PSAMMONALIA

The Newslettter of the International Association of Meiobenthologists



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Editorial

The year 2010 has been the International Year of Biodiversity, launched by the UN in an attempt to warn the global society that the ongoing loss of species will have unpredictable consequences and will seriously affect human well-being. In September 2011, we had the World Conference on Marine Biodiversity in Aberdeen, Scotland. Unfortunately, other commitments did not allow me to participate; but with almost 1000 participants and more than 1100 papers from all around the globe the conference was a big success! If you are interested, you can read some fresh impressions further down in this issue from Evina Gontigaki and Vicky Kalogeropoulou that both participated in the conference.

Among the highlights of the conference were the plenary sessions, particularly those on the link between biodiversity and ecosystem function. With the ever-growing rates of species extinction due to climate change impacts and the expansion of human exploitation even in the deeper areas of our seas, there are great concerns for the imminent loss of the many goods and services provided by the oceans. As a result, marine scientists have shifted their focus to better understand how biodiversity and ecosystem function are related to ecosystem services or, to put it differently, we are interested to predict which, when and where the loss of biodiversity, from genes to species and whole ecosystems, will compromise the functions and services of the oceans. The above concerns are clearly evident by looking at the conference programme, where one could see that the biodiversity and ecosystem function (BEF) relationship covered a major part of the conference. However, as in many other areas and much to my disappointment, meiobenthic experiments on the BEF relationship were virtually absent.

Until now, most BEF studies from aquatic, particularly benthic, systems have dealt either with microbial or macro- and megabenthic communities. This is not without a reason. Microbial communities for example are responsible for most key ecosystem processes such as organic matter mineralization, nutrient recycling, biogeochemical interactions and bentho-pelagic fluxes. Also, it is well known that these processes are enhanced due to the bioturbation activity of the larger organisms (macro- and megafauna). However, BEF experiments on either microbial or macro-megafaunal communities alone are not ideal. In the case of microbial communities, these are never alone in an ecosystem, unlike the usual experimental setup. Additionally, with the vast amount of cells in any given gram of sediment or drop of water it is questionable whether variation in microbial richness is at all meaningful in nature. Experiments with macro- and megafaunal communities also have their flaws. As they have relatively long generation times and a low reproductive potential, they are not suitable for investigating longer-term effects. In addition, although larger organisms are directly responsible for a number of functions, e.g. macrofaunal organisms may rapidly process a large share of the deposited phytodetritus, still most of the processes are due to microbial activity. Moreover, there is always the meiofauna in between, which supposedly plays a significant key role in most processes.

To put it mildly, the lack of BEF studies using meiofauna as the target group to manipulate species richness is unexpected, at the very least. If the regulatory impact of meiofauna on bacteria holds true, either by keeping the population in its reproductive log-phase or by enhancing their biomass through the "gardening" effect, one would assume that they are ideal for such experiments. Some of the advantages of using meiofauna may include: the target-measuring function will still be derived from the global engineers of all functions, the microbial communities; the inclusion of meiofauna in experimental units will resemble more realistically natural ecosystems as there will be more than one trophic level and more than one functional group involved; all the benefits derived from the various interactions between meiofauna and bacteria will still be there (e.g. bioturbation, mechanical breakdown of particles, promotion of bacterial growth through the mucusstabilized burrows and animal trails etc.). So, if meiofauna has so many advantages, what has kept us out of the ongoing BEF debate? Is it the difficulty of manipulating species richness in experimental units? I doubt it, as we have seen over the last decade a large number of experiments where species have been manipulated quite successfully in the lab. In addition, a good practical way to manipulate meiofauna species richness is the dilution method used in microbiology. A constant volume dilution-extinction series, e.g. 10 ml inoculating 100 ml of natural communities, then mixed and 10 ml removed to inoculate the next dilution tube etc. would create a gradient of species loss from complete communities to communities consisting of only the most abundant species. If that is not the problem, then what else is? The only other problem I can think of is our usual reluctance to deal with major ecological issues while they are still hot.

Having said that, I hope that over the next years, meiofauna will have its share in the BEF debate. Maybe this is a train we can't afford to miss and a great opportunity to grasp a "hot" issue and let the world know about our small but active community.

In my previous editorial, I complained about the recent trend in many journals to reject single species descriptions. Of course, we should never

forget Meiofauna Marina, the follow-up of Mikrofauna des Meeresbodens and Microfauna Marina, which for more than 40 years have served our small community by hosting high quality taxonomic papers. The latest volume (No. 19) was published some weeks ago. Unfortunately, this was the last issue in which Andreas Schmidt-Rhaesa, one of the co-founders, acted as editorin-chief. You can read his Editorial as well as the Table of Contents of Volume 19 on Page 6.

