Southern California Association of Marine Invertebrate Taxonomists

3720 Stephen White Drive
San Pedro, California 90731

March, 1992 Vol. 10, No. 11

NEXT MEETING:	Thalassinoid shrimp
GUEST SPEAKER:	Don Cadien Los Angeles County Sanitation District Los Angeles, California
DATE:	April ~~18~~ 20, 1992 9:30am - 3:00pm
LOCATION:	Cabrillo Marine Museum San Pedro, California

MINUTES FROM MEETING ON MARCH 9, 1992:

Ron Velarde announced that the proceedings from the Third Polychaete Conference are available. To obtain a copy send $17.00 to:

Dr. Donald J. Reish
Department of Biology
California State University Long Beach
1250 Bellflower Blvd.
Long Beach, CA 90840.

Abranchiate Amphitrinae Terbellid Workshop: Leslie Harris reviewed the commonly encountered abranchiate Amphitrinae Terebellids of southern California. A key and description of the species occurring in southern California have been included in the newsletter.

FUNDS FOR THIS PUBLICATION PROVIDED IN PART BY THE ARCO FOUNDATION, CHEVRON USA, AND TEXACO INC.

SCAMIT OFFICER ELECTIONS RESULTS:

The SCAMIT officers for 1992-93 are:

President - Ron Velarde
Vice President - Larry Lovell
Secretary - Diane O'Donohue
Treasurer - Ann Martin

Congratulations to all!

NEW PUBLICATIONS OF INTEREST TO SCAMIT MEMBERS:

Hsieh, H., et al. 1991. Habitat characteristics and occurrence of the spionid Pseudopolydora species on the tube-caps of the onuphid Diopatra bilobata Bull. Inst. Academia Sincia. (30) 331-319.

Doyle, S. 1991. Setal type and distribution in two Australian species of Scyphoproctus and three other capitellidae, with a description of Scyphoproctus towraiensis n. sp. Zool. Scripta (20) 263-275.

Grehan, A. 1991. Demography and reproductive biology if Melinna palmata in inner Galway Bay on the west coast of Ireland. Mar Biol. (109) 459-467.

Knight-Jones, P., et al. 1991. Sabelliform polychaetes, mostly from Turkeys Aegean coast. J. Nat. Hist. (25) 837-858.

Thanks to Tom Parker of the Los Angles County Sanitation District.

FUTURE MEETINGS:

The May 11 meeting will be a discussion on how to best organize committees for publishing on SCAMIT provisional species. Decisions will be made as to which species would be the quickest to publish, who has priority, if any, and what level of funding can be made available through SCAMIT. We will also begin cataloging SCAMIT literature. Those members with an interest are urged to attend. We will be meeting at the Cabrillo Marine Museum in San Pedro, California.

Anybody planning to present a paper at the Polycheate conference in France is invited to present it at an upcoming SCAMIT meeting. If you are interested contact Larry Lovell.

SCAMIT OFFICERS:

If you need any other information concerning SCAMIT please feel free to contact any of the officers.

President	Ron Velarde	(619)692-4903*
Vice-President	Larry Lovell	(619)945-1608
Secretary	Kelvin Barwick	(619)692-4900*
Treasurer	Ann Martin	(213)648-5317

* **Please make a note that these are new numbers.**

ABRANCHIATE AMPHITRITINAE (POLYCHAETA, TEREBELLIDAE) FROM SOUTHERN CALIFORNIA

Leslie H. Harris
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The abranchiate genera of the subfamily Amphitritinae present considerable problems because of poor original descriptions, and in many cases, inadequate material for revision. Generic placement depends on the presence or absence of lateral lobes, relative placement of the first notopodia and neuropodia, plus the number of segments bearing notosetae and neurosetae, the start of double rows of uncini, structure of the notosetae, and the presence or absence of a transverse dorsal ridge on segment 2. Original descriptions often lack detailed accounts of these characters, particularly of the setal structures. Type material is missing for many species, or represents the only specimens ever collected of certain species.

The loss of branchiae is an independent development in several different lines of evolution (Holthe 1986b). Annenkova (1924, 1926) showed that the branchiae were secondarily lost in *Baffinia hesslei* (Annenkova 1924), first described as an abranchiate member of *Terebella*, by showing through dissection the presence of blood vessels leading to the lost branchiae. Branchial loss is most common in the Polycirrinae, and found in the Amphitritinae "in otherwise unrelated genera" (Holthe 1986b).

