Southern California Association of Marine Invertebrate Taxonomists

3720 Stephen White Drive
San Pedro, California 90731

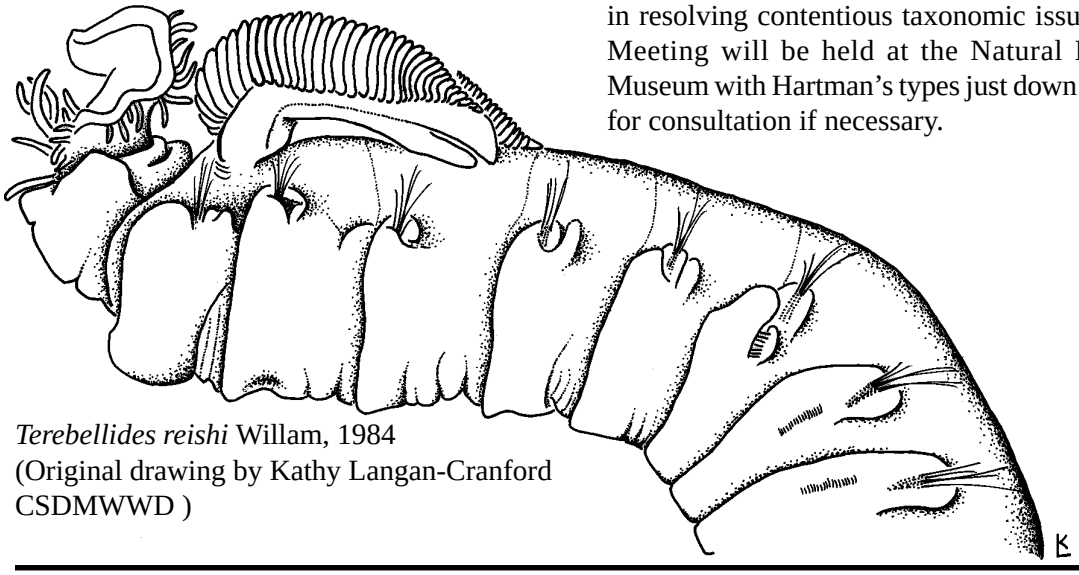
August, 1998

SCAMIT Newsletter

Vol. 17, No. 4

SUBJECT:	Problem Polychaete Soulutions
GUEST SPEAKER:	None - Ron Velarde (CSDMWWD) Discussion Leader
DATE:	Monday, 21 September 1998
TIME:	9:30 a.m. to 3:30 p. m.
LOCATION:	Worm Lab Natural History Museum of Los Angeles County 900 Exposistion Blvd. Los Angeles, CA

There was no August SCAMIT Meeting. At the September meeting, and after two months to ponder the nature of the problems covered in July and their possible solutions, a second problem polychaete discussion will be held. Since this will be the "prove it" meeting, please bring any supporting references, data, specimens, etc. to aid in resolving contentious taxonomic issues. The Meeting will be held at the Natural History Museum with Hartman's types just down the hall for consultation if necessary.



Terebellides reishi Willam, 1984
(Original drawing by Kathy Langan-Cranford CSDMWWD)

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NEW LITERATURE

Two more landmark volumes have been released by the U.S. Government Printing Office (Voss et al 1998). They deal with the systematics and distribution of cephalopods world wide, and are symposium volumes with multiply authored individual contributions. Both volumes are dedicated to Gil Voss and William Adam, two fallen giants in the field of cephalopod systematics and biology. They resulted from the International Workshop on Systematics and Biogeography of Cephalopods held 10 years ago in Washington, and are companion volumes to an earlier publication dealing with larval and juvenile cephalopods (Sweeney et al 1992). These three volumes together constitute an extremely valuable summary of the current state of most cephalopod systematics worldwide. We must remember that not all of the contributions are completely up to date, and a great deal of revisionary work on cephalopods has been published recently. There are some areas left untouched as well - including the octopods of the eastern Pacific. We assume this is because work was not complete at the time of publication on some of the subject taxa and or areas. As with all Smithsonian Contributions, it is likely that copies can be obtained from the authors (in this case the editors). Once their supply is exhausted it will probably be available from the USGPO for awhile, and may be reprinted if demand is sufficiently high. Anyone working with cephalopods can only benefit from many of the articles presented in these volumes, even those only peripherally related to our local fauna.

Another largely pelagic group is discussed in a recently released popular article (Nadis 1998). The siphonophores are mentioned as a major research area for MBARI (Monterey Bay Aquarium Research Institute) and their new deep-diving ROV the Tiburon. Although of little use to us taxonomically, the article presents interesting information on the distribution and activities of some of our local siphonophore species, including one reaching a length of up to 40m!! Unfortunately the article does not discuss our one benthic siphonophore, *Dromalia alexandri*.

