

PSAMMONALIA

Newsletter of the
International Association of Meiobenthologists

Number 127, February/May 2000



Composed and Printed at Seto Marine Biological Laboratory,
Kyoto University
Shirahama cho, Wakayama Prefecture, 649-2211, Japan

Dreaming the Space



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

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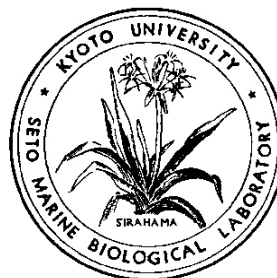
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You may make your donations to the *Bertil Swedmark Fund* directly to the IAM bank account (account number 6586667) of the Lloyds Bank (Sort code 30-96-68), 8 Royale Parade Plymouth PL1 1HB, UK.

EDITORIAL BOARD

Motohiro Shimanaga, Yoshihisa Shirayama



EDITORIAL

Dear Member.

I believe all of you have a nice new millennium. In my case, unfortunately, the beginning of this year was troublesome.

From February, I had more than 5 funerals. All of them were shocking for me. In February, my uncle living in Paris was killed by a traffic accident. He was an oil painter and when a motor-bike hit him, he was on the way to his favorite place for designing his new works. In March, three of my colleagues working in the Ecological Center of Kyoto University met an accident. The boat they were on board was capsized by side waves in Baja California. Two leading professors were dead, and one associate professor is still missing. In April, two of my previous colleagues died young due to cancer and heart attack.

All these tragedies killed my working time, too, and I could not prepare the first issue of *Psammonalia* for the year 2000 until May, though I had to publish it in February. Please accept my sincere apologize that I had to make this issue of *Psammonalia* as a bounded one of February and May issue due to the situation I explained above. Due to this delay, some important information regarding meetings etc. became out of date.

When my colleagues of Ecological Center were involved in the accident, many people worked for collecting reliable information. They sent staffs to USA for arranging the team to look for the missing scientist. All cost of these activities were covered by an insurance. Two students of the same center died due to a traffic accident two years ago. At that case, the center could not work well to rescue them due to the lack of funds.

The continuous accidents taught me a lot. As field scientists, we do have possibilities to be injured or even killed due to an accident. The accident will bother not only yourself, but also your family, colleagues and your teachers. We can not be too careful to avoid such accident.

Treasurer report

I had only incomes for *psammonalia* this year. In total I received 37960 BEF or 949 US dollars (or 949 EURO). Of this amount 30 EURO or USD were meant for Swedmark Bertil fund. This brings the total amount of money on our European account to 27304 BEF (end 99) +36760 BEF (yr 2000) = 64064 BEF (or 1602 US dollar).

(Ann Vanreusel)

Bertil Swedmark Fund, Statement of Accounts for 1999

This fund originated with a bequest of £1000 from Dr. Bertil Swedmark, to encourage the study of meiofauna amongst students. However, the money was held within

the general IAM funds until 1993 when the treasury was handed over from Plymouth to South Carolina. The money is held in the IAM Account Number 6586667 of Lloyds Bank (Sort code 30-96-68), 8 Royal Parade, Plymouth, PL1 1HB, UK. The account opened in October 1993 with the original £1000 and a sum of money donated by the organizers and participants of the Maryland Conference. The accounts to December 31st 1999 are as follows:

Capital brought forward	£ 3342.75
Interest received in 1999	£ 39.54
Donations from members	£ 00.00
Donation from Ximco 1998	£ <u>1507.06</u>
Total income for 1999	£ <u>1546.60</u>

Balance carried forward..... £ 4889.35

Signed: J.M. Gee R.M. Warwick

Note:

1.No Interest was brought forward this year as the interest accumulated over the three years to the end of 1998 was used to support two grants for XIMCO participants.

2. The fund has received no member donations this year. If you gave a donation via your respective treasurer it is not lost but has not been passed on to the Fund, as yet. Bank charges for cashing foreign cheques are high and so it makes sense to accumulate as large a cheque as possible before passing on to the Fund.

Our New Website came to permanent address

Thanks to the effort of Keith, our web site got a permanent address at

<http://www.mtsu.edu/meio>

Any comments/suggestions would be appreciated! Please feel free to forward or suggest the new website to others for their comments. All comments should be sent to: kwalt@mtsu.edu

Thanks for your input!

Keith Walter

Errata of Membership directory

Following comments arrived to the editor regarding errata of the membership directory enclosed with *Psammonalia* NO. 126.

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<http://www.uni-oldenburg.de/zoomorphology>

Please Reply to the Questionnaire in #126

To have perspective of meiobenthology in the coming century, I prepared a questionnaire in the last page of the Psammonalia #126. I have received only 10 responses, so far. Please send your answer to the editor so that I can prepare better and reliable report on the results of the questionnaire. Thank you in advance for your cooperation.

Annual dues

Please pay your annual dues for the year 2000 now and your advanced payment for the year 2001 is welcome. Your payment status in February 2000 is shown on the address label of this issue.

ANNOUNCEMENTS

Time to prepare for the next Meiofauna Conference at Boston 16-20, July, 2001

First Announcement, Call for Session Topics

The Eleventh International Meiofauna Conference "ELIMCO,." will be held July 16 - July 20, 2001. The meeting will be held on the campus of Boston University (BU), which allows to help external academic groups to use the campus for meetings. BU <<http://www.bu.edu>> is a good location, right on Back Bay, on a trolley line, close to downtown Boston. BU is 3 miles from Logan International Airport, and can be reached by subway. It is anticipated that dorm rooms will be available for about \$50 per night. A breakfast and lunch meal plan will be offered for about \$14/day. The next announcement will detail exact prices and other registration information.

The last International Conference was held July 27 - 31, 1998 in Plymouth, England at the University of Plymouth. A total of 137 persons attended. It seems historically fitting that the IAM will go from Plymouth, UK to the shores of Massachusetts, USA for the first conference of the millennium.

The conference theme will be "Meiofauna Studies for the New Millennium." The Organizing Committee solicits recommendations for Session Topics. These should be submitted by the end of July 2000. Please send them to Paul Montagna <paul@utmsi.utexas.edu>.