Arrangement of the double rows of uncini along the body is an important character at the species level. The last double row is usually concurrent with the occurence of the last notopodia, in the posteriormost thoracic segment. However, it is not uncommon for the double rows of uncini to extend onto the first few abdominal segments, especially in the genus *Lanassa*. In *Pseudoproclea* Hutchings & Glasby 1988, the double rows extend to within the last 8-10 segments before the pygidium. The uncini usually switch from single to double rows on the 11th segment (setiger 8), but there are exceptions. The

uncini of all local genera are in double rows beginning on segment 11. Uncini in the double rows are usually arranged in two distinct lines, face-to-face (beak-to-beak), but in a few genera, such as *Laphania*, the two rows may be fused into an interlocking line (resembling a closed zipper) and the uncini alternate back-to-back. All genera except *Proclea* and *Laphania* have the first neuropodia on segment 5 (setiger 3); *Proclea*'s uncini begin on segment 6 (setiger 3), *Laphania*'s begin on segment 9 (setiger 7).

Structure of the notosetae is important at both generic and species levels. Genera may have setae that are all smooth, all serrate, or a combination of both. In some genera, the setae are supposed to remain the same in all fascicles, while in others such as *Proclea* and *Pseudoproclea* the setae change in shape and/or degree of denticulation from anterior to posterior thoracic setigers. Personal observations have shown that even in species described as having a single type of notosetae, two types may occur, as may changes in structure relative to position. *Spinosphaera oculata* Hartman is a good example of this (Harris, ms).

Five abranchiate genera occur in southern California, predominantly in soft sediments: *Lanassa* Malmgren 1866, *Laphania* Malmgren 1866, *Leaena* Malmgren 1866, *Proclea* Saint-Joseph 1894, and *Spinosphaera* Hessle 1917. Several common species are undescribed and even those taxa listed as described species need to be compared to original or topotype material. Following are brief descriptions of the above genera and their local representatives. Generic information is taken primarily from three sources: Fauchald 1977, Hutchings & Glasby 1988, and Holthe 1986a, b.

Lanassa Malmgren 1866: Lateral lobes present or absent; notopodia begin on segment 4, present on 11-15 (27 ?) segments; neuropodia begin on segment 5 (setiger 2), uncini in double rows on segment 11 (setiger 8) which end on either segment 18 (same segment as the last notopodia) or up to five segments past the end of the notosetae; two types of notosetae, both denticulate to some degree.

Lanassa gracilis (Moore 1923): Lateral lobes on segments 2 & 3; notosetae 15 pairs, on segments 4 to 18; uncini in single rows on segments 5 to 10, double on segments 11 to 18; short setae, limbate, denticulate along edge, and larger setae, bilimbate, denticulate on tip only; ventral shields on approximately 6 segments; nephridial papillae on segment 3. Present but uncommon in soft sediments, shelf depths.

References: Moore 1923, Hartman 1969

Lanassa venusta venusta (Malm 1874): Lateral lobes on segments 2 & 3, not well developed; notosetae 11 pairs, on segments 4 to 14; uncini in single rows on segments 5 to 10, double rows on segments 11 to 18, extend 4 segments past end of notopodia; two types of setae - limbate, denticulate along edges, and thinner ones, denticulate, taper to very fine tips; ventral shields on about 10 segments; nephridial papillae on segments 3, 6-9. Common in soft sediments, shelf depths.
Reference: Holthe 1986a

Lanassa sp. D Harris: Lateral lobes on segments 2 & 3; notopodia 15 pairs, on segments 4 to 18; uncini in single rows on segments 5 to 10, double rows on segments 11 to 19, extend 1 segment past end of notopodia; two types of setae - 1) bilimbate denticulate and 2) shorter, geniculate and denticulate; ventral shields on up to 10 segments; nephridial papillae on segment 3. In soft sediments, shelf depths; most abundant of the local *Lanassa* species. All three species can occur in the same sample.
Reference: Harris, ms.

