

ACC 10/9/85

**Southern California Association of  
Marine Invertebrate Taxonomists**

3720 Stephen White Drive  
San Pedro, California 90731



September 1985

Vol. 4, No.6

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Next Meeting:	October 21, 1985
Guest Speaker:	Susan J. Williams, Assistant Curator (Worms) Allan Hancock Foundation. Systematics of "Ampharetid Polychaetes"
Place:	Cabrillo Marine Museum 3720 Stephen White Drive San Pedro, Ca. 90731
Specimen Exchange Group:	Terebellidae
Topic Taxonomic Group:	Ampharetidae

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MINUTES FROM SEPTEMBER 9, 1985

Guest speaker - Jay Shrake from Marine Ecological Consultants gave a presentation on the local Caudofoveata (Chaetodermatida and Solenogastres Aplacophora). Important taxonomic characters include spicule morphology, structure of the radula, and the relative shape and size of each body region. The body is divided into four regions (A thru D). The anterior end containing the radula is Region A and the posterior end containing the gills is Region D. Spicule morphology is best examined by placing a portion of each body region in a well slide with some bleach. This frees the spicules from the body wall without destroying their shape. The spicules should only be left in the bleach solution for a short period of time; after which they should be rinsed in water so they do not completely dissolve. The well slide also provides an area where the three dimensional structure of the spicule can accurately be examined. The radula and chitinous support membranes must be dissected out to permit adequate examination. Methylene blue can be used to stain the radula to determine the shape of the support material. Differentiation between the two common genera Chaetoderma and Falcidens can best be determined by the radular differences. Additionally Falcidens usually has a short body Region B, while the Chaetoderma body Region B is longer. Many of the species described by Schwabel (1963) will ultimately be discarded due to poor descriptions and lost type material. Additional synonymies for some species described by Heath (1911) may occur in a forth-coming publication.

Funds for this publication provided in part by  
Chevron U.S.A., Inc., Arco Foundation, and Texaco, Inc.

Recent Publications of interest include the following:

- 1) Smith, P.R. and Fu-Shiang Chia, 1984. Larval development and metamorphosis of Sabellaria cementarium Moore, 1906 (Polychaeta: Sabellariidae). Can. J. Zool., 63:1037-1049.
- 2) Winsnes, I.M., 1985. The use of methyl green as an aid in species discrimination in Onuphidae (Annelida, Polychaeta). Zool. Scripta, 14(1):19-23.
- 3) Cate, J.M. and S. Raskin. (in press). Its easy to say Crepidula! (Kreh PID' yu luh). Phonetic guide to pronunciation of the scientific names of sea shells and a glossary of terms used in malacology. Pretty Penny Press. P.O. Box 3890, Santa Monica, California. 90403. Price: \$19.95.

Chris Glasby from Australia has requested assistance in obtaining specimens and/or information on the freshwater Nereid subfamily Namanerinae (Namanereis, Namalycastis, Lycastopsis). This information and any material sent will be used for a taxonomic revision of the subfamily for doctoral research. Please contact Chris at the Australian Museum, 6-8 College St., Sydney, New South Wales 2000, Australia.

Gordon Hendler has asked that we run an announcement concerning the position of curatorial assistant at the Los Angeles County Natural History Museum. Gordon will be assuming a position of Associate Curator sometime in September, leaving the Smithsonian Sorting Center. For this position a strong background in invertebrate systematics and an interest in working with collections of echinoderms is preferred. The salary for this position will begin at \$18,000. Anyone interested should send a brief resume to Dr. Gordon Hendler, Natural History Museum, 900 Exposition Blvd., Los Angeles, CA. 90007.

Nancy Mountford has asked us to announce the 2nd International Workshop on the Marine Fauna and Flora of Hong Kong and southern China, Hong Kong, 1986. The workshop will be held between April 2 - April 24. For further information contact: Dr. Brian Morton, Department of Zoology, Hui Oi Chow Science Building, University of Hong Kong, Hong Kong.

Sue Williams has informed us that the Hancock Foundation Library has expanded its hours for the Fall Semester. The library will be open Monday - Thursday 8:30 A.M. - 7:00 P.M. and Saturday 8:30 A.M. - 5:30 P.M.