A new journal is being launched - **Biological Invasions**. As one might expect from his prominence in the field, the Editor-in-chief is James T. Carlton. This journal represents the first stab at concentrating information in a peer-reviewed journal on all aspects of biological invasions. The subject has been increasingly reported in recent years because of man's role in the process. The announcement contains a call for papers, and a description of the journal, along with a subscription form. Individual subscriptions are $100/yr (four issues), and institutional subscriptions are $252.50. Contributing authors will not be subject to page charges, and are provided 75 offprints at no charge. Contact Kluwer Academic Publishers Order Dept., P. O. Box 358 Accord Station, Highham, MA 02018-0358; or via e-mail at kluwer@wkap.com or on the web at http://www.wkap.nl. Manuscripts should be submitted to the Kluwer Academic Publishers Journals Editorial Office - **Biological Invasions**, P. O. Box 990, 3300AZ Dordrecht, The Netherlands.

SLUGFEST

The saga of California *Philine* species has been often addressed in the NL. There are, however, many other worthwhile discussions of the current status of California species to be had. One of the most informative, and contentious, is the ongoing discussion on the Sea Slug Forum run by Dr. William Rudman at the Australian Museum. He has had several correspondents from California who have contacted him concerning the putative introduction of *Philine auriformis* into California waters. He has been sent, and has dissected several specimens originally thought to be *P. auriformis* from intertidal collections in Bodega Bay. Michelle Chow, who has a number of students who are investigating the

locally abundant and conspicuous *Philine* in the bay, supplied Dr. Rudman with photos and specimens for his examination. Since he has examined and reported on *P. auriformis* from its home waters in New Zealand, this was quite valuable.

The results of his dissections were, however, very surprising. He determined that there were two species in the material sent, and that neither of them was *P. auriformis*. He has termed them *Philine* sp. 1 and *Philine* sp. 2 from California. Both are very large animals, pure white, with large gizzard plates. In *Philine* sp. 1 there are two asymmetrical mirror-image plates of the same size, and one smaller plate. In *Philine* sp. 2 all three plates are symmetrical and of equal size. Both species have pits on the outside surface of the gizzard plates at their thickest point. There appear to be differences in radula as well, and dissections of the reproductive system have shown differing reproductive anatomy. In the initial dissection a broken duct lead to an erroneous evaluation of the structure in his sp. 2, but further dissections have remedied this problem.

Dr. Rudman still feels that *Philine* sp. 2 is what we have called *P. auriformis*, but that the differences in the reproductive system and the radula make that ID untenable. Terry Gosliner has also been tracking this exchange, and maintains that the animal is *P. auriformis*. Rudman feels that it is more likely to be an east Asian species from Chinese or Japanese waters. *Philine* sp.1 appears likely to be *Philine orientalis* from China, although there are some differences in fine structure of the denticles on the radular teeth, and the shell differs slightly in its anterior conformation.

We clearly have two species involved in California, at least in Bodega Bay there are two. I have examined specimens from other more southern locations, and have found them all to correspond to Rudman's Type 2. They all have the uniform spindle shaped gizzard plates, and a finely sculptured shell. The question of whether or not these are *P. auriformis* remains. The differences in reproductive and radular morphology pointed out by Rudman may or may not be contained within the variation of a single species. In particular the size of the radula may vary between populations in the native range, and in an invading population in response to differences in prey size and identity.

As part of the Quality Control on the Bight '98 sampling a series of large *Philine* were examined from sites around Catalina Island, and on the mainland. Although complete dissections were not performed, the gizzard plates of all specimens were examined. None had the reduced third plate which characterizes the introduced *Philine* No. 1 of Rudman from Bodega Bay. At least so far there is no evidence that this species (whether *P. orientalis* or another form) occurs in the Southern California Bight. We will continue to call these animals *P. auriformis* (following Gosliner) until their identity is established beyond question. Rudman's concern over the differences between the archival animals he dissected from New Zealand and California specimens from Bodega Bay (differences in radular size and reproductive tract proportions) is well founded, but neither seems sufficient to establish that our animal is not the same.

In his Seaslug Forum discussions Rudman raises again the specter of *Philine bakeri*. Forget it; *P. bakeri* is not the large animal figured by Behrens, Abbott, and (original basis of the faux-pas) MacFarland. The animal they call *P. bakeri* is *P. alba*. This animal, while scarce in recent years, is still around. Several specimens were taken around Catalina and the northern Channel Islands during the Bight '98 sampling. *Philine bakeri* is a much smaller and more cylindrical species which we took in the SCBPP in limited numbers. The shell is distinctive, with deeply incised spiral sculpture which forms crenelations at the margin. It also has a sulcus where the posterior end of the

outer lip joins the spire. Maximum size of these animals (based on those few seen to date) is probably 15mm. Although the species was described by Dall based on shell only, the shells of our animals are dead ringers for Dall's type (based on inspection at the Smithsonian by D. Cadien in 1992).

