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## MESSAGE FROM THE PRESIDENT

Dear Colleagues,

We are approaching the end of 2002 and of an exciting period in which the role of the marine stations in shaping European marine research has been improving steadily. After the Venice Conference of Directors and the decision taken there to focus on marine biodiversity as the first subject the marine stations would jointly undertake, two major EU projects have been implemented that directly support the building of infrastructure and networks: BIOMARE that has ended on October 31, 2002 and MARBENA that is just starting now. Many MARS members are involved in both projects that together represent an investment of over 1.3 M€ from the EC alone.

BIOMARE has achieved its goals of creating a network of research stations and a system of indicators, and was widely publicised through the International Biodiversity Observation Year and the DIVERSITAS programme to which it contributes. It has been presented at the yearly

meetings of ICES (the International Council for the Exploration of the Sea) and ICSU (The International Council for Science). MARS has been asked by the BIOMARE SSC to take over the responsibility of implementing the network of research sites.

Besides these two, several other EU projects on marine biodiversity presented by MARS members were successful in the last round of the Fifth Framework programme, and this overall success in the research part of the Fifth Framework Programme represents again several million euros of research money. In one of our next newsletters we will give an overview of these projects.

The relationships with sister organisation NAML of the US have remained a bit on low profile over the last year. The formalised relationships between the NSF and DG Research of the EU perhaps offer opportunities for the future. Already BIOMARE and MARS have been active in supporting the actions of DIVERSITAS and the Census of Marine Life CoML and its research project DIWPA. The CoML is rapidly growing into a worldwide programme on marine biodiversity, with the same ambitions as the IGBP had for global change research. It deserves active support from European scientists and a Euro-CoML is in the making.

Most marine scientists in Europe are now actively engaged in the building of networks and the research projects that are intended to shape the European Research Area. The MARS network must keep its strong visibility in Europe by being active in the Sixth FP. In the first drafts that are now circulating it is clear that the long effort that has been made to bring marine biodiversity on the research agenda has been successful and that the European landscape will change accordingly. MARS is in an excellent position to remain an important player in this landscape.

In 2003 MARS will organize again its Conference of Directors in which the new scientific priorities that marine research stations can support best have to be discussed. In the Venice Conference there

were presentations on marine model organisms and genomics, and these subjects should be brought forward again. MARS is also in search for a new president. The nomination committee for that search is chaired by A. Eleftheriou from IMBC and any MARS member can present candidates.

Carlo Heip, NIOO-CEME, Yerseke, the Netherlands

### **THE THIRD MARS CONFERENCE OF DIRECTORS**

Paris and Amsterdam are still in the running for hosting the Third MARS Conference of Directors, but the dates are already decided: **17-19 October 2003**. An agenda for this meeting will be circulated after the MARS EC meeting in January 2003.

### **BIOMARE: FINAL RESULTS ON THE CONCERTED ACTION FOR LARGE-SCALE LONG-TERM MARINE BIODIVERSITY RESEARCH IN EUROPE.**

Within theme 4 "Energy, Environment and Sustainable Development" of the EC 5<sup>th</sup> Framework Programme, the Concerted Action (CA) BIOMARE was started. It aimed to establish the infrastructure and conditions required for marine biodiversity research at a European scale. BIOMARE lasted two years from November 2000 till October 2002. It included 26 participating European institutes.

Consensus had grown that co-ordination at the European level is urgently required for long-term, large-scale marine biodiversity research and to plan the best use of European research infrastructure. Many research questions cannot be addressed at the local level; they require co-operation and the establishment of a committed network of scientists and institutes. There was no agreed common methodology for many aspects of biodiversity research, so careful preparation was needed.

The objectives of the Concerted Action were to achieve a European consensus on

- 1) a network of reference sites for long-term, large-scale marine biodiversity research in Europe,
- 2) the establishment of internationally agreed measures and indicators for biodiversity, and
- 3) the creation of facilities for, and the co-ordination of, marine biodiversity research, by running workshops, improving training and

mobility, setting up a web-site, including an overview of current research in, and existing infrastructure for, marine biodiversity research in Europe, creating a database for authenticated data, including socio-economic data such as the impact of fisheries and tourism.

