

PSAMMONALIA

The Newsletter of the
International Association of Meibenthologists

Number 153, May 2010



Composed and Printed at:
Department of Zoology
Federal University of Pernambuco
Recife, PE, 50670-420 BRAZIL

Homage to Prof. Sebastian A. Gerlach and Dr. Warwick L. Nicholas

52

Oecologia (Berl.) 6, 176–190 (1971)
© by Springer-Verlag 1971

On the Importance of Marine Meiofauna for Benthos Communities

S. A. GERLACH
Institut für Meeresforschung, Bremerhaven, Germany (FRG)

Received November 11, 1970

Summary. 1. In sublittoral sediments of silty sand live about 55000–1300000 meiofauna animals, which is a minimum figure because methods are not absolutely efficient.

2. Meiofauna biomass ranges from 0.2 to 2.0 g wet weight in sublittoral silty sand, that is about 3% of macrofauna biomass.

3. A higher percentage of meiofauna biomass is recorded from brackish water regions, intertidal beaches and from the deep sea, where meiofauna and macrofauna biomass are of the same magnitude.

4. Oxygen consumption in meiofauna animals is between 200 and 2000, in small macrofauna between 200 and 500, and in larger macrofauna between 10 and 100 mm³ O₂/h/g wet weight.

5. The assumption is forwarded that in general meiofauna has a metabolism five times more active than that of macrofauna.

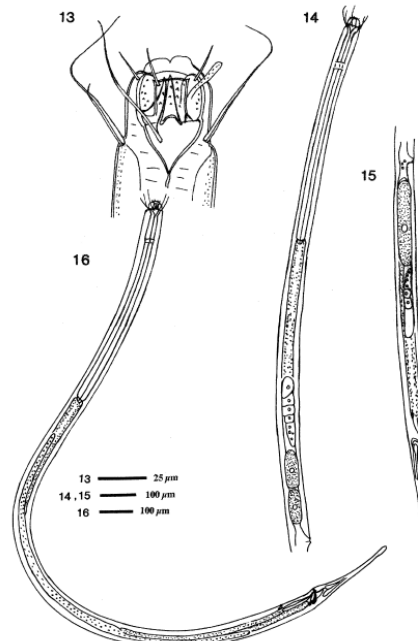
6. Generation time in meiofauna lasts from a few days as was observed in cultures, to one or a few years, as was observed in natural populations. For a generalization the guess is forwarded that three generations per year would be an average meiofauna value.

7. Life cycle turnover rate as calculated from life cycle models of two nematodes is 2.2–3. Multiplied by three annual generations results in an average annual turnover rate of about 9 for meiofauna, which is about five times more than that in macrobenthos.

8. If one compares meiofauna and macrobenthos, meiofauna importance in terms of food consumed and in terms of biomass provided for the food chain is 15% in a community like sublittoral silty sand, although meiofauna in terms of standing stock is just 3% of macrobenthos.

Introduction

Meiofauna is present not only in the interstices of sand but also in soft bottom sediments which contain macrofauna in abundance, and which provide the food for commercially exploited fish and shrimp. For a better understanding of benthos productivity and benthic food chains, it is important, therefore, to evaluate the importance of meiofauna in relation to macrobenthos. In this respect, one has to distinguish between the importance in terms of food consumed and the importance in terms of food provided for the food chain.



Figures 13–16. Holotype male and allotype female of *Otyonchus everhiae* n.sp. 13. Head region of male; 14. Anterior body of female; 15. Posterior body of female; 16. Entire male. *Hydrobiologia* 511: 47–64 (2004)

DON'T FORGET TO RENEW YOUR MEMBERSHIP IN IAM!
THE APPLICATION CAN BE FOUND AT THE END OF THIS ISSUE OR AT:
<http://www.meiofauna.org/appform.html>

The International Association of Meiobenthologists Executive Committee

Paulo Santos <i>Chairperson</i>	Dept. of Zoology, Federal University of Pernambuco, Recife, PE 50670-420 Brazil [pjps@ufpe.br]
Keith Walters <i>Past Chairperson</i>	Dept. of Marine Science, Coastal Carolina University, POB 261954, Conway, SC 29528-6054 USA [kwalt@coastal.edu]
Ann Vanreusel <i>Treasurer</i>	Lab Morphologie, Universiteit Gent, Ladengancjstraat 35, B-9000 Gent, Belgium [ann.vanreusel@UGent.be]
Jyotsna Sharma <i>Assistant Treasurer</i>	Dept. of Biology, University of Texas at San Antonio, San Antonio, TX 78249-0661, USA [Jyotsna.Sharma@utsa.edu]
Monika Bright <i>(term expires 2013)</i>	Dept. of Marine Biology, University of Vienna, Vienna, A-1090, Austria [monika.bright@univie.ac.at]
Tom Moens <i>(term expires 2013)</i>	Ghent University, Biology Department, Marine Biology Section, Gent, B-9000, Belgium [tom.moens@ugent.be]
Kevin Carman <i>(term expires 2010)</i>	Dept. of Biology, A103 Life Sciences, Louisiana State University, Baton Rouge LA 70803 USA [zocarm@lsu.edu]
Emil Olafsson <i>(term expires 2010)</i>	Menntun Consultoría, c/Cava Alta 9, 2°C, Madrid 28005 Spain [emilolafsson@menntun.org]

Ex-Officio Executive Committee (Past Chairpersons)

1966-67	Robert Higgins Founding Editor	1984-86	Olav Giere
1968-69	W. Duane Hope	1987-89	John Fleeger
1970-71	John Gray	1990-92	Richard Warwick
1972-73	Wilfried Westheide	1993-95	Paul Montagna
1974-75	Bruce Coull	1996-98	Magda Vincx
1976-77	Jeanne Renaud-Mornant	1999-2001	Yoshihisa Shirayama
1978-79	William Hummon	2002-04	John Lambshead
1980-81	Robert Higgins	2005-07	Keith Walters
1982-83	Carlo Heip		

Board of Correspondents

Antonio Todaro	Dipartimento di Biologia Animale, Univeristy di Modena e Reggio Emilia, Via Campi 213/d, I-41100 Modena, Italy
Teresa Radziejewska	Department of Palaeoceanology, University of Szczecin, ul. Mickiewicza 18, 70-383 Szczecin, Poland

Webmaster

Jeffrey Baguley	University of Nevada, Reno, Department of Biology, Mailstop 314, Reno, NV 89557 [jeffbaguley@gmail.com]
-----------------	---

Editorial

Bom dia!

