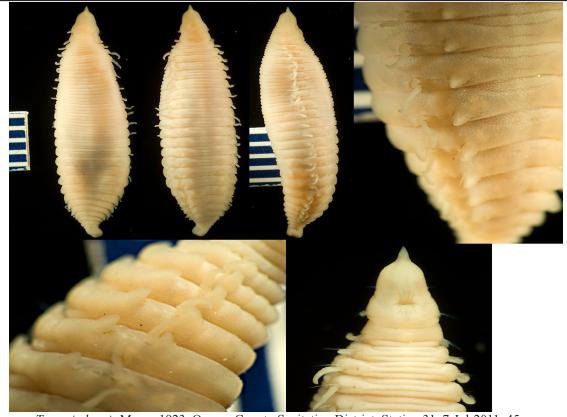
SOUTHERN CALIFORNIA ASSOCATION OF MARINE INVERTEBRATE TAXONOMISTS



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Travesia brevis Moore 1923. Orange County Sanitation District, Station 31, 7-Jul-2011, 45m. Photos by K. Barwick.

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16 MARCH 16 2015, TAXONOMIC TOOLBOX - POLYCHAETA, NHMLAC

Attendees: Erin Oderlin, Greg Lyon (CLA-EMD); Ernest Ruckman, Kelvin Barwick (OCSD); Bill Furlong, Larry Lovell, Brent Haggin (LACSD); Ron Velarde, Kathy Langan, Ricardo Martinez-Lara, Veronica Rodriquez-Villanueva (CSD); Tony Phillips, (DCE); Leslie Harris (NHMLAC).

President Larry Lovell opened the meeting with business news. Los Angeles County has begun the Bight'13 Re-IDs and plans to finish by the end of April. We hope to schedule the reconciliation meetings in May and June.

UPCOMING MEETINGS

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

We discussed what we should do with the original SCAMIT voucher specimens from the first years of Round Robin exchange. Leslie brought them out and we topped them off with ethanol.

Kelvin Barwick gave a presentation on his trip to Oregon where he collected Rick Rowe's polychaete collection as well as his notebooks. His voucher collection is now housed at the City of San Diego's Marine Biology Lab where Rick worked for many years and collected nearly all the specimens. The City's marine biologists have pledged to make all of the material available for examination and loan. In addition a great number of electronic files relating to Rick's professional archives were shared with all present. They included:

- 1. Access database for the voucher collection
- 2. The most relevant of Rick's electronic files, images and voucher sheets, copied from many CD-Rs
- 3. A scanned copy of Polychaete Species List for the Southern California Bight which Rick compiled from hundreds of handwritten notes taken in preparation of the publication of the Polychaete chapter of Straughan and Klink, 1980
- 4. Straughan Voucher Sheets (various authors) from the King Harbor project circa 1980

Anyone who would like any of the above material or has further questions about Rick Rowe's professional archives can contact Kelvin (kbarwick@ocsd.com).

There was a discussion regarding a possible donation of approximately 10,000 reprints by Don Cadien to SCAMIT. This is a very valuable collection, and it was agreed that individuals or entities that would like to purchase these reprints should make an appropriate donation of an unspecified amount. This may be run like the sale of Dr. Reish's reprint collection.

We then began the main task for the day, a review of files in the Taxonomic Tool Box and an update of names/hierarchical placement where necessary for several families of sedentariate polychaete families.

Opheliidae: Veronica has a nice image of *Ophelia pallida* to add to the Toolbox. Tony has an image of *Ophelina* sp A SCAMIT which was updated in 2015. It is believed that Rick's *Ophelina* sp SD2 may be a synonym of *O. pallida*. The genus *Travisia* was moved into Scalibregmatidae.

Pectinariidae: Larry has seen *Pectinaria granulata* from shallow stations at Pt. Fermin. The tips of the paleae are re-curved unlike *P. californiensis*. The City of San Diego also reports *P.*



granulata from shallow stations. Leslie commented that *Cistenides* is a valid genus, which includes *Cistenides brevicoma* (Johnson 1901). She suggested changing *Pectinaria granulata* to *Cistenides granulata*. WORMs lists it as *Cistenides* so SCAMIT will need to make that change in Ed 11.

