

PSAMMONALIA

Newsletter of the
International Association of Meiobenthologists



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This Newsletter is not part of the scientific literature for taxonomic purposes

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EDITORIAL

Priorities in Research

News from members world-wide indicates that funding is being squeezed everywhere as recessions continue and national debts increase. Funding for science is often part of a government's discretionary allowance, which means it is also a ripe target for budget cuts. Politicians speak to the need of spending public money wisely. So, those that can speak well for their fields often can blunt the budget cutters knife. In the United States marine research receives an abundant share of research budgets. Some say an unfair share, because the public and politicians generally enjoy trips to the seashore and eating seafood. I suspect this is true in other countries as well. Even though our job of justifying our work is easier than in some other fields, we must be ready to identify the importance of the work we do to protect our share of research funding. Unfortunately, most politicians cannot understand a justification for a science that will not guarantee some new technological breakthrough. Politicians like to use words like "strategic" or "applied." Another concept is now floating around: that science is not an entitlement and the public does not owe scientists a living just because they are doing good and important work. As we all know, it always seems more difficult to justify work on meiofauna than on fisheries. So, what is the best strategy to defend ourselves in the coming onslaught?

Meiobenthologists must begin to set priorities in meiofauna research. Before you get all excited, I am not advocating that the Association anoint any one approach as the only or best way to do science. But, we must be able to answer simple questions like: what are you doing, why are you doing it, and why it is important? Many scientific societies have taken it upon themselves to start position papers on these kinds of questions. I think most of these efforts have been misguided. Most read like a list of research questions, or an agenda for specific research. I think we need to be more synthetic in our outlook. I think that we should frame our priorities in terms of global issues or processes. For example, we could concentrate on the role of meiofauna in food webs (and ultimately fisheries), or in carbon and nutrient cycling. Meiofauna could also be touted as a good indicator of environmental change, because of its high diversity. Meiofauna are also key to solving the puzzle of early metazoa evolution. We must define how or why studying meiofauna could lead to a better understanding of biological responses to global changes in climate or diversity. By talking about meiofauna in the context of these strategic issues, we can

accommodate the politicians desire for more applied research, while moving forward with basic research. Setting our priorities in this way would position us as a group of forward looking scientists without a selfish agenda. Although our next conference is more than a year away (July 1995), we should start by planning a special session on priorities in meiofauna research.

BERTIL SWEDMARK FUND REPORT

Bertil Swedmark fund accounts for 1993

Initial Balance on 10th February 1993:	£1260.44
01Oct93 - 22Oct93	
Gross interest	£8.79
Tax	£2.17
Net interest	£6.62
22Oct93 - 10Dec93	
Gross interest	£5.03
TOTAL	£1272.09

Until October 1993 the fund was maintained in the High Interest Cheque Account, which we had in operation during our term of office. However, in October the funds were transferred to an Instant Savings Account in which the Bank could waive the payment of income tax on interest.

Anyone can send contributions direct to this account *but remember that a charge of between £8 and £12 (\$US 12-18) will be made for processing a cheque or money order in currencies other than pounds sterling.* Alternatively, you may make a contribution to the Bertil Swedmark Fund in \$US when you are paying your subscription. Bob Feller (the present treasurer) will collect all such contributions and transfer them to the BSF account in a lump sum.

In the U.K. over the last two years interest rates have fallen rapidly from around 13% to their present level of 2.96% on accounts of £500-£5000. Therefore, if interest rates remain stable and there is no increase in capital, we estimate that there should be approximately £60 (\$US 90 at present exchange rates) to disburse from the fund for the 1995 Conference. - Mike Gee Richard Warwick

ANNOUNCEMENTS

CHAETOZONE: New Electronic Polychaete Newsletter

Geoff Read reports that he has started a newsletter for polychaete researchers. This spritely newsletter includes sections on news, recent literature, excerpts from what papers said, and a calendar. Eventually it is hoped the newsletter will be available as a Listserver and to start a discussion group. Contact and input from oligochaete specialists is sought, so that the newsletter and discussion group can be expanded to all marine annelids.

You can obtain a copy of CHAETOZONE from Geoff via e-mail: "read_g@kosmos.wcc.govt.nz" or his mail address is: Dr. Geoffrey B. Read, 12 Oriel Place, Tawa, Wellington, New Zealand. The newsletter is also available by Gopher at "gopher.ucsc.edu". Look down through the menus for: The Library / Electronic Journals / Earth and Marine Science.