Unfortunately I have to begin with some sad news, during the last weeks two important nematologists/meiobenthologists passed away: Prof. Sebastian A. Gerlach and Dr. Warwick Nicholas for whom two friends wrote some nice words. They left us many important achievements during their careers, and are certainly examples to be followed.

Waiting to see most of you at Ghent during our Conference,
Cheers,
Paulo

Next Conference



The International Association of Meiobenthologists is pleased to invite you to participate in its 14th International Meiofauna Conference – FourtIMCO – in Ghent, Belgium, from July 12th – 16th 2010.

See program details in:
<http://www.fourtimco.ugent.be/index.asp>

Other related Conferences

The 11th International Conference on Copepoda will be held in 2011, in Merida, Mexico. For more information on the 11th ICOC, contact the Chairman of the Local Organizing

Committee, Eduardo Suarez-Morales at esuarez@ecosur.mx

New Members

Laura Ryckman, University of Texas Marine Science Institute, 750 Channel View Drive, Port Aransas, TX 78373 USA
e-mail: Ryckman@mail.utexas.edu
Interests: Harpacticoid copepods

Watanabe Hidemi, Graduate School of Information Science and Technology N14W9, 0600814 Sapporo Japan
e-mail: watanabe@ist.hokudai.ac.jp

Change of address

Birger Neuhaus, Museum für Naturkunde Berlin, Invalidenstr 43 D-10115 Germany
e-mail: Birger.neuhaus@mfn-berlin.de

Mathew Richard Lee, Inst Biologia Marine Jurgen Winter, Universidad Austral de Chile, Campus Isla Teja Valdivia Chile
e-mail: matt@matthewlee.org

Obituaries

Sebastian A Gerlach (17.06.2010)

Dear colleagues,
Today the sad news reached me that the former Professor of Benthos Ecology in Kiel, Sebastian A. Gerlach, passed away last Thursday, 17.06.2010. He was weakening since a few years, although there was a recovery from a serious break down in Sweden two years ago. My last encounter with him was when I transported the separate prints of his collected works to the meiofauna

group in Wilhelmshaven.

Prof. Gerlach started his academic career as a meiofauna taxonomist (Nematoda) and doctoral student of Adolf Remane in Kiel and became in 1977

director of the Institut für Meeresforschung in Bremerhaven. He left this place when the AWI was founded to become full professor of benthos ecology and head of the Department of Marine Botany in the Institut für Meereskunde in Kiel (1981). Here he made a second career in pollution research and as coordinator of a large eutrophication project that initiated many other scientific works both in the North Sea and the Baltic region. He also coordinated for HELCOM the Second Periodic Assessment (GESPA) in 1989. He left his chair in 1991 and had an active life as an emeritus professor and sailor with his yacht "GAMLA". He leaves a family behind with his wife Christine and three children. Our sympathy is with his family.

Heye Rumohr (by e-mail)

Vale Warwick L. (Nick) Nicholas
(3 April 1926 – 5 May 2010)

Warwick Nicholas (Nick) was one of the pioneering nematologists in Australia and the world. He died recently after battling cancer with his typical practical resolve since 2003. In addition to his scientific legacy, he leaves his wife Evelyn, 4 adult children and eleven grandchildren. Many colleagues attended his funeral in Canberra.

I knew Nic for thirty years, but this time covers barely half of his very long and wide-ranging scientific career, and it certainly does not cover all the different aspects of his work. Indeed, such was the range of topics, places and people involved that I cannot hope to do justice to them all.

Nick was born in England and had a far from settled childhood under the care of his mother and several relatives. His father died when Nick was quite young. At one stage he and his mother moved to Canada. He attended a number of different schools; from all reports only a few were happy experiences. At one stage, he had an enlarged lymph node removed, and was diagnosed with diphtheria, although after three weeks in diphtheria and scarlet-fever wards the diagnosis turned out to be tonsillitis. After finishing school during the 2nd World War, he trained to become a pilot, first in the UK, then in the USA. Nick had a great deal of flying experience, much of it solo, but the war ended before he took up active service. After the war, pilot training was ceased, and Nick returned to the UK for more training as a radar mechanic. He finished his military service in 1946 as a petty officer.

After demobilization, Nick took up the opportunity to go to university, where he studied zoology and other sciences at the University of Liverpool, graduating in 1951. He completed a doctorate at the Liverpool Institute of Tropical Diseases working on insect-vectoring diseases in west Africa. Through various outside influences Nick was left to complete this research virtually unaided, but it was completed successfully and marked the beginning

of a career-long association with nematodes. Here found his true calling, and his life-long partner, his wife Evelyn.

There followed a period of career instability with various short-term positions and projects, including work on another group of small parasitic worms, the Acanthocephala, which was also to continue throughout his career. During this period Nick continued to work on nematode parasites of vertebrates, but also entered the then novel field of nutritional requirements and culture of nematodes.

Nick arrived in Australia in 1960 to take up a senior lectureship at the then Canberra University College, soon to become The Australian National University. Apart from brief periods on sabbatical, he remained at ANU for the rest of his long career. When he joined, the department consisted of a professor, his secretary, the chief laboratory administrator, six students, and Nick, all housed in a "fibro" hut shared with Botany, Chemistry and Physics. Those were true pioneering days.