There is a need for a special session on meiofaunal diversity. The high diversity of meiofauna taxa is not appreciated by the general scientific community. As an example see the article "How many species are there on Earth?" by R. M. May (Science, 1998, vol. 241, pp. 1441-1449). The goal of the diversity session would be to estimate how many species of meiofauna exist. Paul Montagna would like to organize the session. He solicits speakers who would be willing to provide review papers on the major meiofauna taxa. The papers should follow a common format: starting with a review of current status or known number of species, a review of the rate of discovery of new species, a review of the number of practicing taxonomists, an estimate of the most likely number of species in the group, and ending with an assessment of geographic areas where meiofaunal biodiversity is threatened. It is hoped that these papers could be published as a group to define the diversity of this important group of organisms. A session with four to six papers is envisioned, so some of the taxa with few species should be considered together. If you would like to participate please contact Paul Montagna <paul@utmsi.utexas.edu>.

Other Meetings

4th International Conference on Integrating Geographic Information Systems(GIS) and Environmental Modeling (GIS/EM4)

September 2-8, 2000
The Banff Centre for Conferences,
Banff, Alberta, Canada,

The 4th International Conference on Integrating Geographic Information Systems and Environmental Modeling (GIS/EM4) continues a highly successful set of conferences that, since 1989 have set the standard for cross-disciplinary theory and practice in the synergistic fields of GIS and computer modeling of the natural environment. But GIS/EM4 will build upon, rather than merely repeating past success. By focusing on new developments and applications and on the extension of its joint GIS/modeling approach into human-environment interactions and the social sciences, the meeting will provide leadership to and "cross-pollination" among the broadest possible array of fields that may benefit from spatial methods and computer modeling.

Seeking to demonstrate the sense of innovation it espouses, the 4th meeting will also set new standards in how a carefully crafted, synergistic meeting can and should be convened to better relate science and

management needs and opportunities. We will meet at a state-of-the-art facility, for the first time outside the United States, in the glorious Canadian Rocky Mountains, at a most beautiful and mild time of year. We will innovatively use challenging special topic lectures, systematically related research and practice papers, diverse work-in-progress posters, instructive demonstrations, and hands-on workshops. These will be integrated using "town meetings" to monitor the "metabolism" of the meeting and to focus and add perspective in a shared learning environment. Attendees can also expect an unprecedented set of published permanent records of the contributions to, and outcomes from the meeting.

Who should attend? Government, academic and industry scientists and practitioners who deal with, or must learn about, transactional uses of both geographic information and computer models for anticipatory environmental problem solving. Students, interested scientists and others with a curiosity about, and stake in the future of spatio-temporal modeling of environment are strongly encouraged to attend the leading meeting of its kind in Banff, Alberta, Canada, September 2-8, 2000. Please visit the GIS/EM4 website (see below) for additional information. There you may preview the conference program (in early April) and register on-line for both the meeting and accommodations at The Banff Centre for Conferences. You are invited to come early and stay late but to participate actively in the intensive program we have planned. Note that space is limited so you may wish to register and reserve accommodations early. Rates are guaranteed only through July 15, 2000.

Please use the following contacts for inquiries about GIS/EM4: The GIS/EM4 website (all conference-related information including on-line registration) <http://www.colorado.edu/research/cires/banff/>.

Conference Secretariat,
GIS/EM4 (program and participation)
Cooperative Institute for Research in Environmental Sciences (CIRES),
CIRES Building 216, University of Colorado,
Boulder, CO 80309-0216 USA.
Email: GISSEM4@Colorado.EDU

The Banff Centre for Conferences (facilities and on-site lodging) Box 1020, Station 11, Banff, Alberta, Canada, TOL OCO Email: conferences@banffcentre.ab.ca, Tel: 1 403 762 6100 (24 hours), Fax: 1 403 762 6388

**V Symposium International
on Aquaculture Nutrition**
Merida, Yukatan, Mexico
19-22 November 2000

Objectives

The Symposium represents an excellent forum to communicate and discuss relevant topics to culturing aquatic organisms with the main focus on nutrition. Recognized experts have been invited to participate in oral presentations, allowing the participants to exchange ideas and discuss with specialists benefiting the local aquaculture industry. We extend an invitation to present your research results at the poster exhibition with daily discussion sessions.

Topics

Nutrition and feeding of aquatic organisms; nutrition and feeding of larvae; nutritional requirements; nutritional physiology and metabolism; feedstuffs, additives and quality control; feed technology; feeding strategies and environmental impact.

Poster exhibition

Potential applicants interested in participating at the Poster Exhibition should send a completed application form and a one-page abstract, both printed and in a labelled computer disk (3.5" only) with the abstract saved in Word 97 and also in RTF (text) PC format, following the guidelines indicated in the attachment; abstracts by email will be accepted together with the application form. Abstracts of more than one page without the suggested format won't be accepted. Deadline to receive abstracts is 31st August, 2000.

Commercial exposition

In parallel, there will be a commercial exposition and technical trade show, where you can see the latest feed technology advances for different species, equipment and general supplies for aquaculture. Stands available.

Symposium location

The symposium will take place at the Reef Club Hotel, a five star all-inclusive beach facility in the port of Telchac, 75 km from Merida, Yucatan. The fare (Mexican pesos) per night will be \$960 for single and \$660 for double room, and include all the meals and drinks. There will be transport on Sunday/Monday and Thursday to move the attendance from and to Merida.

Organized by:

Centro de Investigacion y de Estudios Avanzados del IPN, Unidad Merida (CINVESTAV); Fac. de Ciencias Biologicas, Universidad Autonoma de Nuevo Leon (UANL); Facultad de Ciencias, Universidad Autonoma de Mexico (UNAM); Centro de Investigaciones Biologicas del Noroeste (CIBNOR); Centro de Investigacion en Alimentacion y Desarrollo (CIAD); Centro de Investigacion Cientifica y de Educacion Superior de Ensenada (CICESE).

NOTICE: Extended deadline for low registration fee until June 30, 2000

For more information:

Dr. Miguel A. Olvera Novoa, CINVESTAVIPN, Unidad Merida. Apdo. Postal 73 CORDEMEX, 97310 Merida, Yucatan, Mexico. Tel. (99) 812973 ext. 518; fax:(99) 812334. Email: sinav@kin.cieamer.conacyt.mx; <http://kin.cieamer.conacyt.mx>

IMBC 2000

Townsville, Australia
September, 2000

The registrations for IMBC 2000 have been rolling in. Thank you to those who have registered early giving us a solid indication that there will be a very healthy attendance at the conference.