POLYCHAETE RESEARCH NEWSLETTER: Now available by Gopher

Chris Mettam's POLYCHAETE RESEARCH NEWSLETTER is on the Gopher at "bdt.ftpt.br" (Base de Dados Tropical) in the "Bioline Publications / Newsletters" menu. As yet only no's 14 & 15 are available, with only the contents lists accessible without a fee. Full text access is US \$50, which also covers access to some other Bioline newsletters and publications. Bioline also has a discussion group for their announcements (send one line message, subject line blank, "sub BIOLINE-L your_name" to listserv@ftpt.br). Chris's address for the paper version: School of Pure & Applied Biology, University of Wales, P.O.Box 915, Cardiff CF1 3TL, UK. - From CHAETOZONE

LISTSERVERS AND GOPHERS: What are they?

There is currently an explosion of information available over Internet. If you have not used this resource, you are probably wondering how this information is accessible. Here are definitions of the two most common terms. A Listserver site runs a program that will automatically, and immediately, send your e-mail message to "the list" (all other subscribers) when it is addressed to "name_of_list@site," but also responds to your commands to subscribe, unsubscribe, or get files when sent to "listserv@site." A Gopher is a popular information retrieval program set up by your local site operators that, when invoked, connects you to gopher

sites (information stores) around the world. You navigate by simple menu lists. From a networked computer try, for example, entering "gopher@crane.mbl.edu" on the command line to connect to the Woods Hole Gopher. -From CHAETOZONE

Summer Courses in Marine Science

The University of Texas at Austin, Department of Marine Science offers two sessions of field courses for undergraduate and graduate study each summer. During the first session, June 2-July 9, *Estuarine Ecology and Marine Invertebrates* will be offered. Concurrently with the first session, June 2-July 27, *Biological Oceanography* will be offered. During the second session, July 11-August 15, *Biology of Fishes, Selected Studies in Mariculture, and Marine Research Training Cruise* will be offered. All courses are for three credit hours. Courses are taught at the University of Texas Marine Science Institute located on the northeast corner of Mustang Island in Port Aransas, Texas. The summer program, focusing on laboratory and field studies in adjacent marine habitats, provides an extraordinary opportunity for students to gain marine experience. For applications and additional information contact: Summer Coordinator, The University of Texas at Austin, Marine Science Institute, P.O. Box 1267, Port Aransas, Texas 78373. Telephone (512) 749-6721, FAX (512) 749-6777, Internet paul@utmsi.zo.utexas.edu

The Louisiana Universities Marine Consortium (LUMCON) offers summer field courses and directed research projects for undergraduate and graduate credit during its 1994 Summer Program in Marine Science. Courses include: *Introduction to Marine Science* (4 weeks); *Marine Science for Teachers* (3 weeks); *Marine Vertebrate Zoology* (4 weeks); *Coastal Habitat Loss: Causes and Consequences* (2 weeks); and *Wetland Vegetation* (2 weeks). Students must register at Consortium member universities in order to receive credit (1 credit/week). Room and board fees are \$115/week, and limited scholarships are available to qualified applicants to help defray these costs. Inquiries and requests for applications for admission and scholarships should be directed to the Dr. John H. Caruso, Summer Program Director, LUMCON Marine Center, 8124 Highway 56, Chauvin, Louisiana 70344-2124; Telephone 504-851-2800; Fax 504-851-2874.

Internship Program

The Louisiana Universities Marine Consortium (LUMCON) announces the opening of an internship

program in marine science, education, and technology. This program will afford students the opportunity to gain experience for university credit in a discipline of their choice by working closely with research faculty, senior academic staff, or other appropriate staff members at the Marine Center for Research and Education in Cocodrie, Louisiana. Projects are arranged by consultation between the student, the University Education Coordinator, and the supervising faculty or staff member. They will be designed to afford maximum flexibility in order to fit the needs and schedules of students and advisors. Room and board fees are \$115/week, and limited scholarships are available to qualified applicants to help defray these costs. Inquiries and requests for applications for admission and scholarships should be directed to the Dr. John H. Caruso, University Education Coordinator, LUMCON Marine Center, 8124 Highway 56, Chauvin, Louisiana 70344-2124; 504-851-2800 (fax-851-2874).

