



**Southern California Association of
Marine Invertebrate Taxonomists**

April, 2005

SCAMIT Newsletter

Vol. 23, No. 12

SUBJECT:	Echinoderms, with special emphasis on Spatangoida
GUEST SPEAKER:	Boris Savic
DATE:	11 July 2005
TIME:	9:30 a.m. to 3:30 p. m.
LOCATION:	Los Angeles County Museum of Natural History Worm Lab



**Triangular plate and jaws from the radula of
Falcidens longus. 400X. Photo by K. Barwick.**

SUMMARY MINUTES OF APRIL 2005

Aplacophore Mollusks of the 2003 Regional Monitoring Survey of the Southern California Bight - Kelvin Barwick (CSDMWWD) and Don Cadien (CSDLAC)

Survey design of the benthic infaunal portion of the Bight '03 Coastal Ecology program included stations below 200m. Previous regional programs have not included sampling with this depth range. In consequence members of the molluscan class Aplacophora were very infrequently encountered. Their infrequency was reflected in a lack of interest in their specific level identification. Only one aplacophore species level taxon could be reliably identified by Bight '98 program participants, *Limifossor fratula*. All other taxa were lumped under Chaetodermatidae.

The group is more difficult to work with than most mollusks because its members lack a shell. These are the “worm-mollusks”, elongate animals which possess a radula and bear dermal scales (or spicules) of aragonite rather than a shell. Most local taxonomists have not expended much effort in their identification, since they are relatively rare. It was our goal to produce a tool to provide reliable and definitive identifications based on external features. Hopefully we have succeeded, although radular examination remains necessary in some cases to provide confirmation of identifications based on external body features.

Within the next month we will be publishing the results of our work. It includes: twenty pages of introductory text with color illustrations, 16 voucher sheets with accompanying color plates, and an extensive bibliography. Because of the need to use color it will be published as a SCAMIT supplement on a CD-ROM available to the hard copy members. As always electronic members will be able to download it from the web site. Additional copies of the CD will be made available at cost.

SCAMIT DATABASE COMMITTEE

SCAMIT’s Database Committee has been active since it was formed last January. The Committee originally consisted of seven members, each with an interest in designing a database schema and computer-based taxonomic tools for SCAMIT. It currently is comprised of 10 individuals, representing five agencies, and has met monthly since February. The Committee’s progress is outlined as follows:

1) Currently, members are improving upon a third draft of a database schema, which is represented as a detailed, annotated Visio-based flowchart. The Taxonomic Listing currently serves as the core of the database, and the design incorporates modules that would include everything from interactive taxonomic

keys, nomenclatural information and ecological data. One module that is being designed, referred to as Assessment Tool Support, would permit users to calculate “biointegrity indices” that have proven helpful in making regulatory decisions regarding water quality.

2) Additionally, the Taxonomic Listing (4th ed.) of 2,174 species has been digitized and soon will be made available on SCAMIT’s website in a form that will be searchable.

3) Using both of the above as centerpieces for discussion, members are reaching a consensus on both the design of the desired database and the set of taxa that should be included in the initial phases of the project.

4) Members have met with a representative of OBIS and have defined mechanisms for collaboration with that more global initiative.

5) The members actively are seeking funding for the development of the database and taxonomic tools. Such monies are needed for the professional services of computer science specialists and, in large part, as compensation for the content that will be provided by marine invertebrate taxonomists. SCAMIT has submitted a preliminary proposal to a funding agency for \$350k, which if awarded, would cover an initial two-year effort to make data and extensive tools available on-line for 25% of the taxa included in the Taxonomic Listing. Additional funding opportunities have been identified, so members are elaborating upon the first proposal with the intent of submitting a second request for funding in late June.

For additional information, contact a SCAMIT officer or Todd Haney (haney@ucla.edu).