The Curation Committee has recently inaugurated an improved method for processing the material from the specimen exchanges.

#### SPECIMEN EXCHANGE PROCEDURES

1. Prior to exchange, call vice-president for approval. Then label specimens with agency code, designating the best specimen in set 'a'.
2. At the exchange, turn in specimens to the vice-president. Get SCAMIT card and Cabrillo Marine Museum form for each species exchanged.
3. At the topic meeting, return completed SCAMIT card and Cabrillo Marine Museum form without species I.D. to vice-president.
4. a. If specimen I.D. is resolved at topic meeting, vice-president will fill in species name on SCAMIT card and Cabrillo Marine Museum form and turn them in to curator with specimen.  
b. If specimen I.D. is unresolved at topic meeting, vice president will loan out specimens for further examination. Once I.D. is resolved, vice-president will follow procedures outlined in 4.a.

5. Curator will complete specimen tag and Cabrillo Marine Museum form (assign Cabrillo Marine Museum #) for each voucher specimen turned in. Forms will be placed in files and specimens will be deposited in voucher collection.
6. Curator will be responsible that each specimen is in the appropriate glassware, and that SCAMIT specimen labels are filled out.

Reminder: A newly updated listing for overdue voucher sheets is now available from the secretary. Those individuals responsible for the original voucher should turn them in as soon as possible. Other individuals interested in making a voucher sheet should consult the list to see which voucher species are available, and notify the vice-president of which species they want to make voucher sheets for.

Ron Velarde, v.p.  
 Pt. Loma Biology Lab  
 4077 N. Harbor Dr.  
 San Diego, CA 92101 (619) 221-6625

List of specimens from September 9, 1985:

HYP	47	<u>Falcidens</u> spp. (Salvini-Plawen, 1968) Further I.D. required by J. Shrake.
MBC	33	<u>Dentalium vallicolens</u> Raymond, 1904
MBC	34	<u>Falcidens</u> spp. (Salvini-Plawen, 1968) Further I.D. required by J. Shrake.
SCCWRP	61	<u>Dentalium rectius</u> Carpenter, 1864
SCCWRP	62	<u>Limifossor fratula</u> Heath, 1911
LACO	57	<u>Dentalium rectius</u> Carpenter, 1864
LACO	58	<u>Falcidens</u> spp. (Salvini-Plawen, 1968) Further I.D. required by J. Shrake.

Helpful Hints: The key printed here for southern California Dentalium was taken from an article in the Minutes of the Conchological Club of Southern California. No. 46, March 1945. Copies of the entire article, which includes one plate and a discussion of each Dentalium species may be obtained by writing the SCAMIT Secretary, Tom Parker, Marine Biology Laboratory, JWPCP, 24501 S. Figeroa St., Carson, Calif. 90745, (213) 775-2351 x394.

Key to Species of Dentalium

- a. Shell longitudinally strongly ribbed
  - b. Ribs typically 6, decreasing anteriorly.....neohexagonum
  - b' 6-ribbed at apex, increasing to 12, and at aperture with 17-24 alternating riblets; length 27 mm, about 9 x diam.....oerstedii
  - b'' Similar, but glossy with finer sculpture and more numerous riblets at aperture.....numerosum
  - b''' 12 to 20 sharp riblets at apex, 25-48 at aperture, the interstices wider than ribs, concave; length 29-65 mm., 9-15 time the diam. ....agassizii
- a' Shell with fine, evenly engraved longitudinal striae toward the apex (or in young specimens throughout); section circular
  - b. Apex simple; without apical slits; length 25-30 mm; 10 times diam. ....semipolatum
  - b' Apex with slit on concave side; shell translucent whitish with opaque rings; length 30mm, 16 times diameter.....inversum
  - b'' Apex with slit on both concave and convex side; length 38.5 mm, 12 times the diameter.....hannai