Graduate Research Grants

The Louisiana Universities Marine Consortium (LUMCON) Foundation, Inc. announces the availability of three graduate student research grants. Each award consists of up to \$2,000 to defray expenses of a research program as part of an M.S. or Ph.D. Program. The award is to be used for research in the marine sciences and be interactive with a program of LUMCON or in some way make significant use of the LUMCON facilities. Application is open to outstanding graduate students enrolled in any university. Due date is April 1 for start of funding in June or September for a one-year period. For additional details and application forms, contact Dr. Nancy N. Rabalais, Louisiana Universities Marine Consortium, 8124 Hwy. 56, Chauvin, LA 70344 (504-851-2800,-2874 fax).

Potential Postdoc Opportunity

There is a good chance that a Postdoctoral Fellowship will be available beginning in the Fall of 1994 to study harpacticoid ecology and systematics. If interested, contact Paul Montagna at the University of Texas Marine Science Institute, P.O. Box 1267, Port Aransas, Texas, USA. E-mail: paul@utmsi.zo.utexas.edu.

Conferences

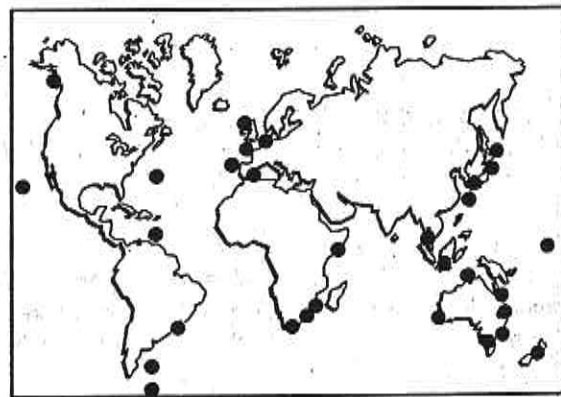
Second International Conference on Ground Water Ecology will be held March 27-30 1994 in the Atlanta Hilton and Towers, Atlanta, Georgia USA. The conference is sponsored by the U.S. Environmental Protection Agency American Water Resources

Association. Contact American Water Resources Association, 5410 Grosvenor Lane, Suite 220, Bethesda, MD, 20814-2192 USA / (301)493-8600; FAX: (301) 493-5844.

International Conference on Applied Ecology and Biology and Biology of Benthic Organisms will be held 15-16 June 1994 and International Workshop on Applied Ecology and Taxonomy of Meiobenthos will be held the 17-22 June 1994, at the Universiti Pertanian Malaysia, 43400 UPM, Serdang, Selangor D.E., West Malaysia. See the brochure at the end of the newsletter for full details. Yoshihisa would like everyone to know that "although the deadline for registration might be over, it is still possible to participate in both the seminar and the workshop, because the convenors know those who are interested in the workshop donot have enough time for planning travel."

NEWS FROM MEMBERS

Tidbits



Global Biodiversity Project

The figure shows the latest locations at which artificial substrate units have been put out in 1993 or will be put out in 1994 by the following participants:

Northern Hemisphere: U.K. Peter Barnett*, PML*; NETHERLANDS, Carlo Heip*; SPAIN, Santiago Moreno*, Victoriano Urgorri (1994); BERMUDA, Dorte Westphalen*; USA, George Matsumoto, Giacomo Bernardi, Tom Shirley*(1994); TRINIDAD, Judy Gobin*; HAWAII, Fred Dobbs*, Sheryl McCarthy; JAPAN Yoshihisa Shirayama*, Hiroshi Mukai, Ichiro Takeuchi, Satoshi Nojima, Kazuhiko Sakai;

THAILAND, Chittima Arayuthaka*.

Southern Hemisphere: TAHITI, Patrick Buat*; AUSTRALIA, Warwick Nicholas*, Primitivo Aceret*, Gary Poore, Gabi Caswell, Fred Wells, Carina Cartwright; NEW ZEALAND, Ashley Rowden (1994); INDONESIA, Carol Heip*; KENYA, Carlo Heip*; SOUTH AFRICA, Anton McLachlan*, Jeanette Whitehorn*, M. Schleyer; BRAZIL, Thais Crobisier*; FALKLAND ISLANDS, Connor Nolan; ANTARCTICA, British Antarctic Survey. (* Denotes IAM Member).

The northern hemisphere samplers were put out at the beginning of May and recovered at the end of September. So far I have received the samples from Plymouth, Thailand, Hawaii, California (where recoveries were made at only one site) and Bermuda. These samples have been split into macrofauna and meiofauna size fractions and the meiofauna fractions have been ludoxed. All the samples have been transferred to 70% alcohol). The next step is to pick out all the animals from these samples. The southern hemisphere samplers were put out at the beginning of November and will be collected at the end of March 1994 except those in Antarctica which will be collected next November.