But we have also had many requests for extensions of the early discount registration from people who, for legitimate reasons, could not achieve the previous deadline. Rather than make special arrangements for individuals, we have decided to extend the date for the discounted registration for full registrants to 16 June 2000.

If you have already sent or authorized payment of your registration at the higher late rate of AU\$850, we will only charge you the discount rate of AU\$690, as long as we receive it by 16 June 2000.

For overseas delegates, this is a very good time to pay in Australian dollars, with the exchange rate against the US dollar being at a four-year low (AU\$1 = US\$0.57 approx).

We have also agreed to offer the Student Discount Rate to recent graduates in post-doctoral positions. If you have graduated with a PhD within the last two years, you may be eligible for the discount rate of AU\$250. You will need to supply proof of post-doctoral status, for example, in the form of a letter from your supervisor. (If you are eligible and have already registered at the higher rates, please contact us.)

New developments concerning the conference will appear on our website from now until September 29. (<http://www.aims.gov.au/imbc-2000/imbc-00.html>)

Conference on Marine Protected Areas

Edinburgh, UK

15th - 16th November, 2000

There is a conference being organised by the UK Marine SACs Project in Edinburgh, 15th - 16th November, 2000. This event aims to review the learning and achievements from the last four years in establishing management on marine SACs in the UK and will also provide an opportunity to consider the priorities for future action. It is targeted at those statutory bodies, user and interest groups with close involvement in the management and use of these sites in UK and other European countries.

Please can you circulate these details to any others who might be interested in attending this event.

John Torlesse (john.torlesse@english-nature.org.uk)

Taxonomy Today
Diversity & the Tree of Life
International Conference sponsored by the
Natural Environment Research Council
 The University of Reading, UK
 3-5 July 2000

This Conference is intended to provide a view of current research developments in taxonomy today, both at the interface between phylogeny construction and systematics, and in the discovery, classification and cataloguing of organisms. It is one of the events sponsored by NERC as part of its five-year Taxonomy Initiative.

Eminent researchers will give keynote addresses at the start of each session and there will be guest lectures to open and close the conference. Among the conference papers are some by recent participants in the NERC Taxonomy Initiative at each of the three nodes: University of Glasgow, Imperial College, and The University of Reading; and at two of the national collections associated with the initiative: The Natural History Museum and the Royal Botanic Gardens Kew.

The three symposium sessions will be augmented with a Poster Session, and a Policy Forum. We are particularly keen that students and other young systematists should participate fully in the conference. Participants are invited to offer posters on their current research and to debate ideas on new research priorities at the Policy Forum.

The Conference starts after lunch on Monday 3rd July and finishes at lunch-time on Wednesday 5th July.

Further details from the Taxonomy Today website
http://www.systematics.rdg.ac.uk/taxonomy_today/
 Or by e-mail to: taxonomy-today@reading.ac.uk

BES aquatic group/MBA conference
Aquatic habitats as ecological islands

Plymouth, UK
 Tuesday 5 - Thursday 7 September 2000

There will be a joint meeting between the Aquatic Ecology Group of the BES, the Marine Biological Association and the Freshwater Biological Association on the above theme. The meeting will be held at the Robbin's conference centre at the University of Plymouth.

This meeting will address several topical issues in aquatic ecology under the general subject of island biology and its applicability to aquatic systems. Paper and poster sessions on the first two days will focus on:

- *Evolution and biogeography in freshwater and marine systems
- * The role of dispersal in shaping aquatic assemblages
- * Habitat fragmentation and metapopulation dynamics

* Genetic differentiation in aquatic taxa

Papers addressing aspects of the topic outside these themes will also be welcomed. There will be a choice of field excursions on the final day.

We hope that this meeting will attract scientists working on a diverse range of habitats within the aquatic realm and encourage the search for commonality in patterns and processes among systems. We have already assembled an array of guest speakers with diverse research interests and we hope that these will be complimented by additional oral presentations and posters.

Guest speakers:

HARILAO LESSIOS (Smithsonian Tropical Research Institute, Panama) Genetic isolation and genetic diversity of marine populations on oceanic islands.

ALEX ROGERS (University of Southampton) Getting in to hot water: ecological islands in the deep sea.

AXEL MEYER (University of Konstanz) Patterns and Processes in the Evolution of Adaptive Radiations in East African Cichlid Fish.

CHRIS TODD (University of St Andrews) Larval Dispersal and Population Differentiation in the Marine Environment: Generalisations and Variations on a Theme.

BETH OKAMURA (University of Reading) Waterfowl-mediated Dispersal in Freshwater Invertebrates.

GARY CARVAHLO (University of Hull) The evolution of population differentiation: isolation, gene flow and adaptive significance.

GEORGE TURNER (University of Southampton) Why are there so many Cichlid fish species in African lakes?

DAVID BILTON (University of Plymouth) Population differentiation in freshwater invertebrates: what have genetic studies revealed so far?

Oral presentations will be of 15 minutes duration with five minutes allowed for questions. Posters will be displayed throughout the meeting, with a dedicated poster session also scheduled. There will also be the choice of field excursions to local habitats on the final day.

Abstracts for papers and posters should be submitted by e-mail to Simon Rundle on S.Rundle@plymouth.ac.uk. If possible, please send your abstract as an e-mail attachment in WORD-7 format. Closing date for abstracts is 17th April 2000. The deadline for registration will be 1st July 2000.

Full details of registration will appear in the May BES bulletin and on the web site (see below). If you are unable to access either of these please contact Simon Rundle (see details below) after May 1st for a

registration form. The conference fee of 50 pounds sterling includes an abstract booklet, all lunches, an evening boat cruise (with food) and a reception at the MBA. Accommodation in the University conference will be available at a cost of approximately 25 pounds per night bed and breakfast. For more details on the call for papers, registration and accommodation, visit the conference web pages which can be accessed via the Benthic Ecology Research Group page at:

<http://www.science.plymouth.ac.uk/departments/biology/Research/BERG.HTM>

or contact Dr Simon Rundle, Department of Biological Sciences, University of Plymouth, Drake Circus, Plymouth, PL4 8AA. Tel: 01752 232967. FAX 01752 232970. E-mail: srundle@plym.ac.uk.

**Fifth International Crustacean Congress
and
'Summer' 2001 meeting of The Crustacean Society**

9-13 July 2001

University of Melbourne
Melbourne, Victoria Australia

The website is now open for registration of expressions of interest

<http://www.unihouse.org.au/ICC5/index.htm>

For those of you with limited access to the web here is a summary of the contents.

