SOUTHERN CALIFORNIA ASSOCIATION OF MARINE INVERTEBRATE TAXONOMISTS

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This Issue

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14 MAY 2012, B'08 SYLLIDAE PART DUEX, CSD

Larry Lovell opened the meeting with rounds of introductions by all present.
Upcoming meetings were then announced:
11 June 2012 – NHMLAC, *Brada* / *Travisia* discussion of species reported and resources used to identify. Additional polychaete review topic TBD.
July – no meeting due to POTW field activities.
27 August 2012 – NHMLAC, Vasily Radashevsky will present on his recent polychaete studies. Specimens need to be sent to Leslie ahead of time or given to her at the June meeting. Vasily will be reviewing So Cal material he has received in the past.
September – no topic as of yet.
October date TBD – NHMLAC, Dave Elgin will present on a sponge topic. He is the second author with Welton Lee on *The Sponges of California*. He is currently working on *The Sponges of Oregon*. If possible he will demo his interactive website at the meeting.
5 or 22 November 2012 – OCSD, Kelvin will review *Lirobittium* and *Tellina*.
10 December 2012 – CSD, Megan will review amphiurids, trawl *Parastichopus* spp and Phyllophoridae provisionals.

UPCOMING MEETINGS

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

Other announcements:
May is membership month. Please renew your membership.

The Species Review Committee is in action again and Don Cadien is the committee chair. The committee will review a list of emendations to Ed 6. Approved emendations will be implemented and added to Ed 7 to be released 1 July 2012. Emendations under consideration are of four types; spelling and orthography corrections to the current list, name changes (generic, synonymies, familial and ordinal changes) from the published literature, species reported since the last list, and addition of new, vetted and approved, provisional species. New to Ed 7 will be ecto-parasites!

The Taxonomic Database Committee met 24 April 2012 at CSD. There was a demo of BIOMAP by Dawn Olson (CSD). Shelly Moore (SCCWRP) provided progress updates on database structure, additional content, and new resource links. Additionally, SCAMIT has hired Crissy Attardo as an intern to find voucher sheets etc not already on the website. Crissy has been visiting labs for several months mining notebooks for voucher sheets and other taxonomic tools not currently residing in the taxonomic toolbox. To date she has given Dean Pentcheff approximately 500 files and there is more work to be done.

The SCAS meeting was in early May and SCAMIT was present with an information and membership table. Three members renewed. Larry was introduced to SCAS President Dr. Jonathan Baskin by Ann Dalkey. Dr. Baskin asked if SCAMIT would be interested in hosting a symposium at one of the annual meetings. Larry replied that SCAMIT and its members have not been active in presenting at meetings the past few years and that we should consider his suggestion. Some topics that SCAMIT should entertain as possible presentations are; the history of SCAMIT, the taxonomic database project, taxonomic barcoding, and Morphbank.

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Kelvin then reminded those present that the upcoming WSM meeting will be June 24-27 at UCSC, and one of the main symposia topics is Opisthobranchs led by Terry Gosliner.

With that the taxonomic portion of the meeting started. Ron Velarde began with a review of the first Syllid meeting (Nov 2011, SCAMIT NL Vol 30 no. 3&4). There was a Syllidae subfamily review with discussion. Leslie provided many comments with pictures of live specimens, especially the subfamily Autolytinae. The materials Ron presented will be available on the website.

The afternoon was spent reviewing and identifying 18 unlabeled syllid species (lab practical format) prepared by Ron with a review of correct answers at the end of the day. It was a full day of Syllidae!!

11 JUNE 2012, POLYCHAETES, NHMLAC

Larry Lovell opened the meeting with introductions.
Next was a review of upcoming meetings. Additions since the last set of upcoming meeting announcements are as follows: The date for the November mollusk meeting was set for Monday Nov 5th and will be lead by Kelvin Barwick at OCSD. December 1st will be the annual SCAMIT Christmas party.

Other announcements:
Leslie will give her presentation on the importance of taxonomy (given last year in Vladivostok) at the upcoming WSM meeting June 24-27 at UCSC.

It was then time for polychaete taxonomy. First up was Ron Velarde who shared images of local *Brada* and *Travisia* species.

Tony Phillips then presented on *Ophelina* sp A SCAMIT (from Hyperion samples), and passed out a voucher sheet.

Larry then lead a further discussion on the topics of the day: *Brada*, *Travisia*, and *Arcteobia* cf. *anticostiensis*. He handed out a character table and key to local *Travisia*. Additionally he provided background discussion on *Arcteobia* and notosetal characters defining it, and their similarity with *Malmgreniella* and *Harmothoe*. There are historical changes in name usage leading to confusion when updating old keys and with interpretation/meaning regarding the presence of two types of genera-defining notosetae.