Poecilochaetidae: Cheryl Brantley described *Poecilochaetus martini* in 2009 (Brantley 2009), supplanting *Poecilochaetus* sp A. *P. martini* has parapodial cirri that are smaller than the branchiae. In addition, the dorsal triangular brown chitinous structure on setiger 9, originally described for *P. johnsoni*, is often difficult to see and sometimes not fully developed. We discussed the importance of listing synonyms from the historical Tool Box into the current Tool Box for this group; most items in the historical Tool Box are already present in the current Tool Box. We reviewed the *Poecilochaetus* table at the bottom of the *P. martini* voucher sheet (listed as *Poecilochaetus martini* as P. sp A.pdf). Ron commented that Martin 1977 and *Poecilochaetus* sp SD1 Rowe should be included as synonyms: presently Rowe is missing from the table and list of references. There are some nice images of the species in the Tool Box.

Trochochaetidae: Images of *Trochochaeta multisetosa* were taken by Kelvin and will be posted in the Tool Box.

Sternaspidae: Kelvin also has images of *Sternaspis affinis* to add to the Tool Box. Veronica found some new sternaspids at a couple of deep Bight'13 stations; *S. cf princeps* from 533m, *S. williamsae* (very small specimen), and *Caulleryaspis nuda* from 942m. She has images of all three species. Sergio Salazar-Vallejo has reviewed the specimens and agreed with her identifications.

Scalibregmatidae: Larry produced a table for *Travisia* in 2012. The two most important characters are the parapodial lobes and placement of nephridial pores. Both are highlighted in the table. Larry will post this table and a key in the Tool Box. It was suggested that Scalibregmatidae sp SD1 should be synonymized with Aberrantidae sp SD1.

Ctenodrilidae: There is a voucher sheet of *Raricirrus maculatus* currently in the Tool Box.

Longosomatidae: There is a voucher sheet and illustration for *Heterospio catalinensis* in the Tool Box. *Longosoma catalinensis* is a junior synonym.

Chaetopteridae: There is a key by Pasko and Velarde, 1993 that remains valid; but the 1992 version should be deleted.

Apistobranchidae: The Tool Box contains a copy of the page from Hartman's Atlas for *Apistobranchus ornatus*.

Sabellariidae: Leslie produced the voucher sheet for *Sabellaria gracilis* and "Notes on the Variation of the Outer Paleae in *S. cementarium*" (now *Neosabellaria cementarium*). Kelvin has images of setal types. There was a discussion about *Idanthyrsus* sp and *Mariansabellaria harrisae* which are both listed in Ed. 9.

13 APRIL 2015, TAXONOMIC TOOLBOX - CAPRELLOIDEA, SCCWRP

Attendees: Craig Campbell, Erin Oderlin, Greg Lyon (CLA-EMD); Danny Tang, Ken Sakamoto (OCSD); Don Cadien, Larry Lovell (LACSD); Ron Velarde, Tim Stebbins, Katie Beauchamp (CSD); Tony Phillips, Dean Pasko (DCE).

Business: Erin Oderlin of CLA-EMD has been elected Treasurer and will be replacing Laura who "retired" to a position with less (no) taxonomic responsibilities at her place of work. Laura will be working to help Erin transition into new role. Larry, Dean, and Leslie were re-elected.



May and June have been set aside to accommodate with Bight'13 QA Resolution meetings. LACSD has finished most of the re-identification process. Dates for meetings with respective laboratories will be scheduled fairly soon, hopefully in late May and June, depending on everyone's schedules. These meetings will be followed by the Bight'13 synoptic data review, likely in August.

Ron also had information about a couple of meetings. SCAITE – the fishy sister of SCAMIT - is meeting Monday, April 20th at Cabrillo Marine Aquarium; WSN will be meeting on November 5–8 in Sacramento, and the National Water Monitoring Conference, will be meeting in May 2016.

Larry announced Kristian Fauchald's passing and indicated that there will be several symposia celebrating his life and work.