A week has been scheduled for the meeting, enough time to share ideas, meet colleagues and explore parts of Melbourne. The Congress will incorporate the annual 'Summer' meeting of The Crustacean Society. I urge you to think early about coming to Australia. It may be on the other side of the Earth from you and although flights are frequent many cheap fares go early.

Between now and July 2001 the Congress website will be updated at frequent intervals. I invite you to register an interest in the congress.

Program

The committee already has offers of special symposia but more are possible.

These have been mooted so far:

The Third Crustacean Larval Conference (convenor Paul Clark, pfc@nhm.ac.uk)

Symposium on the systematics and biology of the Anomura (convenors Rafael Lemaitre, lemaitre.rafael@nsmh.si.edu, Christopher C. Tudge, tudge.christopher@nsmh.si.edu)

Copepods as colonizers and invaders (convenor Geoff Boxshall, g.boxshall@nhm.ac.uk)

Ecotoxicology of crustaceans (convenor Malcolm Jones, M.Jones@plymouth.ac.uk)

The impact of fishing on communities (convenor Les Watling, watling@maine.maine.edu)

Burrowing crustaceans (convenor Fiona Bird, f.bird@zoo.latrobe.edu.au)

Biology of crustacean symbioses (convenor Peter Castro, pcastro@csupomona.edu)

The unity of the Peracarida (convenor Buz Wilson, buzw@amsg.austmus.gov.au)

Molecular systematics and taxonomy (convenor Chris Austin, cherax@deakin.edu.au)

The biology and management of exploited crustaceans (convenors Brad Mitchell and Andrew Levings, bradm@deakin.edu.au & ahl@deakin.edu.au)

Tours

Pre-Conference Tour to Lizard Island, Great Barrier Reef (contact Dr Penny Berents, pennyb@austmus.gov.au)

Post Conference Tour (4 days) - Grampians National Park, Victoria's Lake District and Great Ocean Road

Accommodation

University of Melbourne's student residential college, close to the campus. Breakfast included in the A\$50 (US\$32) daily cost. Hotels and B&Bs in the area also provide accommodation of all standards.

Fee

A\$400 (about US\$260) will include a reception, book of abstracts, congress proceedings, plus tea and coffee and lunches during the sessions. A reduced price for students of two-thirds of regular fee will be offered.

Organising Committee

Gary Poore, Environment Program, Museum Victoria, Melbourne (Chairman)

Chris Austin, School of Aquatic Sciences and Natural Resources, Deakin University, Warrnambool

Fiona Bird, Department of Zoology, La Trobe University, Bundoora

David Hobday, Marine and Freshwater Resources Laboratory, Queenscliff

David Macmillan, Department of Zoology, University of Melbourne, Parkville

Richard Marchant, Environment Program, Museum Victoria, Melbourne

Expressions of interest

If you need a paper copy of the expression of interest form write to:

The Fifth International Crustacean Congress
University Conference Management Service
University House, The University of Melbourne
Victoria 3010 Australia

Dr Gary C. B. Poore

Chairman, Organising Committee

Fifth International Crustacean Congress

c/o Museum Victoria

GPO Box 666E
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(street address: 71 Victoria Cres., Abbotsford, Vic. 3067,
Australia)
phone (61-3) 9284 0215
fax (61-3) 9416 0475
email icc5@mov.vic.gov.au

Congress website :
<http://www.unihouse.org.au/ICC5/index.htm>

5th Congress on Marine Sciences Marcuba'2000

The National Oceanographic Committee (CON) of Cuba is pleased to announce that the 5th Congress on Marine Sciences will be held at the Havana International Conference Center, on June 19-23, 2000. The meeting is expected to bring together scientists and managers involved in marine sciences, services and technologies as well as educators, sociologists, economists, businessmen, policy-makers and anyone interested in promoting and integrating marine scientific research to sustainable development.

Contact info: Guillermo Garcia Playa, Ciudad de La Habana, Cuba, Tel.: (537) 23 64 01 ex 06; Fax: (537) 24 99 87, E-mail: marcuba@unepnet.inf.cu
http://ioc.unesco.org/iocweb/news/external/marcuba2000_e.htm

Symposia on Pollutants, Aquaculture, Extremophily

The European Society for Comparative Physiology and Biochemistry is organizing in July 2000 a large international congress including symposia on Pollutants, Aquaculture, Extremophily, and more which may be of interested to many of you. Have a look at www.ulg.ac.be/physioan/escpb.htm for a look at the general program.

9th International Congress on Invertebrate Reproduction and Development.

July 2001
Rhodes University,
Grahamstown, South Africa

Conference Organizer: Alan Hodgson, Department of Zoology & Entomology, Rhodes University, Grahamstown 6140, South Africa e-mail: zoah@giraffe.ru.ac.za; Fax: +46 622 4377.

The first announcement and preliminary program details are available at: <http://www.rhodes.ac.za/conferences/icird2001>

Suggestions for workshops are welcome

Position available

New Ph.D. Studentships

University of Plymouth, Department of Biological Sciences

The following studentships are available from October 2000 for 3-year programmes of study leading to the degree of Ph.D. Enquiries and applications are welcome from recent or prospective graduates possessing, or expecting, a minimum of Upper Second Class Honours degree in a relevant biological sciences subject.

Support grants of 6620 (currently under review) are provided, with fees paid and a generous research budget. Good opportunities for paid part-time demonstrating (up to a maximum of 6hr/week) are provided. If you are interested in research in one of these areas, and would like to join a lively Department with excellent supervision and training opportunities, please contact the relevant Director of Studies for further information.

