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TAXONOMISTS



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Tubulanus cingulatus (Coe, 1904) Cit of San Diego trawl station SD-16 (2), 10 July 1995, 92 ft., large specimen, total length approx. 7.5 cm. (Image by D. Pasko)

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

19 SEPTEMBER 2005

President Kelvin Barwick started the meeting with the business news. He announced upcoming SCAMIT meetings. It was decided that next year's May meeting will be a workshop on problematic Phyllodocids. Leslie Harris also volunteered to lead a meeting on Terebellids in June.

Kelvin announced the newsletter is now produced in a one-column format. There had been several requests for this in the past. Members have commented that the new format is much easier to read on-line. In addition, there is more room on page one for a nice, colorful image. Good digital images of marine invertebrates are always welcomed by the newsletter staff.

It was mentioned that the search engine Google has been indexing the SCAMIT newsletters under their Scholar section, making it easier to search and find specific information. However, with the new software (Adobe InDesign) being used to produce the SCAMIT newsletters, we should be able to create an index as the newsletters are produced. The newsletter staff is currently looking into this feature.

Cheryl Brantley announced that the SCAMIT reprint sale was a success. Approximately \$1200 in reprint and book sales has been earned. This accounts for about half of the reprints and there was some discussion about where to house the remaining reprints.

SCAMIT owes a big "Thank You" to member John Miller (LACSD) for all his work on this project.

Larry Lovell gave a report on the vents and seeps conference that was held at Scripps. There were approximately 200 attendees present from all over the world. Larry hosted several experts in the collections lab who were interested in examining specimens.

Ron Velarde announced the Southern California Unified Malacologists (SCUM) meeting will be held on January 21, 2005 in Santa Barbara. Ron also passed around a new publication by USGS titled "Resource Inventory of Marine and Estuarine Fishes of the West Coast and Alaska: A checklist of North Pacific and Arctic Ocean Species from Baja California to the Alaska-Yukon Border" by Milton S. Love, Catherine W. Mecklenburg, T. Anthony Mecklenburg and Lyman K. Thorsteinson.

From there it was on to the polychaetes. Our first guest speaker of the day was María Ana Tovar-Hernández from ECOSUR (Chetumal, Quintana Roo, Mexico). Her presentation was titled "Systematic revision of *Chone* Kroyer, 1856 (Polychaeta: Sabellidae). She is working on a worldwide revision of *Chone* for her PhD dissertation and is examining type and non-type material. Currently there are 53 species of *Chone* described worldwide. "True" species of *Chone* have the following characters: a broadly rounded dorsal lip, no extension of the branchial skeleton, and similar shaped uncini throughout the abdominal region. Species that

Upcoming Meetings

December 12 - No Meeting

January 9 - TBA

February 13 - Polyclad flatworms at San Deigo Lab with Tony Phillips (CLAMED)

March 12 - TBA

April 10 - TBA

May 8 - TBA

June 12 - Terebellids at LACMNH with Leslie Harris



fit into this description are *C. infundibuliformis* from Greenland, *C. magna* from San Miguel Island, California, *C. aurantiaca* from Puget Sound, Washington, *C. mollis* from Pacific Grove, California, *C. picta* from Martha's Vineyard, Massachusetts, and *C. gracilis* from Kodiak Island, Alaska. In contrast, distinguishing characters of a new genus that María Ana is describing are: erect dorsal lips, extension of the branchial skeleton, and differently shaped uncini in the posterior region of the abdomen as compared to the anterior region. Species that will be included in the new genus are *C. veleronis*, *C. albocincta*, *C. minuta*, *C. ecaudata*, *C. bimaculata*, *C. americana*, *C. uebelackerae*, *C. perkinsi*, *C. farringtonae*, *C. sp A Harris*, *C. sp B Harris*, *C. sp C Harris*, *C. sp 1*, *C. sp 2*, and *C. sp 3* Tovar-Hernández. María Ana also discovered a difference in sperm morphology between species of "true" *Chone* and species in the new genus.