Following lunch, the group examined specimens of *Brada pluribranchiata* and *B. pilosa* noting the external papillations. *B. pluribranchiata* possesses large papillae with a secondary elongate papilla, while *B. pilosa* lacks large papillae and possesses only smaller filiform papillae.

We then moved on to examination of members of the genus *Travisia*; *T. gigas*, *T. pupa*, and *T. brevis*. Nephridial pores are not as described for *T. brevis* (setigers 3-14, not 7-25). The nephridial pore distribution is the same for all three local species and seems to be a generic character. The posterior parapodial lobes and degree of postulation on the middle annulation (tri-annulate) of anterior and posterior segments is different between *T. brevis* and *T. pupa*. It was noted that *T. granulata* Moore 1923 has not been reported by any SCAMIT members. It is reported in Hartman 1969 as collected in shelf depths in coarse sand and rocks, and hard packed sand. Those are difficult habitats to sample.

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27 AUGUST 2012, SPIONIDAE, NHMLAC, GUEST SPEAKER VASILY RADASHEVSKY

Larry Lovell opened the meeting with the usual round of introductions.
There were some additions and changes to the latest round of upcoming meeting announcements and they are as follows:

6 September 2012 - SCCWRP, taxonomic database meeting.
10 September 2012 - NHMLAC, Gary Poore will talk about the Western Australia species inventory project and the Galatheids of the coral coast.
18-20 September 2012 - SCCWRP, an EPA CBRAT database update meeting.
22 October 2012 - NHMLAC, sponge meeting with Dave Elvin.
1 December 2012 - there was some discussion that the Christmas party will probably not happen due to a lack of possible attendees
14 January 2013 - OCSD, Tony Phillips will be discussing the flatworms of the SCB.

Other announcements:
Kelvin Barwick reported that this year's WSM meeting at UCSC was interesting and well attended. Wendy Enright was elected as the next President and the 2013 meeting will be held somewhere in San Diego. Paul V. Scott was elected President for 2014 and is starting to plan an "All-Americas" meeting in Mexico for that year.

There was further discussion of the idea for a SCAMIT symposium at the next SCAS meeting with member talks on taxonomy, ecology, QA/QC, and intercalibration.

The taxonomy portion of the day started with Vasily giving his presentation, "Updates on the Taxonomy of Spionidae (Annelida) from the Pacific Coast of the U.S.". His Spionidae British Isles paper is in review and it covers both morphology and biology. He discussed that further work on taxonomy is hampered by a lack of funding and competent workers. The "powers that be" think that work on taxonomy is complete and does not need funding, but there are many issues in species level identification which still exist, and resolution is difficult. A generic key to European spionids was produced by Vasily, which will apply to CA/NEP fauna. It includes 20 genera and provides a head to pygidium review of characters and SEM images to illustrate those characters. Definitions of character states are also provided.

Vasily then spoke about specific characters:
Swimming chaetae in larvae are shed upon settling. Most juveniles don't have chaetae on setiger one, and it takes time to develop adult chaetal patterns, so one must be caerful making identifications. Vasily noted that species-specific characters develop later than generic characters. Branchiae have cilia on one or both margins (inner and outer). Nuchal organs increase in length to a maximum that is species specific. He likes to refer to the "behavior of structures in ontogenetics of species" as a way to describe larval vs adult differences.

Nuchal organs are a useful character. Metameric (segmental in a certain number of segments, the first one is usually different) and non-metameric (parallel lines or U – shaped). They are underlined by the nuchal nerve as discussed in Söderström's classic paper on Spionidae anatomy (Söderström 1920).

He then discussed the term "snout"; he uses it to distinguish origins of pointed anterior ends of some spionids. Through observing larvae and documenting development, pointed anterior ends may develop from prostomial tissue or peristomial tissue. For example, in *Dispio*, the prostomium

elongates after larval settlement, forming the point. In contrast, in *Scolelepis* the peristome elongates and forms the anterior point; Vasily refers to this as a snout.

Dorsal crests in *Prionospio* species are a good character, but proper preservation is important. Crest vs folds is a problem with this character. Notopodial postchaetal lamellae can almost meet in the middle, but not completely so they are not considered a complete fold/crest.

Chaetae – there are many different kinds and arrangements. There are three groups of chaetae: In the anterior, there are inferior/superior notochaetae, anterior/posterior notochaetae, and anterior/posterior neurochaetae. In the posterior, the anterior row is replaced by hooks (Radashevsky & Fauchald 2000, Brazil conference proceedings).

