

**SOUTHERN
CALIFORNIA
ASSOCIATION OF
MARINE
INVERTEBRATE
TAXONOMISTS**



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SCAMIT Newsletter

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Clypeaster rosaceus (Linnaeus, 1758)
ID by Dr. R. Mooi
Found on dock in San Diego Bay.
This is a Caribbean species and how it ended up in San Diego Bay is a bit of mystery but most likely it was a tourist trinket that was lost or tossed off a boat docked in SD.

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

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4 NOVEMBER 2019, B'18 ECHINODERM FIDS, OCSD

Attendance: Kelvin Barwick, Ernie Ruckman, OCSD; Peter Bryant, UCI; Megan Lilly, CSD; Erin Oderlin, CLAEMD; Jovairia Loan, Chase McDonald, Don Cadien, LACSD; Tony Phillips, DCE.

Kelvin opened the meeting by reminding attendees about the upcoming annual All Hands Membership meeting at SCCWRP on 9 December 2019. We will be opening the nominations for SCAMIT Officers at that time. Normally the SCAMIT Executive Committee meets in the summer, but this year there were many delays, so the meeting is now scheduled for 14 November 2019. He encouraged anyone with concerns that they would like addressed by the Executive Committee, to contact him or any of the current officers, before the November meeting.

UPCOMING MEETINGS

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

The day started with Dr. Peter Bryant, UCI, introducing himself. He has an extensive history with genetic mapping and biodiversity studies. Below is an excerpt from his web page: <https://devcell.bio.uci.edu/faculty/peter-bryant/>

Monitoring Biodiversity: We are working with students and local environmental organizations to photodocument and monitor local biodiversity, emphasizing terrestrial invertebrates (insects and spiders), and marine invertebrates (zooplankton). Projects include field studies of the distribution, seasonality and abundance of these animals, as well as studies of their life cycles. The resulting data are being used to build a comprehensive web site showing the diversity, life history, ecological roles, and conservation issues concerning these animals as well as plants and other organisms. A specific region of mitochondrial DNA, called the “DNA Barcode” is being used for matching adult animals with larval stages, and for species identification as part of the International Barcode of Life Project.

He attended the SCAMIT meeting to discuss his interest in zooplankton, and his work sequencing pelagic invertebrate larvae. Representatives from the different POTW agencies said they would seek permission for him to tag along on some of their trawls to continue his collecting efforts.

Turning to the taxonomy portion of the day, Megan brought a fun “show and tell” critter. A local San Diego fisherman noticed a sea lion playing with something strange on a dock. He threw the sea lion a fish to distract it and picked up its toy which turned out to be an unusual animal. It was brought to the CSD marine lab for identification and it was determined to be the test of a *Clypeaster rosaceus* (Linnaeus, 1758), confirmed by Dr. Mooi at Cal Academy (see cover images). *C. rosaceus* is a Caribbean species so how an individual (granted a dead one) ended up in San Diego Bay is a bit of a mystery. Although, sadly, the tests of these “sea biscuits” are often sold as curios in tourist gift shops. Perhaps it fell off someone’s sailboat and was quickly snatched up by the sea lion as a new favorite toy. With show and tell over, it was time to turn our attention to local echinoderm FIDs.



CLAEMD

Holothuroidea FID – this turned out to be the detached tail of Molpadiidae. These often throw people for a loop since they contain ossicles and appear to have what looks to be feeding tentacles. However, Megan pointed out that these are actually structures that surround the opening at the end of the tail to try to protect the holothuroid from being parasitized by commensals, such as pea crabs, as well as just minimizing foreign body intrusion.

Brisaster FID – test length = 34.3mm and petaloid width = 4.2mm. These measurements mean the specimen fell between *B. latifrons* and *B. townsendi* on the regression line. Megan recommended backing off to *Brisaster* sp since it was a so called, “tweener”.

Thyone bentii FID – large individual, it was not U-shaped, as the literature suggests, but an examination of the ossicles confirmed the ID.

Amphioplus sp FID – juvenile animal with a disc diameter of < 4mm, so it was recommended to leave it at genus.

