



## Southern California Association of Marine Invertebrate Taxonomists

April, 2004

### SCAMIT Newsletter

Vol. 22, No. 12

**SUBJECT:** B'03 Echinoderms  
**GUEST SPEAKER:** none  
**DATE:** 13 September 2004  
**TIME:** 9:30 a.m. to 3:30 p. m.  
**LOCATION:** City of San Diego Marine Biology Lab  
2392 Kincaid Rd  
(contact M. Lilly for directions)

#### APRIL MINUTES



Image by R. Rowe, CSD

The meeting began with president Kelvin Barwick calling for future meeting topics. There is a tentative plan to have a follow up to the "Future of SCAMIT" meeting held last year, however, our meeting schedule has been a bit discombobulated this year what with so many local members being consumed with working on B'03 projects. Hopefully we will get back on track soon. Our next scheduled meeting is 13 September and will cover echinoderms. It will be held at the City of San Diego's marine lab and will be lead by Megan Lilly, Don Cadien and Lisa Haney (who has promised new and exciting information on many of the strange holothuroids LACSD encountered). In addition, Lisa has been trying to drum up interest and support in a much needed crustacea meeting. We will keep you posted.

Kelvin then brought up the topic of digital imaging, specifically, how to standardize the way in which the images are produced (which programs) and stored for SCAMIT archives. Also a standard is needed for those images associated with the newsletter. There were no decisions made at the time, but eventually it is hoped that a standard format will be developed.

Don Cadien then had the floor and announced that Don Reish is going to be contributing 7 boxes of reprints to SCAMIT. These will eventually need to be sorted and catalogued, perhaps at a future SCAMIT meeting.

A sad announcement was made by Ron Velarde. He informed those present that the Sea Slug Forum is no longer being supported by the Australian Museum. William Rudman is still working on it, but only as time allows.

With the business portion of the meeting over we got down to the subject at hand which was a review of the B'03 trawl invertebrates. Don passed around a species list of trawl vouchers from the various agencies. This list included both physical and photo vouchers. All species submitted were included at this point, including infaunal and pelagic animals, it will be edited at a future date

Representatives from different agencies gave a "slide show" (mostly power point presentations) of the animals they had seen during the summer's trawls. Kelvin Barwick put together an in-depth and extensive program of the City of San Diego's trawls, which reviewed their photo vouchers as well as images of species that were collected for specimen vouchers. City of San Diego had a number of provisional species within the sponges and the colonial ascidians. Trawls in San Diego Bay turned up many unknown (to us) and interesting animals within these two groups. For the sponges, all were photographed alive and intact and then "pieces" were taken back to the lab and permounts were made of

the spicules (which were also photographed). Many species turned out to be the same as those seen in Bight '98 which Dean Pasko had thoroughly catalogued.

The colonial ascidians were photographed live, as well and then usually one, or part of one, was returned to the lab. Dissections of these animals have not yet been accomplished as Megan Lilly is quite unhappy with the prospect of sectioning colonial ascidians ("I don't do colonial ascidians") and to date, no other brave soul has volunteered for the task. The animals were beautiful in life but appear ugly as a prospect for sectioning.

As a side note, Rick Rowe, CSD, should be thanked for his contribution to the digital image collection. Not only is Rick a talented photographer and captured many of the species beautifully, but he also designed small, clear, plastic boxes of various sizes which were filled with sea water and then the animals were photographed live (submerged) through the side of the box. A 1cm black and white grid pattern was placed in the background for size reference. A simple, but ingenious system which created many wonderful images of animals looking somewhat normal instead of the usual flattened, shapeless and unhappy creatures we see on a measuring board.

Don Cadien was next to show the invertebrate image collection of LACSD. Most images were taken by Cheryl Brantley, Tom Parker or John Miller, and Don wishes to extend his thanks for their assistance. Many of the animals weren't necessarily vouchers, but species that were seen during some of their more interesting deep water trawls which were invalid due to torn nets, incorrect bottom times, etc.

For instance, they encountered a massive specimen of *Staurocalyptus* at 271m. This animal was rich with other species living in and amongst its spicules. Don was sorely



disappointed that the animal was from an invalid trawl and therefore he couldn't justify spending the day happily picking through its spicules looking for interesting "tidbits".

He also showed slides of their *Parastichopus* sp A which is often mistaken for "fish puke" as it is a very flaccid, pale, soft animal. It is white with a red dermis that is often mostly rubbed off, although one can almost always still find some red near the tentacles. Also, upon close inspection, small black spots can often be seen.

Slides of a juvenile *Parastichopus californicus* were shown, and it looked markedly different from an adult of the same species, so IDer's beware.

Another interesting find was a *Solaster borealis* with two *Munnidopsis depressa* on the dorsal surface, clinging to the arms. It was an interesting association not previously seen by anyone present. Some people suggested that the association was "net induced" but Don was not convinced of this due to the firm and symmetrical grip that was being displayed by the *M. depressa*.

Other animals seen in invalid trawls included, *Galathea californiensis*, and a species of *Alpheus*.

Two species of interest, but which will not be included in the data due to the fact that they are not epibenthic in nature, were, *Pasiphaea emarginata* and a polychelid lobster larva in the genus *Polycheles*. This last animal was most bizarre looking and threw Don for quite the loop upon initial examination. He has written about this animal in a previous newsletter (see April 2003, Vol. 21 no. 12).

Many interesting species were also encountered during the intercalibration trawls between agencies. To name a few:

*Synallactes challengerii*, *Hippasterias californica*, *Urticina* sp A, *Glyptolithoides cristatipes*, *Ceramaster leptoceramus*, and *Liponema brevicornis*.