Three work-packages had been set in motion, consisting of a series of evaluations, recommendations, regional meetings and joint workshops.

The methodology was similar in all three work-packages and followed a sequence of inventories and reviews made by WP leaders in consultation with all members, regional meetings and two general workshops to discuss drafts and recommendations, and reports and implementation. The inventories, meetings and reports focussed on:

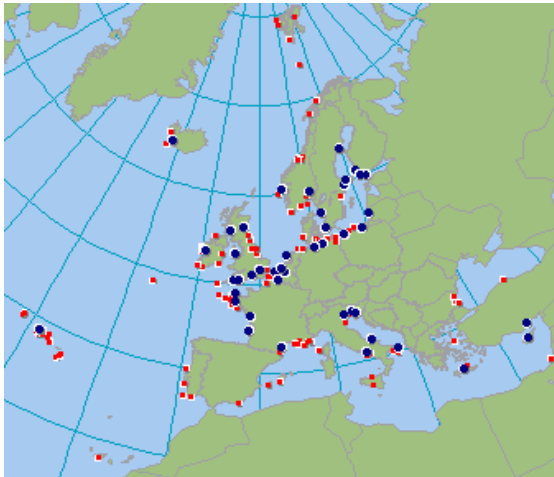
- 1) expanding the existing networks of marine biodiversity research organisations. Many MARS members have been involved in the BIOMARE actions, and on its turn several BIOMARE participants became MARS member.
- 2) recommending reference sites for marine biodiversity research. A set of 30 Reference stations and 80 Focal sites have been selected. The stations will be described in a book.
- 3) establishing methodologies, protocols, and indicators of marine biodiversity in Europe. A scheme on the priority indicators of marine biodiversity has been selected, and will be printed in a book.
- 4) publishing an annotated check-list of long-term data-sets, species-diversity lists, and associated publications. All the data-lists are available through the internet: <http://www.biomareweb.org>.
- 5) initiating Euroconferences on marine biodiversity. A conference was organised in May 2001, an a next will be organised from 11-15 May in Renesse, the Netherlands (see further in this issue)
- 6) establishing a web-site for dissemination of information on European marine biodiversity to scientists, administrators and the public at large (<http://www.biomareweb.org>),
- 7) indicating data available to end-users, suitable for integration with socio-economic questions.

This Concerted Action enhanced research on marine biodiversity in Europe through the establishment of a network of marine institutes and an agreed set of reference stations and indicators. This will enable comparisons to be made between sites and trends in long term

surveys to follow. It will enhance the integration of research throughout Europe, to the benefit of students, research scientists and managers dealing with socio-economic questions, and it will increase awareness among the public.

Further information about this project can be found at <http://www.biomareweb.org>.

Herman Hummel, Carlo Heip & Pim van Avesaath, NIE-CEMO, Yerseke, The Netherlands



MARS Institutes (blue) and European Marine Biodiversity Research Sites as defined by BIOMARE (red).

### **EUROCONFERENCE: 11-15 MAY 2003, RENESSE, THE NETHERLANDS**

High-Level Scientific Conferences Activity  
**Biodiversity of Coastal Marine Ecosystems:  
A Functional Approach to Coastal Marine  
Biodiversity**

Supported by the European Commission, High Level Scientific Conferences

Moermond Castle, Renesse, The Netherlands  
11-15 May 2003

Maximum number of participants: 80

#### Programme content

The conference is the last of a series of two with the overall objectives to inventory, summarise and generalise the scientific knowledge on the structure and function of marine biodiversity in coastal marine areas of Europe.

The emphasis will be on understanding the causes of the observed patterns and on functional studies that try to understand the role of biodiversity in biogeochemical cycles, ecosystem productivity and food web structure.

We will focus on large-scale and long-term problems such as the consequences of climate change. Since we cannot conduct realistic experiments on these scales, this will be achieved by the integration of a number of short-term and regional research projects that are now running.