CSD

Amphiodia urtica (Lyman 1860) FID discussion - Megan has noticed, for the last few years, a greater variety in the degree and variation of pigmentation found on *A. urtica*. She continued to identify the various forms as *A. urtica* but was seeking other opinions. She brought some B’18 specimens (B’18 10266, 64m, and B’18 10267, 63m) that were morphologically similar in all ways except in level and pattern of pigmentation. Everyone present felt that they should continue to be called *A. urtica*. Megan finds this phenomenon puzzling; if the variation of pigment patterns was associated with different locales an argument could be made for some sort of environmental effect, but since animals within a sample can have no pigment, slight pigment, or be heavily pigmented, that argument can’t be made.

Amphiodia sp A Haney 2008, B’18 10232, 14m - Megan doesn’t often see this species so she was seeking confirmation, which she received.

Brisaster spp, show and tell - Megan brought large, good examples of *Brisaster latifrons* (A. Agassiz 1898) (B’18 10325, 265m) and *Briaster townsendi* (A. Agassiz 1898) (B’18 10323, 390m) for comparison. She also brought 3 juvenile specimens of *B. townsendi* (B’18 10336, 430m) that even though small, could still be identified to species as they fit nicely on the regression line for *B. townsendi*. Their measurements (test length x posterior petaloid width) were: 30mm x 5mm, 27mm x 4.3mm, and 27mm x 4.6mm. This led to a discussion about when is it appropriate to speciate and when should a taxonomist back off. Since these animals were at or below the convention of 30 mm test length cut off, and smaller than the specimen brought by CLAEMD (34mm TL) which had ended up being left at genus *Brisaster*, it would be easy to argue they should be left at genus as well. However, Megan asserted that if an animal does fall clearly within a species on the regression line, even at small sizes, to go ahead and ID it, with the caveat that at least one additional person measure the animal to make sure the morphometrics are being consistently calculated.

Brissopsis sp LA1 Haney 2004 FID, B’18 10324, 426m – upon review it was decided that it was just an unusual looking specimen of *Brisaster* sp. The spines were a bit long and the gestalt of the petaloids was slightly off (proportions and relative placement on the test), but not enough to make it a *Brissopsis* sp LA1.



Amphiura diomedea Lütken & Mortensen 1899, B'18 10372, 687m – Megan brought this specimen for show and tell. Questions arose as to how to separate it from *Amphiura arcystata* H. L. Clark 1911. There is a gestalt difference but for detailed descriptive differences Megan recommended Hendler's chapter in the MMS Atlas (Hendler, 1996)

OCS D

Nacospatangus laevis (H. L. Clark 1917) FID, B18-10389, 16 July 2018, 80m (north of San Miguel Island; coarse sand/shell hash; 3 specimens;) & B18-10391, 15 July 2018, 82m (Santa Barbara Channel, just northeast of Anacapa Island; coarse sand/shell hash; 1 specimen) – The specimens were confirmed as *N. laevis*. This is one of Megan's favorite species of urchin and she took a moment to expound on their virtues. They are relatively rare, at least in most of the POTW standard monitoring programs. *N. laevis* prefers coarse, large grain size habitats, (indicated by the fact that these specimens were collected off the Channel Islands in coarse sediments) and CSD only sees them occasionally at a few of their southern stations in relict red sands. There are many distinctive features of this genus but one of the primary ones is the lack of an anterior ambulacral notch. Additionally, observed either live or dead, many small spots can be found interspersed among the spines that are ruby red in life and dark red in preserved specimens. Upon examination under a dissecting scope, these red spots reveal themselves to be swollen poison glands at the bases of the pedicellaria jaws. Poisoned-tipped pedicellaria do a good job discouraging the settlement of epibionts. It is a beautiful little heart-urchin with its snow-white appearance dotted with rubies and Megan hoped she had instilled an appreciation for this species in others, if maybe not with her same level of adoration.

9 DECEMBER 2019, ANNUAL GENERAL MEMBERSHIP MEETING, SCCWRP

Attendance: Kelvin Barwick, Ben Ferraro, OCS D; Wendy Enright, Ryan Kempster, Maiko Kasuya, Veronica Rodriguez-Villanueva, Katie Beauchamp, CSD; Jovairia Loan, Norbert Lee, Terry Petry, Chase McDonald, Brent Haggin, Christine Boren, Don Cadien, Bill Furlong, LACSD; Greg Lyon, Craig Campbell, Erin Oderlin, Joanne Linnenbrink, Cody Larsen, Jennifer Smolenski, CLAEMD; Leslie Harris, NHMLAC; Tony Phillips, Larry Lovell, DCE.