Mobile predators in a dynamic environment: the role of fish in structuring upper-estuarine benthic communities. Supervisory team: Dr Simon Rundle, Dr Martin Attrill, Prof. Malcolm Jones. Contact: srundle@plymouth.ac.uk

Ecophysiological and taxonomic distribution of widely distributed benthic diatoms used as indicators of pollution. (In collaboration with the Natural History Museum, London). Supervisory team: Dr Murray Brown, Dr Eileen Cox (Natural History Museum). Contact: mtbrown@plymouth.ac.uk

The effect of human disturbance on oystercatcher prey selection and foraging behaviour on rocky shores. Supervisory team: Dr Ross Coleman, Dr Peter Cotton, Prof. J. Goss-Custard and Dr Richard Stillman (Institute of Terrestrial Ecology). Contact: racoleman@plymouth.ac.uk

A cephalopod model for visual studies. Supervisory team: Prof. Roddy Williamson, Dr Peter Cotton in collaboration with Dr David Stevenson and Dr Phil Gee (Department of Psychology). Contact: rwilliamson@plymouth.ac.uk

Endocrine disruption in freshwater invertebrates. (in collaboration with the Environment Agency). Supervisory team: Prof. Michael Depledge and Dr Tamara Galloway. Contact: tgalloway@plymouth.ac.uk

Assistant Director The American Museum of Natural History Center for Biodiversity and Conservation

The American Museum of Natural History's Center for Biodiversity and Conservation (CBC) seeks an Assistant Director to work closely with the CBC Director and

Program Managers to oversee and coordinate interdisciplinary initiatives in research, capacity building, and outreach.

RESPONSIBILITIES AND DUTIES:

The successful candidate will: assume responsibility for day-to-day operations of the CBC; work with Program Managers to identify strategic opportunities for program implementation; ensure quality of scientific content and translation accuracy for CBC publications; lead CBC staff in topic selection for, and organization of, the annual Spring Symposium series; and participate in proposal development and fund-raising activities.

QUALIFICATIONS:

Candidates must have: a Ph.D. in evolutionary biology, ecology, conservation biology or a related field; substantial knowledge of systematics and collections-based research; a minimum of 5 years managerial and program development experience; excellent organizational and time-management skills; attention to detail; superior oral and written communication skills; and proven interpersonal abilities; Spanish proficiency and a minimum of 2 years field experience are preferred. Applications, including a curriculum vitae, salary requirements and complete contact information for three references should be sent by June 23rd to:

Director
Center for Biodiversity and Conservation
American Museum of Natural History
Central Park West at 79th Street
New York, N.Y. 10024

For more information on the CBC, please visit our web site: <http://research.amnh.org/biodiversity/index.html>.

Senckenberg Research Institute as Head (BAT I) of the newly founded German Centre for Marine Biodiversity Research in combination with a **C-3 Professorship in Marine Biodiversity Research at the Carl von Ossietzky University, Oldenburg**, to fill a dual appointment.

The DMZB is a department of the Forschungsinstitut Senckenberg. It has the task, within the framework of national and international programmes, to form a node in the network of German marine taxonomic research, to develop and undertake its own research projects, as well as co-ordinating the acquisition and processing of taxonomic samples on expeditions of German research vessels. The Universities of Oldenburg and Hamburg are co-operative partners with the DZMB.

Responsibilities:

To establish, and be subsequently responsible for, the scientific and organisational leadership of the DZMB at Wilhelmshaven and Hamburg, as well as its wider development. To represent the subject of marine biology (systematics, evolution, biodiversity) at the University of

Oldenburg, both in research and teaching, to an extent of 2 hours per week during each semester. To participate (under the DZMB) in national and international marine biological research intentions.

We are seeking a scientist who will, through publications and references, show outstanding achievements in marine biology in the fields of systematics and biodiversity on marine animal groups of the meio- and macrobenthos, with experience in academic teaching and the planning and execution of extensive research projects. The applicant would preferably have extensive expedition experience. We would also favour indications of an aptitude for personnel and scientific management.

The position will be based in Wilhelmshaven. When the entire provision is complete (at the earliest 2001), it is planned to include fully furnished buildings, 21 positions in Wilhelmshaven and Hamburg and an appropriate budget.

With his/her position, the appointed person be granted a Professorship with the University of Oldenburg and will simultaneously be appointed at the Forschungsinstitut Senckenberg. Whilst his/her employment contract will actually be a private legal document with the Senckenbergische Naturforschende Gesellschaft, his/her pay-scale will be fixed in accordance with the government compensation group BAT I (the so called Joicher Modell).

The University of Oldenburg endeavours to increase the percentage of women in science. Therefore, women are emphatically requested to apply. In accordance with 47 Abs. NHG, female applicants with identical qualifications would be considered preferable. Handicapped persons with the same suitability would also be preferable.

The position is not suitable for a part-time basis. The ability to speak German is a pre-requisite.

Applications, with two copies of the usual documentation should, be sent by 30th June 2000 to the Director of the Forschungsinstitut Senckenberg, Senckenberganlage 25, D-60325 Frankfurt, Germany.

SCIENTIST Marine Taxonomic at NIWA

NIWA is a leading environmental research institute and key provider of atmospheric, freshwater and marine research in New Zealand. An opportunity in Wellington has arisen for a scientist to join our group of taxonomists and carry out research on a variety of marine benthic biodiversity projects.

You will be involved in the application of specialist taxonomic knowledge to group studies of biodiversity, conservation and anthropogenic impact in the marine environment. Other duties will include undertaking specialist taxonomic research on one or

more marine invertebrate groups. Verbal and written presentation of research results to both scientific and commercial audiences must be demonstrated.

Minimum qualifications are a PhD or equivalent experience in marine invertebrate taxonomy, preferably in either Cnidaria, Crustacea or Nematoda. You will need good oral and written communication skills, and be comfortable in a collaborative team environment. Possessing a good knowledge of biosecurity and conservation issues in the marine environment is also desirable but not essential.

Requests for further information and written applications, including resume, should be addressed to Margaret Devlin, NIWA, PO Box 14-901, Kilbirnie, Wellington, ph: +64 4 386 0300, email: m.devlin@niwa.cri.nz by 23 June, 2000. More information on NIWA and the job descriptions can be found at www.niwa.cri.nz.

Ecologist Marine Benthic at NIWA

NIWA is a leading environmental research institute and key provider of atmospheric, freshwater and marine research in New Zealand. NIWA is seeking an ecologist to lead ecological research analysing New Zealand marine benthic biodiversity in relation to environmental processes. The position is based in Wellington and assists in fulfilling strategic government objectives for New Zealand marine environment.

The successful candidate will be highly motivated and flexible, be able to manage and use comprehensive environmental datasets, possess proven scientific and report-writing skills demonstrated by a good publication record, and be able to communicate technical findings effectively to scientific and general audiences. The position requires a high degree of statistical skill and an ability to coordinate a variety of projects simultaneously. Applicants should possess a PhD and be able to work as part of a team and be willing to participate on research voyages.

Previous experience in benthic marine zoology / ecology or taxonomy work is essential and experience in the use of software as a taxonomic tool and GIS would be an advantage.