All in all it was a fun day full of interesting photographs of unusual and often beautiful animals.

### POLYCHAETE UPDATE

Following is Sergio Salazar-Vallejo's review of his work on the Flabelligerids at the Los Angeles County Museum of Natural History.

#### Californian Flabelligeridae (Polychaeta), 2

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These are some brief comments on Californian flabelligerids, made after seeing most of the type material for this coast and supplemental specimens. Regrettably, there are still some types to review so the changes included here are considered tentative. The revision should be completed by the end of the year after another visit to the NHMLAC. Additional material lent by SCAMIT members which I could examine at that time would be very useful.

#### *Brada Stimpson, 1854*

*Brada pluribranchiata* is a valid species, not a junior synonym of *B. sachalina*. It is a smaller species but with about twice as many segments as in *B. sachalina* (18-22). Further, the papillae are smaller, arranged in 4-5 transverse rows, and slightly covered by fine sediment, while in *B. sachalina* the papillae are very large, arranged in 1-3 transverse rows, and covered by cemented sand grains.

For the local fauna, the name *Brada villosa* should be replaced by *B. pilosa* Moore. The differences between both species were indicated by Hartman, as already stated in my previous commentary, and validated by study of type material.



The deeper water specimens with extremely long setae collected by the LACSD & loaned to me by Tom Parker are closely allied to *B. verrucosa* Chamberlin. Even without the differences in setal length, however, *B. verrucosa* differs by having larger parapodia in setiger 2 while the LACSD specimens lack this enlargement. This is a consistent difference and will be employed to describe the local form as an independent species named after Tom Parker.

#### ***Diplocirrus* Haase, 1915**

There may be more than two species in the California Current ecosystem. The SCAMIT form has not yet been studied in detail but might deserve an independent name because it differs from *D. capensis*.

#### ***Flabelliderma* Hartman, 1969**

The name *Stylarioides papillosa* Essenberg, 1922, has to be reestablished as the type species as Hartman (1959, 1961) was incorrect in assuming that it was a homonym and in establishing the new name *F. essenbergae* (Hartman 1961). Hartman (1961) also misinterpreted Essenberg's original description and based her concept on a different species. *F. papillosa* has now been redescribed from fresh material, a neotype has been selected, and a new name will be introduced for the form described and illustrated by Hartman as *F. essenbergae*. Further, a form from Guadalupe Island, Mexico, apparently commensal with a subtidal sponge, is being described as an independent species and will be named after William Light.

The current concept of *Flabelliderma commensalis* may include three species, each living on a different sea-urchin host. The large black form living on *Centrostephanus coronatus* is being described and will be named after Robert Spies because he made several studies on specimens collected from that sea-urchin; the two others live on low intertidal *Strongylocentrotus purpuratus* and subtidal *S.*

*franciscanus* and show striking differences in size and pigmentation. The form collected from *S. franciscanus* has an eversible pair of long tubes (nephridia?) on an anterior setiger. This may be linked to reproduction but more experimental and reproductive biology studies are required to determine this.

#### ***Flabelligera* Sars, 1829**

So far, the only difference between *F. infundibularis* and *F. affinis*, is that the former has very dark neurohooks, so dark that even the rings are difficult to detect. However, I have not yet studied adequate materials from the latter species, and other differences may be discovered later.

#### ***Ilyphagus* Chamberlin, 1919**

*I. ilyvestis* type material lacks the anterior end; it has apparently not been found again, and it has been redescribed.

#### ***Pherusa* Oken, 1807**

The genus is being restricted; the only local species will be *P. neopapillata*, *P. papillata*, and a new species that lives in *Macrocystis* holdfasts and which has very long notosetae. This will be named for Genny & Shane Anderson who generously provided living specimens, holdfasts, and hospitality during two trips to Santa Barbara. *P. inflata*, on the other hand, will be used as the type species for an independent genus characterized by an anterior dorsal shield made of cemented sand grains.

The status of *Pherusa negligens* in relation to *P. schmidtii* is still unresolved. I have asked some Russian colleagues to send type materials, but they are under a heavy shortage of funds and may not be able to do so. Perhaps this problem can be resolved by revising some alternative materials from the Bering Sea.



***Piromis* Kinberg, 1867**

The species recorded locally are *P. capulata*, *P. hospitis*, and *P. sp. A* Harris. The types of *P. hospitis*, considered missing since 1993, were found under another name in the collection. The first two species differ because *P. capulata* lacks foliose dorsal lappets on anterior setigers and has similar neurohooks throughout the body while *P. hospitis* has foliose, flattened dorsal lobes in anterior setigers and bidentate neurohooks with short rings in median and posterior setigers. *P. sp. A* is very similar to *P. hospitis* but has globose dorsal lobes which extend posteriorly on the body about twice as far as in *P. hospitis*. It has been incorrectly identified as both *capulata* (Hartman 1963, Hartman 1966, Hartman 1969) and *hospitis* (Blake 2000) as pointed out by Leslie. I intend to name *sp. A* in her honor. Some *Piromis* specimens with sediment cover restricted to few anterior setigers, and made of large sand particles, deserve a more detailed study.

**Acknowledgments**

This 6-month stay in Los Angeles has been very productive. It was possible thanks to the warm hospitality of Leslie Harris and David Ocker who allowed me to stay in their home; this, in turn, enabled me to save enough money from my Fulbright scholarship for my upcoming research activities in France. My SCAMIT colleagues have been very kind by allowing me to see their valuable materials.

Additional thanks go to Leslie for her help in improving my Spanglish in this commentary.



Please visit the SCAMIT Website at: <http://www.scamit.org>

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