Gosliner (1996) correctly deals with *P. alba* vs. *bakeri*, but then suggests that *P. bakeri*, *P. polystrigma* (which he redescribes) and *P. californica* are all "similar" and require further study. The implication being that they might be synonymous. While further study would be beneficial, separation of these three species is quite simple, particularly *P. californica*, which has sculpture unlike that of any other west coast *Philine* (raised into prickles at the intersections of the radial and spiral sculpture). He mentions *Philine* sp A of SCAMIT, referring to it as *Philine* sp. 1 and providing a brief description. He also briefly describes Bullomorpha sp. A of SCAMIT as *Philine* sp. 2. Given the overlap of name usage it is probably beneficial to take stock and provide equivalencies between authors. In the following list the SCAMIT usage is provided first, followed by that of other authors. If the species is not on the SCAMIT list and has no usage indicated then there is no default ID and those of other authors are provided with attribution.

Philine alba = *P. bakeri* of Abbott 1974, MacFarland 1966, and Behrens 1991
Philine auriformis = *Philine* No 2 of Rudman
Philine bakeri
Philine californica
Philine orientalis? of Rudman = *Philine* No. 1 of Rudman = *Philine auriformis* of Michelle Chow [in part]
Philine polystrigma of Gosliner =P. nr.quadrata of SAIC, 1986
Philine sp. A = *Philine* sp. 1 of Gosliner
Philine sp. B [newly introduced by John Ljubenkov for animals from OCSD sampling]
Philine sp. 2 of Gosliner = Bullomorpha sp. A of SCAMIT

This yields a list of eight different forms from California waters. Gosliner has identified two other forms of modified philinids which he includes in the genus, but no descriptions are available, and it is unknown what these animals are at present. One reputedly lacks both a shell and gizzard plates (and thus might be a philinoglossacean), while the other lacks gizzard plates.

Anyone wishing to participate in the debate, or contact the contending factions can reach Michelle Chow at mbond@ucdavis.edu; Dr. Terry Gosliner at tgosliner@calacademy.org and the Sea Slug Forum at http://www.austmus.gov.au/science/division/invert/mal/forum/index.htm.

CONFERENCES

Early next year (24-27 January) a National Conference on Marine Bioinvasions will be held at MIT in Cambridge Maine. The following general topic areas are scheduled to be addressed: Transport Vectors, Ballast Water, Patterns of Invasions, Ecological and Genetic Consequences of Invasions, Status of Control Factors and Predictive Models, and Economic Impacts of Invasions. You can contact the organizers at http://massbay.mit.edu/exoticspecies/conference.html for furthern information. Abstracts are due 30 September.

The Call for Papers has been received for Coastal Zone 99, to be held in San Diego July 24-30. Such a diverse series of subjects will be addressed that they cannot be listed here. We direct interested parties to the Coastal Zone 99 website omega.cc.umb.edu/~cz99 or the CZ99 Secretariat, University of Massachusetts - Boston, Urban Harbors Institute, 100 Morrissey Boulevard, Boston, MA, 02125-3393.

BIGHT '98 SAMPLING

Member Tim Stebbins recently posed a question regarding counting of trawl specimens associated with algae on the Taxonomic List Sever. We repeat them here for those who do not receive that material.

"To Record or Not to Record — That is the Question!

I recently sent a memo regarding the presence of *Synidotea harfordi* at Bight '98 trawl station 2416. I recommended that these isopods be recorded since: (1) they (the genus) are considered benthic; and (2) they were large enough (>1cm) to meet trawl catch criteria. They were also significant (at least to me) in that they represent a "new" species for the SCAMIT list. I still stand by this recommendation. The reason that I'm readdressing the issue is that I just had the opportunity to examine some other isopods that Dean gave me from a trawl. As luck would have it, these specimens also came from station 2416. They were not recorded since they supposedly came up with some kelp (probably *Egregia*). Should they be recorded in the Bight '98 data? All of the specimens were large enough (i.e., > 1cm in length). Although they were most likely associated with the Egregia, who knows for sure? And if they were collected in a grab (perhaps hanging out on drift algae) they would be recorded. I would probably record them here, but then I'm biased — I have a feeling others would not. Of course, an additional problem is that they were probably not all collected."

The algal associated isopods he was discussing should be recorded if they meet the size criterion for inclusion in trawl sampling. Many smaller individuals were probably lost through the mesh, but they would not be countable anyway. Association with algae, either drift or attached does not make an organism a sampling artifact and unreportable.

During recent trawling for Bight '98 little of interest was seen by CSDLAC staff. Nearly all our sampling sites were in shallow water and over fine sand bottoms. Catches were small (by our standards) to normal (by most other standards). Few unusual species were taken, although the lump-tail sea-robin proved to be not uncommon in our trawls this time.