Requests for further information and written applications, including resume, should be addressed to Margaret Devlin, NIWA, PO Box 14-901, Kilbirnie, Wellington, ph: +64 4 386 0300, email: m.devlin@niwa.cri.nz by 23 June, 2000. More information on NIWA and the job description can be found at www.niwa.cri.nz.

Postdoctoral Fellowship - Benthic Ecology Mote Marine Laboratory

Mote Marine Laboratory in collaboration with the National Geographic Society's Sustainable Seas Expeditions seeks applications for one postdoctoral

fellowship. The associate will examine interrelationships of Gulf waters on benthic communities of the Florida Keys National Marine Sanctuary and the southwest shelf such as: coral reefs, live-bottom habitat, algal beds, and/or seagrasses or submarine springs or sinks. The position will be interactive with Mote scientists in Sarasota and the Florida Keys. Successful applicants will have backgrounds in community analysis, benthic/pelagic coupling, invertebrate taxonomy, and or biogeography.

Candidate must have a doctoral degree (Ph.D.), in the marine sciences/biological oceanography, be fluent in English, immediately eligible for employment in the U.S., with a broad background related to the linkage of physiochemical parameters and the benthos.

The Deadline for Applications is: June 30, 2000. Reviews will be completed by July 31, 2000 with anticipated starting date of September 1, 2000. Appointments will be for two years with a first year performance review.

Initial application should include :

- 1) Curriculum vitae containing education and training, research experience, awards, and a list of publications;
- 2) a statement describing research interests and a general approach to the issue stated above,
- 3) reprints of published research,
- 4) three professional references.

For additional Information: Call or write Mote Marine Laboratory or visit, www.mote.org web site to request application materials. Send response to:
Jim Culter, Mote Marine Laboratory
1600 Ken Thompson Parkway, Sarasota, Florida 34236
USA
Tel: (941) 388-4441, FAX (941) 388-4312

Curatorial Assistants in Invertebrate Zoology Natural History Museum of Los Angeles County

Openings exist for two full time, permanent positions as Curatorial Assistants in the Invertebrate Zoology section of the Natural History Museum of Los Angeles County. The successful candidates will divide their time among four major world-class collections (polychaete worms, echinoderms, mollusks, and crustaceans). Duties include sorting and identifying incoming and existing collections of marine invertebrates, assisting with the organization and computer cataloging of the collections, and assisting the curators and collection managers with other collection-related activities. Qualifications include training or experience in Invertebrate Zoology, plus a strong interest in natural history, marine invertebrates, and museum collections. Preference will be given to applicants with strengths or experience in working with marine annelids, echinoderms, mollusks, or crustaceans; graduate training / experience is preferred but not

mandatory. Starting salary commensurate with experience; excellent benefit packages (dental, health, life, retirement) are available. Closing date is June 15, 2000. Applications should consist of a current CV plus names and addresses of three referees.

Please address all applications and inquiries to Dr. Kirk Fitzhugh, Research and Collections Branch, Natural History Museum of Los Angeles County, 900 Exposition Boulevard, Los Angeles, California U.S.A., or e-mail to: fitzhugh@bcf.usc.edu. The Natural History Museum is an equal opportunity employer.

Marine Biologist

We are interested in finding a marine biologist from Baja to work with us on a proposal concerning marine pollution in Mexico/California. If interested please send your CV to me at this e-mail address <MERPM@aol.com>.

Michael J. Marshall, Ph.D,
Coastal Seas Consortium, Inc.

Interesting websites

List of Jobs in UK

You can find a list of academic job opportunities in UK at <http://www.jobs.ac.uk/>

Ecological Information from UK

An impressive searchable database of marine ecological information from Britain and Ireland is at: <http://www.jncc.gov.uk/mermaid/>
(Dr Mark J. Costello)

Coastal Zone Management discussion list

The Coastal Seas Consortium, Inc., now hosts a discussion list, through List-Bot, on all issues related to coastal zone management. You are welcome to join. The easiest way to sign on is through our web page (www.coastalseas.com). Go to the bottom of the opening page and click on the List-Bot button.

Nematode Image site

Anyone interested in nematode images? I found a neat Web site. Go to: <http://richmedia.lycos.com/>
Click on Pictures and type-in the word "nematode"
(Michael A. McClure)

Nematode of the week

A "nematode of the week" page has been added to the Society of Nematologists WWW site: <http://www.ianr.unl.edu/son/>
The purpose of this page is to provide information on interesting and unusual nematodes.
(Allen Szalanski)

Possible impacts of climate change on flora and fauna species and associated ecosystems

The latest version of our research bibliography on the possible impacts of climate change on flora and fauna species and associated ecosystems is now available on our site at: <http://www.eelink.net/~asilwildlife/bib.html>

Over 200 citations have been added since the last update in December. The 2013 citation bibliography is fully searchable (Boolean) and can be downloaded in a PDF version.

New Book

Reproductive Strategies and Developmental Patterns in Annelids

edited by Adriaan W.C. Dorresteijn
Zoological Institute, Johannes-Gutenberg-University, Mainz, Germany - and
Wilfried Westheide
Dept. of Biology/Chemistry, University of Osnabrueck, Germany

Developments in Hydrobiology, Volume 142
Reprinted from *Hydrobiologia*, 402

Contents and Contributors

Preface. List of participants.
Reproductive and developmental phenomena in annelids: a source of exemplary research problems; A.E. Fischer. Structure, function and development of segmental organs in Annelida; T. Bartolomaeus. Reproduction of the Syllidae (Annelida: Polychaeta); H.-D. Franke.
Reproduction and larval development of the spioniform Polychaeta with application to systematics and phylogeny; J.A. Blake, P.L. Arnofsky.
Reproduction and development in Cirratulidae (Annelida: Polychaeta); M.E. Petersen.
Divergence of reproductive and developmental characteristics in Hediste (Polychaeta: Nereididae); M. Sato.
Nereidid polychaetes as model organisms for marine chemical ecology; J.D. Hardege.
Metabolite supply in oocytes of *Nereis virens*: role of nucleosides; U. Hoeger, N. Rebscher, G. Geier.
Polychaete aquaculture and polychaete science: a mutual synergism; P.J. W. Olive.
Development of Perviata and Vestimentifera (Pogonophora); E.C. Southward.
Sexual conflict and mating systems in the dorvilleid Ophryotrocha and the dinophilid Dinophilus; G. Sella, L. Ramella.
Polychaete sperm: Phylogenetic and functional considerations; G.W. Rouse.
Sperm types and their use for a phylogenetic analysis of aquatic clitellates; M. Ferraguti, C. Erséus.
Larval settlement of polychaetes; P.-Y. Qian.
Conservation and innovation in spiralian development; J.J. Henry, M.Q. Martindale.