The worms that we call *C. mollis* in Southern California are not the "true" *C. mollis*. "True" *C. mollis* occur in shallow mudflats; Leslie has seen them in Tomales Bay.

We discovered that our *Chone* sp SD 1 is a synonym of *C. sp 3*.

Next we discussed *C. minuta* and *C. ecaudata*. These two species are morphologically similar and María Ana will make *C. minuta* a synonym of *C. ecaudata*. Leslie explained however there are different ecotypes. In Washington, she has seen dense "shag carpets" of *C. minuta*. In contrast, Leslie finds *C. ecaudata* in mixed sediments from the Channel Islands.

Leslie commented that *C. duneri* is an undescribed species even though it is listed in the SCAMIT Species List. Members with specimens of *C. duneri* should send them to Maria Ana for examination. This can be done thru Leslie.

María Ana was asked how to place an unidentified specimen of *Chone* into her new undescribed genus or the "true" *Chone* if the crown is missing. She replied that one should examine the abdominal uncini. If the uncini morphology is similar throughout the abdomen, the specimen is a "true" *Chone*. If the uncini in the anterior abdominal region are different in morphology than uncini in the posterior abdominal region, the specimen would be placed in the new undescribed genus.

Our next speaker was Professor Rolando Bastida-Zavala from the Universidad del Mar located in Oaxaca, Mexico. The title of his presentation was "Revision of the genus *Hydroides* (Polychaeta: Serpulidae). He described the morphology of Serpulids and said the most important character is the operculum. The uncini are also an important character. Serpulids secrete calcareous tubes and are an important part of the fouling community. Rolando has found seven new species: *Hydroides deleoni*, *H. lambecki*, *H. panamensis* (Panama and Equador), *H. salazarvallejo*, *H. similoides*, *H. tenhovei* (Eastern Pacific, west coast of Baja), and *H. trompi* (Gulf of California, Panama). Rolando gave us three websites that may be of interest.

The Universidad del Mar website is: www.umar.mx

Serpulids from the Eastern Pacific can be found at:
www.mx.geocities.com/rolando_bastida/index.html

A website that deals with polychaetes in Mexico is:
www.jornado.unam.mx/2003/oct03/031027/eco-cara.html

The third speaker for the day was Ron Velarde and he spoke about aphroditids. He passed out copies of Mark Rossi's 1978 key and illustrations that had some added comments and



information. Aphroditids have a limited number of useful taxonomic characters. In 1953 Pettibone synonymized *Aphrodita refulgida* and *A. japonica*; however, most workers, including Ron, don't support this synonymy. Ron described various characters and character states. The presence or absence of eyes should be noted but don't place a lot of weight on it. Eyes can be faded or subdermal and difficult to detect. The shape of the median antenna is a good character. It can be cirriform, clavate, or a small tubercle. Be careful though; if a cirriform antenna is broken it may appear to be clavate. The palps in aphroditids can be varying lengths. Sometimes they can be regenerating, and there can be variation within the same animal. Another character is the facial tubercle which is between the palps, but descriptions have been inconsistent. Usually the length of the facial tubercle is compared to the size of the prostomium.

The setae are a major character. Often the relative width of neurosetae and notosetae are used. When comparing, use the thickest of the neurosetae and notosetae. There are three tiers or groups of neurosetae. It's important to know what tier the key is referring to. Neurosetae may have spines, spurs, etc. on the outside. Unfortunately on large specimens the tips often break off. Ron commented that the first two setigers and the posterior setigers are modified so it's best to use only setae from the middle of the body.

There are three distinct groups of notosetae: notosetae group 1 are the lateral notosetae closest to the acicula, usually consisting of the "felt"; notosetae group 2 are thicker and extend over the dorsum and may form more than one group of dorsal notosetae; notosetae group 3 are thin capillaries that are positioned in between notosetae group 2. Group 2 notosetae have different structures on the exterior and distinct tips which are species specific. Group 1 and 2 notosetae are used in taxonomy.

We agreed that *Aphrodita parva* is a description of a juvenile and we don't recognize this species.

For standardization, Ron examines parapodia at setigers 10 and 11. First, the felt and debris must be carefully cleared away.

