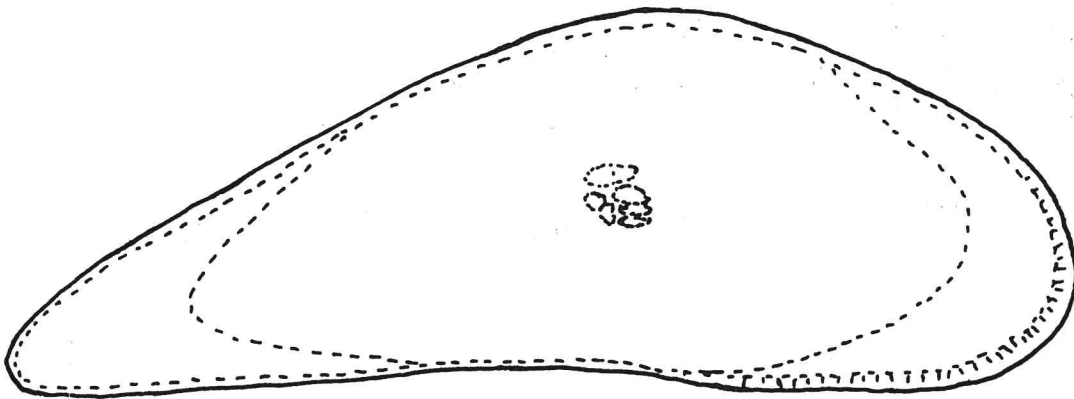


PSAMMIALIA

NEWSLETTER OF THE INTERNATIONAL ASSOCIATION
OF
MEIOBENTHOLOGISTS

COURRIER DE L'ASSOCIATION INTERNATIONALE
DES
MEIOBENTHOLOGISTES



PSAMMONALIA

Newsletter of the International Association of Meiobenthologists
Courrier de l'Association Internationale des Méiobenthologistes

Number 37

July, 1977

Editeur : Jeanne Renaud-Mornant
Muséum National d'Histoire Naturelle
Laboratoire de Zoologie (Vers)
43 rue Cuvier
75231 - Paris Cedex 05
France

Cover : Right valve of Phreatocandona motasi, a freshwater interstitial ostracod from Romania. (length 0,65 mm) . An original drawing by Dan L. DANIELOPOL.

This document is not part of the scientific literature and is not to be cited, abstracted or reprinted as a published document.

INTERNATIONAL ASSOCIATION OF MEIOBENTHOLOGISTS
ASSOCIATION INTERNATIONALE DES MEIOBENTHOLOGISTES

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E D I T O R I A L

According to our Association's Constitution, the two year term of Hjalmar Thiel and Ragnar Elmgren as Committee members expires on December 31st 1977. The membership has to elect two new officers for the Council. In view of this, the members have the right to nominate the candidates of their choice for the vacant positions. To facilitate your nominating, please use the included form on page 9. In making your choice, give due consideration to equitable representation of geographical distribution of membership of the Association.

The Third International Meiofauna Conference is to take place in Hamburg from August 11 to 27, 1977, at the Hamburg University, Zoologisches Institute and Zoologisches Museum. Our association will held its own meeting in the evening, on Thursday August 25 - as indicated on TIMCO time schedule on page 11. We hope that participants will be numerous and we wish a full success to TIMCO.

Please note the excellent bibliography on Marine Tardigrada compiled by Leeland Pollock, which follows the section on recent literature. If you have additions or corrections, please contact Dr Pollock directly.

Jeanne Renaud-Mornant

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ANNOUNCEMENTS
NOUVELLES DIVERSES

NOMINATIONS COUNCIL MEMBERS - CANDIDATURES MEMBRES DU CONSEIL

The two-year term of office of two Committee members, Ragnar ELMGREN and Hjalmar THIEL expires December 31st 1977.

According to article 11 of the Association's constitution, nominations for these positions should be received by August 1977, and should be made in writing by any two members.

In order to have election prepared for the next issue of Psammonalia, I request that you mail me the name of the nominee of your choice before September 15th 1977, so I can arrange for the election of these candidates in the last 1977 issue of Psammonalia.

To facilitate your answers the following form is suggested :

To : J. RENAUD-MORNANT
Laboratoire Zoologie-Vers
Muséum National d'Histoire
Naturelle
43 rue Cuvier
75231 Paris Cedex 05

Date :
(prior to September 15th)

In view of election to take place in the fall 1977,

I Member of the International
Association of Meiobenthologists, nominate :

Dr. as a candidate for the
vacant Executive Committee position.