From the map it is clear that we are short of sites in latitudes higher than 55°N, so if anyone has contacts in these latitudes who might be willing to participate I would be grateful if you would let me know.

So far, the only offers we have had for identification are for Nematodes (Richard Warwick), harpacticoid copepods (Mike Gee), mites (Isle Bartsch) and Caprellid Amphipods (Ichiro Takeuchi). We need to find people willing to tackle other macrofauna groups so again, if anyone knows of taxonomic experts in these groups who might be interested, please let me know. -Mike Gee (Program Coordinator)

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RECENT LITERATURE

New Book

Nematodes: structure, development, classification and phylogeny. V. V. Malakhov, translated by George V. Bentz, edited by W. Duane Hope. Smithsonian Institution Press, Washington, London, \$29.95, £19.50. ISBN Paper 1-56098-255-1.

Originally published in 1986 in the USSR, this book provides a detailed review of the morphology and development of all nematodes, especially the less studied, free-living marine forms. Using information from histology, and ultrastructural investigations, as well as embryogeny and ontogeny, Malakhov proposes a classification and phylogeny for nematodes and related groups and compares nematodes to other animals with a primary body cavity (pseudocoelomates), such as the Loricifera. This comprehensive study contains extensive Russian literature references not readily available in other sources. -from the cover.

This is an interesting book, not only because it makes the Russian literature more accessible, but because of the interesting discussions on phylogeny. The first two chapters (174 pp.) are about nematode biology, the last three chapters (79 pp.) are about classification and phylogeny. I quickly turned to these latter pages to see if I could learn anything about that taxonomic mess we all refer to as "pseudocoelomates". This is always difficult to deal with in Invertebrate Zoology classes. I have always wondered why the meiofauna phyla don't fit into nice neat packages like the macrofaunal Protostomia (e.g., annelids, mollusks, and arthropods) and Deuterostomia (e.g., echinoderms and chordates). Malakhov does discuss relationships among the pseudocoelomates, but stops short of proposing a grand sweeping theory. He acknowledges the common belief that the group is polyphyletic, and he describes four new phyla: the mono-class Rotifera and Acanthocephala, the Nematelminthes (classes Gastrotricha and Nematoda), and the Cephaloryncha (classes Priapulida, Kinorhyncha, Gordiacea, and Loricifera). He further suggests the Rotifera and Acanthocephala are probably protostomes

and the Nematelminthes are independent of the two main branches of metazoa. He also believes that the Cephaloryncha are independent, but are most closely allied to the deuterostomes. I am sure this book will stimulate a lively debate among invertebrate zoologists and prove to be an important contribution to those who are inclined to draw phylogenetic trees. -ed

Articles

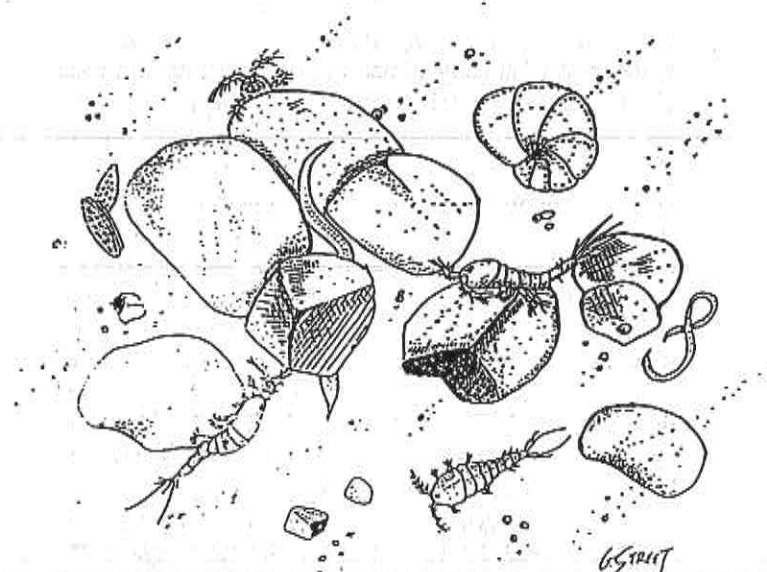
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THANKS

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John H. Caruso
Bruce Coull
Mike Gee
Andrew Gooday
Preben Jensen
Geoff Read
Yoshihisa Shirayama
Richard Warwick



FIRST ANNOUNCEMENT

REGISTRATION FORM

International Conference on Applied Ecology and Biology of Benthic Organisms
And Workshop on Applied Ecology and Taxonomy of Meiobenthos.