The cover cartoon of meiofaunal organisms protesting against species loss induced by climate change was actually inspired from a series of massive protests that have been going on almost weekly over the last year, against the endless austerity measures put forward in Greece. Measures that have resulted from the recent economic crisis and Greece's huge debt problem, which are threatening both Europe's recovery and the future of the euro. As if these were not enough and in the name of applying measures for the further reduction of public expenses, Greece is planning to immediately suppress the annual state funding of HCMR by 30%, with the eventual goal of making it a private institution. If these plans are carried out, then it is almost certain that marine research in Greece will soon die out. Having no other way of protesting against this unprecedented decision, I hope you will excuse my usage of this forum to ask you to sign our petition against these actions. If you agree, please click on the following link http://tinyurl.com/6amt6ac to fill in the petition form.

Till our next rendezvous, I hope you will enjoy the issue, and please keep in touch! All the best.

by Nikos Lampadariou

Editor-in-Chief Nikolaos Lampadariou

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Request for meiofauna images

I have received the following request from Ross Piper who is seeking meiofauna images. If you have any which you would like to share please contact Ross directly. Dear all

I'm currently working on a book that is to be a visual exploration of all the animal phyla for a general audience and I'm looking for good photos of meiofauna, especially representatives of the lesser known phyla. If you have any photographs I'd love to see them. Please email them to ross_piper@yahoo.com

Many thanks in advance.

Ross

Recent Conferences

World Conference on Marine Biodiversity (26 – 30 September 2011, Aberdeen, Scotland, UK)

"Nature is recycling everything, producing no waste. People, on the other hand, are exploiting all natural resources producing huge amounts of waste." This was the first message of the plenary session held by Jean-Michel Cousteau, at the very first day of the 2nd World Conference on Marine Biodiversity held in Aberdeen, Scotland, 26 – 30 September 2011. The conference attracted 930 delegates from 76 different countries, a significantly larger number of participants compared to the first WCMB in 2008, making this conference a necessary ordinance.



Several oral and poster presentations, preliminary results of new projects, final results of old ones, new ideas and lots of information in a stimulating and at the same time tiring week. It was, however, a great opportunity to meet and network with scientists from different fields, having one basic thing in common; marine biodiversity. Thus, before, during and after the end of the conference several workshops and side meetings were held in order to enhance collaborations within already existing projects, to evaluate the legacy of finishing projects and to start new ones.

The organizing committee did a really good job in general and especially regarding the plenary sessions. Each of the speakers spoke to the point, fundamental issues of ecology and ecosystem functioning. The plenary session that made the biggest impression on us was entitled 'Marine biodiversity, ecological capacity and biological insurance: why do those rare species matter?' by Naeem Shahid, professor of the department of ecology, evolution and environmental biology in Columbia University. He highlighted, among other issues, the importance of the rare species which represent the potential biocapacity of the ecosystems, although most ecologists tend to overlook them.

"People protect what they love, but how can you protect something you don't understand?" (Jean-Michel Cousteau). We have to take action as scientists. The take-home messages were few, but essential. We have to become an active link between the policy makers and the stakeholders. To enforce the conservation of several marine ecosystems under threat by determining more Marine Protected Areas (MPAs). To involve socio-economics in our results and formal reports, by evaluating the ecosystem services, in order to make clear to everyone the importance of nature's conservation. What is more, a prompt response is needed, concerning deep-sea ecosystems. The right management of deep-sea functions and services is essential, in order to protect them before they are over-exploited, before it's too late as with so many other ecosystems. So, let's cooperate and make some progress until 2014, when we are all invited in Qingdao, China, for the next World Conference on Marine Biodiversity organized by the Institute of Oceanology and the Chinese Academy of Science.

by Evina Gontikaki and Vicky Kalogeropoulou

Listen to Vicky making her points live from Aberdeen at: http://www.marbigen.org/ content/interviews-imbg-scientists

11th International Conference on Copepoda (10 – 15 July 2011, Merida, Mexico)

Recently, I attended the 11th International Conference on Copepoda (11th ICOC), which took place from 10 to 15 July in Merida (Mexico). A large number of copepodologists attended this meeting in a wonderful place where the participants had the opportunity to discuss recent advances in copepod research. About 65 oral and 97 posters were presented, covering a wide range of topics such as taxonomy, systematics, morphology, ecology, biogeography, molecular biology and genetics.