Ron spent a day at the Los Angeles County Natural History Museum examining specimens of aphroditids. He looked at the type of *A. falcifera* from off Mexico and found it to be very distinctive. The dorsal notosetae have scales and the neurosetae have spurs. Ron later found a specimen of *A. falcifera* in his own lab's voucher collection from a kelp holdfast off La Jolla. Ron could not find a specimen of *Aphrodita* sp A to examine. No one seems to know of a more complete description of Rossi's *A. sp. A*.

Ron noted that #4 in the 1978 Rossi key has 3 choices. The first choice in which the lateral notosetae are shaggy and white leads to *A. sonora* Kudenov, 1975 (includes *A. mexicana* Kudenov, 1975). Ron suspects the order of priority between these two synonymous species should be reversed and will check on this. These species were described from the Gulf of California. Ron commented that each of these two species is treated in separate journals both by Kudenov in 1975.

The last couplet of the key, #9, leads to *A. japonica* and *A. longipalpa*. *A. longipalpa* is differentiated by its long palps which then leaves everything else to *A. japonica*. Consequently, *A. japonica* may include other yet undescribed species.

We spent the remainder of the afternoon examining various specimens of *Aphrodita* spp under



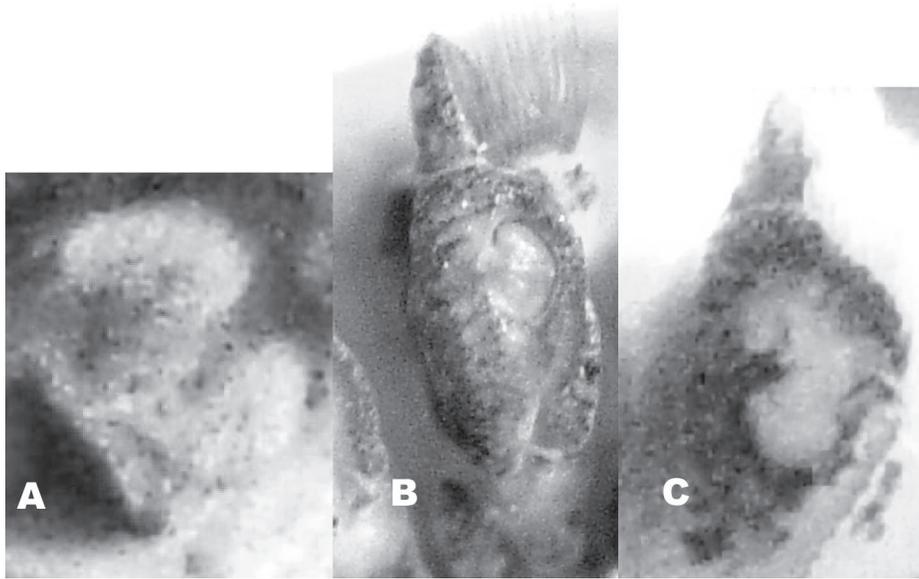


Figure 1.— A *Spiophanes berkeleyorum* spreader B *S. fimbriata* spreader C *S. kimballi* spreader
dissecting microscopes and looking at the diagnostic characters Ron had emphasized.

“Eenie, meenie, minnie, moe”... kimballi, fimbriata, berkeley-“O”

The recent publication by Meissner (2005) provides new features for diagnosis of *Spiophanes* taxa. Some of this was discussed in the SCAMIT newsletter (Vol 21, No 11) following her visit and presentation at a SCAMIT meeting.

The setal spreader structure emphasized by Meissner is illustrated in her publication mostly with SEM photos and some line drawings. In the case of the new taxa, *Spiophanes kimballi*, there is no photographic image provided of the spreader and the line drawing illustrating the setal spreader is a depiction sketched from a low power dissecting scope view.

Above are compound scope images (Fig. 1) of *Spiophanes berkeleyorum*, *fimbriata*, and *kimballi*. They are stained in methylene blue and digitally enhanced. Each of these images is oriented with dorsal at top of the page and anterior direction to the right. Unlike the SEM photos, the crisply depicted demarcations in these setal spreader structures are sometimes obscured by surface curvature and lower contrast glandular margins. Hopefully these illustrations will assist in making sure the names and abundances for these “little-piggies” goes correctly into our *Spiophanes* data.