At ANU Nick continued to work on culturing and nutrition of free-living nematodes, vertebrate-parasitic nematodes and Acanthocephala, in addition to supervising postgraduate students and lecturing. Later, he added other types of nematodes and little known taxonomic groups to the list of animals studied.

He was, with the late Alan Bird, one of the early editors of the Australasian Nematologists Newsletter. He was instrumental in setting up the Australian Society for Parasitology. He served on many committees and advisory boards, including the ABRS

advisory board. He led the Zoology Department at ANU for quite a few years in total over several intervals, although he was never appointed Professor, which was a disappointment to him.

For most of his career, Nick was passionate about the nematodes. He studied human, vertebrate and invertebrate parasites, free-living forms in beaches and swamps from Melbourne to Darwin. He studied feeding and energetics in the laboratory. He studied ecology, behaviour, epidemiology, biochemistry, and taxonomy. He described 35 new species and 5 new genera of nematodes, which is a sizeable chunk of the known fauna of Australia.

Not content with that, he described 3 of the 12 species of gastrotrichs known from Australia, the last published only a few years ago. He worked on Nematomorpha and Acanthocephala as well. All these names may mean very little to most, but they demonstrate Nick's tremendous interest in real scientific problems, and starting from where nothing or very little was known never deterred him.

Nick literally gave the world the nematode *Caenorhabditis elegans*, which is used a model organism for studying nutrition, development and ageing. He and wife Evelyn travelled to America by ship in the late 1950's with vials of culture in his pocket and the recipe for keeping the cultures alive in his notebook. (Those were less biosecurity-conscious days.) Nick used his intimate knowledge of nematodes to choose this species carefully, so that it would both culture without any other organisms present, and survive the then lengthy travelling times. So good was

Nick's choice, that *Caenorhabditis* has been studied around the world ever since. The axenic cultures of *C. elegans* were an essential condition for the studies that lead to the 2002 Nobel Prize awarded to Horvitz, Brenner and Sulston. It is a measure of the importance of the cultures which Nick started, that right up to the present, he was still being contacted for information about their origin from around the world. His studies on energetics are still used as the basis for calculating energy flows and food requirements in nematodes.

Nick produced many things scientific. He wrote many papers over 55 years of scientific publishing; many of the 119 papers are still cited. Modern search tools list over 1000 references to his papers; it is a measure of impact that this is an impressive figure even though many papers were written and cited before the advent of the modern tools. He wrote a book which went through 2 editions. He had many PhD and Masters students; I was one. Such was the range of his interests that we, his students, have gone many different ways.

More than anything Nick produced ideas, and shared his experience. He was always open but forthright, and willing to share his time (except when his favourite soap opera was on!). Despite these achievements, Nick was always down-to-earth and dismissive of those seeking status for its own sake. His exploits and anecdotes enlivened the staff room at what became known as BoZo at ANU for many years.

By any measure, by his scientific impact, through his writings, by the students he has left, and in the personal

and scholarly interactions we all had with Nick, the scientific community was lucky to have known him.

Mike Hodda (by e-mail)

Recent Literature

- Alves AS, Adao H, Patricio J, et al. 2009. Spatial distribution of subtidal meiobenthos along estuarine gradients in two southern European estuaries (Portugal). *Journal of the Marine Biological Association of the United Kingdom* 89 (8): 1529-1540
- Araujo-Castro CMV, Souza-Santos LP, Torreiro AG, et al. 2009. Sensitivity of the marine benthic copepod *Tisbe biminiensis* (Copepoda, Harpacticoida) to potassium dichromate and sediment particle size. *Brazilian Journal of Oceanography* 57 (1): 33-41
- Armenteros M, Ruiz-Abierno A, Fernandez-Garces R, et al. 2009. Biodiversity patterns of free-living marine nematodes in a tropical bay: Cienfuegos, Caribbean Sea. *Estuarine Coastal and Shelf Science* 85 (2): 179-189
- Armenteros M, Ruiz-Abierno A, Vincx M, et al. 2009. A morphometric analysis of the genus *Terschellingia* (Nematoda: Linhomoeidae) with redefinition of the genus and key to the species. *Journal of the Marine Biological Association of the United Kingdom* 89 (6): 1257-1267
- Balsamo M, d'Hondt JL, Pierboni L, et al. 2009. Taxonomic and nomenclatural notes on freshwater Gastrotricha. *Zootaxa* 2158: 1-19
- Balsamo M, Guidi L, Ferraguti M, et al. 2010. *Diuronotus aspetos* (Gastrotricha): new morphological data and description of the spermatozoon. *Helgoland Marine Research* 64 (1): 27-34
- Bernhard JM, Barry JP, Buck KR, et al. 2009. Impact of intentionally injected carbon