Don announced the passing of Robert Bamber, a significant worker in Pycnogonids and other arthropod groups. An announcement about his work, career and passing can be found on WoRMS website.

Don also announced that he had updated his review of the Lysianassoidea amphipods, a light reading, 8.7MB tome reaching 98 pages.

Caprellidae Review

Don began the taxonomic portion of the meeting with an introduction to the Caprelloid material in the taxonomic toolbox. There is a lot of material on the site that came from Lisa Haney. Don planned on us reviewing these for utility and possible updates. He also briefly discussed how SCAMIT reluctantly came to incorporate the Meyers and Lowry revision of the Caprelloidea (Meyers and Lowry 2003).

We started with the Caprellidae: Caprellinae. We first visited the *Aciconula acanthosoma* identification sheet, showing distinctive spination of the body and slender 5th pereopod. This simple identification sheet includes name, minus the authority (T. Chess, 1989), several diagnostic characters, and figures. The habitat for this species is shallow water, less than 10m, commonly on hydroids. Tony has seen it in the Channel Islands. It's a small genus, with a handful of species worldwide. Only *A. acanthosoma* is reported in SCB, with a range extending southward to Mexico.

Don asked the general question of whether these identification sheets were "good enough" to leave on the SCAMIT Toolbox or should they be revised into completed SCAMIT Voucher Sheet format. After some discussion, Dean and others suggested that these simple sheets were fine as they are, and that anyone using the toolbox should be responsible for digging deeper into the literature on their own. Don then suggested that the authority and a contribution to the source (i.e., Lisa Haney) should be added, and volunteered to take on that task for these sheets.

We brought up the Benedict 1978 Preliminary Key to the Caprellidae. Don suggested that this key be posted to the website, with some updates. In the course of this discussion, Don also admonished everyone that we will need to be paying closer attention to the abdomen of the Caprellidae since it contains a large amount of taxonomic information. Dean volunteered to retype Bruce's key and update to current taxonomic status; although discussion later in the meeting relieved Dean of this responsibility since Don thought there were so many new taxa to consider and name changes to incorporate, that the end result might not be worth the effort.

After this slow start, we jumped into scanning and discussing each sheet. A synopsis follows.

Caprella californica identification sheet was also OK, but additional information needs to be added to distinguish it from *C. scauroides*. Unfortunately, they are all variable species and



difficult to distinguish. *C. scaura* is an invasive in Europe. Everyone was cautioned to review Takeuchi and Oyamada (2012), which provided a review of the *C. californica/scauroides* problem. We decided to create a sheet of *C. scauroides* Mayer 1903, using this recent publication as a guide.

Caprella equilibra identification is presented, but its presence in SCB has been questioned. Unlikely distributions are common, and should be expected, with caprellids as a result of anthropomorphic introductions. Consequently, one should not be necessarily limit his/her identification(s) based solely on reported ranges and zoogeography.

Having said that, we looked at *Caprella gracilior*, primarily a more northern species uncommon in SCB. Tony has found it in samples from Goleta, however. It is similar to *C. simia*, which is found in bays and estuaries in SCB.

Caprella kennerlyi is only from Northern California, although Tony indicated that he has also collected it in Goleta samples. Ron interjected that CSD has one or more records of it. There is a question as to whether it should be kept in *Metacaprella*, despite the discrediting of the genus *Metacaprella* due to the erection of the genus on several variable characters. These arguments are made in Guerro-Garcia & Ros (2012), and Mori (1999). SCAMIT adopts the placement within *Caprella* (See Watling and Carlton 2007).

Caprella mendax is probably the most common caprellid in monitoring programs in SCB, and the existing identification sheet is sufficient.

Caprella natalensis is a widely distributed species, but caution should used when recording it. Any identification of *C. natalensis* should be compared to *C. drepanicher*. *C. drepanicher* extends from Russia to southern California, and one might consider referencing Meyer (1903) for specific information. Don reminded everyone that the Meyer publications, including the 1903 publication, are available in the Bio-Heritage Library.