Signed
Seconded by
(when possible)

T I M C O
Third International Meiofauna Conference
Hamburg, August 22 - 27 1977

W O R K S H O P

Discussion of results is important in scientific communication. Fruitful discussions should be based on comparability of methods and results. Everyone is convinced that he uses the best procedure available. Is this true ?

Do we need a better comparability ?

If so, how can we achieve this ?

These are the questions we suggest to discuss at first during the workshop we will arrange along with TIMCO. All of you - participants of TIMCO and those not coming to Hamburg for the last week of August this year - are invited to make suggestions on the topics to be discussed at the TIMCO workshop. We would be delighted to receive your proposals and comments with a short account, how a better comparability of results could be achieved. We ask you to send any remarks prior to TIMCO, starting on August 21. Hopefully, you all receive the next Psammonalia in July. However, your suggestions will be never too late, since discussion on intercalibration will not terminate with TIMCO, it will be continued in PSAMMONALIA.

Olav Giere Eike Hartwig
Zoologisches Institut d.
Universität Hamburg

Hjalmar Thiel
Institut für Hydrobiologie und
Fischereiwissenschaft
der Universität Hamburg

All mail to be adressed to :

TIMCO Symposium Office
Institut für Hydrobiologie
und Fischereiwissenschaft
der Universität Hamburg
Palmaille 55
2000 Hamburg 50, FRG

T I M C O time Schedule

with topics for the scientific sessions

August 22 - 27 1977

Sunday 21	Monday 22	Tuesday 23	Wednesday 24	Thursday 25	Friday 26	Saturday 27
	0900 : Opening of TIMCO	0900 : Populations : development, dynamics metabolism	Excursion (all day : early to late)	0900 : pollution ecophysiology	0900 : morphology, taxonomy, evolution	0900 : energetics, faunistics
	1030 : lectures on general aspects		to the German Wadden Sea : Boat trip through Islands and sands, hikes on sand dunes, sand and mud flats, visit to bird observation island and to farmed island	1400 : ecophysiology, distribution	1400 : methods	1400 : zoogeography, small scale distribution
	1400 : deep sea, sublittoral	1400 : populations : development, dynamics, metabolism				1530 : closing of TIMCO
1500 - 2000 : registration					1600 : workshop	
1900 - 2200 : informal come-together				1930 : meeting of the International Association of Meiobenthologists on an Elbe river boat and informal session		

From J.B.J. Wells, Zoology Department
 Victoria University of Wellington
 Private Bag
 Wellington , New Zealand

KEYS TO AID IN THE IDENTIFICATION OF MARINE HARPAETICOID COPEPODS

Please note that these Keys are now distributed from Wellington and not from Aberdeen. Copies are still available free of charge if sent by surface mail, but if you require them by Air Mail, please enclose the equivalent of \$ US. 6.00.

Address requests to : Professor J.B.J. Wells,
 Department of Zoology
 Victoria University of Wellington
 Private Bag
 Wellington
 New Zealand

New Book :
 ECOLOGY OF MARINE BENTHOS, Belle W. Baruch Library in Marine Science, N° 6.
 Edited by Bruce C. Coull. Univ. of South Carolina Press, Columbia, SC 29208
 (S 27.50). Available from Univ. of S.C. Press, Columbia, SC 29208 USA.

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FIRST EUROPEAN ECOLOGICAL SYMPOSIUM

PREMIER COLLOQUE ECOLOGIQUE EUROPEEN

ECOLOGICAL PROCESSES IN COASTAL ENVIRONMENT

University of East Anglia, Norwich, UK

Monday 12 September - Friday 16 September 1977

PAPERS TO BE PRESENTED

Tuesday 13 September

- 09.00 The Pro-Vice-Chancellor of the University of East Anglia, Norwich
Professor M.J. FRAZER : Welcome Address.
- 09.15 The President of the British Ecological Society - Professor T.R.E.
SOUTHWOOD : Introduction

Characteristics of Coastal Ecosystems
Chairman : Professor T.R.E. SOUTHWOOD

- 09.30 Professor Dr. V. WESTHOFF (Nijmegen University, The Netherlands) :
The structure and diversity of European coastal ecosystems.
- 10.00 Professor Dr N.K. JACOBSEN (Copenhagen University, Denmark) : The
development of sedimentary coastal ecosystems.
- 11.00 Professor R.G. WIEGERT (University of Georgia, USA) : The characte-
ristics of ecological processes occurring in coastal ecosystems.