Three major themes will be explored:

1. Generation of biodiversity and phylogenetic constraints on function
  - a. Evolutionary background and phylogenetic constraints
  - b. Colonisation and recruitment processes
  - c. Habitat fragmentation and metapopulations
  - d. Species introductions and extinctions
2. Biodiversity and ecosystem function
  - a. Theoretical background
  - b. Marine biodiversity and food-web structure
  - c. Marine Biodiversity and productivity
  - d. Marine biodiversity and biogeochemical cycling
  - e. Cross-cutting aspects of function and biodiversity
3. Conservation and restoration of coastal biodiversity, including mariculture and fisheries.

In particular, we will consider how the biodiversity of coastal marine ecosystems can be maintained and, where necessary, restored.

#### Participation

Leading specialists from (and outside) Europe will be invited to present papers. The preliminary agenda will be available at our website. There will be two poster sessions.

The integration between 'young' and 'senior' scientists will be stimulated. For this reason a special session will be organised and chaired by the 'young' scientists.

Within the programme there are still some slots available for the presentation of a paper.

A limited number of grants covering twin room conference fee and travel costs (up to a maximum) will be available from the High Level Scientific Conferences Activity of the European Union for:

- Young researchers (35 or under) who are nationals of a Member State of the European Union or an Newly Associated State (NAS),
- Researchers from NAS, and
- Key-note speakers.

Applications from female researchers are encouraged.

You are invited to submit a short abstract of your proposed talk and/or poster, but this is not essential for participation.

Application forms are available at our website: <http://www.nioo.knaw.nl/CEME/euroconf/index.htm>

Organised by: Netherlands Institute of Ecology

Co-ordinator: Prof. Dr. Carlo H.R. Heip, NIOO-CEME, Yerseke, The Netherlands  
Chair: Prof. Dr. Richard M. Warwick, PML-Plymouth, United Kingdom

**EXAMPLE OF A MARINE SCIENCE BASED SME BEING INVOLVED IN EUROPEAN RESEARCH PROJECTS: Ecological Consultancy Services Limited (EcoServe)**

Permanent positions in research and marine ecological work are harder to get in Ireland since the early 1980's. The career options were emigration, or waiting for one of very few jobs, teaching at schools or universities, or with government fishery organisations. Two new opportunities arose in the late 1980's, namely funding from the EC for research and economic development, and consultancy to help industry and government implement increasingly demanding environmental regulations. Irish universities were successful in winning research in marine sciences, especially in aquaculture. However, the researcher hired by universities had fixed term contracts, salaries were dependent on the contract rather than what their experience might dictate and they were excluded from university pension schemes. They were rarely given any opportunity to take charge of their destiny, such as by submitting their own R&D proposals. An alternative career option that would put such scientists in control of their career was to establish a company, either in partnership with a university as a so called "campus company", or privately. Some universities set up 'centres' or 'units' staffed by contract researchers but entirely owned by the university. These have an advantage over companies in that they can 'bridge' shortfalls in cash between projects, and do not charge VAT (Value Added Tax) on services.

From a university research group to a company  
In 1996 it was proposed to establish a campus company in Trinity College University of Dublin from the research group led by Dr Mark J. Costello. However, it was then decided to close the Environmental Sciences Unit where this group was based so there be no obvious university link for the company. Thus the company was established as a private company with shares owned by Dr Costello and several members of his research group. The company was founded in 1996 but started operation in 1997 with Mark Costello as Managing Director, Chris Emblow as Director, and Mona McCrea and Jennifer Dowse.

The staff paid themselves low salaries to match projected income but each year have been able to pay end-of-year bonuses and increase salaries. The company has never requested any bank loans or financial support from government or others. Overheads are minimised by working in collaboration with laboratories with specialised facilities and expertise (e.g. chemical analysis, granulometry, certain taxonomic expertise). Field vehicles and equipment are hired rather than purchased but items used regularly such as microscopes, oxygen and salinity meters, trawls, and dredges are held in-house.

Every member of staff has a computer and is proficient with MS Word, Excel, e-mail, and with varying degrees of expertise in Geographical Information System and database (e.g. MS Access, Endnote) operations. All scientists oversee projects from quotation to reporting with supervision and quality control by company Directors. The company also has full employer, professional liability and third party insurance, and established a flexible pension plan for its staff. It has its own Safety Code and Standard Operating Procedures manual.