Laphania Malmgren 1866: Lateral lobes present; narrow, ring-like collar on segment 2, most conspicuous on dorsum; notopodia begin on segment 3 (Holthe 1986a, b), 17 pairs; uncini begin on segment 9 (setiger 7), switch to double rows on segment 11 (setiger 9), continue to segment 19, arranged back to back; notosetae all smooth, both long & short, with brimmed, undulate tips; ventral shields on 12 segments; nephridial papillae on segments 5 to 8.

Laphania cf. *boecki* Malmgren 1866: Characters as for genus. Locally occurs in southern California in rocky, subtidal areas, in the Santa Barbara Channel and Santa Maria Basin.
References: Banse 1980, Holthe 1986a

Leaena Malmgren 1866: Lateral lobes present; notopodia begin on segment 4 (? 3), present on 10 to 17 (? 31) segments; uncini begin on segment 5 (? 4), double on segment 11 (? 12 in one species), present on 10 to 13 (? 16) segments as double rows, then single rows again; all setae smooth. This genus contains the most character variation, and is in greatest need of revision.

Leaena caeca Hartman 1960: Lateral lobes present, poorly developed, on 2 segments; notosetae begin on segment 3, occur on 16 segments; uncini begin as single rows on segment 4, switch to double rows on segment 10 (setiger 8), continue to end of thorax, then single; ventral shields on 11 segments; all setae distally smooth, broadly bilimbate, both long & short. Rare, from the Santa Catalina Basin, 620 fm.
References: Hartman 1960, 1969

Leaena videns Chamberlin 1919: Incompletely known: 31 pairs of notosetae, uncini described as having exceptionally long beaks, notosetae long, with geniculate shafts & prolonged slender tips. Rare, rocky intertidal, Laguna Beach.
References: Chamberlin 1919, Hartman 1969

Proclea Saint-Joseph 1894: Lateral lobes present; notopodia begin on segment 4, 16-23 pairs; uncini begin on segment 6 (setiger 3), double on segment 11 (setiger 8), continue as double rows to end of thorax or first 1-4 abdominal segments; notosetae both serrated and smooth, change from anterior to posterior thorax.

Proclea cf. *graffi* (Langerhans 1884): Lateral lobes distinct on segments 2 & 3, less so on 4; notosetae 16 pairs, on segments 4 to 19; uncini begin on segment 6 (setiger 3), double on segment 11 (setiger 8), continue to end of thorax, then in single rows; notosetae in first 8 setigers both long & short, smooth (local taxa with very fine denticulations visible at 1000X: Harris, ms); long setae of posterior 8 setigers finely denticulate with broad edges, short setae geniculate, almost pectinate; ventral shields on about 10 segments; nephridial papillae on segments 3 & 8. This is represented in southern California by a relatively large species (40 mm, ovigerous) found in rocky, subtidal habitats. There is another, much smaller (2 mm, ovigerous) species from the same type of area which also fits this description (*Proclea* sp. B Harris, ms).
Reference: Holthe 1986a, Harris, ms.

Proclea sp. A Harris: Characters as for *P.* cf. *graffi*, but much smaller (5-7 mm, ovigerous) and with a different staining pattern. Found only in soft sediments, slope depths, in southern and central California.
Reference: Harris, ms.

Proclea sp. C Harris: Characters as for *P.* cf. *graffi*, except the notosetae

occur on segments 4 to 18 (15 setigers), so that the double rows of uncini which occur on segments 11 to 19 extend 1 segment past the end of the notosetae. Found only in soft sediments, slope depths. Both species A & C have been found in the same samples, along with *Lanassa gracilis*, *L. venusta venusta* & *L.* sp. D.
Reference: Harris, ms.

Spinosphaera Hessle 1917: Lateral lobes absent; notosetae begin on segment 4, occur on 23 to 40+ segments; neurosetae begin on segment 5 (setiger 2), switch to double rows on segment 11, extend over large part of body before changing back to single rows; notosetae both smooth & serrate, both long & short with subdistal hispid swellings.

Spinosphaera oculata Hartman 1944: No lateral lobes; notosetae on varying number of segments, from 31 to 41 pairs; uncini in single rows from segment 5 to 10, double rows from segment 11 to near end of body, single for last 12 or fewer segments; notosetae change along body - in anterior 7 setigers setae are both long & short, bilimbate, smooth with elongate tips, at setiger 8 the setae, both long & short, are still bilimbate, but denticulate along one edge, by setiger 13 both long & short setae are geniculate, have oblique denticulate tips, and have subdistal inflated hispid regions with narrow, obscure wings below swellings; ventral shields through setiger 13; nephridial papillae from segment 5 onward. Central and southern California (rare), rocky intertidal.
References: Hartman 1944, 1969, Harris, ms.