Invertebrate novelties were virtually non-existent. The only interesting catches were from abandoned trawls where hard bottom had ripped up the net. Even the large penaeid shrimp we expected to see on shallower sandy bottoms were sparse; only three *Penaeus californiensis* were encountered in our Bight '98 trawls. Target shrimp, *Metapenaeopsis*, and the recently arriving and somewhat deeper living *Plesionika* and *Pantomus* species were absent from the Bight '98 trawls. We did, however, continue to see the penaoid *Solenocera mutator* [several adult males] , and two pandalids *Plesionika trispinus* (including more gravid females) and *Pantomus affinis* in tows along the Palos Verdes Peninsula at our regular monitoring stations. We hit one astonishing catch of *Pantomus affinis* at a depth of 137m which contained 1132 individuals, about 17% of which were gravid females! We also took all three off-shore *Octopus* species this time; *Octopus californicus*, *O. rubescens*, and *O. veligero*.

Only three species were taken which were additions to our cumulative species list; the sponge *Dysidea amblia*, the galatheid crab *Munida quadrispina*, and the bysally attached clam *Pteria sterna*. This latter species was encountered in an abandoned trawl, and was taken from *Muricea californica*, generally near the attachment of the gorgonian colony.

The situation around Catalina Island was quite different. Don Cadien (CSDLAC) met with Karen Wisenbaker (WIES) for several days to go over the vouchers and FID specimens they took during Bight '98 trawls around the island. A number of interesting specimens were

obtained, including several whose identity is still uncertain. Newly taken in these trawls were the muricid snail *Scabarotrophon grovesi*, and the crabs *Cryptodromidiopsis laraburrei* and *Stenorhynchus debilis.* The later two have been recently cited as part of the El Niño evidence - both appearing in numbers in the San Diego area.. The *Cryptodromidiopsis* specimen taken was a gravid female, so perhaps we will be seeing more of these small cryptic sponge-carrying crabs. It was included in Ed. 3 based on a single record.

Other noteworthy organisms were a series of the sea star *Hippasteria spinosa*, some *Astropecten ornatissimus*, and a specimen of *Psolus squamatus*. A young specimen of the infrequently encountered *Cancellaria cooperi* was taken, as was a large specimen of *Berthella californica.*

A series of sponges were taken in the trawls around Catalina. These included *Tethea aurantia, Leucilla nuttingi, Poecilastra tenuilaminaris,* and *Rhabdocalyptus dawsoni*. The latter has a layer of very long surface tetracts/pentacts which protrude above the sponge surface and intertwine to form a sort of outer coarse filter. Underneath this were a series of small ophiuroids, all *Ophiopholis bakeri*, along with two species of worms, a caprellid, and a pectinid. All these associates derive some benefit from lodging under the fence of spicules which cover them, while the sponge seemed to be unharmed. Two of the *Ophiopholis* had their own associates, tiny white parasitic copepods attached to the oral field of the ophiuroid.

Both the large *Laqueus californicus* and the somewhat smaller *Terebratulina crossei* were taken in samples from “Brachiopod bottoms”. Sea-pens were common in the trawls, with *Acanthoptilum* spp. being the most common, followed by *Stylatula elongata*, *Thesea sp B*, and *Stachyptilum superbum*. Both species of *Virgularia* commonly encountered on the mainland coast *V. bromleyi* and *V. galapagana* were absent from the materials returned for FID. A large specimen of what is probably the ‘brown tent anemone’ was taken on cobble off the east end of the island.

Another interesting cnidarian is much more characteristic of hard bottoms, and undoubtedly was swept off a low lying rock. It is a still unidentified gorgonian octocoral in the family Primnoidae. It is very close in appearance to what is called *Plumarella longispina* in Nuttall 1909. The animal does not have the characters of the genus *Plumarella* as provided by Bayer 1991, and seems to be a *Parastenella* instead based on details of the spicules.

MY LIFE AS A BIOLOGIST

By Donald J. Reish

Chapter 9—The Hartman Years, Part 1

I remember three things about my final masters oral. I had many questions about the honey bee and the lymphatic system—both of which I knew only slightly. Dr. Pratt told me later that they terminated my oral exam early because I drank so much of the water that they provided, they were afraid that I would have an “accident”! I taught one-half of the invert course and Dr. Pratt taught the other half during the fourth summer at OIMB [Oregon Institute of Marine Biology]. I expanded my efforts at collecting syllids from the Oregon coast during the last summer.

I had written Dr. Hartman while in Oregon. Her replies were encouraging. She wrote that the Hancock Foundation offered fellowships. I applied for and received one of them. I also had TA offers at Northwestern and Hawaii. At the end of the summer of 1948 I spent a couple of weeks with my mother who had moved to LA during WWII. I went to the USC campus and to the Hancock Foundation to meet Dr. Hartman. I learned that she only came to the campus on Saturday, and I would be back in Oregon by then. The receptionist at the desk

called Dr. Hartman at home, and I talked with her briefly; I heard a baby crying in the background. I was amazed when I saw the worm stacks in Room 30. Back in Oregon I made arrangements to meet Dr. Hartman in January 1949. We spent about two hours talking polychaetes. She gave me copies of her reprints. I decided then that I wanted to work on my PhD at USC. I applied at the other two above mentioned places plus others because I needed financial support.

