

PSAMMONALIA

The Newsletter of the
International Association of Meibenthologists

Number 136, March 2003.



**Confused by taxonomy, a nematode attempts to tie a
gordian knot in the mistaken belief that it is a
nematomorph – *with apologies to Ronald Searle***

Composed and Printed at:
The Natural History Museum,
Cromwell Road, London,
SW7 5BD, United Kingdom.

International Association of Meiobenthologists

PSAMMONALIA

EXECUTIVE COMMITTEE

- John Lambshead** - *The Natural History Museum, Department of Zoology, Cromwell Road, London, SW7 5BD, UK*
Chairperson
- Yoshihisa Shiriyama** - *Seto Biological Laboratory, Kyoto University, Wakayama Prefecture, 649-2211, JAPAN*
Past Chairperson
- Ann Vanreusel** - *Lab Morphologie, Universiteit Gent, Ledeganckstraat 35, B-9000 Gent, BELGIUM*
Treasurer
- Robert Feller** - *Belle Baruch Institute for Marine Science and Coastal Research, University of South Carolina, Columbia SC 29208, USA*
Assistant Treasurer and Past Treasurer
- Thais-N Corbisier** - *Universidade de Sau Paulo, Instituto Oceanografico, 191 Cidade Universitaria, Sau Paulo, 05508-900, BRASIL*
Term Expires 2004
- Antonio Todaro** - *Dipartimento di Biologia Animale, Univ. di Modena e Reggio Emilia, Via Campi 213/d, I-41100 Modena, ITALY*
Term Expires 2004
- David Thistle** - *Department of Oceanography, Florida State University, Tallahassee, FL 32306-3048, USA*
Term Expires 2004
- Guy Boucher** - *URA 699 CNRS, Biologie des Invertebrates Marins MNHN, Pavillon Chevreul 57, Rue Cuvier 75005, Paris, FRANCE*
Term Expires 2004

EX-OFFICIO EXECUTIVE COMMITTEE (PAST CHAIRPERSONS)

- | | |
|---|--|
| Robert P. Higgins Founding Editor, 1966-1967 | Carlo Heip - 1982-1983 |
| W. Duane Hope , 1968-1969 | Olav Giere - 1984-1986 |
| John S. Gray , 1970-1971 | John W. Fleeger - 1987-1989 |
| Wilfried Westheide - 1972-1973 | Richard M. Warwick - 1990-1992 |
| Bruce C. Coull - 1974-1975 | Paul A. Montagna - 1993-1995 |
| Jeanne Renaud-Mornant - 1976-1977 | Magda Vincx - 1996-1998 |
| William D. Hummon - 1978-1979 | Yoshihisa Shiriyama - 1999-2001 |
| Robert P. Higgins - 1980-1981 | |

BOARD OF CORRESPONDENTS

- Bruce Coull** - *School of the Environment, University of South Carolina, Columbia, SC 29208, USA*
- Roberto Danovaro** - *Faculta de Scienze, Universita di Ancona, ITALY*
- Andrew Gooday** - *SOC, Empress Dock, Southampton, SO14 3ZH, UK*
- Duane Hope** - *Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution, Washington, DC 20560, USA*
- Tom Moens** - *University of Gent, Marine Biology Section, K.L. Ledeganckstraat 35, B-9000 Gent, BELGIUM*
- Nic Smol** - *Vakgroep Biologie, Ledeganckstraat 35, B-9000 Gent, BELGIUM*
- Susetiono** - *RD Centre for Oceanology, Indonesian Insitute for Sciences, Jakarta, INDONESIA*
- Alex V. Tchesunov** - *Dept. Invertebrate Zoology, Biology Faculty, Moscow Lomonosov State University, Moscow 119899, RUSSIA*
- Zhang Zhinan** - *Department of Marine Biology, Ocean University of Qindgao, Qindgao, Shangdong, PEOPLES REPUBLIC OF CHINA*

You may make your donations to the Bertil Swedmark Fund directly to the IAM bank account: Lloyds TSB, 8 Royal Parade, Plymouth PL1 1HB, UK. - Account Number 6586667, Sort Code 30-96-68.