Establishment and Differentiation of Populations
in Relation to Environmental Heterogeneity in Evolving Coastal Habitats
Chairman : Professor Dr V. WESTHOFF

- 13.30 Dr. A.J. GRAY (Institute of Terrestrial Ecology, Furzebrook, UK) :
The genetic structure of plant populations in relation to the
development of coastal habitats.
- 14.00 Dr. S. COLES (Institute of Terrestrial Ecology, Norwich, UK) :
Benthic micro- algal populations on intertidal sediments and their
role as precursors to saltmarsh development.
- 14.30 Professor J.L. HARPER (University College of North Wales, Bangor, UK) :
The demography of sand dune species with contrasting life cycles.
- 15.30 Professor Dr. B. HEYDEMANN (Kiel University, West-Germany) : Responses
of animals to spatial and temporal changes in environmental conditions.

Wednesday 14 September

Ecophysiological Relationships of Organisms
in Interface Habitats Between Marine, Freshwater and Terrestrial Habitats

- 09.00 Professor J. DAINTY (Toronto University, Canada) : The ionic and
water relations of plants which adjust to a fluctuating saline environ-
ment.
- 09.30 Dr. A.P.M. LOCKWOOD (Southampton University, UK) : Ecophysiological
responses of crustaceans to rapid salinity fluctuation.
- 10.00 Professor Dr. H. NEMENZ (Vienna University, Austria) : Osmotic
relations of animals in saline environments.
- 11.00 Dr. G.R. STEWART and Dr. J.A. LEE (Manchester University, UK) : The
role of nitrogen in the adaptation of plants and animals to a
saline environment.
- 11.30 Professor R.L. JEFFERIES (Toronto University, Canada) and Dr. A.J. DAVY
(University of East Anglia, Norwich, UK) : Growth strategies of plants
growing in a saline environment.

Photosynthesis and Primary Production in Coastal Environments

- 14.00 Dr. K. WINTER (Technische Hochschule, Darmstadt, West Germany) :
Photosynthetic and water relationships of higher plants in a
saline environment.
- 15.30 Dr. S. LONG (Essex University, UK) and Professor H.W. WOOLHOUSE
(Leeds University, UK) : Primary production in Spartina marshes.

Thursday 15 September

Energy and Nutrient Flow

- 09.00 Dr. K. CHARMAN (Nature Conservancy Council, Lincs, UK) : Feeding
ecology and energetics in Brent geese.
- 09.30 Dr. R.M. WARWICK, Dr I.R. JOINT and Dr P.J. RADFORD (Institute for
Marine Environmental Research, Plymouth, UK) : Secondary production
of benthos in an estuarine environment.
- 10.00 Professor G.J.F. PUGH (Aston University, UK) : The role of fungi in
litter decomposition in coastal habitats.
- 11.00 Professor G.M. WOODWELL, Dr. C.A.S. HALL, Dr D. WHITNEY and Dr. R.A.
HOUGHTON (Woods Hole, Massachusetts, USA) : The Flax Pond ecosystem
study ; The annual metabolism and nutrient budgets of a saltmarsh.

Applied Coastal Ecology

Chairman : Dr. E.A.G. DUFFEY

- 13.30 Dr. D.S. RANWELL (Institute of Terrestrial Ecology, Norwich, UK) :
Strategies for the management of coastal systems.
- 14.00 Professor J.A. RIOUX (Montpellier University, France) : Case studies
1 : The Camargue.
- 14.30 Dr. E. VAN DER MAAREL (Nijmegen University, The Netherlands) : Case
studies 2 : The environmental management of dunes in Holland.
- 15.30 Dr. F. GARCIA-NOVO (Sevilla University, Spain) : Case studies 3 : The
dune system of Donana National Park (S.W. Spain).
- 16.00 Dr. W. JOENJE (Groningen University, The Netherlands) : Case studies
4 : Colonisation, succession and nature management in the Lauwerszee
polder, The Netherlands.
- 16.30 Professor J.M. TEAL (Woods Hole Oceanographic Institution, USA) : Case
studies 5 : Experimental fertilization of saltmarshes with sewage
sludge.

Evening discussion

A discussion on European cooperation in nature conservation will take
place in the evening of Thursday 15 September, after the session on
Applied Coastal Ecology. The leader will be Dr. P.A. GAY, Head of
Scientific Services Division, Nature Conservancy Council, London, UK.

GENERAL INFORMATION MAY BE OBTAINED FROM THE LOCAL SECRETARY :

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School of Biological Sciences
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U.K.