Spinosphaera cf. *pacifica* Hessle 1917: No lateral lobes; notosetae on 20-23 segments; uncini begin on segment 5, switch to double rows on segment 11; notosetae alternate between long & short, both types with narrowly flaring pectinate ends, only long setae have inflated spinose subdistal parts, followed by pronounced bilimate regions; nephridial papillae on segments 3, 6-20. Southern and central California.
References: Hessle 1917, Imajima & Hartman 1964

KEY TO SOUTHERN CALIFORNIA ABRANCHIATE AMPHITRITINAE

1. Uncini begin on segment 5 (setiger 2).....2
- Uncini begin on segment 6 (setiger 3).....*Proclea*.....4
- Uncini begin on segment 9 (setiger 7).....*Laphania* cf. *boecki*

2. Notosetae all smooth (may appear finely denticulate at 1000X).....*Leaena*.....6
- Some notosetae clearly denticulate (< 400X) after segment 1.....3

3. Notosetae occur on 11 to 15 segments; setal shafts not modified..... *Lanassa*.....7
- Notosetae on 20+ segments; setal shafts with subdistal hispid swellings.....*Spinosphaera*.....9

4. Notosetae on 16 segments; last double row of uncini on same segment as last notopodia.....5
- Notosetae on 16 segments; last double row of uncini on segment following last notopodia .....*Lanassa gracilis*

5. Found in soft sediments, shallow to shelf depths; ovigerous specimens 5-7 mm maximum length .....*Proclea* sp. A
- Found in rocky habitats, shallow to shelf depths; ovigerous specimens 40-50 mm length .....*Proclea* sp. C

6. Notosetae on 16 segments; deep water.....*Leaena caeca*
- Notosetae on 31 segments; rocky intertidal.....*Leaena videns*

7. Notosetae on 11 segments; uncini in double rows on 8 segments.....*Lanassa venusta venusta*
- Notosetae on 15 segments.....8

8. Uncini in double rows on 8 segments; last double row on same segment as last notopodia.....*Lanassa gracilis*
- Uncini in double rows on 9 segments; last double

KEY TO ABRANCHIATE AMPHITRITINAE WORLD-WIDE*

1. Uncini begin on segment 5 (setiger 2).....2
- Uncini begin on segment 6 (setiger 3).....*Proclea*
- Uncini begin on segment 9 (setiger 7).....*Laphania*

2. All setae in posterior 8 thoracic setigers smooth 3
- At least some notosetae clearly denticulate.....4

3. Third segment with transverse ridge across dorsum.....*Leaena*
- Third segment without transverse ridge across dorsum.....*Stschapovella*

4. Uncini in double rows for more than 20 segments 5
- Uncini in double rows for less than 20 segments 7

5. 16 segments with notosetae.....*Pseudoproclea*
- Notopodia on more than 20 segments.....6

6. Notopodia continue to near end of body; notosetae with unmodified shafts.....*Baffinia*
- Notopodia on 23 to 40+ segments; notosetae after setiger 13 with subdistal hispid swellings on shafts.....*Spinosphaera*

7. All notosetae equal in size.....8
- Notosetae on setiger 12 similar to others but much thicker.....*Arranooba*

8. Notosetae finely denticulate.....*Lanassa*
- Some notosetae distinctly pectinate.....*Phisidia*

* *Bathya* is too incompletely known to be included.

row on segment following last notopodia .....*Lanassa* sp. D

9. Notosetae on 20-23 segments; subdistal hispid regions short, somewhat rounded; geniculate setae with narrow, flaring distal portions.....*Spinosphaera cf. pacifica*
- Notosetae on 31-40+ segments; subdistal hispid regions elongate, only slightly swollen; geniculate setae with broadly flaring distal portion .....*Spinosphaera oculata*