EDITORIAL

Spring has finally come to the great city of Old London Town. For the last fortnight we have had warm balmy days, tree blossom, and sex-crazed squirrels in the park. However, yesterday the British weather decided to bring us firmly back to reality with frost and snow. At the risk of waxing lyrical it concerns me that this is a model for the fortunes of meiofaunology. Over the last ten years or so the members of this society have established meiofaunology at the heart of scientific research and conservation. But in many ways, we have gone backwards. If we just examine my personal field of marine nematology then my subjective impression is that there are fewer active researchers now than when I was a student – and that was aeons ago. Have we failed to demonstrate the value of our science or did we succeed all too well and publish ourselves out of work?

On a different note, have you checked your e-mail address is correct at the meiofauna website overseen by web-supremo Keith ‘hold on while I fish this copepod out of the hard drive’ Walters? Remember we will be moving to an electronic version of the newsletter at the end of the year.

The site address is <http://www.meiofauna.org/>



“What the well-dressed web supremo is wearing this summer. T-shirt by Armani, beard by the American Society of Ratcatchers”

John Lambshead

BOOK REVIEW

Fresh Water Meiofauna – Biology and Ecology

Edited by SD Rundle, AL Robertson & JM Schmid-Araya

Published by Backhuys, 2002, ISBN 90-5782-109-5

This book developed from a special edition of the journal of Freshwater Biology on lotic meiofauna and it consists of fourteen chapters each written by published authors in their fields. The first seven chapters cover faunal groups, Microturbellaria, Rotifera, Gastrotricha, Nematoda, Hydrachnidia, Microcrustacea, Tardigrada; one of the largest being devoted to the Nematoda (and quite right too). Other chapters address ecological issues.

Fresh water Meiofauna is a useful volume to have on one’s shelf as a guide to the main freshwater meiofauna and some of the topical ecological issues. I confess to some disappointment that there isn’t more than one chapter on biodiversity and biogeography but I guess there are always space limitations. This is a worthwhile volume that I envisage using as a valuable reference.

John Lambshead

MEETINGS



SYMPOSIUM VENUE

The conference will be held at the University of Aveiro (Auditorium in the Rectorate and Administration Building). The campus is situated near the lagoon (Ria de Aveiro) and within walking distance of the city centre. Aveiro is a town in the centre of Portugal that can be easily reached by train from the airports of Lisbon (270 km south, about 2.5 hours by train) and Porto (70-km north, 50 minutes by train). The best way to get to the train station from the airport is by taxi either in Lisbon (the closest station is Oriente), or in Porto (Campanhã)

THEME AND SUB-THEMES

The 38th EMBS will be convened under the theme Marine Biodiversity. Participants are invited to submit oral and poster presentations under four sub themes:

Patterns and processes (e.g. from genome to ecosystem level, local to global scales, 'hot spots' and unique environments, genetic erosion, the role of natural disturbance, habitat heterogeneity and biotic interactions in generating or maintaining biodiversity).

Assessment (techniques: e.g. mapping, imagery, remote sensing; evaluation tools: eg new indices, biological and structural indicators)

Threats (e.g. pollution, eutrophication, habitat fragmentation, introduced species, other sources of disturbance)

Management and conservation (e.g. MPAs, habitat restoration, ecosystem management)

SYMPOSIUM FORMAT AND PROCEEDINGS

Each day will start with a 30-minute lecture given by a keynote speaker. All other oral presentations will have the duration of 15 minutes (including a few minutes for discussion). No parallel sessions will be held, in order to give all participants the chance to attend all presentations and to contribute to the discussion. Posters should not exceed 90 cm in width and 120 in length. The posters will be displayed during the meeting and can be discussed during coffee breaks.

English is the official language of the Conference, both for oral presentations and poster displays. No translation facilities will be available.

Arrangements are being made to publish the Proceedings in *Hydrobiologia*. All papers must be in English and will be subjected to peer review.