- dioxide hydrate on deep-sea benthic foraminiferal survival. *Global Change Biology* 15 (8): 2078-2088
- Blanar CA, Munkittrick KR, Houlahan J, et al. 2009. Pollution and parasitism in aquatic animals: A meta-analysis of effect size. *Aquatic Toxicology* 93 (1): 18-28
- Botelho AP, Da Silva MC, Sobral LDT, et al. 2009. Two new species of *Sabatieria* Rouville (Nematoda: Comesomatidae) with conical-cylindrical tails, from Campos Basin, Rio de Janeiro, Brazil. *Zootaxa* 2096: 82-98
- Caramujo MJ, Boavida MJ. 2009. The practical identification of harpacticoids (Copepoda, Harpacticoida) in inland waters of central Portugal for applied studies. *Crustaceana* 82 (4): 385-409
- Casu M, Lai T, Sanna D, et al. 2009. An integrative approach to the taxonomy of the pigmented European *Pseudomonocelis* Meixner, 1943 (Platyhelminthes: Proseriata). *Biological Journal of the Linnean Society* 98 (4): 907-922
- Cavalcanti MD, Da Silva MC, Da Fonseca-Genevois V. 2009. *Spirodesma magdae* nov gen. nov sp (Nematoda: Desmodoridae) from the Brazilian deep sea (Campos Basin, Rio de Janeiro, Brazil). *Zootaxa* 2096: 109-118
- Cerrano C, Danovaro R, Gambi C, et al. 2010. Gold coral (*Savalia savaglia*) and gorgonian forests enhance benthic biodiversity and ecosystem functioning in the mesophotic zone. *Biodiversity and Conservation* 19 (1): 153-167
- Chapman MG, Tolhurst TJ, Murphy RJ, et al. 2010. Complex and inconsistent patterns of variation in benthos, micro-algae and sediment over multiple spatial scales. *Marine Ecology-Progress Series* 398: 33-47
- Charbagi-Barbirou K, Tekaya S. 2009. Sexual differentiation and karyological study in the gonochoristic planarian *Sabussowia dioica* (Platyhelminthes, Tricladida). *Cahiers de Biologie Marine* 50 (4): 303-309
- Chatterjee T, De Troch M, Chan BKK. 2008. Descriptions of two species of *Copidognathus Halacaid* mites (Acari, Halacaridae) from Zanzibar, Tanzania. *Zootaxa* 1809: 49-60
- Chatterjee T, Pešić V, Chan Bkk, De Troch M. 2009. Description of a new species of the *Agauopsis ornata* group (Acari, Halacaridae) from Zanzibar, Tanzania including a key to species of the *ornata* group sensu stricto. *Cahiers de Biologie Marine* 50 (3): 261-271
- Chatterjee T, Pešić V, De Troch M. 2008. A new species of the genus *Arhodeoporus* (Acari, Halacaridae) from Zanzibar, Tanzania. *Cahiers de Biologie Marine* 49 (2): 185-190
- Chatterjee T, Pešić V, De Troch M. 2009. A new species of the genus *Atelopsalis* (Acari, Halacaridae) from Zanzibar, Tanzania. *Cahiers de Biologie Marine* 50 (2): 193-197
- Chertoprud ES, Gomez S, Gheerardyn H. 2009. Harpacticoida (Copepoda) fauna and the taxocene diversity of the South China Sea. *Oceanology* 49 (4): 488-498
- Chullasorn S, Dahms HU, Schizas NV, et al. 2009. Phylogenetic inferences of *Tisbe* Lilljeborg, 1853 (Copepoda, Harpacticoida) with *Tisbe thailandensis* sp nov from Thailand. *Hydrobiologia* 627 (1): 1-17
- Chullasorn S. 2009. A review of *Typhlamphiascus* Lang, 1944 (Copepoda: Harpacticoida: Miraciidae) with a new species *Typhlamphiascus higginsi* from Phuket Island, Thailand. *Zoological Studies* 48 (4): 493-507
- Coe HJ, Kiffney PM, Pess GR, et al. 2009. Periphyton and invertebrate response to wood placement in large Pacific coastal rivers. *River Research and Applications* 25 (8): 1025-1035
- Cottarelli V, Bruno MC, Berera R. 2008. An intriguing new taxon of interstitial Laophontidae from the Indo-Pacific: *Aequinoctiella* gen. nov (Copepoda:

- Harpacticoida). *Vie et Milieu-Life and Environment* 58 (3-4): 263-275
- Das SS, Tripathi MK. 2009. Trace fossils from Talchir carbonate concretions, Giridih basin, Jharkhand. *Journal of Earth System Science* 118 (1): 89-100
- De Wit P, Rota E, Erseus C. 2009. *Grania* (Annelida: Clitellata: Enchytraeidae) of the Great Barrier Reef, Australia, including four new species and a re-description of *Grania trichaeta* Jamieson, 1977. *Zootaxa* 2165: 16-38
- Debenay JP, Della Patrona L, Herbland A, et al. 2009. The impact of easily oxidized material (EOM) on the meiobenthos: Foraminifera abnormalities in shrimp ponds of New Caledonia; implications for environment and paleoenvironment survey. *Marine Pollution Bulletin* 59 (8-12) SI: 323-335
- Denis F, Ravallec R, Pavillon JF, et al. 2009. Genetic differentiation of Atlantic populations of the intertidal copepod *Tigriopus brevicornis*. *Scientia Marina* 73 (3): 579-587
- Diaz-Asencio L, Armenteros M, Diaz-Asencio M, et al. 2009. Spatial and temporal variations of meiofaunal communities in Cienfuegos Bay, Cuba. *Revista de Biología Marina y Oceanografía* 44 (1): 13-22
- Du YF, Xu KD, Lei YL. 2009. Simultaneous enumeration of diatom, protozoa and meiobenthos from marine sediments using Ludox-QPS method. *Chinese Journal of Oceanology and Limnology* 27 (4): 775-783
- Fadeeva NP, Maslennikov SI. 2009. The abundance and distribution of free-living marine nematodes of the Piltun-Astokhskoye oil and gas field (North-East Sakhalin). *Russian Journal of Nematology* 17 (1): 31-42
- First MR, Hollibaugh JT. 2010. Environmental factors shaping microbial community structure in salt marsh sediments. *Marine Ecology-Progress Series* 399: 15-26
- Gad G. 2009 A clearly identifiable postlarva in the life cycle of a new species of *Pliciloricus* (Loricifera) from the deep sea of the Angola Basin. *Zootaxa* 2096: 50-81
- Gad G. 2009. *Culexiregiloricus*, a new genus of Nanaloricidae (Loricifera) from the deep sea of the Guinea Basin (Southeast Atlantic). *Zootaxa* 2096: 33-49
- George KH, Plum C. 2009. Description of two new species of *Dorsiceratus* Drzycimski, 1967 (Copepoda: Harpacticoida: Ancorabolidae) from Sedlo and Seine Seamounts (Northeastern Atlantic) and remarks on the phylogenetic status of the genus. *Zootaxa* 2096: 257-286
- Gheerardyn H, Arbizu PM, Vanreusel A. 2009. Discovery of Novocriniidae (Copepoda, Harpacticoida) from cold-water corals in the Porcupine Seabight (NE Atlantic), with description of a new species of *Atergopedia* Martínez Arbizu & Moura, 1998. *Organisms Diversity and Evolution* 9 (3) DOI: 10.1016/j.ode.2009.04.001
- Gheerardyn H, de Troch M, Vincx M, et al. 2009. Harpacticoida (Crustacea: Copepoda) associated with cold-water coral substrates in the Porcupine Seabight (NE Atlantic): species composition, diversity and reflections on the origin of the fauna. *Scientia Marina* 73 (4): 747-760
- Gheerardyn H, De Troch M, Vincx M, et al. 2010. Diversity and community structure of harpacticoid copepods associated with cold-water coral substrates in the Porcupine Seabight (North-East Atlantic). *Helgoland Marine Research* 64 (1): 53-62
- Gheerardyn H, George KH. 2010. New representatives of the genus *Ancorabolina* George, 2006 (Copepoda, Harpacticoida, Ancorabolidae) including remarks on ancorabolid phylogeny. *Zoological Journal of the Linnean Society* 158 (1): 16-55
- Gheerardyn H, Veit-Köhler G. 2009. Diversity and large-scale biogeography of Paramesochridae (Copepoda, Harpacticoida) in South Atlantic Abyssal