On the way back to Oregon I stopped at Stanford to visit my friends Bob and Paul (more about him in a later chapter) who were working on advanced degrees. I went to the Biology Dept, but I really didn't talk to anyone; I did see G. M. Smith working in his office; he wrote many botany texts. I stopped at Berkeley where I met Cadet Hand and Don Abbott both of whom were working on their PhDs.

On the return trip to southern California I stopped at Hopkins Marine Station at the invitation of W. K. Fisher, who had retired as director. I had sent him sipunculids and echiuroids from Oregon which he used in his monographs of these two groups. I slept in the lab and was awakened by the seals in the morning. I met Ralph Smith who was working on the life history of *Neanthes lighti*. Pete Riser and Don Abbott were also there. I collected more syllids.

I arrived in LA in August 1949. I lived with my mother; she put me up in her garage (no car) since her main source of income was renting out rooms. At my first meeting with Dr. Hartman I told her that I wanted to work on the syllids of Pacific Coast for my PhD. She said no. She didn't think it was appropriate for a dissertation. I then decided to work on the life history of *Typosyllis*. Since Dr. Hartman did not have an academic appointment, she could not be on my committee; however, unofficially she was my chair. I'm sure that she could have flunked me out if she thought that I was unworthy. My committee consisted of Martin, Moore, Dawson (He never had a grad student; I was the closest to one), Sheldon and Buchanan. The latter two died and were replaced by Garth and Mayer. I will discuss my doctoral research in a later chapter.

What was it like to be the first person to work with Dr. Hartman? The environment was formal. She always called me Mr. Reish and I always called her Dr. Hartman. After completion of my doctorate, she called me Don but never Dr. Reish. She was, and always will be, Dr. Hartman to me. My first job as a Hancock fellow was to type the list of polychaete genera which was used in her catalog of the polychaetes. I then checked the alcohol in all the vials in the stacks. These 2 jobs took me 2 years. I then started sorting samples for her. As a Hancock Fellow, I had to work 12 hours a week. They paid my $100.00 a month and tuition.

I was amazed by her library and especially her catalog to all the reference to polychaetes. I copied the syllid catalog (which I later gave to Fred Piltz) and later the nereid catalog. You could set your clock by her work schedule. She came in a 7 AM and left at 11:30 AM. I then had Room 30 to myself until 9:45 PM when the doors of Hancock were locked. Hancock was open to noon on Saturday and never on Sunday. Dr. Hartman never took a break. She looked at worms for about 2-3 hours and typed (very fast) for the rest of the time. She never told me what she was doing or whenever she completed a MS. She was very receptive of my questions and the discussion usually ended up with my carrying a pile of references to my desk. However, sometime she either did not hear my question or was thinking about something else; her reply was unrelated to my question. I could not get her back on track so I walked away and asked the question later. One day she showed me a fancy slide rule that she had bought. She asked me to teach her how to use it. I had taught others in

years past how to use a slide rule. She wanted to solve her long problem then and there. She could not wait to learn the basics. She never learned how to use it.

[Next time: Chapter 10—The Hartman Years, Part 2]

AMPHIPOD CHATSHOP

Following the International Crustacean Conference in Amsterdam an informal 4 day meeting was held in Germany by world amphipod workers. A brief synopsis of that gathering was provided on the crustL list server. It is reprinted here with the authors' permission for the information of those not in attendance.

"IXth International Meeting on the Amphipoda (Amphipod Chatshop) Kronenburg (Germany) 26-30 July 1998

[by] Wim Vader, Adam Baldinger & Traudl Krapp-Schickel

This amphipod meeting directly followed the IVth International Crustacean Congress in Amsterdam. The small village of Kronenburg in the Eifel mountains of W. Germany formed a nice contrast to Amsterdam, where most participants had been the week prior. Thirty-five scientists from twelve countries on four continents took part in the amphipod meetings, some accompanied by their families whose presence increased the family atmosphere even more. The Amphipod Chatshop, was organized by Traudl Krapp Schickel (Bonn) and Wim Vader (Tromsø). The unpretentious title chatshop was chosen because no official lectures or contributed papers were given, instead the meeting concentrated on a series of moderated discussions on topics of common interest.