DATES TO REMEMBER

15th of February 2003: pre-registration
28th February 2003: second announcement
15th May 2003: abstract submission and early registration
July 2003: third announcement with scientific programme

ORGANIZING COMMITTEE

Henrique Queiroga, Universidade de Aveiro
Marina Ribeiro da Cunha, Universidade de Aveiro
Maria Helena Moreira, Universidade de Aveiro
Victor Quintino, Universidade de Aveiro
Ana Maria Rodrigues, Universidade de Aveiro
João Serôdio, Universidade de Aveiro
Maria Ângela Cunha, Universidade de Aveiro

For more information please go to:
<http://www.bio.ua.pt/embs38/index.html>

The 37th CIESM Congress - Barcelona, Spain 7-11 June 2004

CIESM congresses have been held regularly on the Mediterranean shore since 1919 (see highlights of 36th congress in Monte Carlo). They aim to facilitate the exchange of information on marine and coastal research in the Mediterranean and Black seas. Any marine scientist, coastal planner, engineer or student involved or simply interested in the dynamics and evolution of the Mediterranean environment is much welcome to attend. The 37th congress will be held in Barcelona, at the kind invitation of the Government of Spain, one of the founding members of CIESM.

It will take place at the newly-built Forum center located on the seafront near the mouth of the Besós river. Our congress will contribute to the first Universal Forum of Cultures, hosted by the authorities of Catalunya and Barcelona from May to September 2004, an event which will provide a wide range of art festivals, exhibitions, lectures and conferences.

REGISTRATION

Regular fees
140 EUR. if paid before 15 January 2004
230 EUR. thereafter.

Reduced fee: 75 EUR. Available to researchers from countries experiencing economic difficulty (all countries of the Mediterranean south shore, Black Sea). Students with a bona fide University certificate.

Registration under the above categories will provide access to all sessions and social events of the Congress as well as selected events of the Forum of Cultures. It will also entitle the participant to a volume of the CIESM Proceedings available at the start of the Congress.

Accompanying persons can buy a pass, which will allow access to the social events of the Congress plus to selected events of the Forum (but not to the scientific sessions).

45 EUR. if paid before 15 April 2004
75 EUR. thereafter.

For more information please go to:
<http://www.ciesm.org/events/congr.html>

The IUBS 12th International Symposium on Biological Indicators, 2 - 5 December 2003. City University of Hong Kong, Kowloon, Hong Kong.

The theme of the 12th Symposium will be "Bioindicators for Environmental Management". This symposium will provide a forum for local and overseas experts to meet and discuss their research findings and the latest advances in bioindicators, with special reference to their applications in environmental management such as setting environmental quality objectives, environmental impact assessment, risk assessment, environmental monitoring and control.

The Symposium will primarily focus on the following 4 key areas:-

1. Recent advances in molecular and genomic bioindicators
2. Quantitative biological indicators and biomarkers
3. Population, community and ecosystem responses as bioindicators
4. Application of bioindicators in environmental management (e.g. setting environmental quality objectives, environmental impact assessment and risk assessment, environmental monitoring and environmental control)

SYMPOSIUM FORMAT AND CALL FOR PAPERS

The Symposium will consist of keynote and invited lectures, oral presentations and poster displays by participants. English will be the official language for the entire event. Participants intending to contribute papers should submit an abstract of about 200 words to the Symposium Secretariat before 1 August 2003. Article title, authors' names, their affiliations and the abstract should be sent via e-mail to 'bhsym@cityu.edu.hk'. Authors should specify whether they prefer oral presentation or poster display.

SYMPOSIUM VENUE

The Symposium will be held on the campus of the City University of Hong Kong. The University is located at Kowloon Tong, which is a major traffic hub from which one can travel to other parts of the Kowloon Peninsula and Hong Kong Island by Mass Transit Railway (MTR), or to the New Territories by Kowloon-Canton Railway (KCR). Rail transportation from Hong Kong's new Chek Lap Kok Airport is via the Airport Express to

Central, where a connection can be made with the MTR to Kowloon Tong. Travelling time from the Airport to City U is about 50 minutes.

REGISTRATION

US\$400.00 for registration on or before 15 September 2003
US\$450.00 for registration after 15 September 2003
Students Rate: US\$120.00 before 15 September 2003, US\$200.00 after 15 September 2003
Registration fee includes all symposium materials, reception, tea and coffee breaks, and the symposium banquet. Lunch will not be provided.

For more information please go to:
<http://www.cityu.edu.hk/bch/sym2003/>

10th Deep-Sea Biology Symposium. Oregon Coast, USA. 25 – 29 August 2003

The 10th Deep-sea Biology Symposium will be held at Coos Bay, Oregon, USA from 25-29 August 2003.

It will be hosted by The Oregon Institute of Marine Biology (University of Oregon). Oral presentations and poster sessions will be held in the 500-seat performing arts center on the Campus of Southwestern Oregon Community College.