- b''' Low rounded threads near apex some of which are more prominent; occurs in deeper water and are larger than above.....vallicolens
- a'' No longitudinal sculpture
  - b. Strong and solid, young striated.....pretiosum
  - b' Quite thin; deep water species; no apical notch
    - c. Slender with very slight curvature, and slow increase
    - d. Very slightly curved, very slender; length 30 mm, 16-19 times the diameter.....watsoni
    - d' Almost straight, very glossy; length 30-40 mm, 12-15½ times the diameter.....rectius
    - d'' Curvature regular but slight; length 45 - 69 mm, 11 - 14 times the diameter.....dalli
  - b'' Shell subcircular in section
    - c. Well curved, polished, flesh-tinted toward the apex, which is sometimes slit in front and behind; length 45 mm, 12 times the diameter.....splendidulum

Crenella decussata (Montagu, 1808)  
Mytilidae

SCAMIT Vol. 4, No. 6

SCAMIT Codes: LACO 55, SCCWRP 58

Date Examined: 12 August 1985  
Voucher by: Paul Scott (SBMNH)

Synonymy:

Mytilus decussata Montagu, 1808  
Crenella yokayami Nomura, 1932  
Crenella laticostata Scarlato, 1960  
Crenella civaricata (Orbigny, 1847) See additional note #1

Literature:

Soot-Ryen, 1955; Oldroyd, 1924; Grant & Gale, 1931; Abbott, 1974.

Diagnostic characters:

1. Shell small, less than 4 mm.
2. Shell sub-ovate, moderately inflated.
3. External sculpture of fine thick radial lines crossed by concentric striae, giving a beaded appearance in some specimens.
4. Internal margins crenulate.
5. Hinge plate directly below beaks, striated, well developed to obscure.

Additional notes:

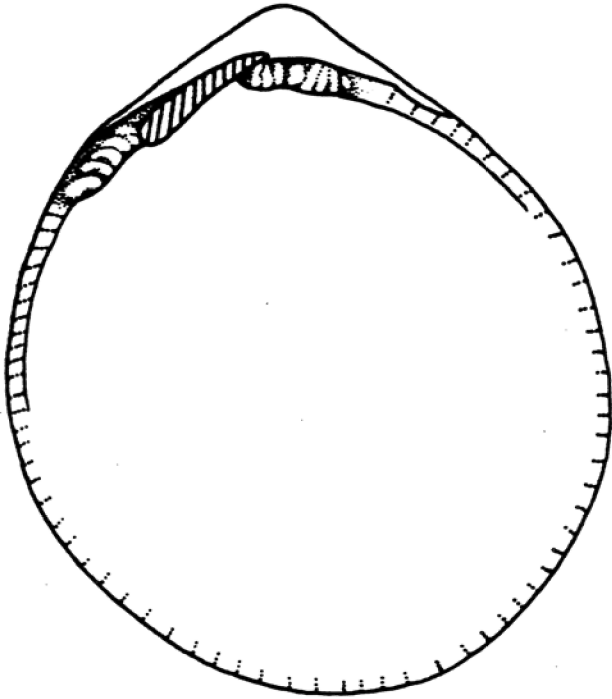
1. The eastern Pacific Crenella are in need of a thorough systematic revision. Comparing specimens from Alaska, Washington, Oregon, California, and Mexico yielded no consistent differences between specimens. The conchological differences between C. decussata and C. divaricata as outlined by Soot-Ryen (1955) are unworkable when one compares northern specimens with the southern specimens. At this point it is advisable to treat the southern California Crenella as one species, rather than to retain two species which are indistinguishable. By systematic priority, Crenella decussata should be used as the southern California species.

Depth range: 5-460 m (Bernard, 1983)

Distribution: 60N to 2S (southern range as C. divaricata; Bernard, 1983)

See illustrations on reverse side

Crenella decussata (Montagu, 1808)



Drawing by Laurie Marx, Santa Barbara  
Museum of Natural History



Abbott, 1974

SCAMIT Codes: LACO 54, SCCWRP 59

Date examined: 12 August 1985  
Voucher by: Paul Scott (SBMNH)

Synonymy:

Crenella columbiana Dall, 1897  
Crenella rotundata Dall, 1916  
Crenella tamurai Habe, 1955

Literature:

Soot-Ryen, 1955; Oldroyd, 1924; Dall, 1897

Diagnostic characters:

1. Shell small, less than 20 mm.
2. Shell thin, highly inflated, subquadrate to ovate.
3. External sculpture of fine radial ribs.
4. Hinge obsolete in adults, juveniles with weak, striated hinge plates.