Half of EcoServe work is related to the European Commission as part of research contracts, concerted actions and consultancy work. The other half is a mixture of national research and consultancy contracts, and many short-term marine and freshwater ecological surveys as part of Environmental Impact Statements and related monitoring work. All field data is compiled in a database linked to a GIS to facilitate comparison with new datasets and enable rapid retrieval. All publications of possible relevance are entered into a bibliographic database. Rapid accessibility of information saves time and thus client's money.

European research projects  
EcoServe co-ordinated two European Concerted Action projects, one on sea-lice biology and control under the FAIR (aquaculture) research programme. The second was the European Register of Marine Species (ERMS) under the MAST programme (erms.biol.soton.ac.uk). The latter involved 23 organisations and 170 scientists and established a database of over 600 marine biologists with expertise in the identification of marine species. This project paved the way for Fauna Europaea, a checklist of terrestrial and freshwater fauna. EcoServe is contributing to BIOMARE by expanding the ERMS database

of expertise and running the BIOMARE website ([www.biomareweb.org](http://www.biomareweb.org))

Involvement in research projects has added benefits in keeping staff aware and knowledge about current research and expertise. It also helps make contacts that may form partnerships for more lucrative commercial contracts. Success in EU research projects has led to partnering in more. EcoServe was involved in 12 EU proposals in 2000 of which 3 were successful, and so far 6 in 2001.

The involvement of a small company in EU research contracts is unusual, especially where EcoServe was co-ordinator. However, all scientific work and administration depends on the people involved. EcoServe has a continuity of staff usually impossible in university research groups. They are familiar with proposal preparation and cost statements, and different options for management and budgeting. It can then cost less to use several experienced but part-time staff at EcoServe than to employ one full-time but temporary research assistant in a university. It is also better for a project to use more experienced people whenever possible.

There is a common misconception that companies pursue profit at the expense of good science or even good ethical practice. In fact most small research and consultancy companies rely on developing good client relationships that lead to further personal contacts and new business. Small companies are thus more sensitive to client needs and wishes than are large institutions. Good marketing is therefore not about mass mailings and aggressive sales, but about providing a good service that helps clients do their work better, so that additional work and new clients arise.

EcoServe has a philosophy of collaboration and co-operation rather than competition. It also believes in publication and freedom of information as part of good science. Thus, EcoServe does not charge people for information where public funding (e.g. EU or national) paid for its compilation. It only charges for the additional time and expenses (e.g. postage, copying) that may be involved in compiling and disseminating such information.

## Outlook

EcoServe has shown that it is possible for scientists to combine forces as a company and earn a good and enjoyable living as researchers and consultants based on their experience and reputations. A broad client base with a mix of long-term (years) EC research projects to local short-term (days) contracts is desirable to account for changing success rates in different sectors. For example, foot and mouth disease has restricted fieldwork in 2001 but staff were busy on EU projects and database development. Careful time management, conservative financial projections, and tight financial control are also essential but not difficult to achieve in a small company.

Industry generally prefers to work with consultancy companies for short-term contracts because of their flexibility, speed of response and independence. Thus research and consultancy companies form a link between full-time researchers and industry. A company with a stable team of staff has the advantage over single-person companies in having a wider range of skills, and having administrative and scientific support. There are also economies of scale, especially with regard to insurance and having staff conduct appropriate work for their different salaries. These companies also develop a wider breadth of experience, from field to lab work, contract reports to scientific publication, personnel to financial management, than research groups in larger organisations would experience. With the increasing reluctance of government funded institutions to provide careers for young research scientists it is likely that more small research and consultancy companies will appear in Europe. These companies are a welcome addition and alternative career option for marine scientists.

## NOTICE OF MEETINGS

### **Euroconference: Biodiversity of Coastal Marine Ecosystems**

May 11-15, 2003, Renesse, the Netherlands  
About 80 participants will be invited to the meeting with the aim of ensuring balanced representation from all European coasts. Further information may be obtained from Prof. Carlo Heip: [c.heip@nioo.knaw.nl](mailto:c.heip@nioo.knaw.nl).