This modern campus lies in coniferous forest on the shore of Empire Lake, within the Coos Bay city limits and just minutes away from the city of North Bend and the fishing village of Charleston.

This meeting will include an opportunity to socialise on the OIMB campus in Charleston and a trip down the scenic Southern Oregon coast, terminating in a jet boat trip on the wild and scenic Rogue River.

Breakfasts and lunches will be available at reasonable prices in the conference centre on campus. The conference venue is within walking distance of Pizza Parlours, a Mexican restaurant, hamburger joints etc., but several miles away from the nearest bars and better restaurants where one might want to socialise in the evenings.

There is no public transportation except for taxis. We plan to provide an evening bus service (at a nominal charge to users) that will carry people to and from eating areas, but strongly recommend that delegates rent cars wherever possible.

REGISTRATION

It is preferred that delegates register over the internet by filling out and submitting the form from this site. Alternatively the form may be printed out and faxed from the following site. (<http://darkwing.uoregon.edu/%7Eoimb/deeps/ea/registrationform1.html>).

Payments must be made in U.S. funds by check or direct bank transfer. Credit card numbers cannot be accepted. Details of costs and payment methods can be found on the registration form.

Registration includes the cost of the excursion and river trip, the program, some transportation costs, the opening reception and coffee breaks. The banquet, which will be an outdoor affair at OIMB with excellent food and drink, is priced separately.

The deadline for early registration and abstract submission is May 1st, 2003. Abstracts will not be accepted after this date. Registration will incur a slightly higher fee. In the event that a delegate finds it necessary to withdraw fees will be refunded in full until August 1st 2003; later withdrawals will be dealt with on a case by case basis, with the amount refunded dependant on expenditures that have already been made.

Oral contributions and posters from any field of deep-sea biology are welcome, but we expect to organise some sessions around the following thematic areas, all of which have been suggested by delegates:

Human impacts and exploration of the deep sea.

Reproduction and recruitment.

Experimental community ecology.

Physiological of deep-sea and mid-water animals.

Biology of the deep Gulf of Mexico.

History of deep-sea biology.

Population dynamics and genomics.

Benthic-pelagic coupling.

For more information please go to:
<http://darkwing.uoregon.edu/~oimb/deepsea/fronpage.html>

NEWS FROM MEMBERS

MeioChile.

I recently set up the MeioChile website (www.meiochile.cl) in the hope of encouraging more people to study meiofauna in Chile and to help those who do to communicate more with each other. Currently the site is a one man project though I hope in the future others will contribute to its pages. Eventually the site will be available in both Spanish and English, though at the moment only the English is available. The translation is in progress, but my Spanish is far from perfect. Currently the site has pages, at various stages of construction, on sampling and sample processing (provided by the Darwin nematode project), meiofauna from the sedimentary and rocky-shore environments, ecotoxicology, references (general, Chilean and keys), and a forum (my personal soap-box). In addition there are pages on various interstitial taxa including; foraminifera, turbellaria, nematodes, harpacticoids, mystacocarida, gastrotrichs, polychaetes, nemertean, oligochaetes, kinorhynch, ostracods, halacarids and bryozoans. Some of these pages include galleries of photos of the wee beasties I've encountered recently. Unfortunately for a number of reasons, mostly personal, I am leaving Chile soon and returning to the UK to look for work. I have web hosting paid for until the end of November, after that I will try to make other arrangements to keep the site on the web. I would strongly encourage others to follow my lead and set up meiofauna sites concentrating on their local fauna. Web hosting and domain names are now affordable and HTML is surprisingly easy to learn.

Regards Matthew R. Lee.

mlee@genes.bio.puc.cl

leemr@btopenworld.com

Dear Colleagues:

Last February, my supervisor from Argentina, Dr. Catalina T. Pastor de Ward and Professor Dr. Richard M. Warwick were in Havana and we had the opportunity to participate in the Training Workshop on Marine Biodiversity and Rapid Assessment, Statistical Analysis and Interpretation of Marine Community Data using PRIMER for Windows (v5).

I conceived this workshop with the sponsor of UNDP/GEF Program for Sustainable Management of Sabana-Camagüey Archipelago (NE platform of Cuba) and the leader of workshop was Prof. R. M. Warwick.