The discussions held were as follows:

27 July morning: "Cladistic tools in amphipod taxonomy," moderated by Jørgen Berge (Tromsø). Cladistic analyses are rapidly becoming a vital part in amphipod taxonomy, but many workers are still unfamiliar with the theory and methods of this discipline. Berge introduced this topic based upon his own studies. This resulted in a lively discussion, that included the peculiar problems posed by the mosaic-like evolution of the Amphipoda, coupled to their almost total absence from the fossil record. Virtually no agreement on what constitutes apomorphic characters impedes the search for suitable outgroups. Numerous ingroup taxa and only a few representative outgroup taxa, results in analyses that may become skewed, because the many closely related ingroup-taxa more or less swamp the character traits in the few outgroup taxa. The role of molecular studies and how to integrate such results into cladistic analyses currently generated mostly by morphological characters was also discussed.

27 July afternoon: "What should a taxonomic description look like?" moderated by Oliver Coleman (Berlin). Several years ago, Olli distributed a circular letter with the same title, asking for as complete illustrations as possible, and suggesting that written text concentrate on points insufficient for illustration. He maintained that "it is easier to understand a illustration than to visualize a written description." There was general agreement on the importance of complete and detailed illustrations, but many colleagues also stressed the significance of written descriptions, particularly to explain species variation. A researcher should discern between publications that involve new species descriptions and/or generic or family level revisions from the taxonomic keys produced for the general biologist or ecologists. Both types are of vital importance, but it was agreed upon that these publications can not easily be combined in one paper.

28 July morning. "Amphipod information in an electronic age," moderated by Alan Myers (Cork). A number of possibilities to distribute electronic information was discussed and included i.e: the development of an amphipod website, that could serve as a gateway for the Amphipod Newsletter, now temporarily stalled; deposition of and easy access to regional taxa and their distribution lists; type specimens and their museum location; and illustrated interactive keys (hopefully in DELTA-format).

A sizable number of technical problems and pitfalls was noted: Such a website requires constant service by an expert, a significant amount of time for a dedicated and altruistic researcher (several younger colleagues were named) and it will require resources. A problem with an easily accessible list is quality control, i.e: who decides which entries are reliable, and will monitor and edit the taxonomic and distributional data?

Stefan Koenemann (Norfolk, VA) promised to develop an amphipod homepage. Les Watling will scan Amphipod Newsletters 2-20 and Wim Vader has produced AN 21; all should be available soon to download on the web page.

28 July afternoon. "Whither amphipod family-level taxonomy?" This discussion was introduced by Les Watling (Maine), who gave his views on the plesiomorphic amphipod and on the position of the Amphipoda among the Peracarida. Currently the classification of the Amphipoda is still in a state of flux; the schedules of Jerry Barnard and Ed Bousfield, often not very compatible and neither of them based on cladistic analyses, are still prevalent. Discussions revolved around the bush-like evolution of the Amphipoda and envious comparisons to the Isopoda where the general classification appears clearer. Not unexpectedly, the classification problems of the Amphipoda were not solved! However, it was suggested that a cladistic analysis of the amphipod families should have high priority, simply to give a general idea of the overall relationships, and to generate topics for further studies.

29 July morning. "Uniformity of terminology," moderated by Oliver Coleman. The primary question of this session was whether this discussion is necessary at all in such that "we should not try to stifle colleagues by forcing everybody to use exactly the same terminology," a thesis forcefully defended. However, descriptions should be unequivocal and unambiguous. As an example, the terminology of setae, spines and teeth was discussed. Les Watling announced that a workshop on this topic will be held in Maine in the summer of 1999.

29 July afternoon. "Illustrations in taxonomic descriptions." This discussion was based on a note contributed by Kathy Conlan and Ed Hendrycks (Ottawa), with examples of good and poor illustrations, and a set of guidelines that illustrations should adhere to. These guidelines were generally accepted as important, although it was pointed out that they were a bit "idealistic" and difficult to adhere to with increasing publication costs. Among the points mentioned often inadequately defined in present illustrations (and descriptions!) were the pleopods, the oostegites (form and number), and the characteristics of immature and juvenile animals.

"Next amphipod meeting: when and where?" moderated by Wim Vader (Tromsø). The next International Crustacean Congress will be held in Melbourne in 2001, and many participants voted for an amphipod meeting or an amphipod-isopod consortium prior to or after the Congress (Tasmania and Sydney were mentioned). The next European Crustacean Conference will be in Lodz, Poland in 2002.

Most of the participants expressed interest in having an amphipod meeting prior to the Melbourne Congress. Wanda Plaitis (Kreta) offered a preliminary invitation to hold the next

amphipod meeting on Kreta in the summer of 1999. It was decided to have next amphipod meeting in 1999 and it should be in a regular format with contributed papers and invited lectures and posters. Wanda Plaitis, Wim Vader and Adam Baldinger are in the process of developing this proposal (PLEASE SEE BELOW).