### **Conference on Sustainable Development of the Mediterranean and Black Sea Environment**

May 29-31, 2003, Thessaloniki, Greece  
During the Greek Presidency of the EU participants (expected number around 100) will

comprise a wide range of high level scientists, end-users and high level policy-makers from Mediterranean and Black Sea countries. The Conference will be an open event and all interested parties may participate.

The Conference aims at reinforcing scientific and technological collaboration between the European Union, the third countries of the Eastern Mediterranean region as well as the Black Sea region countries at a very high level, in a move to develop sustainable scientifically-based strategies for the management and preservation of marine ecosystems under threat.

Further information from Prof. A. Eleftheriou, IMBC, Crete, Greece, E-mail: msimbc@imbc.gr

## **NOTICE OF NETWORKS AND DATABASES**

### **The MARine Life Information Network**

The Marine Life Information Network (MarLIN) programme (<http://www.marlin.ac.uk>) offers free access to a range of information that represents a valuable tool to researchers, conservationists and managers working in the marine environment and to those involved in education. *Alison Hood, Plymouth, UK, ahood@pml.ac.uk*

### **The Baltic Sea Alien Species database:**

<http://www.ku.lt/nemo/mainnemo.htm>  
*Sergej Olenin, Klaipeda, Lithuania*

### **The Species2000/ERMS database**

On-line availability at  
<http://www.seaweed.ie/search>,  
<http://www.sp2000.org>, and  
<http://erms.biol.soton.ac.uk>.

### **The Ocean Biogeographic Information System**

The Ocean Biogeographic Information System (<http://www.iobis.org>) is the data server for the Census of Marine Life. The Chair of its International Steering Committee, Mark J. Costello, is a co-opted member of the MARS Executive Committee. Prior to taking his current position at the Huntsman Marine Science Centre in Canada ([www.huntsmanmarine.ca](http://www.huntsmanmarine.ca)) he was Managing Director of Ecological Consultancy Services Ltd (EcoServe) and coordinated the European Register of Marine Species. He is developing a framework for an OBIS programme in Europe and welcomes offers of data sets that can be linked through the internet to the OBIS website 'portal'.

## **MARS EXECUTIVE COMMITTEE MEETING**

### **19 March 2002, Amsterdam**

The meeting was organised by MARS under the auspices of the KNAW (Royal Netherlands Academy of Arts and Sciences).

Present: Friedrich Buchholz, Anastasios Eleftheriou, Jean-Pierre Feral, Stephen Hawkins, Carlo Heip, Herman Hummel  
Apologies: Erik Bonsdorff, Pierre Lasserre, Alenka Malej  
Absent: Giorgio Bernardi

### **1/Remarks on the minutes of the previous meeting (10 February 2001, Paris: executive committee) and approval.**

# MARS teaching activities must be activated and should be advertised on the web. No news was received from the proposed summer school in Naples on molecular biology. Due to the over-commitment of the potential organisers, the summer school on modelling proposed by Yerseke was delayed but will be reconsidered in the framework of the programs that are running.

A summer school is planned in May-June 2003, in Poland (H. Hummel).

# The MARS list server is hosted by the CNRS in Paris (co-owners J-P Féral / G. Boucher). This is a private mailing list dedicated to MARS business. The executive committee must accept inscription. Anybody may unsubscribe at any time.

Messages posted to <mars.insu@cnsr-dir.fr> are distributed to all members of the list.

# The number of new members of MARS is increasing. The action goes quite well, but it should be permanent.

# EU and Biodiversity:

The visibility of marine biodiversity has greatly increased starting with the EPBR meeting organized in Brussels under the presidency of Belgium (meeting in December 2001). Spain will organise a meeting on the biodiversity in Mediterranean ecosystems (11-13 May 2002). A Danish meeting is planned for October 2002.

# EU and the 6<sup>th</sup> framework program and relationship with the ESF marine board  
A number of points were coming back on the present agenda.

# Internal business

The executive committee approved the synthesis made in the previous minutes.

## **Reminder**

Membership includes:

- **Regular members:** Regular members are laboratories, institutes, or university departments primarily devoted to fundamental marine science and possessing coastal research facilities.
- **Associated members:** Associated members are scientific organisations without research facilities at the coast but with marine research interests. Such organisations need to appeal for MARS associated membership through a regular member to which they become associated.