ESTUARINE AND BRACKISH-WATER SCIENCES ASSOCIATION
SCIENTIFIC MEETING 1977

" The role of Models in Estuarine Studies"

at
The Institute of Marine Environmental Research
PLYMOUTH

September 20 and 21 1977

PROGRAMME

TUESDAY September 20th

- Introduction to models
- 10.00 - 10.30 The Role of Hydraulic models in Estuarine Studies.
Mrs. M. Kendrick. H.R.S. Wallingford.
- 1.30 - 11.30 Mathematical Models (a) One Dimensional
M.J. Barrett & B.M. Mollowney. W.R.C. Stevenage
(b) Two-Dimensional
D.J. Rabone & D.K. Dempster. W.R.C. Stevenage
- 11.30- 12.00 Holistic ecosystem simulation models
P. Radford. I.M.E.R. Plymouth

- Use of models for Estuarine Management
- 2.00 - 2.30 The use of Models for the management of the Usk Estuary .
I.T. Crofts & P.C. Nicholas, Welsh National Water
Development Authority

- Short papers on the use of models for the management of
the following estuaries :
- 2.30 - 3.45 The Clyde - Clyde River Purification Board
The Mersey - North West Water Authority
The Humber - British Transport Docks Board
The Thames - Thames Water Authority
The Solent - Southern Water Authority

- 4.00 - 4.30 Estuary Models for your Pockry Calculator :
The Choices and Limitations
R.E. Lewis , I.C.I. Brixham
- 4.30 - 5.30 DISCUSSION

WEDNESDAY September 21st

- Use of Models to Study Estuarine Processes
- Systems ecology in the Bristol Channel and the
GEMBASE Model (a) - (d) I.M.E.R. Plymouth
- 9.15 (a) Introduction and overview
A.R. Longhurst
- (b) Hydrography and physical models
R.J. Uncles
- to (c) Benthic and plankton ecology
R.M. Warwick
- 10.45
- 11.00 - 11.30 (d) Model assumptions and interpretation of output from
GEMBASE.
I.R. Joint

- 11.30 - 12.00 Mathematical modelling of salt and mud transport in estuaries with special reference to vertical exchange processes.
J.G. Rodger , H.R.S. Wallingford
- 2.00 - 2.30 A model for the bacterial reduction of sulphate in an anaerobic saltmarsh sediment
D.B. Nedwell, University of Essex
- 2.30 - 3.00 Modelling of Inorganic Nutrients in an Urbanized Estuary. Comparison of observations and predictions.
K. Collins & P.J. le B. Williams, University of Southampton
- 3.00 GENERAL DISCUSSION
-

The Institute for Marine Environmental Research

The Institute is housed in a new building to be officially opened later in the week of the meeting, and we are invited to examine displays of the work of the whole Institute. These will include the activities of the :

- (a) Systems Ecology Group
 - (b) Experimental Ecology Group, on the effects of stress on estuarine invertebrates
 - (c) Oceanic Ecology Group, on the decadal scale variability of North Atlantic plankton.
-

NEWS FROM THE MEMBERS

NOUVELLES DES MEMBRES

Alain DINET, Station marine d'Endoume, 13007 Marseille, France.

Since 1973, a study of deep-sea meiobenthos is carried out from material collected during the cruises organized by the Centre Océanologique de Bretagne (Brest-France). Several areas of the Atlantic Ocean and the Mediterranean are investigated but out interest is concentrated on the North-West Atlantic and more particularly on the Bay of Biscay where seven cruises were performed. A quantitative study of meiofauna is made from Reineck-box samples. Density and biomass of meiobenthos are compared with the distribution of organic matter in sediments. Species diversity of main groups (i.e., nematodes and harpacticoids) is evaluated. A particular attention is given to harpacticoid copepods which are identified to species. Among this group, the family Gerviniidae is specially studied. A revision of the genus Pontostratiotes including descriptions of nine new species has been made.

For the future, this work will be extended to new areas of the Southern Atlantic. The problem of the small scale distribution of deep-sea meiofauna will be considered in collaboration with microbiologists.

Karsten REISE, Biologische Anstalt Helgoland, Litoralstation List, 2282 List/Sylt, West-Germany

Since 1974 I am concerned with the ecology of intertidal organisms in the Wadden Sea of the island Sylt (Eastern part of the North Sea). The main topic of my research is the evaluation of predation pressure by means of field experiments. So far, I could demonstrate the impact of vagal epibenthic predators on infaunal polychaetes and bivalves. Further experiments are now in progress to elucidate the role of infaunal predators. Both, macro - and meiofauna are considered.

Dr. Marian GODDARD, Royal Holloway College, University of London, Dept. of Zoology, Alderhurst, Bakeham Lane, Englefield Green, Surrey TW20 9TY, Great-Britain.

My present research is into the role of Protozoa in slow sand filters, an important stage in the purification of water entering London's water supply system.