Caprella penantis has very distinctive gills that are large and round, nearly as large as the pereonite to which they are attached.

Caprella sp E is a species from Bruce Benedict that was never illustrated. This sheet is not very helpful as it includes just the characters listed in Benedict (1978) without a note about where he collected the species. We know it came from the BLM records, and someone may be able to get distributional information from BLM reports. Don will contact Ananda Ranasinghe (retired from SCCWRP) to see if he has that information.

Caprella verrucosa is a very distinctive animal due to the pattern of rounded tubercles on the body.

Don mentioned two invasive species from the NW Pacific, *Caprella mutica* and *C. simia* that are not included in the toolbox. Everyone should be aware of these two species which occur in bays and estuaries. Both are included in Watling (1995), and in Light's manual (Watling and Carlton, 2007). These are also well illustrated in Arimoto (1976), and California Academy of Sciences site has nice photos of *C. mutica*.

Deutella california is a fairly common shallow, fouling species, not typically found in soft bottoms. It has light tan speckles all over the body, while *D. venenosa* has large dark spots.

Deutella venenosa is less common than its congener. It is similar to *D. california* with the additional dorsal projections on the anterior pereonites. Guerro-Garcia (2003) reviewed the genus and re-described the species based upon a large number of specimens from Chile. Unfortunately, his re-description takes the originally bi-articulate pereopod 3-4 from Meyer and lists it as being



uni-articulate, creating some confusion of the correct character state. The species has been reported from Chile and SCB, but nowhere in between, raising doubt that the taxa from the two regions are the same. Pereonites 2, 3, and 4 are produced into a lateral shelf. Don had created a nice voucher sheet, accompanied by photos taken by Larry, but had misplaced it. Ron rediscovered the sheet and Don volunteered to post it to the Toolbox.

Mayerella acanthopoda is another interesting beast found in soft bottoms, primarily from bays. Neither Don nor Ron have found it in bays, although Tony has found *M. acanthopoda* in Marina Del Rey, San Gabriel River, Huntington Harbor, and Upper Newport Bay, and Dean has found it in various bay samples from the Regional Harbor Monitoring Program (RHMP). It looks a lot like *M. banksia* except for the difference of the pereopod 5, in that the second and third segments are fused, producing a bi-articulate appendage where the terminal article is much longer than the basal article. Tony added that he uses Benedict (1977) paper describing *M. acanthopoda* for characters to distinguish the taxa. He relies on the coarsely serrate gnathopod 1 dactylus inner margin relative to the finely serrate *M. banksia*, while Dean relies on the structure of pereopod 5.

Mayerella banksia is a soft-bottom taxon from offshore habitats, and only rarely encountered from embayment samples [perhaps representing mis-identified animal]. It differs from *M. acanthopoda* in the structure of pereopod 5, which is 3-articulate, with the terminal article subequal to or only slightly longer than basal article. A review of Laubitz (1970), which includes the description of *M. banksia*, indicates that the gnathopod 1 dactylus is minutely serrate.

Paracaprella sp SD1 is represented by a voucher sheet created by Dean Pasko. It is similar to P. barnardi, but differs in the structure of the abdomen with claw-like structures on the abdominal lobes/appendages. In P. barnardi, the "serrations" are smaller and the male gnathopod 2 palm is represented by an evenly arching concavity, without a secondary invagination as was found in Paracaprella sp SD1. Don described his draft key to the Paracaprella that uses the presence/absence of the mandibular palp represented by a stiff seta vs. no representation, the structure of male gnathopod 2, and the serrations/claws present on the male abdominal appendage. We discovered two copies of the voucher sheet in the Toolbox, so one needs to be deleted.

Tritella laevis and *T. pilimana* identification sheets include the figures from Laubitz (1970). The two species are quite easily distinguished by the length and density of the swimming setae on antenna 2, which are more dense and long in *T. pilimana*. Don brought up the issue of whether the presence/absence of body spines could be used to distinguish the two, but both species have these spines in adults and therefore should not be used as the distinguishing character.