- Plains and the deep Southern Ocean. Deep-Sea Research Part I-Oceanographic Research Papers 56 (10): 1804-1815
- Gillett DJ, Schaffner LC. 2009. Benthos of the York River. Journal of Coastal Research SI 57: 80-98
- Gomes TP, Rosa JS. 2009. Composition and spatio-temporal variability of meiofauna community on a sandy beach in the Amazon region (Ajuruteua, Para, Brazil). Iheringia Serie Zoologia 99 (2): 210-216
- Gomez S, Chertoprud ES. 2009. *Sentiropsis vietnamensis* n. sp., a new pseudotachidiid (Copepoda: Harpacticoida) from the South China Sea. Journal of Crustacean Biology 29 (4): 568-578
- Gowda G, Rajesh KM, Mridula RM. 2009. Vertical distribution of polychaetes in brackishwater pond of Nethravathi estuary, India. Journal of Environmental Biology 30 (6): 1025-1029
- Gradinger RR, Kaufman MR, Bluhm BA. 2009. Pivotal role of sea ice sediments in the seasonal development of near-shore Arctic fast ice biota. Marine Ecology-Progress Series 394: 49-63
- Grego M, De Troch M, Forte J, et al. 2009. Main meiofauna taxa as an indicator for assessing the spatial and seasonal impact of fish farming. Marine Pollution Bulletin 58 (8): 1178-
- Grilli P, Kristensen RM, Balsamo M. 2009. *Heterolepidoderma caudosquamatum* (Gastrotricha: Chaetonotida), a new species from brackish waters of Denmark. Zootaxa 2173: 49-54
- Guidi L, Ferraguti M, Todaro MA, et al. 2009. Unusual spermatozoa and reproductive modalities of *Xenodasys eknomios* (Gastrotricha: Xenodasyidae). Italian Journal of Zoology 76 (2): 165-172
- Guidi-Guilvard LD, Thistle D, Khripounoff A, et al. 2009. Dynamics of benthic copepods and other meiofauna in the benthic boundary layer of the deep NW Mediterranean Sea. Marine Ecology-Progress Series 396: 181-195
- Guilherme BC, Da Silva MC, Esteves AM. 2009. Description of a new species of *Epacanthion* (Thoracostomopsidae, Nematoda) from Brazil and a modified key for species identification. Zootaxa 2096: 99-108
- Gwyther D, Batterham GJ, Waworuntu J, et al. 2009. Recolonisation of mine tailing by meiofauna in mesocosm and microcosm experiments. Marine Pollution Bulletin 58 (6): 841-850
- Heiner I, Boesgaard TM, Kristensen RM. 2009. First time discovery of Loricifera from Australian waters and marine caves. Marine Biology Research 5 (6): 529-546
- Heiner I, Sorensen KJK, Kristensen RM. 2009. The spermiogenesis and the early spermatozoa of *Armorloricus elegans* (Loricifera, Nanaloricidae). Zoomorphology 128 (4): 285-304
- Hildrew AG. 2009. Sustained research on stream communities: a model system and the comparative approach. Advances in Ecological Research 41: 175-312
- Hoang LP, Blome D, Nguyen VT, et al. 2009. Five new species of the genus *Leptolaimoides* Vitiello, 1971 (Nematoda: Leptolaimidae) from Can Gio mangrove biosphere reserve, Vietnam. Russian Journal of Nematology 17 (1): 17-29
- Hummon WD, Guadiz CJ. 2009. A new species of marine Gastrotricha from Maine, USA: *Tetranchyroderma mainensis* (Macrodasyida, Thaumastodermatidae). Marine Biology Research 5 (4): 385-390
- Hummon WD, Todaro MA. 2009. Italian marine Gastrotricha: VI. Seven new species of Macrodasyida. Zootaxa 2278: 47-68
- Huys R, Lee W. 2009. Proposal of *Marbefia*, gen. n. and *Inermiphonte*, gen. n., including updated keys to the species of *Pseudonychocamptus* Lang, 1944 and *Paralaophonte* Lang, 1948 (Copepoda,