Only directors, or their delegates, from **regular members** do have **voting rights** at general and director meetings.

The Executive Board can co-opt members for specific purposes. One of the co-opted members shall be the Executive Secretary to be proposed by UNESCO Venice (this rule will have to be amended).

**Co-opted members** can be appointed on the basis of being: 1) editor of the Newsletter, 2) co-ordinators of major MARS related scientific projects, 3) responsible for other duties strongly related to MARS.

Co-opted members have, once invited, the same rights and duties as the regular members of the steering committee.

Membership subscriptions are:

- 150 euros for labs with less than 20 total personnel
- 250 euros for labs with between 20-50 total personnel
- 500 euros for labs with more than 50 total personnel

There is no membership fee for associated members.

# Membership subscription:

The fee for 2000 and 2001 is due as well as the fee for 2002.

# Eastern European members

Many members and potential members from Central and Eastern Europe have difficulties paying the membership fee. A proposal was submitted to UNESCO-ROSTE to cover those fees. However no special sponsoring to support Eastern countries membership came forward in 2001. C. Heip will remind P. Lasserre about this.

# Honorary MARS fellows

The Executive has invited Professor Otto Kinne, former director of the Biologische Anstalt Helgoland, to become the first honorary MARS fellows. Professor Kinne has accepted the fellowship that will be awarded at the next

Conference of Directors.

# Newsletter and web page / secretariat

The situation concerning the Newsletter and the Web Page has not changed significantly since the last meeting. However, a link between MARS and BIOMARE is proposed in order to publish the newsletter together. The situation is partly due to the lack of an executive secretariat. The support offered by UNESCO-ROSTE was significantly lower than expected. There was no candidate for this position. It is proposed that H. Hummel acts again as executive secretary for the time being.

# MARS conference of directors

The minutes were approved. They will be published in the newsletter and on the web page.

On the thematic discussions primarily individual reports were received. A booklet will soon be published. A rewritten questionnaire on the present and future research in the marine stations in Europe will be sent around again. This is necessary to have an updated picture of the research at the European marine labs.

Results will be disseminated through BIOMARE WP3.

# External relationships

- *ESF / ESF Marine Board*

Since the departure of Laurent d'Ozouville, the ESF marine board has organized a Hanze Konferenz in Bremen to prepare a Marine Science Plan in anticipation of the Sixth Framework Programme of the EC. During that meeting one of the four subgroups was devoted to marine biodiversity, and the subject will be an important chapter in the final document.

The proposed association between MARS and the Marine Board has been discussed during the meeting of Marine Board meeting in Hamburg in August 2000 where it was received with mixed enthusiasm. The idea seems to have just disappeared, but perhaps should be reinvigorated.

Now, L. d'Ozouville with whom good working relationships had been established, is leading a new governmental organisation (France + Portugal), with goals that are to some extent overlapping with those of the ESF/Marine Board.

At the level of ESF, a paper on biodiversity by C. Heip, C. Lévêque and A. Troumbis has been presented in Stockholm in January 2002 during the ESF Forward Looks Meeting.

The Eurocores project proposal on marine biodiversity is finished and submission can be made when the time is ripe. Eurocores has a difficult start and the mechanism has still not received widespread approval among ESF member organizations.

As a co-opted MARS member, and as a member of the ESF marine board, Silvana Vallerga can be an efficient link to the Marine Board as well as to Eurogoos.

#### - *Census of Marine Life (CoML)*

CoML is an international program for research to assess and explain the diversity, distribution, and abundance of marine organisms throughout the world's oceans. Pilot field projects should take place in 2002-2004. The main field projects should occur in 2005-2007. Analysis and integration of information should culminate in 2008-2010.

At the moment, three projects have European project leaders: MAR-ECO (Patterns and Processes of Ecosystems in Northern Mid Atlantic Ridge (Odd Aksel Bergstad, Norway); ChESS (Chemosynthetic Ecosystems in the Arctic and Northern Atlantic Oceans) (Paul Tyler UK), and HMAP (History of Marine Animal Populations) (Poul Holm, Denmark).