Kelvin opened the meeting by discussing lunch and its estimated time of arrival, the most important topic of the day. He then reviewed the day's agenda and started his "STATE of SCAMIT" address:

Everyone has been processing B'18 samples this last year and most meetings, subsequently, have been B'18 FID-related. Kelvin thanked all those taxonomists who had stepped up to lead and/or present at meetings.

SCAMIT had a "first" in 2019, awarding a \$2000 grant to the student fund of the International Polychaete Conference (IPC-13). Kelvin reported that while manning the SCAMIT table at the conference, a student from Brazil took the time to come and personally thank SCAMIT as monies from the grant had allowed her to attend.

A new year has brought new challenges. The Species List Review Committee (SLRC) has been dormant but members continue to work behind the scenes. The next SLRC meeting will likely be after the February 2020 Bight'18 deadline.



Next Erin Oderlin gave the Annual Treasurer's Report:

- Dues were raised to \$20 last year (from \$15) and that was the first time SCAMIT has raised dues in many years. SCAMIT currently has approximately 150 members, and of those, about 40 used PayPal to submit their membership dues
- No publication grants were applied for, or awarded, in 2019
- Our website fees were approximately \$520
- SCAMIT showed a small loss this year due to our \$2000 grant to the IPC 13 student fund in memory of Dr. Don Reish
- Erin welcomes suggestions for alternate investment options to help SCAMIT generate more income, but she gently reminded everyone that whatever is suggested cannot create a lot of extra work for her. All SCAMIT officers volunteer their time and they only have so much of it. Kelvin also chimed in that even if SCAMIT had more money, at this point it is unclear what we would spend it on since we get few publication grant applications

The Vice President's Report was given by Leslie:

Leslie noted that many experts have expressed interest in presenting at SCAMIT meetings and these are good opportunities to encourage new members to join. For instance, the upcoming Bryozoa workshop with Megan McCuller (North Carolina Museum of Natural Sciences) promises to bring some new members. Some of these potential presenters work mostly on live and/or DNA-ready specimens, but Leslie maintains that having these dialogs and interactions is important in order to make progress in our identifications, even if it means collapsing things into a species complex for the time being.

She noted frequent meeting schedule adjustments due to Bight'18 efforts.

Some members participated in the LA Urban Ocean Experiment Bioblitz including Don Cadien, Brent Haggin, Bill Furlong and Norbert Lee from LACSD. There was also assistance from staff at CLAEMD.

- 4300 lots of specimens were added to the collections of NHMLAC and this count did not include what went to Florida or North Carolina
- DNA from those specimens was sent to BOLD for sequencing
- Next on the list for a Bioblitz are the Channel Islands, Sitka, Alaska, and more to come

SCAMIT Secretary, Megan Lilly, was out of town and unable to attend so that concluded Officer announcements. The next agenda item was a round table discussion among attendees.

Don Cadien started by discussing the impact of WoRMS and how we still need to keep “chugging along” to deal with provisional species. Leslie also brought up the topic of our region-specific expertise as opposed to outside investigators. Don noted that WoRMS is generally responsive to emails with suggestions and/or corrections.

Tony Phillips gave an update on the next Coan et al. book which will be the third in the series of bivalve bibles. This latest edition will address South American province bivalves. He then mentioned that DCE had been hired to do the taxonomy training for CLAEMD staff. He is currently reviewing their B'18 vouchers and is pleased to report they have done a great job with the accuracy of their identifications. And lastly, he is starting a new project comparing juvenile to



adult bivalves, and hopes to present at a future SCAMIT meeting. He is aiming for the summer or fall of 2020 for the final presentation.