Name of participant: _____
Prof/Dr./Mr/Mrs/Ms: _____

_____ Male/Female

Institution: _____

Address: _____

Telephone: _____ Fax : _____

I will be attending the Conference: YES () NO ()

as: () Oral presenter () Poster presenter

Title: _____

I will be attending the Meiobenthos Workshop: YES () NO ()

Accommodation required YES () NO ()

Date required: please circle

14, 15, 16, 17, 18, 19, 20, 21, 22, 23 June 1994

Ordinary-single occupancy ()

Ordinary-twin sharing ()

Deluxe-single occupancy ()

Deluxe-twin sharing ()

Attached is a cheque (RM) or banker draft (US\$) No. _____
in favour of UNIVERSITI PERTANIAN MALAYSIA for the
amount of RM _____ or US \$ _____
for the payment of the registration fees and deposit for one night
accommodation.

Date: _____ Signature: _____

*Drs. Idris Abd. Ghani
The Secretary
International Conference and Workshop on Applied Ecology
and Biology of Benthic Organisms
c/o Department of Biology
Faculty of Science and Environmental Studies
Universiti Pertanian Malaysia
43400 UPM, Serdang, Selangor, D.F.
MALAYSIA*

Complete the attached Registration Form and mail it to:

**INTERNATIONAL CONFERENCE
ON
APPLIED ECOLOGY AND BIOLOGY
OF BENTHIC ORGANISMS
(15 - 16 JUNE 1994)**

and

**INTERNATIONAL WORKSHOP ON
APPLIED ECOLOGY AND TAXONOMY
OF MEIOBENTHOS.
(17 - 22 JUNE 1994)**

at
Universiti Pertanian Malaysia
43400 UPM, Serdang, Selangor D.E.
West Malaysia.

Jointly Organised by



UNIVERSITI PERTANIAN MALAYSIA
and
BENTHOLOGICAL ASSOCIATION OF MALAYSIA

Background

Universiti Pertanian Malaysia together with the Benthological Association of Malaysia will organise an **International Conference on Applied Ecology and Biology of Benthic Organisms**, follow with an **International Workshop on Applied Ecology and Taxonomy of Meiobenthos**.

Objectives of the conference:

- * To provide a forum for exchange and dissemination of information among scientists, biologists and oceanographers from all over the world.
- * To promote scientific exchange and future collaboration on benthic research, which may also include the exploration for sustainable management, rational utilization, rehabilitation and conservation of benthic organisms.
- * The conference will also enable scientists and others engaged in research on ecology and biology of benthic organisms and benthic environments to present papers and take part in the discussion on issues related to benthic organisms.

Objectives of the workshop:

- * To provide experience in research techniques required for the sampling, preserving, sorting and identification of meiobenthos.
- * To acquire knowledge on analysis and application of data for ecological research related to biological indicators and environmental pollution.

Venue for Conference and Workshop

The Conference and Workshop will be held from 15-16 June and 17-22 June 1994 respectively at the Serdang Campus of the Universiti Pertanian Malaysia (UPM). The Serdang Campus of the University is located within a half an hour drive from Kuala Lumpur - the City of Lights - the bustling cosmopolitan capital of Malaysia. UPM's green campus is the largest among Malaysian universities, boasting a land area of over 1200 ha. The Centre of Extension and Continuing Education, the venue of the Conference and Workshop is a busy locale, well equipped to host international residential conferences and workshops. The conference and workshop venue is only 40 minutes drive from the Kuala Lumpur (Subang) International Airport.

Registration fees

Conference only (before 1 March 1994) US\$100(RM300)
Conference only (after 1 March 1994) US\$150(RM450)
Workshop only (before 1 March 1994) US\$300(RM900)
Workshop only (after 1 March 1994) US\$350(RM1000)
Conference and Workshop (before 1 March 1994) US\$400(RM1200)
Conference and Workshop (after 1 March 1994) US\$450(RM1350)

Participants are kindly requested to complete and airmail the attached Registration Form to the Conference Secretariat with the payment on or before 1 March 1994. The registration fee covers the attendance at the conference / workshop sessions, social events, field trip and sight seeing, conference / workshop materials, abstract book, refreshments, and lunches during the conference/workshop and the printed conference proceedings. Registration fees should be paid by RM or US dollar bankers drafts written in favour of UNIVERSITI PERTANIAN MALAYSIA.