- Harpacticoida, Laophontidae). *Zookeys* 23: 1-38
- Huys R, Mackenzie-Dodds J, Llewellyn-Hughes J. 2009. Cancrincolidae (Copepoda, Harpacticoida) associated with land crabs: A semiterrestrial leaf of the ameirid tree. *Molecular Phylogenetics and Evolution* 51 (2): 143-156
- Huys R. 2009. On the junior subjective synonyms of *Coullia* Hamond, 1973 (Copepoda, Harpacticoida, Laophontidae): an update and key to species and related genera. *Zookeys* 5: 33-40
- Huys R. 2009. Unresolved cases of type fixation, synonymy and homonymy in harpacticoid copepod nomenclature (Crustacea: Copepoda). *Zootaxa* 2183: 1-99
- Hwang U, Choi E, Kim D, et al. 2009. Monophyly of the family Desmoscolecidae (Nematoda, Demoscolecida) and its phylogenetic position inferred from 18S rDNA sequences. *Molecules and Cells* 27 (5): 515-523
- Ingels J, Kiriakoulakis K, Wolff GA, et al. 2009. Nematode diversity and its relation to the quantity and quality of sedimentary organic matter in the deep Nazare Canyon, Western Iberian Margin. *Deep-Sea Research Part I-Oceanographic Research Papers* 56 (9): 1521-1539
- Kanneby T, Todaro MA, Jondelius U. One new species and records of *Ichthydium* Ehrenberg, 1830 (Gastrotricha: Chaetonotida) from Sweden with a key to the genus. *Zootaxa* 2278: 26-46
- Karanovic TV, Hancock P. 2009. On the diagnostic characters of the genus *Stygonitocrella* (Copepoda, Harpacticoida), with descriptions of seven new species from Australian subterranean waters. *Zootaxa* 2324: 1-85
- Kieneke A, Zekely J. 2009. *Desmodasya abyssalis* sp nov.-first record of a deep-sea gastrotrich from hydrothermal vents. *Journal of the Marine Biological Association of the United Kingdom* 89 (4): A1-A7
- Kihara TC, Huys R. 2009. A new genus of Ectinosomatidae (Copepoda, Harpacticoida) from sublittoral sediments in Ubatuba, Sao Paulo State (Brazil), an updated key to genera and notes on *Noodtiella* Wells, 1965. *Zookeys* 17: 57-88
- Kihara TC, Huys R. 2009. Contributions to the taxonomy of the Normanellidae (Copepoda, Harpacticoida): description of a new genus from the Brazilian continental shelf and re-assignment of *Pseudocletodes vararensis* Scott & Scott, 1893 (ex Nannopodidae). *Zootaxa* 2233: 1-38
- Kolasinski J, Frouin P, Sallon A, et al. 2009. Feeding ecology and ontogenetic dietary shift of yellowstripe goatfish *Mulloidichthys flavolineatus* (Mullidae) at Reunion Island, SW Indian Ocean. *Marine Ecology-Progress Series* 386: 181-195
- Kovacic M, La Mesa M. 2008. Feeding ecology of De Buen's goby, *Buenia affinis*, in the Kvarner Area (Adriatic Sea). *Vie et Milieu-Life and Environment* 58 (3-4): 249-256
- Kruck NC, Chargulaf CA, Saint-Paul U, et al. 2009. Early post-settlement habitat and diet shifts and the nursery function of tidepools during *Sillago* spp. recruitment in Moreton Bay, Australia. *Marine Ecology-Progress Series* 384: 207-219
- Lampadariou N, Tselepides A, Hatziyanni E. 2009. Deep-sea meiofaunal and foraminiferal communities along a gradient of primary productivity in the eastern Mediterranean Sea. *Scientia Marina* 73 (2): 337-345
- Leasi F, Ricci C. 2010. Musculature of two bdelloid rotifers, *Adineta ricciae* and *Macrotrachela quadricornifera*: organization in a functional and evolutionary perspective. *Journal of Zoological Systematics and Evolutionary Research* 48 (1): 33-39

- Lecroq B, Gooday AJ, Pawlowski J. 2009. Global genetic homogeneity in the deep-sea foraminiferan *Epistominella exigua* (Rotaliida: Pseudoparrellidae). *Zootaxa* 2096: 23-32
- Leduc D, Probert PK, Duncan A. 2009. A multi-method approach for identifying meiofaunal trophic connections. *Marine Ecology-Progress Series* 383: 95-111
- Lee JM, Chang CY. 2009. Two groundwater copepods of the Genus *Parastenocaris* (Harpacticoida, Parastenocarididae) from South Korea. *Animal Cells and Systems* 13 (2): 169-178
- Levin LA, Mendoza GF, Konotchick T, et al. 2009. Macrobenthos community structure and trophic relationships within active and inactive Pacific hydrothermal sediments. *Deep-Sea Research Part II-Topical Studies in Oceanography* 56 (19-20) SI: 1632-1648
- Lima RDC, Lins L, Da Silva MC, et al. 2009. Four new species of *Syngolaimus* De Man, 1888 (Nematoda: Ironidae) from the Southeast Atlantic (Brazil), with redefinition of valid species and the proposal of a new key. *Zootaxa* 2096: 119-136
- Maria TF, Esteves AM, Smol N, et al. 2009. *Chromaspirina guanabarensis* sp. n. (Nematoda: Desmodoridae) and a new illustrated dichotomous key to *Chromaspirina* species. *Zootaxa* 2092: 21-36
- Menzel L, George KH. 2009. 122 Description of four new species of *Mesocletodes* Sars, 1909 (Copepoda, Harpacticoida, Argastidae) and redescription of *Mesocletodes robustus* Por, 1965 from the South Atlantic, including remarks on the *Mesocletodes abyssicola*-group. *Zootaxa* 2096: 214-256
- Merckx B, Goethals P, Steyaert M, et al. 2009. Predictability of marine nematode biodiversity. *Ecological Modelling* 220 (11): 1449-1458
- Mirto S, Bianchelli S, Gambi C, et al. 2010. Fish-farm impact on metazoan meiofauna in the Mediterranean Sea: Analysis of regional vs. habitat effects. *Marine Environmental Research* 69 (1): 38-47
- Nam EJ, Lee W. 2009. On the first swimming leg of *Rhizothrix sejongi* Nam & Lee, 2005 (Copepoda: Harpacticoida: Rhizothricidae), with an amended key to species of the genus *Rhizothrix*. *Proceedings of the Biological Society of Washington* 122 (2): 212-214
- Netto SA, Valgas I. 2010. The response of nematode assemblages to intensive mussel farming in coastal sediments (Southern Brazil). *Environmental Monitoring and Assessment* 162 (1-4): 81-93
- Nielsen DL, Gigney H, Watson G. 2010. Riverine habitat heterogeneity: the role of slackwaters in providing hydrologic buffers for benthic microfauna. *Hydrobiologia* 638 (1): 181-191
- Pascal PY, Dupuy C, Richard P, et al. 2009. Seasonal variation in consumption of benthic bacteria by meio- and macrofauna in an intertidal mudflat. *Limnology and Oceanography* 54 (4): 1048-1059
- Pesic V, Chatterjee T, Chan BKK, Ingole B. 2008. New records of marine water mites (Acari: Hydrachnidia: Pontarachnidae) from Taiwan, Korea and India, with the first description of the male of *Pontarchna australis* Smit, 2003. *Systematics and Applied Acarology* 13 (1): 72-74
- Pešić V, Chatterjee T, De Troch M, Ingole B. 2009. New records of marine water mites (Acari: Hydrachnidia: Pontarachnidae) from the Pujada Bay (west Pacific Ocean) and the Andaman Sea (Indian ocean). *Acta Entomologica Serbica* 14 (1): 129-132
- Pešić V, Chatterjee T, Herrera-Martinez Y, Herrando-Perez S. 2010. *Wandesia (Partnuniella) lehmanni* – a new water mite species (Acari: Hydrachnidia, Hydryphantidae) from a high-altitude lake