Additional notes:

1. This species is easily separated from Crenella decussata by the large thin shell and the very fine radial ribs.
2. Juveniles can be separated from Crenella by the large prodissoconch and the fragile, thin shell.

Depth range: 20 - 550 m (Bernard, 1983)

Distribution: 60N to 17N (Bernard, 1983)

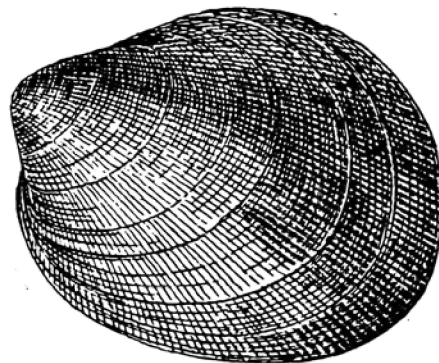


Illustration from Dall, 1897

SCAMIT Codes: LACO 56, SCCWRP 60

Date examined: 12 August 1985  
Voucher by: Paul Scott (SBMNH)

Synonymy:

None

Literature:

Soot-Ryen, 1955

Diagnostic characters:

1. Shell elongate, inflated, beaks sub-terminal.
2. Shell without definite external sculpture, but with growth striae.
3. Hinge without teeth.

Additional notes:

1. Several species of Modiolus are present in the intertidal and continental shelf of southern California. Juveniles of the genus are extremely difficult, if not impossible, to separate. The leading authority on Modiolus does not feel juveniles can be identified to the species level if they are less than 35 mm in length (B. Wilson, pers. coms. 1984). Until a complete size series (juvenile to adult) for each species is assembled, it seems best to report our juveniles as Modiolus spp. juvenile.



Southern California Crenellinae Bibliography

Abbott, R.T. 1974. American sea shell, Second edition. Van Nostrand Reinhold. 663 pgs.

Bernard, F.R. 1983. Catalogue of the living Bivalvia of the eastern Pacific Ocean: Bering Straight to Cape Horn. Canadian Special Publ. of Fisheries & Aquatic Sciences 61:1-102.

Dall, W.H. 1897. Notice of some new or interesting species of shells from British Columbia and the adjacent region. Bull. Nat. Hist. Soc. British Columbia 2:1-18, pls. 1,2.

Grant, U.S., IV & H.R. Gale. 1931. Catalogue of the marine pliocene and pleistocene Mollusca of California and adjacent regions. Mem. San Diego Soc. Nat. Hist., Vol. 1:1-1036, pls. 1-32.

Oldroyd, I.S. 1924. The marine shells of the west coast of North America. Stanford Univ. Publ., Univ. Series, Geological Sciences. Vo. 1, No. 1, 247 pgs., 57 pls.

Soot-Ryen, T. 1955. A report on the family Mytilidae (Pelecypoda). Allan Hancock Pacific Expeditions 20(1):1-174.

**SCAMIT ORDER FORM**

Video Tapes - These tapes of SCAMIT guest lecturers are available for viewing on VHS recorders. Price for renting is \$10.00 with a \$5.00 refund upon return of the tape.

- Tape 1. Dr. Andrew Lissner and Dr. Wilson Hom: Status of Benthic Archive Samples and Reexamination of Existing Data for California. (May 14, 1983)
- Tape 2. Dr. Pat Hutchings: Systematics of Mediomastus. (January 14, 1985)  
Dr. Richard Bray: Consumer mediated Nutrient Transport into Rocky Subtidal Reefs. (February 11, 1985)
- Tape 3. Dr. J.L. Barnard: Amphipod Workshop Morning Lecture (March 7, 1985). Also accompanied with transcribed notes from the discussions on March 6, 8 and 11, 1985).

T-Shirts - Price \$8.00 plus \$.95 for postage.

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 Biology Laboratory  
 Hyperion Treatment Plant  
 12000 Vista del Mar  
 Playa del Rey, CA 90291

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