I found that all talks and poster presentations were very interesting but I would like to focus on those papers combining morphology and genetics. For me, the combined use of morphological and molecular data seems to be the way forward for meiofauna and copepod research.

Among the conference highlights were also the talk and posters presented by Dr. T. C. Kihara on the use of Confocal Laser Scanning Microscopy (CLSM) as a non-invasive method for the study of copepods. The author explained how to use this particular technique to study the morphology of copepods and the 3D models produced from CLSM image stacks were just amazing. I would also like to mention a very interesting and emotional poster session on parasitic and symbiotic copepods, which was organised by the students of Dr. Ju-Shei Ho, who wanted to pay tribute to his work.

For those interested in the papers presented during the conference, a proceeding's volume will be soon available, published from the Journal of Natural History.

 $by \ Maria \ Cand{\acute{a}s}$

ChEss

The first workshop on "Meiofauna from chemosynthetic deep-sea environments", sponsored by ChEss (Census of Marine Life: Biogeography of Deep-Water Chemosynthetic Ecosystems) was held in Ghent, Belgium, July 2010. The aim of this workshop, organized by Sabine Gollner, Ann Vanreusel, and Monika Bright, was to exchange information on meiofauna from chemosynthetic, reducing environments such as

hydrothermal vents, cold seeps, whale falls, sunken wood, and areas of low oxygen that intersect with continental margins and seamounts. An overview of current knowledge is provided in the workshop report. In order to enhance our knowledge and to stimulate further research, the participants provided information on currently described species from these environments, on meiofauna taxonomists who can help with species identification and description, and on DNA protocols. Besides, current projects and scientific interests are presented. The workshop summary report can be downloaded at http://www.hydrothermalvent.com (section ChEss) or at http://tinyurl.com/5sq2oxa

by Monika Bright

Fiftimco

Wonchoel has launched recently the web page for our next conference (http://envisci.hanyang. ac.kr:8001/15th/). The website is still under construction and has minimum information about the venue and Korea. Keep posted for new updates in the near future as more information will become available.

Meiofauna Marina

Below you can read the Editorial and the Table of Contends of Volume 19. More details at http: //www.pfeil-verlag.de/04biol/d7557.php

Editorial

In 2003, Thomas Bartolomaeus and I founded the journal *Meiofauna Marina*, because we felt that a journal dedicated to the study of meiofauna is important. For a series of years the journals *Mikrofauna des Meeresbodens* (1970-1983) and *Microfauna Marina* (1984-1997) served this need, but after the termination of Microfauna Marina in 1984 there was a gap that we wanted to fill with Meiofauna Marina.

Now, nine years later, *Meiofauna Marina* looks back at eight volumes with a number of (at least in my mind) important and interesting papers. It should not be hidden that the manuscript flow and the number of subscriptions periodically go through difficult times. There are different reasons for that and we were and are working on solutions. Now I have to leave the Editorial team of *Meio-fauna Marina*, because new challenges require time and energy. I enjoyed working for the journal, especially the contact with the authors. Very much I have to thank the publisher, Friedrich Pfeil, who always showed an admirable enthusiasm to the journal. Many thanks also to Hubert Hilpert for his expertise in bringing text and figures into excellent format.

Finally, I thank my co-editors. These were Thomas Bartolomaeus in the first years, then Pedro Marinez Arbizu and finally Kai Horst George and Antonio Todaro, who will continue the journal through the next years. I very much wish you good luck with the journal and I am looking forward to continuing interesting editions.

Andreas Schmidt-Rhaesa, Hamburg August 2011

Over the years Andreas has carried out superb work on the behalf of Meiofauna Marina, the best way of thanking him is to continue on his footsteps: we are keenly committed to do so, with the generous help of all of you.

M. Antonio Todaro and Kai H. George, August 2011



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Upcoming conferences

The following important conferences are scheduled for this year:

Fourth International Barcode of Life Conference (28 November – 4 December 2011, Adelaide, Australia)

http://www.dnabarcodes2011.org/

The Consortium for the Barcode of Life in association with the University of Adelaide is organizing the Fourth International Barcode of Life Conference in Adelaide, Australia from 28 November to 3 December 2011. Adelaide is located in the state of South Australia where there is an extraordinary range of attractions to see. Adelaide is the capital city of South Australia.