In the polydorines, the modified setiger 5 arrangement of chaetae and hooks is highly variable for the different genera. Companion setae can be associated with the spines.

The start position of lateral pouches can vary with age.

Pygidial cirri can have an equal number of dorsal and ventral lobes. Or, they can have a single mid dorsal disc-like lobe; incised or with a smooth margin and a pad-like fleshy structure.

Many spionids have lateral glands used for muco-polysaccaride secretion in tube construction. *Spiophanes* species have specific patterns of glands on setigers 5-8, changing to slits thereafter (Meissner et al 2012). Terms describing the different types were confusing to Vasily so he has devised a new framework with 6 main pattern types.

Heart bodies are part of the vascular system at higher levels.

Vasily studies specimens under glycerin (high magnification) with a small amount of methylene green stain to thin the glycerin and increase the contrast.

No world-wide key to the genera exists, so Vasily is currently working on this project.

Next, Vasily had comments on specific species:

Streblospio gynobranchiata Rice & Levin 1998 - apodus, achaetous chaetiger one (see illustration in the paper).

Scolelepis spp - the snout is actually the peristomium from the larval stage which gets enveloped by the prostomium as the larvae mature into adults. There are basal sheaths on the palps which can be present/absent/reduced/fused.

Paraprionospio alata - there is a sheath on the palps and lamellae on the branchiae; the shapes are used for speciation in the Yokoyama Indian paper (Yokoyama & Sukumaran 2012). Tony Phillips raised an observation that many SCAMIT members have noticed; there are two morphs of *P. alata*; the shallow water form has foliose lamellae, and the deep water form has thin lamellae.

Polydora narica Light 1969 - the illustration of the modified chaetae is precise and is considered to be accurate. Vasily has determined that the spine was incorrectly interpreted (angle of view). Spines have a depressed distal end with a lateral flange that can break and look like a tooth. Earlier mis-identified as *P. limicola* by Olga Hartman, *P. narica* has black bands on its palps. *P. limicola* can be found in the SCB but is rare (*P. aggregata* by Blake is the same) and is found in harbor fouling communities, but never in bottom sediments.

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Prionospio multibranchiata E. Berkeley 1927 vs. *P. lighti* Maciolek 1985. These two species can be confused and both can occur in the SCB. *P. multibranchiata* may be a good species in the NWP, Sea of Japan, however, the NEP is the type locality. The median pair of eyes is large in this species. In *P. lighti* the median pair of eyes is small and it is a local species.

P. maciolekae Dagli & Çinar 2011 - occurs in Turkey.

Pygospio elegans Claparede 1863 vs. *P. californica* Hartman 1936 vs. *P*. sp. nov. from Oregon. *P. elegans* has distinct pigment bands even when preserved and the hooks are all bidentate. The other two species have spoon-like hooks.

Dipolydora brachycephala (Hartman 1936) Bodega Lagoon, CA. This species has a long caruncle that extends to setigers 5-8, except for smaller individuals. The length of the caruncle for *D. caulleryi* (Mesnil 1897) is shorter (<setiger 4). Both species may occur here. Specimens examined at the California Academy of Sciences seemed to be *D. caulleryi* as large individuals displayed a caruncle extending to setiger 4.

Dipolydora socialis (Schmarda 1861) Chile. Type may be lost or in Germany. Caruncle extends to end of setiger 5; gizzard plates are made of chiton and are present except in some large adults which may shed them. Found living in tubes on the bottom.

Dipolydora magna (E. Berkeley 1929) Vancouver Island, Canada. Caruncle longer, to setigers 9-10. Found living in tubes on the bottom.

Dipolydora neocardalia (Hartman 1961) from LA. May be valid, Vasily has seen specimens. Length of caruncle to setigers 7-8.

Dipolydora carunculata. Sea of Japan. Vasily species. Boring or tubes on the bottom. May be the same as *D. magna*.

Rhynchospio glutea (Ehlers 1897) vs *R. arenicola* Hartman 1936. Vasily now has good genetic material to compare both species.

Polydora californica Treadwell 1914 vs *Boccardia proboscidea* Hartman 1940. Name conserved in Radashevsky & Harris 2010.

Lastly was a review of specimens brought by members:

CSD - *Polydora narica*, *P. cornuta*, (small black pigment spots laterally starting on setiger 7), a larval polydorine, and *P. akaina* (branchiae and dorsal lamellae fused but not noted in Blake's description).

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