In addition to the "chatshops," ICC contributed posters were arranged at the Eifelhaus, and magnificent photographs of Antarctic and Lake Baikal amphipods were shown by Gauthier Chapelle (Brussel). Also shown was a fascinating video on the biology of some amphipod species contributed by Les Watling. Ichiro Takeuchi (Japan) showed photographs from his Antarctic diving exploits. An evaluation of the chatshop format showed that most participants were satisfied with this informal meeting, especially when it is held directly following a large conference.

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THE NEXT AMPHIPOD MEETING?

We are proposing to have the next amphipod conference at Heraklion, Kreta (Crete, Kriti), Greece. To organize the meeting, we ask your input in the following:

1. If you're interested in attending this meeting in Kreta, when would you prefer it to take place? August 1999, September 1999, Spring 2000. Please indicate why or give another suggestion.

2. Do you plan (now) to contribute a paper or poster at this meeting?

3. Please give suggest topics and/or symposia you would be interested in.

Thank you.

Please respond to Adam Baldinger (abaldinger@oeb.harvard.edu)"

Attachments

Kathy Langan, CSDMWWD, has graciously provided two useful attachments to this month's Newsletter. The first is a "taxonomic protocols" table resulting from the "problem polychaete" meeting in July. It attempts to standardize the taxonomic approach for dealing with problematic polychaete identifications during the Bight'98 project. The second is a key to the Trichobranchidae of Point Loma, as referenced in the above mentioned table.

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Bight '98: Identification Protocols for Selected Polychaete Taxa

Taxa	Protocols
Capitella capitata complex	No changes in identifications.
Mediomastus sp	Identify *M. acutus*. Identify all other species as *Mediomastus* sp. (See minutes of July 20 SCAMIT meeting for details of discussion).
Decamastus sp	Use *D. gracilis*. Look for variability.
Notomastus sp	Identify to species. Use Hartman's Atlas 1969 for *N. hemipodus*.
Petaloproctus sp	Identify as sp.
Praxillella sp	Forward specimens to specialist.
Cossura sp	Identify to species. (See minutes of July 20 SCAMIT meeting for details of discussion).
Arabella sp	Identify as sp. Retain complete specimens.
Drilonereis sp	Use Leslie Harris's key in SCAMIT Newsletter, Vol. 14 No. 11. (See minutes of July 20 SCAMIT meeting for details of discussion). Save entire specimens.
Ophryotrocha A/B/C complex	Identify to A, B, or C.
Dorvillea (Schistomeringos) longicornis	Use Hilbig 1995 to verify this identification.
Marphysa sp	Identify *M. disjuncta* and *M.* sp A.
Lumbrineris sp	Forward specimens to specialist.
Mooreonuphis spp	Identify to species. (Rick Rowe is preparing a summary chart for various species).
Onuphis iridescens complex	Identify to species.
Fauveliopsis sp	Use key in Fauchald and Hancock 1981. (See minutes of July 20 SCAMIT meeting for details of discussion).
Scoloplos armiger complex	No changes in identification.
Acmira sp	Identify to species. Use Larry Lovell and Kelvin Barwick's new Paronidae key.
Allia ramosa	Identify as *Aricidea (Allia*) sp A SCAMIT 1996. This is a name change.
Allia cf. nolani	Identify as *Aricidea (Allia) hartley*i. This is a name change.
Levinsenia sp	Identify to species. Larry Lovell is preparing a key. (See minutes of July 20 SCAMIT meeting for details of discussion). Use Larry Lovell and Kelvin Barwick's new Paronidae key.
Myriochele sp	Identify to species.
Aphrodita sp	Identify *A. refulgida* and *A. armifera*; identify other species as A. sp.
Eteone sp	Identify *E. fauchaldi, E. leptotes, E. pigmentata*; identify other species as sp and notify other polychaete taxonomists.
Eulalia sp	Identify to species.
Phyllodoce sp	Identify to species.
Phyllodoce sp	Identify to species.
Parandalia sp	Identify P. fauveli; if you get a different species, notify other polychaete taxonomists.
Sthenelais spp	Ron Velarde is working on these for the Sept. SCAMIT meeting. (See minutes of July 20 SCAMIT meeting for details of discussion).
Autolytus sp	Ron is preparing a key for syllids.
Pionosyllis sp	Ron is preparing a key for syllids.
Proceraea sp	Ron is preparing a key for syllids.
Sphaerosyllis sp	Ron is preparing a key for syllids.
Syllis (Typosyllis) spp	Ron is preparing a key for syllids.
Chone complex	Identify to species.