- in the Colombian Andes. *International Journal of Acarology* 36 (1): 53-58
- Petersen DG, Sundback K, Larson F, et al. 2009. Pyrene toxicity is affected by the nutrient status of a marine sediment community: Implications for risk assessment. *Aquatic Toxicology* 95 (1): 37-43
- Pillay D, Branch GM, Steyn A. 2009. Complex effects of the gastropod *Assiminea globulus* on benthic community structure in a marine-dominated lagoon. *Journal of Experimental Marine Biology and Ecology* 380 (1-2): 47-52
- Plum C, Arbizu PM. Discovery of *Smacigastes* Ivanenko & Defaye, 2004 (Copepoda: Harpacticoida: Tegastidae) in a deep-sea cold seep, with the description of a new species from the Gulf of Mexico. *Zootaxa* 2096: 338-355
- Pusceddu A, Gambi C, Zeppilli D, et al. 2009. Organic matter composition, metazoan meiofauna and nematode biodiversity in Mediterranean deep-sea sediments. *Deep-Sea Research Part II-Topical Studies IN Oceanography* 56 (11-12): 755-762
- Radziejewska T, Fenske C, Wawrzyniak-Wydrowska B, et al. 2009. The zebra mussel (*Dreissena polymorpha*) and the benthic community in a coastal Baltic lagoon: another example of enhancement? *Marine Ecology-an Evolutionary Perspective* 30: 138-150
- Reddy YR, Schminke HK. 2009. Discovery of the genus *Kinnecaris* Jakobi, 1972 (Copepoda, Harpacticoida, Parastenocarididae) in Southeastern India, with description of a new species. *Crustaceana* 82 (3): 311-326
- Ricketts ER, Kennett JP, Hill TM, et al. 2009. Effects of carbon dioxide sequestration on California margin deep-sea foraminiferal assemblages. *Marine Micropaleontology* 72 (3-4): 165-175
- Rothe BH, Schmidt-Rhaesa A. 2009. Architecture of the nervous system in two *Dactylopodola* species (Gastrotricha, Macrotrichida). *Zoomorphology* 128 (3): 227-246
- Rubal M, Guilhermino LM, Medina MH. 2009. Individual, population and community level effects of subtle anthropogenic contamination in estuarine meiobenthos. *Environmental Pollution* 157 (10): 2751-2758
- Santos PJP, Botter-Carvalho ML, do Nascimento AB, et al. 2009. Response of estuarine meiofauna assemblage to effects of fertilizer enrichment used in the sugar cane monoculture, Pernambuco, Brazil. *Brazilian Journal of Oceanography* 57 (1): 43-55
- Schminke HK. 2009. *Monodicaris* gen. n. (Copepoda, Harpacticoida, Parastenocarididae) from West Africa. *Crustaceana* 82 (3): 367-378
- Sedlacek L, Thistle D, Carman KR, et al. 2009. Effects of carbon dioxide on deep-sea harpacticoids revisited. *Deep-Sea Research Part I-Oceanographic Research Papers* 56 (6) : 1018-1025
- Seifried S, Veit-Kohler G. 2010. Redescription of *Bradya typica* Boeck, 1873 (Copepoda: Harpacticoida: Ectinosomatidae) with the first description of the male. *Helgoland Marine Research* 64 (1): 1-20
- Soetaert K, Franco M, Lampadariou N, et al. 2009. Factors affecting nematode biomass, length and width from the shelf to the deep sea. *Marine Ecology-Progress Series* 392: 123-132
- Soltwedel T, Mokievsky V, Schewe I, et al. 2009. Yermak Plateau revisited: spatial and temporal patterns of meiofaunal assemblages under permanent ice-coverage. *Polar Biology* 32 (8): 1159-1176
- Song SJ, Ryu J, Khim JS, et al. 2010. Seasonal variability of community structure and breeding activity in marine phytal harpacticoid copepods on *Ulva pertusa*