T. PARKER, CSDLAC

10 OCTOBER 2005

Don Cadien started the meeting by reminding everyone that Ed. 5 of the SCAMIT Species List is coming soon to a theatre near you. Be sure to email your additions, changes, etc, to Don at dcadien@lacsdl.org. He is hoping to have it out by the first quarter of next year. They have expanded the Species List to incorporate data from new bathymetric ranges sampled during the Bight projects. For instance, animals sampled in Bays, Estuaries and shallow water, will now be included.

Rick Rowe announced that next year we will hold a Phyllodocidae workshop (as mentioned in



the September minutes). Before the workshop he plans to post a character matrix for each of our common Phyllodocidae genera at the SCAMIT website. Workshop participants will be able to enter the password protected webpage containing the matrices and fill the appropriate cells to describe the morphology of their specimens. Those matrices will be available at the workshop for additions and corrections, and hopefully to generate reports describing each taxon that SCAMIT considers valid in the Southern California Bight. More specifics about this process and a firm date for the workshop will be released early in 2006.

Larry Lovell announced the exciting news that Greg Rouse, from Australia, has been hired on as Scripps' newest professor. Dr. Rouse is a world renowned specialist in polychaete phylogeny, morphology, and physiology as well as Crinoids. We look forward to having closer access to his knowledge.

Ben Pister, from UCSD, made an announcement about the Species ID club at Scripps. Taxonomic meetings are held once a month on a Friday from 3-5 pm in Ritter Hall. They often have the opportunity to work with live material, something many of us don't get to enjoy. The Species ID Club is always looking for guest speakers, so if you have taxonomic knowledge that you'd like to share, please contact Ben at: BPister@biomail.ucsd.edu.

Carol Paquette had brought some older editions of SCAS Bulletins and left them out for people to pick and choose as they pleased.

With that it was time to start the Nemertean meeting. Megan had put together a powerpoint presentation which included the most commonly seen Palaeonemertea spp in CSD monitoring samples as well as *Procephalothrix* sp. She started with an overview of how to do a cross section of a nemertean and examine the muscle patterns and nerve chord placement in order to separate Tubulanids from Carinomids (and from Heteronemerteans for that matter). From there we moved to slides of individual species and discussed their specific characteristics. In addition to the presentation Dean Pasko had produced a preliminary key to the Palaeonemertean Worms from the SCB. This was passed around and we attempted to use it on a few specimens. The presentation and the key will be made mailed to those in attendance upon request. Additionally we will post the presentation in the taxonomic tools section of the website, but the key will remain a work in progress and not be distributed until a more finished version is available.

It became apparent rather quickly that some taxa were being referred to by more than one name by the different agencies and that some consolidation was in order. Additionally, many of the "Palaeonemertea" provisional species were given familial-level SCAMIT provisional designations, mostly within the family Tubulanidae, as cross sections of these animals revealed their familial relationship.

Following are some of the animals reviewed and the changes that ensued:

Tubulanus nothus of northeastern Pacific (NEP, per SCAMIT) probably represents a new species according to communications between Tony Phillips (Hyperion) and Dr. Ray Gibson (Liverpool John Moores University, UK). A very consistent speckling pattern posterior to the dark preservation band along with the presence of lateral sense organs (LSO's) were viewed as diagnostic by all taxonomists in attendance. The color of the preservation band and speckling varies from brown to a deep purple, but is uniformly present in those specimens identified as *T. nothus* in the NEP.



John Ljubenkov (consultant) and Tony Philips indicated that the City of San Diego nemertean warmly referred to as “Mr speckly” (due to the presence of a freckle-like pattern of brown pigment ventrally around the mouth and sometimes extending posteriorly) was similar, and probably the same, as Tubulanidae sp A of Steve Hulsman of Washington/British Columbia area. This animal has a preservation band in the esophageal region preceded by a white ring, lacks LSO’s and has c-shaped cerebral sense organs (CSO’s). Mr speckly was awarded the SCAMIT designation of Tubulanidae sp B SCAMIT 2005.