Bight '98: Identification Protocols for Selected Polychaete Taxa (continued)

Taxa	Protocols
Euchone sp	Identify to species.
Mesochaetopterus sp	Identify to species.
Aphelochaeta/Monticellina complex	Identify to species using Tony Phillip's voucher sheets, Rick Rowe's identification sheets of March 1998, and Blake 1996.
Chaetozone setosa complex	Use Blake 1996 and attempt to key out. We will re-visit this group at a later date.
Cirratulus sp	Use Blake 1996 and attempt to key out.
Cirriformia sp	Use key in Blake 1996 to speciate.
Magelona spp	Identify to species using Dean Pasko's key of Nov. 1991 (Key to West Coast Magelona) and *Magelona* SD10 voucher sheet.
Carazziella sp	Use Blake 1996 and refer to comments in SCAMIT Newsletter, Vol. 15 No. 5 (Sept. 1996).
Polydora sp	Identify to species using Cheryl Brantley's table of Oct. 1996 (Tables of diagnostic characters for Polydora and Dipolydora of California) and Blake 1996.
Prionospio A/B complex	Identify to Prionospio jubata or P. dubia.
Prionospio lighti	Identify to species.
Scolelepis spp	Identify to species using Larry Lovell and Dean Pasko's key of Nov. 1995 (Key to the non-polydorid Spionidae from Southern California) and Blake 1996.
Spio sp	Identify to species using Larry Lovell and Dean Pasko's key of Nov. 1995 (Key to the non-polydorid Spionidae from Southern California) and Blake 1996.
Spiophanes missionensis	Identify as *S. duplex*. This is a name change.
Lysippe sp	Identify as *Lysippe* sp A or *L.* sp B.
Sosane occidentalis	Identify to species.
Lanassa sp	Identify to species using Leslie Harris's key in the SCAMIT Newsletter, Vol. 10 No. 11 (1992) and Rick Rowe's chart of Nov. 1995 (Separating the abranchiate Amphitritinae Terebellidae of Pt. Loma).
Polycirrus sp	We will re-visit this group.
Streblosoma sp	Identify to species.
Terebellides sp	Identify to species using Kathy Langan's key of Aug. 1997 (Trichobranchidae of Point Loma). (A copy is included in this newsletter. See minutes of July 20 SCAMIT meeting for details of discussion).

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TRICHOBRANCHIDAE OF POINT LOMA

(Check both sides of animal)

Notosetae of setiger 1 clearly longer than notosetae of following setigers

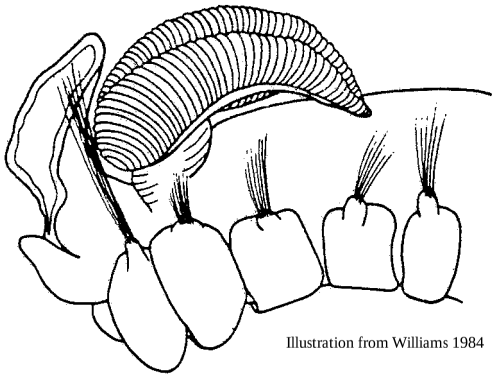


Illustration from Williams 1984

Terebellides californica Williams 1984
other characters:
- setiger 1 notopod prolonged

Notosetae of setiger 1 subequal to notosetae of following setigers

Abdominal setigers number **27-35**

Area of glandular expansion **is present** on setiger 3;
setiger 3 is **wider than** setiger 2 and setiger 4

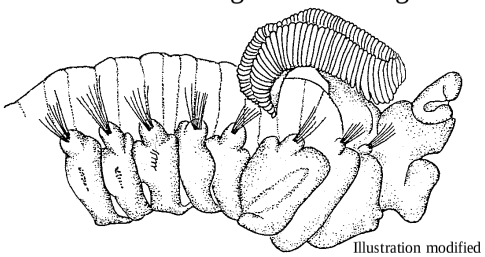


Illustration modified from *Terebellides kobei* Imajima and Williams 1985

Terebellides sp Type D Williams 1984
other characters:
- setiger 1 notopod slightly prolonged
- number of abdominal setigers = 30-35

Area of glandular expansion **is lacking** on setiger 3;
setiger 3 is **same width** as setiger 2 and setiger 4

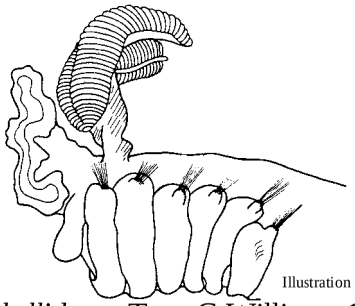


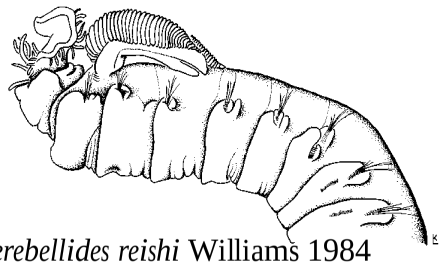
Illustration from Williams 1984

Terebellides sp Type C Williams 1984
other characters:
- setiger 1 notopod not prolonged
- number of abdominal setigers = 27-31

Posterior end missing

Terebellides sp

Abdominal setigers number **40-55**



Terebellides reishi Williams 1984
other characters:
- setiger 1 notopod not prolonged