This training was very useful and helpful for our work. I continue working on the inventory of free-living marine nematodes in our shallow waters. At the same time I'm working on Environmental Impact Assessment for oil prospection offshore.

Cecilia López-Cánovas.



My address:

Instituto de Oceanología
Ave 1ra No. 18406 e/ 184 y 186.
Reparto Flores. Playa.
Ciudad Habana. CP 12 100
Cuba.

E-mail address:

<mailto:cesl2000cu@yahoo.com>

<mailto:cecilia@cesigma.com.cu>

NEW MEMBERS

Maria Herminia Cornejo Rodriguez
Cenaim-Espol Foundation
Campus Politecnico Km 30.5 Via la Costa
Edificio de Tecnologías, Escuela Superior
Politecnica del Litoral
Guayaquil-Guayas
ECUADOR

Tel: 593-4-2269751-494

Fax: 593-4-269492

E Mail: marecornejo@hotmail.com

Research Interests:

Cenaim-Espol Foundation is an aquaculture research centre; I work at the Environmental Analysis Laboratory.

My investigations are related with the ecology of infauna (Nematoda and Polychaeta) of shrimp pond bottoms and I also work at adjacent areas to evaluate the impact, positive or negative, of these activities on the natural environment.

The Seal of Approval!

It seems that some problems just won't go away, and that meiofaunologists will always be searching for the perfect slide sealant to keep our specimens safe and sound. My little note in the last edition of *Psammonalia* generated some responses from fellow members and with their permission, I reproduce them here.

From Stephen Jarvis:

"...I was interested in your note about sealants. Now that I am working in the world of macrofauna it would be extremely useful to have something that would seal a fairly thick preparation (like an oligochaete) in something like lactophenol or glycerol. Christer Erseus recommends Canada balsam but that requires dehydration. Nail varnish is out of the question and, to be honest, I have had problems with this even with copepod slides.

I tried candle wax but this is not very "permanent", and araldite, which is not happy bonding a "wet interface". I keep meaning to go into a chandlers shop to see if there isn't some kind of cement that yachty people use on their boats. Have you tried this avenue? There must be something out there that doesn't involve the accidental synthesis of TNT! If I find anything I'll let you know."

Dr. Stephen Jarvis

Institute of Estuarine and Coastal Studies
University of Hull
Cottingham Road
Hull
HU6 7RX
UNITED KINGDOM

And from Warwick Nicholas:

"Regarding your letter in *Psammonalia* about Gurr's Glyceel. You might find the following note worth including in the next issue. According to 'Laboratory Methods for Work with Plant and Soil Nematodes' Ministry of Agriculture and Fisheries. HMSO, 1951, Glyceel started off as Thorne's Zut (1935).

I made up a mixture for my self using linseed oil from the supermarket and histological collodion for the nitrocellulose. It ringed glycerol mounts OK, but proved too brittle. I suspect commercial Gurr's Glyceel contains an alternative polymer to nitrocellulose.

Some 20 years ago, while on a visit to the UK, I was offered White Cement as an alternative. The nematode specimens in glycerol mounts

ringed with this cement. whose formula can probably be found in a old microscopists formulary, are still in excellent condition."

The formula for Glyceel/Zut given in 1951 was:

Archer Daniels Midland 100, polymerised linseed oil (American) or Younghusband. Barnes & Co., Alcohol - Soluble T.V. linseed oil (British)	31.75 g
Industrial Methylated Spirit	4.76 g
Nitrocellulose, 1/2 second cotton (Arnerican) or I.C.I. Nitrocellulose HX 30/50 (British). Both moistened with 30% by weight of Industrial Methylated Spirit.	22.67 g
Butyl acetate	20.41 g
Toluol (sulphur-free)	20.41 g
Total	100.00 g

Warwick Nicholas

Division of Botany and Zoology.
Australian National University,
Canberra, ACT, 0200
Australia

Here at the Natural History Museum in London, we have been making our glycerine mounts using the wax ring method (de Maeseneer & d'Herde, 1963 – and also in the MAFF Handbook mentioned by Warwick Nichols) which produces good results once the technique has been perfected. The wax has to be a paraffin wax with a fairly low melting point, which may explain why candle wax is not so good. The wax produces a good seal but one which isn't very strong. In the past, we used to additionally ring our wax mounts with glyceel to provide a mechanically strong mount, but one which could still be broken if an animal needed to be remounted.