GENERA OF ABRANCHIATE AMPHITRITINAE WORLD-WIDE

Arranooba Hutchings & Glasby 1988: 1 species

Baffinia Wesenberg-Lund 1950: 2 species

Bathya Saint-Joseph 1894: 3 species

Lanassa Malmgren 1866: 10 species

Leaena Malmgren 1866: 12 species

Laphania Malmgren 1866: 1 species

Phisidia Saint-Joseph 1894: 6 species

Proclea Saint-Joseph 1894: 4 species

Pseudoproclea Hutchings & Glasby 1990: 1 species

Splnosphaera Hessle 1917: 2 species

Stschapovella Levenstejn 1957: 1 species

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Setiger Pattern for Selected Terebellids[1]

setiger#	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	→
Lanassa venusta venusta	D	D	D	D	D	D	D	D	D	D	D									
		1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1	→
Lanassa venusta pacifica	D	D	D	D	D	D	D	D	D	D	D	D								
		1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1	→
Lanassa gracilis	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D					
		1	1	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1	→
Lanassa sp. D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D					
		1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	→
Proclea graffi	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D				
			1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	→
Proclea malmgreni	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D				
			1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	→
Proclea sp. A	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D				
			1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	→
Proclea sp. C	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D				
			1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	1	1	→
Leaena caeca	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S				
		1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	1	1	1	→
Leaena videns	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S	→ 31
	?	→																		

[1] The upper row represents whether the notopodial setae are smooth (S) or denticulate (D) for each species. The lower row represents the neuropodial uncingers in being either in single (1) or double (2) rows. The arrow (→) indicates that the last entry is repeated to the posterior or at least to the setiger indicated by the number.

setiger#	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	→	
Laphania boecki	S	S	S	S	S	S	S 1	S 1	S 2	S 2	S 2	S 2	S 2	S 2	S 2	S 2	S 2	1	1	→	
Laphania sp. A	S	S	S	S	S	S	S 1	S 1	S 2	S 2	S 2	S 2	S 2	S 2	S 2	S 2	S 2	1	1	→	
Spinosphaera oculata	D	D 1	D 1	D 1	D 1	D 1	D 1	D 2	D	D	D	D	D	D	D	D	D	D	D	→	40

ANNUAL MEETING OF THE WESTERN SOCIETY OF MALACOLOGISTS

30 JUNE - 3 JULY 1992, ASILOMAR, PACIFIC GROVE, CALIFORNIA

CALL FOR PAPERS: ABSTRACT FORM for Oral and Poster Presentations

DEADLINE FOR RECEIPT OF ABSTRACT: 15 MAY 1992

1. The abstract (225 words or less) should be typed, preferably on an electric typewriter with clean ELITE type (see reverse side).

2. Type the abstract as in the outlined box on reverse. Single space all typing. NOTE: Abstract should be long and narrow, not short and wide.

3. Use a dark typewriter ribbon. The abstract will be photographically reduced and printed in the Annual Report exactly as you submit it.

4. The entire abstract, including title, author(s), affiliation, and text must be typed within the rectangle. No top or left margins should be left within the space.

5. In preparing the abstract, use the style indicated within the rectangle on reverse of this page and explained below.

   A. Capitalize all letters in TITLE and in author's SURNAME only.

   B. Underline names of Genera and species.

   C. Begin new line for author's name and affiliation.

   D. Indent all name and affiliation information 3 spaces from left margin.

   E. Type surnames first, followed by first names and middle initials.

   F. Do not indent first paragraph of text.

   G. Indent 3 spaces to begin first line of subsequent paragraphs.

   H. Proper but judicious use of hyphens (-) is encouraged to maximize use of space near right margin.

6. Do not fold or cut out abstract. Use cardboard backing to avoid damage in the mail.

7. Mail original plus one copy of transmittal form to: David K. Mulliner, 5283 Vickie Drive, San Diego, CA, 92109 USA.

8. Mail in time to meet receipt deadline.

9. Papers may not be read by anyone other than the authors, or, in case of multiple authorship, by one of the co-authors.

TYPE ABSTRACT TO CONFORM TO THIS SPACE. Use this rectangle behind plain white paper as a typing guide, or trace the rectangle lightly with blue pencil onto plain white paper. DO NOT USE INK.

Use the following style:

COMPARATIVE ANATOMY OF MYCETOPODA AND ANODONTITES (MYCETOPODIDAE) FROM CENTRAL AMERICA WITH MUTELA (MUTELIDAE) FROM EAST AFRICA.