The ancestral cleavage pattern of the clitellates and its phylogenetic deviations; W. Dohle.

Cellular origins of bilateral symmetry in glossiphoniid leech embryos; D.A. Weisblat.

Systematization of the Annelida: different approaches; W. Westheide, D. McHugh, G. Purschke, G. Rouse.

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Kluwer Academic Publishers, Dordrecht

a.. Hardbound, ISBN 0-7923-6018-4

December 1999, 328 pp.

NLG 320.00/USD 169.00/GBP 106.00

Introducing the coastal guide - a multi-media service

The EUCC and Bureau D&K have the pleasure to introduce the Coastal Guide a new information service for professionals in coastal conservation, management, planning and research, especially in Europe and the Mediterranean. Our mission is to assist these professionals in finding and accessing the best available information.

The Coastal Guide is:

demand driven: We think that information flow must not be data driven, but have a user and issue focus; therefore our website will develop according to user needs
interactive: We offer communication between experts (Helpdesk, Newsletter) instead of just another sea of hyperlinks
multimedia: We connect people through phone & fax, mail & Internet, text & figures preparing signposts:
Starting in January 2000 through our participation in the Coast Base project (EU RTD Programme/5th Framework Programme) as cheap as possible: The Coastal Guide is non-profit and provides a free service package to EUCC member organisations.

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Please tell us if you want to subscribe to it starting from January 2000 The Helpdesk to be launched on 1 February 2000.

How to make use of the helpdesk

The Coastal Guide Helpdesk is a new way to find more information and expertise on European and Mediterranean coasts. Helpdesk staff can assist you with general or tailor made services. Choose among Coastal Guide Service Categories A, B, and C:

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The Helpdesk can be reached as follows:

Coastal Guide Helpdesk, Breestraat 89A, NL-2311 CK Leiden, fax: +31 71 5124069, tel.: +31 71 5131781 (working days, 10-16h)

e-mail: helpdesk@coastalguide.org

For general information on the Coastal Guide please contact: info@coastalguide.org

News from members

From Bruce Coull

I received the following e-mail in February. I believe he has been back at University.

Shira: I am at home recuperating from heart bypass surgery 4 weeks ago - so I am not at my office and cannot send you the info for this issue of Psammonalia.

Am recovering quite quickly and will be back at University within two weeks.

Congratulations for Ph.D. Degree

Motohiro SHIMANAGA got his Ph.D degree from The University of Tokyo. The title of his thesis was "Seasonal changes in abundance, vertical distribution and reproductive activity, and species diversity of the meiofaunal community at a bathyal site in Sagami Bay, Central Japan"

Summary

An interdisciplinary research project was carried out to understand seasonal carbon cycling in a deep-sea ecosystem in Sagami Bay, central Japan, from December 1996 to August 1998. In the project, the author studied the temporal changes of benthic animals (mainly metazoan meiofauna) in several aspects.

1. Response of benthic organisms to seasonal change of organic matter deposition

The chloroplastic pigment (CPE), an indicator of the amount of sedimented phytoplankton, was detectable throughout the year in the sediment, and its amount increased significantly in the spring when a fluffy layer was observed on the surface of the sediment. Significant seasonal fluctuation of bacterial abundance also was found, but the range was small that the maximal value

was only 1.6 times larger than the minimal one. Metabolic activity of the organisms did not show significant temporal difference. The abundance and biomass of metazoan meiofauna seemed to fluctuate seasonally, but ANOVA did not confirm it statistically. These results suggest that if enough organic matter is supplied constantly, deep-sea benthic community will be stable even though seasonality of organic matter flux associated with the spring bloom does exist.

2. Seasonal patterns of vertical distribution between meiofaunal groups in relation to phytodetritus deposition. Among major meiofaunal groups, the vertical distributions of copepods (adults and copepodites), and kinorhynchans changed seasonally and they concentrated in the shallower part in the sediment when CPE concentrations were higher. Seasonal changes in the vertical distributions of ovigerous females and nauplii of copepods were not related to CPE concentrations, but related to that of total copepods. On the other hand, nematodes, ostracods, and polychaetes did not show seasonal migrations. These results suggest that there is a difference in the response to the sedimentation of organic matter between metazoan meiofaunal taxa.

3. Reproductive activity and species diversity of benthic copepods

The percentage of ovigerous females in total copepods changed significantly and showed seasonal pattern in 1997 and 1998. Though significant difference could not be detected in the percent of ovigerous females among adult females as well as the ratio of nauplii to total copepods, these parameters also appeared to fluctuate seasonally, suggesting that the reproductive activity of copepods was enhanced by the increase of fresh phytodetritus supply to the sea floor. On the other hand, one of dominant harpacticoid species, *Cervinia* sp. increased significantly in abundance, corresponding to the sedimentation event. The other parameters, however, implied that they do not have clear seasonality in reproduction. The species diversity of copepods at the bathyal Sagami Bay site, which was inferred by the rarefaction curve, was as high as or even higher than that observed at other deep-sea sites.

Welcome!! New Members

Jane Griffith

10 Fenellia Cres, Crnigie, Perth, Western Australia 6025, Australia e-mail: j.griffith@ecu.edu.au

My name is Jane Griffith and I am a PhD candidate at the Department of Environmental Management, Edith Cowan University, Western Australia. My project is entitled 'Benthic nitrogen cycling in shallow temperate coastal lagoons with intermittent oceanic connection: The role of meiofauna and hypersalinity.' The south coast of Western Australia has many estuaries and coastal lagoons that are increasingly coming under pressure from anthropogenic activities. The systems most at risk are those coastal

lagoons that are closed from the ocean for up to decades at a time. Hence, there is a need to understand the rates and processes of nitrogen cycling within these particular systems. The waters of these coastal lagoons frequently

become hypersaline and consequently, benthic macrofauna may be depauperate. As such, meiofauna may be the more dominant faunal component affecting biogeochemical processes in these systems. However, the extent to which meiofauna affects the rates and processes of the nitrogen cycle are largely unknown. Investigating this is one of the main aims of my project.