The Fourth International Barcode of Life Conference will include:

- 28 29 November: Short courses and special presentations on barcoding informatics and lab procedures
- 30 November 3 December: Main Conference

Participants in the Adelaide Barcode Conference will have the option of attending two days of Pre-Conference Training events. For more information visit: http://tinyurl.com/cmo4tkh

2nd ICES/PICES Conference for Early Career Scientists: Oceans of Change (24 – 27 April 2012, Majorca Island, Spain)

http://www.ices.dk/marineworld/oceans/
index.asp

To encourage the participation of early career scientists in international scientific investigations and to promote their involvement in the management of the marine environment, the International Council for the Exploration of the Sea (ICES) and the North Pacific Marine Science Organization (PICES) invited a group of early career marine scientists to form the Scientific Steering Committee (SSC) to plan and organize an international conference for their peers on a marine topic of their own choosing. The resulting conference will be held 24 – 27 April 2012 at Son Caliu Hotel Spa Oasis (Calviá, Majorca, Spain), close to Palma city, the capital of the Balearic Islands. The host is the Mediterranean Institute for Advanced Studies (IMEDEA, CSIC/UIB).

All early career marine scientists who would like to participate must apply for an invitation from the Scientific Steering Committee (SSC). Applicants should be under 35 years in age or have completed a PhD after 2007.

Important deadlines:

- Call for abstracts 31 October 2011
- Application for financial assistance deadline 31 October 2011
- Applicants notified of decisions December 2011
- Invitees to confirm participation January 2012

VIth International Sandy Beach Symposium (23 – 28 June 2012, Mpekweni, Eastern Cape, South Africa)

http://www.sandybeach2012.com/Home

The theme of the VIth International Sandy Beach Symposium is Sandy Beaches 2012: A new paradigm in the face of global change. We stand on the brink of global change, and sandy beaches, as well as adjacent coastal ecosystems, are facing numerous challenges (such as increased storminess, sea level rise, urban development, and resource harvesting), but also new opportunities.

ISBS-VI sees the return of the symposium to its place of origin. With that comes the challenge to re-evaluate current sandy beach paradigms - as developed over the past 30 years - in the light of our changing world. The ISBS-VI therefore aims to identify gaps in understanding and areas previously neglected in sandy beach research, and to promote the development of new paradigms to guide future research.

The VIth International Sandy Beach Symposium will be held in Mpekweni, Eastern Cape, South Africa, from 23 to 28 June 2012. The symposium will be hosted by the Nelson Mandela Metropolitan University.

Participants are encouraged to present their work in a way that may challenge current understanding and schools of thought. Presentations on the application of novel techniques to beach research are also encouraged.

Important deadlines:

- Abstracts due 15 January 2012
- Registration opens 1 March 2012
- Late registration 1 June 2012
- Registration closes15 June 2012

13th International Deep-Sea Biology Symposium (3 – 7 December 2012, Wellington, New Zealand)

http://www.confer.co.nz/deepsea/index. htm

Since 1977 the International Deep-Sea Biology Symposium has typically been held every three years. Following the four year gap between the conference in Southampton, UK (2006) and Reykjavik, Iceland (2010), the next International Deep-Sea Biology Symposium will re-establish an overall three year interval by being held in 2012. The National Institute of Water & Atmospheric Research is organizing the Symposium. The Symposium will take place at the Museum of New Zealand, Te Papa Tongarew, in Wellington, New Zealand.

Important deadlines:

- Call for abstracts open 1 February 2012
- Deadline for abstracts 30 June 2012
- Registration will open in February 2012

6th International Congress of Nematology (May 2014 Cape Town, South Africa)

http://www.sanematodes.com/index.htm

The 6th International Congress of Nematology will be presented by the Nematology Society of Southern Africain (NSSA) during May 2014 in Cape Town, South Africa.

Recent Literature

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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 actively is interested in the study of meiofauna. Annual membership dues are EU\$10 (US\$10) and payment for up to 3 years in advance is possible. New members will receive Psammonalia beginning with the February issue of the year joining. Additional contributions to the Bertil Swedmark Fund, used to support student attendance at the triennial conferences, is encouraged.

Please check the appropriate boxes:

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North American Memb of Meiobenthologists. University of Texas at sna.sharma@utsa.edu	ers: Dues payable in Send dues and applica San Antonio, One U	US dollars by check made pay ation to: Dr. Jyotsna Sharma niversity circle, San Antonio,	yable to the Intl. Assoc. a, Department of Biology, TX – 78249, USA. Jyot-
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Research interests: _

(*) New members are encouraged to introduce yourself to members in a short bio (ca. 10 lines).