend list
- The Chair will confirm that those who have been volunteered are indeed volunteering
- SLRC members will talk to their data managers to gauge their level of interest and need for a database tool or related products



Towards the end of the meeting, Don provided a set of links that he often refers to when checking for recent literature and species of interest.

<http://digitallibrary.amnh.org/>

<http://www.invemar.org.co/boletin/>

<http://archimer.ifremer.fr/>

<http://www.biodiversitylibrary.org/>

<http://www.journals.uchicago.edu/loi/bbl>

http://ci.nii.ac.jp/organ/journal/INT1000001582_en.html

<http://www.ctoz.nl/>

<https://decapoda.nhm.org/cgi-bin/mason.cgi/references/newpdfs.html>

http://www.zmuc.dk/InverWeb/Galathea/Galathea_p5.html

<http://www.ingentaconnect.com/content/umrsmas/bullmar>

<http://www.int-res.com/journals/meps/meps-home/>

https://www.mba.ac.uk/nmb1/old_jmba/vol20/vol20no1.htm

<http://repository.kulib.kyoto-u.ac.jp/dspace/?locale=en>

<http://publications.cm-funchal.pt/>

http://www.mcz.harvard.edu/Publications/search_pubs.html?higher_taxon=Mollusca

<http://www.repository.naturalis.nl/cgi/b/bib/bib-idx?c=naturalis;tpl=browse.tpl>

<http://scholarspace.manoa.hawaii.edu/handle/10125/364>

<http://pensoft.net/>

<http://science.peru.edu/COPA/>

<http://www.sil.si.edu/eresources/silpurl.cfm?purl=0096-3801>

<http://www.ajarchive.org/>

<http://www.scielo.br/?lng=pt>

<https://repository.si.edu/handle/10088/796>

<http://www.crustacea.org.br/?id=3&subid=1>

<http://paleopolis.rediris.es/benthos/REF/som/Tethys-som.html>



<http://isopods.nhm.org/databases/references/>

<http://www.pfeil-verlag.de/04biol/d8391.html>

<http://link.springer.com/journal/227>

<http://www.lovelab.id.ucsb.edu/>

<http://qr7ug7ul2q.search.serialssolutions.com/>

http://www.sil.si.edu/DigitalCollections/usexex/navigation/ScientificText/USExEx19_20select.cfm

https://archive.org/details/university_of_toronto

<http://www.biodiversitylibrary.org/>



**SCAMIT Treasury Summary
2015 – 2016**

Below is the treasurer’s report for 2015-2016. Once again we are **not** raising dues thanks to so much continued support from all of you! We have over 140 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 **\$6,609.50** or 25% of our operating budget of \$26,438.01, which does not include database funds, available for publication grants this year. The taxonomic database support tools on our website were maintained by our webmaster. The database expense totaled \$675.00. We have been doing a great job catching up on newsletter publications; therefore, that expense is higher than in past years, totaling \$1,255.73.

Account Balances (as of 4/30/16)

Holdings

Checking	\$ 16,412.33
(deposited Cash account (\$207.93) into Checking)	
Certificate of Deposit	\$ 10,025.68
Database Fund	<u>\$ 3,267.05</u>
Total	\$ 29,705.06

Income

2015 Membership dues	\$ 1,960.00
Interest from CD	<u>\$ 6.78</u>
Total	\$ 1,966.78



Expenses (General Account)

Meeting refreshment	\$ 282.85
Annual Luncheon	\$ 160.00
2015 PO Box	\$ 128.00
Website Content & Design	\$ 675.00
Newsletters (printing/postage)	\$ 1,255.73
2015 WSM Registration Fee (L. Lovell)	<u>\$ 255.00</u>
Total	\$ 2,756.58



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:

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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:

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