Next was “Dean’s Palaeonemertea sp”. The preservation band in this animal is anterior to the esophageal region. LSO’s and CSO’s are present. John and Tony indicated that they had seen this animal in Los Angeles and other areas. In LA Harbor the preservation band varies from pink to dark red. In most cases in which Dean has seen the specimen, the preservation band is brownish in color. Both Tony and John have previously referred specimens of this sort to “*Tubulanus* sp.” The new designation is Tubulanidae sp E SCAMIT 2005.

Regarding Palaeonemertea sp A Phillips, Megan and Dean indicated that they had not found an LSO in any of the specimens that they had reviewed, a trait that was confirmed by Tony. Palaeonemertea sp A was given the designation Tubulanidae sp D SCAMIT 2005.

Discussion of Palaeonemertea sp C Cadien focused around whether it was equivalent to Tubulanidae sp E or *Carinomella lactea*, and whether it belonged in the family Tubulanidae. Unfortunately there were no specimens to review because all the specimens that the City of San Diego had determined to be Palaeonemertea sp C turned out to be Tubulanidae sp E (see above). Don Cadien (LACSD) then clarified a couple of characters for the group: (1) The preservation band is in the esophageal region, and not anterior to it, as Dean and Megan had interpreted it; (2) a cerebral sense organ (CSO) is present along the side of the head just posterior to the mouth; and (3) an LSO is absent. The CSO has a distinctly triangular shape with the base of the triangle facing posteriorly and it deepens from anterior to posterior. Don volunteered to review specimens from LACSD to verify the muscle pattern and determine if it can be placed into the family Tubulanidae.

Palaeonemertea sp D of MBC is believed to represent juvenile *Carinoma mutabilis*. Don Cadien and Carol Pacquette (MBC) volunteered to review the specimens and report their findings.

Specimens of *Tubulanus* sp SD1 Pasko 1998 were also reviewed. Eight specimens of *Tubulanus* sp SD1 were collected from San Diego Bay in 1998. It is similar to *T. frenatus* (i.e., with black rings and black longitudinal lines on a yellow or greenish body color) except that *Tubulanus* sp SD1 possess only a single, dorsal black longitudinal line, whereas *T. frenatus* possess one dorsal and paired lateral longitudinal stripes. Don and Tony, both of whom have seen *T. frenatus* in their sampling programs confirmed the apparent differences and agreed with the provisional species designation of *Tubulanus* sp SD1.

Anopla genus A species A Phillips 1987 was determined to be the same as Tubulanidae sp A SCAMIT 1995. It was agreed that Tubulanidae sp A would take priority and Anopla genus A species A Phillips would be listed as a synonym. Some confusion was created by individuals who had retained an early voucher sheet of Tubulanidae sp SD1 Pasko 1995. This species was being confused with *Tubulanus* sp SD1 Pasko 1998. To set the record straight, Tubulanidae sp SD1 Pasko 1995 was “scamitized” in 1995 as Tubulanidae sp A SCAMIT 1995, and is separate from *Tubulanus* sp SD1 Pasko 1998 (discussed above). Consequently, the full synonymy list of Tubulanidae sp A SCAMIT 1995 includes Anopla genus A species A Phillips 1987 and



Tubulanidae sp SD1 Pasko 1995.

Finally, Dean brought out one specimen that he had identified as *Carinomella lactea*. The specimen had a very faint (imperceptible to all except Megan) preservation band, a relatively large LSO, and a migration of the lateral nerve cord from its position outside the outer circular muscle anteriorly to internal to the outer circular muscle posteriorly. The latter character was confirmed by Megan, Dean, Tony, Carol, and Don. Unfortunately, because of the faint preservation band, the specimen might have easily been confused with *Carinoma mutablis* if the LSO were overlooked or the muscle layer not confirmed. The specimen was collected from off Imperial Beach, in the South Bay area off San Diego, just north of the US-Mexico border.