Jennifer Smolenksi asked about the status of the digital list/photo project. Cody Larsen mentioned that ITIS might be a good starting point since, to date, SCAMIT has not had much success with this project. Kelvin noted that although it is a good idea, it is difficult to see who the person/team will be that would maintain that project. It was suggested/asked that B'18 trawl photos be posted in the Taxonomic Toolbox. Ryan Kempster mentioned that he has a site (shark-base.org) that already does much of what we are hoping to do. He offered to email Dean Pentcheff and discuss the feasibility. Leslie mentioned that Gustav Paulay is working on the WoRMS photo gallery, including west coast verified images, and thinks he would be interested in talking to us about strategies.

Erin Oderlin asked if anyone is not getting SCAMIT list server emails. If you are not, be sure to get in contact with her so she can update and/or verify your information.

Leslie then solicited the group for volunteers to be meeting presenters and/or hosts, and for suggestions for visiting scientists. Please contact her with ideas.

Ben Ferraro mentioned that there have been two Toolbox Review meetings for Arthropods but the updates are not quite done. He is hoping for one more meeting to finish needed revisions.

Katie Beauchamp said that she is finishing up the *Neocrangon zaca* (Chace 1937) vs. *Neocrangon resima* (Rathbun 1902) research paper. She mentioned that her EPA collaborator is having some troubles completing his part. She is hoping to finish up in the Spring. Don elaborated on the history of the two species and their distinction vs synonymy.

Larry Lovell inquired about the Bight'18 sample schedule. Currently April or May, 2020 is the target for the QC sample exchange and identification, with June 2020 being the goal for resolution meetings.

Brent Haggin has been looking at in-house provisional species (apart from those on the SCAMIT List) and is trying to acquire more information, especially on the older ones. He is hoping to jump start this process for all the agencies. He would like to see the backlog of orphan provisional taxa be addressed. Leslie suggested we put our in-house ID sheets into a Google drive or a similar digital shared storage space; this idea was supported by Veronica and Maiko. Kelvin warned that issues exist with different agencies having different IT security protocols and accessing online shared folders has become unwieldy. This all might require a meeting to get it started, hopefully sooner rather than later, to accommodate B'18 provisional species work. Cody volunteered to take the lead on setting up a file repository that will be accessible to SCAMIT members but not the general public.

Greg Lyon urged members to keep developing and sharing provisional taxa documentation at meetings, and to ensure this information is uploaded, and made available, in the Taxonomic Toolbox.

Wendy Enright passed along a message from the absent Secretary, Megan - she is in the long process of catching up on newsletters and wanted to remind everyone that she relies heavily on the note takers and the presenters, following up with her in order for her to assemble the newsletters.



Wendy's own update was to announce that the next Western Society of Malacologists meeting will be in Ensenada, Mexico, 14-19 June, 2020.

Many attendees passed with regards to any announcements or updates.

The next agenda item was to try to schedule out meetings for 2020. The goal is to move most meetings to OCSD since it is a central location for people coming from San Diego in the south and from Los Angeles in the north.

The meeting schedule developed as follows:

- January 6th, polychaete B'18 FIDs
- January 13th, arthropod B'18 FIDs
- February 24th, non-polychaete provisional species review
- March 9th, polychaete provisional species review
- April 6th, Bioblitz FIDs at NHMLAC
- May 11th, gastropods; more specifics TBD
- June 8th, crustacea toolbox review
- July, no meeting
- August 10th, echinoderm toolbox review
- September 14th, polychaete toolbox review
- October 19th, bivalves, lead Tony Phillips (possibly in Santa Barbara)
- November 9th, misc phyla; more specifics TBD
- December 14th, annual general membership meeting at SCCWRP

After scheduling out 2020, it was time for a Meeting Wrap Up. Kelvin called for Officer nominations from the floor. The current slate of officers was nominated and Leslie additionally nominated Brent Haggin for Secretary. Ballots will be sent out in February, with voting to conclude in March.

LITERATURE CITED

Hendler, Gordon. 1996. Class Ophiuroidea. Chapter 7. pp. 113-179. *IN: Taxonomic Atlas of the Benthic Fauna of the Santa Maria Basin and The Western Santa Barbara Channel*. Blake, James A., Paul H. Scott, and Andrew Lissner (eds.). Santa Barbara Museum of Natural History. Santa Barbara, California, U.S.A. 305pp.



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

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