A third representative of the genus is present in deep waters, *T. tenuissima*. It is interesting and uniquely formed with good illustrations available in Watling (1995).

Within the subfamily Phtisicinae, we have the provisional species *Hemiproto* sp A. We need to substitute Lisa's identification sheet with Don's voucher sheet since it makes the distinction between *Hemiproto wigelyi* and *Hemiproto* sp A. Some of the more distinguishing differences include the absence of lateral spines on gnathopod 1 propodus that are present in *H. wigelyi*, well as the more elongate gills of *Hemiproto* sp A.

Perotripus brevis is a small species. The identification sheet is good for this shallow water, hard substrate associated species. Tony has seen them on bryozoan communities.

Phitisica marina was found in Oceanside Harbor, but there is no voucher sheet listed for this species and the specimens were temporarily misplaced. It was subsequently also identified in Bight'13 samples which substantiates its presence in the SCB. [These records have since been reviewed and verified, although the original identifications was mistakenly recorded as *Hemiproto* sp A.]



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Having completed the Caprellidae, we moved on to the Dulichiidae and *Dyopedus monocanthus*. As obligate parasites of cetaceans, we don't expect to get them in our monitoring stations. The genus includes four species from the NEP, which are all strongly sexually dimorphic, and have the distinguishing character of being without a uropod 3. Laubitz (1977) revised this group, a revision that remains intact to date. Don described the ecology of this group of taxa that included a wonderful discussion of their creation of fecal tubes upon which they sit and fish for food; but often at the expense of getting eaten by quick moving fish.

Then came the Podoceridae, which in the tool-box includes *Podocerus* and *Dulichia* – although *Dulichia* is actually a member of the Dulichiidae. John Chapman's draft key to the group from Light's Manual is included in the Toolbox. John's key includes both the dulichiids and podocerids together since they are very similar in general morphology, differing primarily by the presence of spinning glands near the dactyls of the pereopods in *Dulichia* and their absence in the podocerids.

We discussed *Podocerus* species. *P. brasiliensis* does not have dorsal carina, while *P. cristatus* is dorsally carinate. *P. fulanus*, an estuarine endemic species confined largely to bays and estuaries, is also dorsally carinate, but with fewer carinae, and a large distally placed palmar process on the sparsely setose male gnathopod 2. In contrast, *P. cristatus* is found outside of confined waters and the strongly setose male gnathopod 2 palm possesses two palmar processes.

After lunch we started to review specimens. The first specimen was Ron's specimen from a 12m San Diego regional station (8332) off Imperial Beach. He reported it as *Caprella scauroides* because of the distally produced gnathopod 2 propodus. However, upon review, several attendees talked about the anteriorly directed head spine, which, in their opinion would put it closer to *C. californica*. However, Ron's specimen was large and appeared almost exactly like that illustrated in Takeuchi and Oyamada (2012). Unfortunately, both species have strong distal projections in their terminal males (compare Figure 1 to Figure 6). Comparing figures of the two species and the specimen at hand, we found a mixture of character states, and walked away leaning towards a confirmation of *C. scauroides* over *C. californica*, based on the structure of the gnathopod 2 dactyl and propodus. Ron suggested, and others supported, the use of *C. californica* CMPLX in the future. We need to review specimens of *C. scauroides* that Tony mentioned having earlier in the meeting.

Ron then brought out three specimens of *Urilops* sp B new genus new species of Benedict.(1977) However, one would need to back off to Aeginellidae sp B, since Bruce never published anything on this particular taxon. Unfortunately, that family is no longer valid, so Ron recorded it as Caprellidae sp B. These specimens were collected from a 378m deep water CSD regional station (8336) off the Coronado Bank, but had been seen previously in Bight'13 samples. The specimens matched Bruce's illustrations very closely in all aspects, except the mouthparts, which had not yet been dissected or reviewed.

Dean brought a specimen of "Phtisicinae FID" from a 2006 RHMP survey. However it turned out to be a specimen of *Hemiproto* sp A, and he was at a loss as to why he questioned the identification in the first place. [Subsequent review of the specimen at Dean's home office showed why it was questioned: It turned out to be *Phtisica marina*. See above discussion regarding *Hemiproto* and *Phtisica*.]