With that, we were done for the day. The next nemertean meeting will deal with Heteronemertea, but as yet, has not been scheduled.

Another mystery solved.

The image on the cover of the March 2000 newsletter (Vol. 18(11)) was of an unidentified bivalve from San Francisco Bay. Recently, as part of the Introduced Species Survey, a couple of nearly identical specimens were found. A single specimen collected from 25 m of water near Point Sierra Nevada near Cambria, California. The other was found at Fitzgerald Park near Half Moon Bay. Images were sent (Fig 2) to Paul Scott at SBMNH. He identified it as a juvenile *Siliqua* (personal communication P. Scott, 9 December 2005).

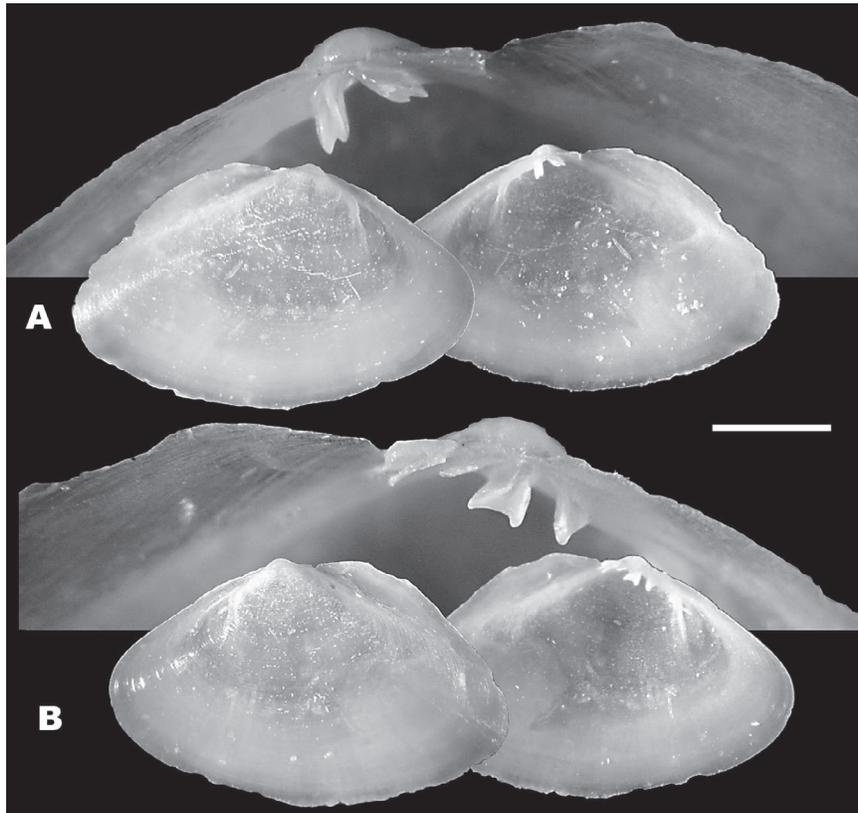


Figure 2 — *Siliqua* juvenile from Point Sierra Nevada **A**. Right valve; outer and inner shell respectively **B**. Left valve; outer and inner shell respectively. Scale bar = 1 mm. (Image by K. Barwick 11/05)



K. BARWICK, CSD

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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Back issues of the newsletter are available. Prices are as follows:

Volumes 1 - 4 (compilation).....	\$ 30.00
Volumes 5 - 7 (compilation).....	\$ 15.00
Volumes 8 - 15	\$ 20.00/vol.

Single back issues are also available at cost.

The SCAMIT newsletter is published monthly and is distributed freely through the web site at www.scamit.org. Membership is \$15 for the electronic copy available via the web site and \$30 to receive a printed copy via USPS. Institutional membership, which includes a mailed printed copy, is \$60. All new members receive a printed copy of the most current edition of "A Taxonomic Listing of Soft Bottom Macro- and Megainvertebrates ... in the Southern California Bight." The current edition, the fourth, contains 2,067 species with partial synonyms. All correspondences can be sent to the Secretary at the email address above or to:

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