I've not found a formula for "White Cement" yet but I have found a supplier and will be testing this sealant soon. Hopefully, our slides will then last as well as Warwick's ones. Any more suggestions?

Tim Ferrero

Reference:

de Maeseneer, J. & d'Herde, J. (1963)
Méthodes utilisées pour l'étude des anguillulules libres du sol. *Revue Agric., Brux.* 16:441-447.

Contacting Psammonalia:

Please send any news, articles or pictures to:

psammon@nhm.ac.uk

Or you can write to us at the Natural History Museum – the address is on the front page.

Editorial Board

John Lamshead (President)

Tim Ferrero (Executive Editor)

Nicola Mitchell (Production Editor).

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

RECENT LITERATURE

Accornero, A., Picon, P., de Bovee, F., Charriere, B. & Buscail, R. (2003). Organic carbon budget at the sediment-water interface on the Gulf of Lions continental margin. *Continental Shelf Research* **23**: 79-92.

Atilla, N., Wetzel, M. A. & Fleeger, J. W. (2003). Abundance and colonization potential of artificial hard substrate-associated meiofauna. *Journal of Experimental Marine Biology and Ecology* **287**: 273-287.

Azovskii, A. I. & Chertoprud, E. S. (2003). Spatio-temporal dynamics of the White Sea littoral Harpacticoid community. *Oceanology* **43**: 103-111.

Carvalho, F. P., Gonzalez-Farias, F., Villeneuve, J. P., Cantani, C., Hernandez-Garza, M., Mee, L. & Fowler, S. W. (2002). Distribution, fate and effects of pesticide residues in tropical coastal lagoons of northwestern Mexico. *Environmental Technology* **23**: 1257-1270.

De Troch, M., Fiers, F. & Vincx, M. (2003). Niche segregation and habitat specialisation of harpacticoid copepods in a tropical seagrass bed. *Marine Biology* **142**: 345-355.

Duft, M., Fittkau, K. & Traunspurger, W. (2002). Colonization of exclosures in a Costa Rican Stream: Effects of macrobenthos on meiobenthos and the nematode community. *Journal of Freshwater Ecology* **17**: 531-541.

Ferrari, F.D. & Ivanenko, V.N. 2001. Interpreting segment homologies of the maxilliped of cyclopoid copepods by comparing stage-specific additions of setae

during development. *Organisms Diversity & Evolution* **1**: (2) 113-131.

Gagarin V.G. 2000. New species of free-living freshwater nematodes from Eurasia. *Zoosystematica Rossica*. **9**: (1) 11-17.

Gagarin V.G. & Gusakov V.A. 2000. *Tridentulus brzeskii* sp.n. (Nematoda, Monhysteridae) from freshwater bodies of Central Russia. *Annales Zoologici (Warszawa)*. **50**: (2) 221-223.

Gagarin, V. G. & Holovachov, O.V. 2001. *Tridentulus palustris* sp.n. from Ukraine (Nematoda: Monhysterida) with a key to the genus *Tridentulus* Eyualem et Coomans, 1995. *Russian Journal of Nematology*. **9** (2) 113-117.

Gagarin, V.G. & Gusakov, V.A. 2001. *Aporcelaimellus saprophyllus* sp.n. (Nematoda: Dorylaimida), a new fresh water nematodes from Central Russia. *Zoosystematica Rossica*. **10**: (1) 11-14.

Gagarin, V.G. 2001. New species of free-living nematodes from Biwa Lake and inflowing stream (Honshu Island, Japan). *Zoologicheskyy Zhurnal* **80**: (1) 12-25.

Gagarin, V.G. 2002. A review of the genus *Arctidorylaimus* Mulvey et Anderson, 1979 (Dorylaimida) with description of *Arctidorylaimus gigas* sp.n. and *A. kurenkovi* sp.n. from Russia. *Nematology* **4**: (1) 25-34.

Gagarin V.G., Kolosova N.V., Tchesunov A.V. 2002. Free-living nematodes (Nematoda) of Lake Glubokoe. *Proceedings of Hydrobiological Station "Lake Glubokoe"*. (Eds) N.M. Korovchinsky & N.N.Smirnov. Volume 8. Tula: Grif and K^o. p. 71-111.