Cristina Gambi

University of Ancona, Institute of Marine Sciences, Faculty of Sciences, via Breccie Bianche, Ancona, Italy, 60131 E-mail: mare@popcsi.unian.it

Degrees in Biological Sciences (1998) with the specialisation in Marine Biology at University of Ancona. She studied meiofauna and presented a thesis entitled "Meiofauna response to the Po river plume front system in the northern and southern Adriatic sea", (tutor Prof. Roberto Danovaro). She continued her studies in meiofauna (grazing rate on bacteria and microphytobenthos; taxonomic analysis of nematodes) at the Institute of Marine Science, in the Marine Biology laboratory directed by Prof. Roberto Danovaro. Now, she is attending her PhD in Marine Biology and Ecology at the University of Ancona. Her publications are:

1. Mirto S., Gambi C., Cecchi M., Manganaro A. (1999). Influences of biodeposition due to intensive mussel culture on coastal meiofaunal assemblages: preliminary results. *Atti Associazione Italiana Oceanologia Limnologia* 13 (1) 30 1-307.

2. Manini E., Gambi C., Danovaro R., Fabiano F. (1999). Meiobenthic grazing rates on bacteria and microphytobenthos sediment in the northern Adriatic sea: preliminary results. (in press *Biologia Marina Mediterranea*)

3. Danovaro R., Gambi C., Mazzola A., Mirto S. (1999). Influence of artificial reefs on the surrounding infauna: analysis of meiofauna. (submitted to *ICES Journal of Marine Sciences*)

4. Danovaro R., Gambi C., Manini E., Fabiano M. (1999). Meiofauna response to a dynamic river plume front. (submitted to *Marine Biology*)

Simone Mitro

University of Palermo, Animal Biology Department, Via Archirafi, 18, Palermo, 90123, Italy
E-mail: mitro@popcsi.unian.it

Degrees in Biological Sciences at the University of Palermo (1995). PhD in Marine Environmental Sciences at the University of Messina (1998). Research fellow in Aquaculture at the University of Jhcona. Member of

several national and international scientific associations, participated to several national programmes.

Simone Mirto has focussed his research activity on benthic ecology and meiofaunal response to organic matter enrichment (density, community structure and biodiversity). Author of 28 scientific articles.

Caroline Wall

CEFAS, Burnham Laboratory, Remembrance Ave. Burnham-on-Crouch, Essex, CM0 8HA, UK, E-mail: C.M.Wall@cefas.co.uk

I am currently working at the Centre for Environment Fisheries and Aquaculture Science in Burnham, Essex. This is an executive agency of MAFF and carries out a wide variety of aquatic research. I began working on Meiofauna quite recently and am concentrating on free-living marine nematodes. I am presently working on a project to determine the effects of Oil Spill Bioremediation techniques on both Meiofauna and Macrofauna. I am in the process of analysing the nematodes found at our first field site in Somerset and we are due to set up a further site in Essex this April. I have also been working on the National Marine Monitoring Programme and I am due to start work on a Project concerning the effects of TBT on Meiofauna.

Kelsey Johannessohn

1756 34th Avenue, Vero Beach, Florida 32960.

I am a ninth grade student in Vero Beach, Florida in the United States. I have been doing science research projects on meiofauna for the past three years. An article in *Discovery Magazine* by Robert Higgins inspired my first project. I compared the amount of meiofauna on a public, well used beach to an area of beach not often used. My second project dealt with the vertical distribution of meiofauna in relation to the incoming tide. This year I want to study the affect of salinity levels on meiofauna. I am very interested in meiofauna and enjoy working with them. I plan on doing science fair projects focused around meiofauna during my next three years in high school.

Address changes or New e-mail information

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Regina Wetzer

Research and Collections
Natural History Museum of Los Angeles County
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Los Angeles, CA 90007,
USA

RECENT LITERATURE

(To make this section as complete as possible, please do not forget sending literature information via e-mail to the editor when you publish papers.)

Adrianov AV and Malakhov VV (1998)
Cephalorhyncha of the World Ocean. Moscow.

Scientific Press Ltd. ISBN 5-87317-067-3 (Bilingual English-Russian edition).

Adrianov AV and Malakhov VV (1998) Kinorhyncha. In: Reproductive biology of Invertebrates (Ed by Adiyodi KG & Adiyodi RG). Vol.9 (Ed by Jamieson BGM). Oxford & IBH Publishing Co. New Dehli, Calcutta. Part A. pp.193-211.

Aravind L and Subramanian G (1999) Origin of multicellular eukaryotes - insights from proteome comparisons. *Current Opinion in Genetics and Development* 9(6):688-694.

Artois TJ and Schockaert ER (1999) Interstitial fauna of the Galapagos: Porrocytidinae (Platyhelminthes Polycystididae).

Bernhard JM, Buck KR, Farmer MA, and Bowser SS (2000) The Santa Barbara Basin is a symbiosis oasis. *Nature* 403: 77-80.

Boetius A and Lochte K (2000) Regional variation of total microbial biomass in sediments of the deep Arabian Sea. *Deep Sea Research Part II Topical Studies in Oceanography* 47:149-168.

Boon AR, Duineveld GCA and Kok A (2000) Benthic organic matter supply and metabolism at depositional and non depositional areas in the North Sea. *Estuarine Coastal and Shelf Science* 49(5): 747-761.

Bouck L and Thistle D (1999) A computer-assisted method for producing illustrations for taxonomic descriptions. *Vie et Milieu* 49(2/3):101-105.

Bouck L, Thistle D and Huys R (1999) Systematics and phylogeny of *Zausodes* C.B. Wilson, 1932 (Copepoda, Harpacticoida, Harpacticidae), including three new species from the northern Gulf of Mexico. *Bulletin of the Natural History Museum London (Zoology Series)* 65(2):73-122.

Brinkhurst RO (1999) Retrospect and prospect: reflections on forty years of study of aquatic oligochaetes. *Hydrobiologia* 406: 9-19.

Casellato S (1999) Oligochaetes of Karavasta Lagoon (Albania). Preliminary results. *Hydrobiologia*, 406: 175-182.

Cook AA, Lamshead PJD, Hawkins LE, Mitchell N and Levin LA (2000) Nematode abundance at the oxygen minimum zone in the Arabian Sea.. *Deep-Sea Research II, (Benthic Processes in the Deep Arabian Sea)* 47:75-85.

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