Dean then brought out three specimens (1 male, 2 female) of *Caprella* sp that had been given to him by Tony. The specimens came from the 2011 SPAWAR survey, Station S-12, apparently attached to a piece of rope found at the station. They had 2-segmented pereopods 3 and 4, fully developed 6-segmented pereopod 5, with a reduced mandibular palp, and a dorsally smooth body, with lateral anteriorly directed, blunt processes, antero-distally on pereonite 3, and no swimming setae present. The male gnathopod 2 was invaginate, with a anvil-shaped posterior process/tooth



and large triangular proximal tooth near the dactyl. Pereopod 5 was fully developed with very elongate, thin articles, and an elongate dactyl. The palm of pereopod 7 was serrate, as illustrated for *Urilops* sp B Benedict. Unfortunately, this particular suite of characters would not allow it to be placed into any genus. Using the key in McCain 1968, we arrived at *Deutella mayeri* or *Paracaprella tenuis*. We attempted the key in Guerro-Garcia (2003; Revision of Genus *Deutella*) without resolution. Dean decided to take the specimen home to review it more closely.

The few of us remaining looked at one last set of specimens from CSD's South Bay Ocean Outfall program (Station I-29, 5-Jan-2011; 39m). The specimens were originally recorded as *C. penantis* because of the large, oval gills and anteriorly directed head spine; but upon additional review, we found several inconsistencies with *C. penantis*. Most prominent among these was the shape and structure of male gnathopod 2, which in Ron's specimens were very weakly setose, without any setae on the dorsal margin, and only sparse, thin setae along the palm. In addition, the proximal palmar tooth was set medially along the palm as opposed to proximally near the junction with article 5, allowing the dactyl to close against this tooth rather than against the midpalm (as shown for *C. penantis*). Lastly, the head spine was acute, upturned (approximately 120 degree angle) and slightly curved, versus anteriorly pointing and blunt. Don examined Laubitz (1970) and found that it looked a little like *C. incisa*. However, when keyed through several different keys, we ended at *C. penantis* each time.

27 APRIL 2015, SPECIAL MEETING - POLYCHAETA, NHMLAC

Attendees: Kelvin Barwick (OCSD); Bill Furlong, Brent Haggin, Larry Lovell (LACSD); Ron Velarde, Ricardo Martinez-Lara, Veronica Rodriquez-Villanueva (CSD); Leslie Harris (NHMLAC); Tulio F. Villalobos Guerrero, Isabel Cristina Molina Acevedo (ESCOSur); Tony Phillips (DCE).

For the April 27 special meeting, two Mexican PhD candidates visiting Leslie at the Natural History Museum of Los Angeles County treated those in attendance to presentations describing their recent research into polychaete taxonomy. The authors provided handouts to those in attendance, but asked that SCAMIT not publish these to the website since they represent only a portion of their ongoing research and/or are awaiting publication.

Isabel Cristina Molina Acevedo presented, "The complex *Marphysa sanguinea* in the Grand Caribbean" and Tulio F. Villalobos Guerrero presented "Revision of *Alitta succinea* (Leuckart, 1847) (Polychaeta: Nereididae) in America". The gist of both of their presentations was that these taxa formerly regarded as cosmopolitan are, in fact, multiple separate species. Both authors discussed the biogeographic distribution and the historical literature that lead to the present confusion along with the reasons for their proposed splitting of the taxa in question. The presentations included very detailed morphological examinations and in one case DNA work. We look forward to seeing these findings published.

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SCAMIT OFFICERS

If you need any other information concerning SCAMIT please feel free to contact any of the officers at their e-mail addresses:

President Larry Lovell (310)830-2400X5613 llovell@lacsd.org
Vice-President Leslie Harris (213)763-3234 lharris@nhm.org
Secretary Dean Pakso (858)395-2104 deanpasko@yahoo.com
Treasurer Laura Terriquez (714)593-7474 lterriquez@ocsd.org

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PO Box 50162

Long Beach, CA 90815