George, K. H. & Schminke, H. K. (2002). Harpacticoida (Crustacea, Copepoda) of the Great Meteor Seamount, with first conclusions as to the origin of the plateau fauna. *Marine Biology* **141**: 887-895.

Gooday, A. J. (2002). Organic-walled allogromiids: Aspects of their occurrence, diversity and ecology in marine habitats. *Journal of Foraminiferal Research* **32**: 384-399.

Gwyther, J. (2003). Nematode assemblages from *Avicennia marina* leaf litter in a temperate mangrove forest in south-eastern Australia. *Marine Biology* **142**: 289-297.

- Heptner, M. V. & Ivanenko V. N. 2002. Copepoda (Crustacea) of hydrothermal ecosystems of the World Ocean *Arthropoda Selecta* **2**: 18 pp.
- Heptner, M. V. & Ivanenko V. N. 2002. Hydrothermal vent fauna: composition, biology and adaptation. Copepoda in A. Gebruk, editor, Biology of hydrothermal systems. Moscow, KMK. 159-176.
- Irwin, S. & Davenport, J. (2002). Hyperoxic boundary layers inhabited by the epiphytic meiofauna of *Fucus serratus*. *Marine Ecology-Progress Series* **244**: 73-79.
- Ivanenko V.N. & Ferrari, F.D. 2002. A new genus and species of the family Dirivultidae (Copepoda, Siphonostomatoida) from a deep-sea hydrothermal vent at the Juan de Fuca Ridge (Pacific ocean) and comments of dirivultid distribution. *Arthropoda Selecta* **3**.
- Ivanenko V.N., F.D. Ferrari, A.V. Smurov. 2001. Nauplii and copepodids of *Scottomyzon gibberum* (Copepoda: Siphonostomatoida: Scottomyzontidae, new family), a symbiont of *Asterias rubens* (Asteroidea). *Proceedings of the Biological Society of Washington*. **114**: 237-261.
- de Jesus-Navarrete, A. & Herrera-Gomez, J. (2002). Vertical distribution and feeding types of nematodes from Chetumal Bay, Quintana Roo, Mexico. *Estuaries* **25**: 1131-1137.
- Leguerrier, D., Niquil, N., Boileau, N., Rzeznik, J., Sauriau, P. G., Le Moine, O. & Bacher, C. (2003). Numerical analysis of the food web of an intertidal mudflat ecosystem on the Atlantic coast of France. *Marine Ecology-Progress Series* **246**: 17-37.
- van der Loeff, M. M. R., Meyer, R., Rudels, B. & Rachor, E. (2002). Resuspension and particle transport in the benthic nepheloid layer in and near Fram Strait in relation to faunal abundances and Th-234 depletion. *Deep-Sea Research Part I-Oceanographic Research Papers* **49**: 1941-1958.
- Michel, C., Nielsen, T. G., Nozais, C. & Gosselin, M. (2002). Significance of sedimentation and grazing by ice micro- and meiofauna for carbon cycling in annual sea ice (northern Baffin Bay). *Aquatic Microbial Ecology* **30**: 57-68.
- Miljutin D. M. & Tchesunov A. V. 2001. On the histological anatomy of *Benthimermis megala* Petter, 1987, a giant nematode from Norwegian deep-sea (Nematoda: Benthimermithidae) *Nematology* **3**(6): 491-502.
- Mokievsky, V. O. 2000. Deep-water meiobenthos researches in the White Sea. *Berichte zum Polarforschung*. **359**: 21-22.
- Mokievsky, V. & Azovsky, A., 2002. Re-evaluation of species diversity patterns of free-living marine nematodes. *Marine Ecology Progress Series* **238**: 101-108.
- Montagna, P. A., Kalke, R. D. & Ritter, C. (2002). Effect of restored freshwater inflow on macrofauna and meiofauna in upper Rincon Bayou, Texas, USA. *Estuaries* **25**: 1436-1447.
- Pinckney, J. L., Carman, K. R., Lumsden, S. E. & Hymel, S. N. (2003). Microalgal-meiofaunal trophic relationships in muddy intertidal estuarine sediments. *Aquatic Microbial Ecology* **31**: 99-108.
- Schratzberger, M. & Jennings, S. (2002). Impacts of chronic trawling disturbance on meiofaunal communities. *Marine Biology* **141**: 991-1000.
- Stead, T. K., Schmid-Araya, J. M. & Hildrew, A. G. (2003). All creatures great and small: patterns in the stream benthos across a wide range of metazoan body size. *Freshwater Biology* **48**: 532-547.
- Suderman, K. & Thistle, D. (2003). Spills of fuel oil #6 and Orimulsion can have indistinguishable effects on the benthic meiofauna. *Marine Pollution Bulletin* **46**: 49-55.
- Tchesunov A. V. 2000. Descriptions of *Pseudosteineria horrida* (Steiner, 1916) and *P. ventropapillata* sp. nov. from the White Sea with a review of the genus *Pseudosteineria* Wieser, 1956 (Nematoda: Monhysterida: Xyalidae) *Annales Zoologici (Warszawa)* **50**(2): 281-287.
- Tchesunov A. V. 2000. Several new and known species from the families Coninckidae and Comesomatidae (Nematoda) in the White Sea. *Hydrobiologia* **435**: 43-59.
- Tchesunov A. V. & Sturhan D. 2002. Redescription of *Dintheria tenuissima* de Man, 1921 (Nematoda: Bastianidae) *Russian Journal of Nematology* **10**(1): 37-42.