SEEING VISUAL CUES IN THE NEWS

Accurate visual inspection of specimens is at the heart of original taxonomic description and any subsequent identification of additional specimens. Many SCAMIT members have re-examined type material and discovered an author had somehow overlooked a different



taxonomic feature in a few of the paratype specimens. This results in some paratype specimens being removed from the original listing and transferred to a different or even a new taxa name. During QA/QC reviews of regional survey specimens, some counts of species will be slightly modified when it is confirmed that a few specimens of a particular taxa were incorrectly identified when a key feature was not initially recognized.

These changes to taxa listings or data records are usually considered an error without explanation. Why do these kind of errors seem to occur so widely across many decades of taxonomic research and regardless of the taxonomists involved? Speculation may conclude that technology has improved the ability to inspect specimen morphology and thus previous errors are detected during specimen comparisons. Possibly there may just be some undefeatable background error that has to be controlled in magnitude.

In the May 26, 2005 issue of *Nature*, researchers Wolfe, Horowitz, and Kenner describe how the rarity of a visual target in a series of inspections impacts the accuracy of recognizing the target's presence. Through a series of experiments they demonstrate that "if observers do not find what they are looking for fairly frequently, they often fail to notice it when it does appear". Even with special incentives to discourage errors, almost all errors were "misses" of targets that were present and rarely were errors detections of the target when it was absent.

The rate of error is tied closely to the prevalence of the visual target in the sample. If a target's prevalence (number of targets) is 50 %, failure to notice it was measured at 7%. Consistently, as the target's prevalence was reduced and made more rare, the error rate of misses increased. A visual target with a 10 % prevalence results in 16 % error, while a prevalence of 1% produced errors of 30%.

When mixing three different visual targets at common (44%), rare (10%), and very rare (1%) prevalences; observers missed 11%, 25%, and 52 % of the visual targets.

Some of their results may help to explain the events acting on Type collections found to contain mixed lots of species; or re-examinations of taxonomic survey specimens resulting in updated final frequency values and taxa scores.

Tom Parker, CSDLAC

ELECTION

Attached at the end of this newsletter the reader will find the ballot for the election of 2005-2006 SCAMIT officers . I apologize for the tardiness of the distribution, but please take a minute to vote.

BIBLIOGRAPHY

Wolfe. J. M., T. S. Horowitz, and N. M. Kenner. 2005. Rare items often missed in visual searches. *Nature* Vol. 435 pp 439.



Please visit the SCAMIT Website at: <http://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:

President	Kelvin Barwick (619)758-2337	kbarwick@sandiego.gov
Vice-President	Leslie Harris (213)763-3234	lharris@nhm.org
Secretary	Megan Lilly (619)758-2336	mlilly@sandiego.gov
Treasurer	Cheryl Brantley (310)830-2400x5500	cbrantley@lacsds.org

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:

SCAMIT

C/O The Natural History Museum, Invertebrate Zoology

attn: Leslie Harris

900 Exposition Boulevard

Los Angeles, California, 90007

BALLOT FOR SCAMIT OFFICERS 2005-2006

Vote for one (1) nominee for each office. Please mail or return the completed ballot to Leslie Harris by July 11th 2005. You may return it to the Secretary or other attending officers at the July meeting. The address to mail it to is:

Attn: Leslie Harris
Worm Lab
Los Angeles County Museum of Natural History
900 Exposition Blvd
Los Angeles, CA 90007

President – The president presides at all meetings and represents SCAMIT in external business affairs.

_____ Kelvin Barwick
_____ Write in: _____

Vice-President – The Vice-President chairs ad hoc committees, supervises the specimen exchange, tabulates election ballots, and fills in for the President as necessary.

_____ Leslie Harris
_____ Write in: _____

Secretary – The Secretary keeps minutes of the meetings, is responsible for the newsletter, and preparation of the ballots.

_____ Megan Lilly
_____ Write in: _____

Treasurer – The Treasurer collects dues, makes disbursements, keeps financial records, and makes an annual statement of the financial status of SCAMIT.

_____ Cheryl Brantley
_____ Write in: _____

2005-2006 SCAMIT Meeting Topics – Please suggest any topics you deem worthy of a SCAMIT meeting.