Scientific Conference (15-16 June 1994)

The official language of the conference and workshop will be English. The scientific programme of the conference include invited keynote addresses from internationally recognized experts, contributed original research papers cover wide range of topics including:

- applied biology/ecology of benthic animals
- applied biology/ecology of benthic plants
- benthos and benthic marine pollution
- applied biology/ecology of meiobenthos
- benthic sediments
- prospect and impact of benthic marine culture
- biodiversity and conservation of marine benthic organisms.

Meiobenthos Workshop (17-22 June 1994)

Meiobenthos workshop is open to a maximum of 25 participants only (on first come first serve basis). The workshop will be conducted by:

Assoc. Prof. Dr. Y. Shimoyama (ORI, University of Tokyo, Japan)
Dr. Robert P. Higgins (Smithsonian Institute, USA)
Mr. Shabdin Mohd. Long (Univ. Kebangsaan Malaysia, Sabah)

Scope of the Workshop:

- * Introduction to the study of meiobenthos
- * Sampling equipments and sampling methods
- * Sampling methods for taxonomic studies
- * Taxonomy of meiofauna phyla
- * Sample processing for ecological studies
- * Data processing for ecological studies
- * Meiofauna as biological indicator-application
- * Future studies on meiofauna.
- * Field excursions and field sampling

Contributed Papers

Original research papers on all aspects of benthic organisms are invited to be presented as oral or as poster presentations. Date line for submission of abstract is 1 March 1994.

Date line for submission of full paper is 15 June 1994. Full paper should be submitted in hard and soft copies to the conference secretariate on the registration day.

The Organising Committee is negotiating for all accepted papers to be published in **BENTHOS RESEARCH JOURNAL**.

Accommodation

Accommodation will be available at the University Guest House. The registration fee covers teas and lunches during the conference / workshop. For those who are staying on campus, breakfasts and dinners will be provided at concessional rates.

The room rates are as follows:

University Guest House
Ordinary - single occupancy US18 (RM54)
Ordinary - twin sharing US22 (RM65)
Delux - single occupancy US22 (RM65)
Deluxe - twin sharing US28 (RM85)

All rates are subject to change. The participants are requested to complete the enclosed Registration Form and airmail to the Conference secretariat by 1 March 1994.

Correspondence

All enquiries and correspondence related to the Conference and Workshop should be directed to:

Drs. Idris Abd. Ghani
The Secretary

International Conference and Workshop on Applied Ecology and Biology of Benthic Organisms
c/o Department of Biology
Faculty of Science and Environmental Studies
Universiti Pertanian Malaysia
43400 UPM, Serdang, Selangor, West Malaysia.
Phone: 03-9486101 Ext: 3595/3603/3609/3605
Fax: 03-9483745, Telex: MA 37454 UNIPER.

International Association of Meiobenthologists

Application for Membership or Renewal

The International Association of Meiobenthologists is a non-profit scientific society representing meiobenthologists in all aquatic disciplines. The Association is dedicated to the dissemination of information by publishing a quarterly newsletter and sponsoring a triennial International Conference. The newsletter, *Psammonalia*, is published mid-month in February, May, August and November. The next International Conference will be in the summer of 1995.

Membership is open to any person who is actively interested in the study of meiofauna. Annual membership dues are \$10 US and you may pay up to 3 years in advance, i.e., \$30. New members will receive *Psammonalia* beginning with the February issue of the current year. If you are able, please add extra money to be contributed to the Bertil Swedmark Fund, which is used to help students or others who wish to attend the triennial International Conference.

Please check appropriate box:

- New member Renewing member

Name _____

E-mail network _____

Address _____

E-mail address _____

FAX number _____

City, St/Prov _____

Telephone _____

Zip/Postal Code _____

Country _____

\$US _____ enclosed for ____ years membership at \$10/year.

\$US _____ enclosed to contribute to the Bertil Swedmark Fund.

\$US _____ TOTAL

Dues must be paid in US dollars. Make checks payable to Int. Assoc. of Meiobenthologists. Send dues and applications to:

Dr. Robert Feller
Belle W. Baruch Institute
Univ. of South Carolina
Columbia, SC 29208 USA

Interests: _____

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