Tillman, D. C., Moerke, A. H., Ziehl, C. L. & Lamberti, G. A. (2003). Subsurface hydrology and degree of burial affect mass loss and invertebrate colonisation of leaves in a woodland stream. *Freshwater Biology* **48**: 98-107.

Wu, S. S., Tsutsumi, H., Kita-Tsukamoto, K., Kogure, K., Ohwada, K. & Wada, M. (2003). Visualization of the respiring bacteria in sediments inhabited by *Capitella* sp 1. *Fisheries Science* **69**: 170-175.

Yushin, V.V. & Zograf, Y.K. 2002. Electron microscope study of the spermatogenesis in a free-living marine nematode *Neochromadora poecilosoma* (Chromadorida, Chromadoridae). *Biologiya Morya Vladivostok*, **28**: 47-52 (in Russian).

Yushin, V.V., Coomans, A. & Malakhov, V.V. 2002. Ultrastructure of spermatogenesis in the free-living marine nematode *Pontonema vulgare* (Enoplida, Oncholaimidae). *Canadian Journal of Zoology* **80**: 1371-1382.

Yushin, V.V., Coomans, A., Borgonie, G. & Malakhov, V.V. 2002. Ultrastructural study of cuticle formation during embryogenesis of the free-living marine nematode *Enoplus demani* (Enoplida). *Invertebrate Reproduction and Development*, in press

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. Membership is open to any person who is actively interested in the study of meiofauna. Annual membership dues are 10 euro (\$ 10 US) and you may pay up to 3 years in advance, i.e. 30 euro (\$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 boxes:

- New member (*) Renewing member 10 euro or \$10 Change of address
 Regular membership 10 euro or \$10 Patron or Sustaining membership 50 euro or \$50
I want to receive PSAMMONALIA by Air mail (paper copy) OR E-mail

Name: _____	
Address: _____ _____	
City: _____	State/Province: _____
Zip/Postal Code: _____	Country: _____
Telephone: _____	Fax: _____
E-mail address: _____	
Euro / US\$ _____ enclosed for _____ years.	
<i>Regular Members at 10 Euros or 10 US\$ / Year.</i>	
<i>Patron or Sustaining member at 50 Euros or 50 US\$ / Year.</i>	
Euro / US\$ _____ enclosed to contribute to the Bertil Swedmark Fund.	
Euro / US\$ _____ TOTAL	
VISA/MASTER/EUROCARD No: _____	Expiry: _____
Signature: _____	Date: _____

For North American members: dues can be paid in US dollars. Make checks payable to Intl. Assoc. of Meiobenthologists. Send dues and applications to: Dr. Robert Feller, Belle W. Baruch Institute, Univ. of South Carolina, Columbia, SC 29208 USA

For all other members: dues can be paid in euro.. Make (euro) checks payable to Ann Vanreusel. If possible make use of the credit card transaction possibilities. Send dues and applications to: Dr. Ann Vanreusel, Marine Biology Section, Ledeganckstraat 35, B-9000 Gent, BELGIUM

(*) New members please introduce yourself to the IAM in 10 lines for publication in *Psammonalia*.