- from Pohang, east coast of Korea. *Journal of Sea Research* 63 (1): 1-10
- Sorensen MV, Heiner I, Hansen JG. 2009. A comparative morphological study of the kinorhynch genera *Antygomonas* and *Semnoderes* (Kinorhyncha: Cyclorhagida). *Helgoland Marine Research* 63 (2): 129-147
- Sorensen MV, Rho HS. 2009. *Triodontoderes anulap* gen. et sp nov.-a new cyclorhagid kinorhynch genus and species from Micronesia. *Journal of the Marine Biological Association of the United Kingdom* 89 (6): 1269-1279
- Spilmont N, Meziane T, Seuront L, et al. 2009. Identification of the food sources of sympatric ghost shrimp (*Trypaea australiensis*) and soldier crab (*Mictyris longicarpus*) populations using a lipid biomarker, dual stable isotope approach. *Austral Ecology* 34 (8): 878-888
- Todaro MA, Dal Zotto M, Maiorova AS, et al. 2009. A new species of *Aspidiophorus* (Gastrotricha, Chaetonotida) from the Russian Far East with a key to marine species of the genus. *Marine Biology Research* 5 (3): 297-303
- Urban-Malinga B, Burska D. 2009. The colonization of macroalgal wrack by the meiofauna in the Arctic intertidal. *Estuarine Coastal and Shelf Science* 85 (4): 666-670
- Van Colen C, Montserrat F, Verbist K, et al. 2009. Tidal flat nematode responses to hypoxia and subsequent macrofauna-mediated alterations of sediment properties. *Marine Ecology-Progress Series* 381: 189-197
- Van Gaever S, Galeron J, Sibuet M, et al. 2009. Deep-sea habitat heterogeneity influence on meiofaunal communities in the Gulf of Guinea. *Deep-Sea Research Part II-Topical Studies in Oceanography* 56 (23): 2259-2269
- Vasconcelos DM, Veit-Kohler G, Drewes J, et al. 2009. First record of the genus *Kliopsyllus* Kunz, 1962 (Copepoda Harpacticoida, Paramesochridae) from Northeastern Brazil with description of the deep-sea species *Kliopsyllus minor* sp nov. *Zootaxa* 2096: 327-337
- Veit-Kohler G, Drewes J. 2009. *Kliopsyllus schminkei* sp n. (Copepoda, Harpacticoida, Paramesochridae)-a new copepod from the southeast Atlantic deep sea (Angola Basin). *Zootaxa* 2096: 313-326
- Veit-Kohler G, Gerdes D, Quiroga E, et al. 2009. Metazoan meiofauna within the oxygen-minimum zone off Chile: Results of the 2001-PUCK expedition. *Deep-Sea Research Part II-Topical Studies in Oceanography* 56 (16): 1093-1099
- Vezzulli L, Pezzati E, Moreno M, et al. 2009. Benthic ecology of *Vibrio* spp. and pathogenic *Vibrio* species in a coastal Mediterranean environment (La Spezia Gulf, Italy). *Microbial Ecology* 58 (4): 808-818
- Wetzel A. 2009. The preservation potential of ash layers in the deep-sea: the example of the 1991-Pinatubo ash in the South China Sea. *Sedimentology* 56 (7): 1992-2009
- Whomersley P, Huxham M, Schratzberger M, et al. 2009. Differential response of meio- and macrofauna to in situ burial. *Journal of the Marine Biological Association of the United Kingdom* 89 (6): 1091-1098
- Willen E, Dittmar J. 2009. A new genus of Pseudomesochrinae Willen, 1996 (Copepoda, Harpacticoida, Pseudotachidiidae) from the Guinea Basin. *Zootaxa* 2096: 287-298
- Willen E. 2009. *Nyxis rostricularis*, a new genus and species of Paranannopinae Por, 1986 (Copepoda, Harpacticoida) from the Southern Atlantic deep sea. *Zootaxa* 2096: 299-312
- Witek A, Herlyn H, Ebersberger I, et al. 2009. Support for the monophyletic origin of Gnathifera from phylogenomics. *Molecular Phylogenetics and Evolution* 53 (3): 1037-1041
- Zaleha K, Jamaludin FI. 2010. Culture and growth of a marine harpacticoid,

Pararobertsonia sp in different salinity and temperature. Sains Malaysiana 39 (1): 135-140

Zhuo K, Wang HH, Liao JL. 2010. *Neodolichodorus sinensis* sp nov (Nematoda: Dolichodoridae) from China. Zootaxa 2362: 63-68

Editor's Acknowledgments

For their help and contribution for this number, I would like to thank Jyotsna Sharma for comments on a first draft of the issue, Adriane Wandeness for gathering the recent literature and Visnu Sarmento for gathering emails of meiofauna authors that are still not IAM members.

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 January and July. 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 January 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:

- New member* Renewing member Change of address
- Regular membership (EU\$10 or US\$10) Patron or Sustaining membership (EU\$50 or US\$50)

Name _____ Email address _____

Address _____

Telephone _____ FAX _____

City, St/Prov _____

Zip/Postal Code _____ Country _____

EU/US\$ _____ enclosed for _____ years. (Regular member EU/US\$10, Sustaining EU/US\$50)

EU/US \$ _____ enclosed as contribution to the **Bertil Swedmark Fund**.

EU/US \$ _____ TOTAL

North American Members:

Dues payable in US dollars by check made payable to the Intl. Assoc. of Meiobenthologists.

Send dues and application to: Dr. Jyotsna Sharma, Department of Biology, UT San Antonio, San Antonio, TX 78249-0661, USA [Jyotsna.Sharma@utsa.edu].

All Other Members:

Dues payable in Euros by check made payable to Ann Vanreusel or by credit card (see below).

Send dues and application to: Dr. Ann Vanreusel, Marine Biology Section, Ledeganckstraat 35, B-9000 Gent, Belgium [ann.vanreusel@ugent.be].

VISA/MASTER/EUROCARD number: _____ Expiry date: _____

Signature: _____

Interests: _____

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