Oligochates, Rotifers and Protozoa are the most numerous animals living in the slow sand filters, and of the Protozoa which are present in highest abundance, the ciliates contribute most to the total biomass, while flagellates occur in higher numbers.

The community is supported by a continuous input of bacteria and organic matter, which is estimated as carbon. The rate of protozoan development throughout the length of a filtration run has been studied along with the vertical density distribution of these animals and how this varies seasonally. At present I am determining the degree of horizontal homogeneity of Protozoa within the filter bed, which is itself a uniform sand system. Proposed work includes measurements of the rate of food uptake of the more common Protozoa present and investigations into the respiration rates of these animals. This will result in an overall picture relating the organisms present in the filter beds to the environmental parameters which they are exposed to, for example: redox conditions, temperature, dissolved oxygen and food availability.

Dr. K. JAYASREE, Department of Marine Sciences, University of Cochin,
Foreshore Road, Cochin-682016, Kerala, India.

After a busy, nevertheless pleasant 3-year stay in Aberdeen (U.K) I am now back to Cochin (India). I have successfully completed my Ph.D. " Systematics and ecology of free-living marine nematodes from polluted intertidal sand in Scotland" (thesis) from the Aberdeen University. About three papers from my thesis will be published in the near future. I have catalogued my nematode-slide-collection at the Marine Laboratory, Aberdeen, with a view to assisting future workers in the locality. Presently, I am working on the nematode fauna of the Cochin backwaters and nearby localities. Access to meiobenthos literature in general is one of my major problems here ; hence I may request all members especially those who deal with nematodes to help me by sending their publications ? Please note my change of adress.

Paul J.G. SEATON, Department of Biological Sciences, Napier College of
Commerce & Technology, Colinton Road, Edimburgh EH10 5DT,
Scotland

I am currently studying the meiobenthos of polluted beaches in the Firth of Forth, Scotland in connection with the introduction of a new sewage treatment scheme in the city of Edimburg later this year. It is hoped to relate this work to that carried out on the macrobenthos, chemistry and microbiology of the Firth by other members of the group. The meiobenthos research is funded by the National Environmental Research Council and is being carried out under the supervision of Dr. A.D. McIntyre of the Department of Agriculture & Fisheries for Scotland, Marine Laboratory, Aberdeen.

Fernando ALCAZAR, Departamento de Oceanologia, Universidad de Chile,
Sede Valparaiso, Casilla 13 - D. Vina del Mar, Chile.

I've been involved for a year in a research program at the Departamento de Oceanologia Universidad de Chile, relating to the effects of organic pollution in sandy beaches, in the Valparaiso Bay, Chile. This subject has allowed me to collect and preserve an interesting fauna that I wish to bring to the light of science with the help of specialists in the different taxa represented in our beaches.

Dan DANIELOPOL , Limnologisches Institut, Osterreichische Akademie der
Wissenschaften, A-1090 Wien, Berggasse 18/19, Austria.

Investigations on the freshwater interstitial meiofauna in Austria.
- A. At the "Limnologisches Institut - Osterreichische Akademie der Wissenschaften" and "Limnologische Lehrkanzel, Universität Wien " Berggasse 18, Wien-9. Since 1973 a programme on the ecology of the groundwater fauna of the Danube has been in progress. Robert Eder is preparing a dissertation on the interstitial nematodes of the Danube lower than Vienna where the water quality of the river is 3. Eder has been studying the vertical and horizontal distribution of the nematodes for two years.

Dr. Fritz Schiemer and Prof. Heinz Löffler studied interstitial nematodes and harpacticoids respectively collected in the Danube Valley in Lower Austria.

During the last two years I worked mainly on freshwater interstitial ostracods from the Danube basin, France and Greece in order to obtain data for a review on the origin, the ancestry and the morphological specialisation of this group. I plan to begin new investigations on the quantitative distribution of the interstitial ostracods in relation to the organic matter and oxygen in the sediments of the Danube.

- B. At the " 1. Zoologisches Institut, Universität Graz, Universitätsplatz 2, Graz 1. " Under the supervision of Prof. R. Schuster, Ingrid Macher completed a dissertation on the meiofauna of the wells used for drinking water supply in the Graz area. She studied thoroughly the copepods. Michael Kirchengast began a dissertation on the distribution of the interstitial fauna of the Mur near Graz, in an area where a paper mill is polluting the waters of the river.

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n. sp., Parastygarctus sterreri, Pseudostygarctus triungulatus n. gen, n. sp.,
Megastygarctides orbiculatus n. gen., n. sp., E. sigismundi, A. diakidius, plus
two additional undescribed halechiniscids).