CONEY, C. Clifton, Malacology Section, Los Angeles County Museum of Natural History, 900 Exposition Blvd., Los Angeles, CA 90007 and LOPEZ, A. University of Central America, Managua, Nicaragua.

Scanning and transmission electron microscopy and histology were employed to investigate the external and internal anatomy of the ctenidia, the external structure of the oral and aboral surfaces of the labial palps and the ciliation of the incurrent and excurrent siphons of Mycetopoda siliquosa (Spix, 1827), Anodontites nicaraguae (Philippi, 1848), and A. montezuma (Lea, 1841) of the Central American Mycetopodidae and Mutela nilotica (Cailliaud, 1823) of the East African Mutelidae. The unique circulatory system of the mycetopodid ctenidia and ctenidial ciliation are described in detail. The bizarre.....

THE WESTERN SOCIETY OF MALACOLOGISTS

The twenty-fifth annual meeting of the Western Society of Malacologists will be held at Asilomar, Pacific Grove, California from June 30 to July 3, 1992.

The agenda will include a Cocos Island, Costa Rica symposium, an opisthobranch symposium, contributed papers, poster session, shell and reprint auction, banquet and a field trip.

Call for papers:

Contributed papers are requested. Please complete and return the enclosed form by 15 May 1992. Presentations should not exceed 20 minutes in duration. An abstract should accompany the form. Use the enclosed sample abstract and outline rectangle as a guide for abstract length. Return enclosed form to:

David K. Mulliner
5283 Vickie Drive
San Diego, CA 92109

Phone: (619) 488-2701

Call for auction materials:

Please send your duplicate reprints to Dr. George Kennedy for the annual reprint auction, and good shells with data to Dr. Henry W. Chaney for the annual shell auction.

Send reprint donations to:

Dr. George L. Kennedy
Curator
Section of Invertebrate Paleontology
L.A. County Museum of Natural History
900 Exposition Boulevard
Los Angeles, CA 90007

Send shell donations to:

Dr. Henry W. Chaney
Curator
Department of Invertebrate Zoology
Santa Barbara Museum of Natural History
2559 Puesta del Sol Road
Santa Barbara, CA 93105

APPLICATION FOR PRESENTING CONTRIBUTED TALK OR POSTER
1992 WESTERN SOCIETY OF MALACOLOGISTS MEETING

NAME: _____

ADDRESS: _____

_____

_____ ZIP: _____

PHONE (office): _____ (home): _____

TITLE OF TALK (CHECK_____) OR POSTER (_____) : _____

_____

_____

TIME NEED FOR TALK (20 minutes maximum) : _____

EQUIPMENT NEEDED: _____35 mm slide projector _____Other

INDICATE IN WHICH SESSION YOU WISH YOUR CONTRIBUTED PAPER PLACED:

_____Marine _____Fossil

_____Fresh water _____Terrestrial

_____Cephalopod _____Other

DO YOU WANT YOUR ABSTRACT TO BE PUBLISHED IN THE W.S.M. ANNUAL REPORT? (You will have the opportunity to revise it after the meeting.)_____

BEST STUDENT PAPER COMPETITION: _____ (Requires note or signature from professor asserting current student status. Single authored papers only; limited to one designated paper).

PROFESSOR'S SIGNATURE: _____

RETURN THIS FORM TO: David K. Mulliner
5283 Vickie Drive
(BEFORE 15 MAY 1992) San Diego, CA 92109

APPLICATION FOR PRESENTING AN EXHIBIT
1992 WESTERN SOCIETY OF MALACOLOGISTS MEETING

Call for Exhibits:

Lighted, lockable display cabinets are available. The cabinets are approximately four feet long, by two feet wide, by two feet high.

NAME:_____

ADDRESS:_____

_____

_____ ZIP:_____

PHONE (office):_____(home):_____

TITLE OF EXHIBIT :_____

_____

_____

SPACE NEED FOR EXHIBIT :_____

DO YOU WANT A DESCRIPTION OF YOUR EXHIBIT TO BE PUBLISHED IN THE W.S.M. ANNUAL REPORT?
(You will have the opportunity to submit it after the meeting.)_____

RETURN THIS FORM TO: George Metz
W.S.M. Exhibit Chairman
(BEFORE 30 MAY 1992) 121 Wild Horse Valley
Novato, CA 94947