# The National Association of Marine Laboratories (NAML) <<http://www.naml.org>>  
A meeting of NAML took place in October 2001. MARS was invited, but unfortunately no one could go. C. Heip is on the mailing list of NAML and receives the information. The contacts with NAML deserve further support because scientific contacts between the EC and the NSF are increasing. A joint area of interest that was proposed to the NSF in the US was monitoring.  
The minutes of the MARS executive committee meeting will be sent to NAML.

#### # DIVERSITAS

<<http://www.icsu.org/DIVERSITAS/>>  
There were 2 years of nearly complete silence but now the programme is restarted. Anne Larigauderie is the new executive director and she is housed at the ICSU building in Paris. The Chairman of the Scientific Committee is Michel Loreau. Contact: Anne-Hélène Prieur-Richard <[prieur\\_richard@icsu.org](mailto:prieur_richard@icsu.org)>.

DIVERSITAS is an international global environmental change research programme sponsored by the International Council for Science (ICSU), SCOPE (Scientific Committee on Problems of the Environment), IUBS (International Union of Biological Sciences), IUMS (International Union of Microbiological Societies) and UNESCO-MAB (Man and the

Biosphere).

DIVERSITAS's missions are:

- to promote integrative biodiversity science, linking biological, ecological and social disciplines in an effort to produce socially relevant new knowledge,
- to provide the scientific basis for an understanding of biodiversity loss, and to draw out the implications for the policies for conservation and sustainable use of biodiversity.

As one of four international global environmental change research programmes, DIVERSITAS works towards its objective in close collaboration with the International Geosphere-Biosphere Programme (IGBP), the International Human Dimensions Programme on Global Environmental Change (IHDP), and the World Climate Research Programme (WCRP).

The next scientific committee meeting will be held in Paris on the 12-13 April 2002. Carlo Heip will contact Michel Loreau about possible overlap between his network and the MARS network.

# International Association of Biological Oceanography (IABO)  
IABO recently organised a joint meeting with IAPSO (International Association for Physical Sciences of the Ocean) 2001, *an ocean odyssey* in Mar del Plata (Argentina) / 21-26 October 2001. A symposium was dedicated to CoML (convenors F. Grassle and Y. Shirayama).  
The future role of IABO has been discussed. MARS may help to increase the activity of IABO.  
URL: <<http://www.olympus.net/IAPSO/>>

#### # EU

For the last call of the 5<sup>th</sup> framework program, 7 projects succeeded: see annex 1

# European Environment Agency EEA  
EEA invited MARS to present the list of indicators, which will result from BIOMARE  
URL: <<http://org.eea.eu.int/>>

#### # UNESCO

An International Conference of Experts on the *Reconstruction of Scientific Cooperation in South East Europe* has been held in Venice (24-27 March 2001)

The International Conference of experts, co-organised by UNESCO and the European Science Foundation brought together representatives from 20 European Countries

including 11 from South Eastern Europe, who met in order to discuss and exchange ideas. The major problems and need concerning the situation of S & T at national and regional levels were identified both from the presented papers and ensuing discussions during the Conference. These focused on the overall lack of clear science and technology policies, the weak involvement of decision makers in supporting research activities and programmes, the rather high heterogeneity in integration and participation in international projects and cooperative programmes, the shortage of competence and skills exacerbated by a large brain drain, the insufficient capacity of the communication works and the shortage of the information available to researchers. In the spectrum of expertise marine sciences were practically absent and the MARS representative (A. Eleftheriou) had the opportunity to describe the existing community funded programmes in Environmental Sciences with emphasis on Marine related research and to describe the aims and objectives of MARS and the BIOMARE project and its significance in Marine Biodiversity. As significant interest was expressed by many participants in marine sciences, it was decided to establish a Web Side to inform and allow exchanges between researchers and organisations in SE Europe. (report by A. Eleftheriou)

#### # Conferences

##### *Euroconference on coastal marine biodiversity, Corinth, 5-10 May 2001*

This Euroconference was a big success with many exciting contributions. The report will be soon published. A new proposal will be submitted for the second conference in the series (this has in the mean time been accepted, the meeting will be held in Renesse, the Netherlands, in May 2003).

Two participants from Eastern countries have been supported by MARS and eight participants have been supported by UNESCO-ROSTE.

##### *Marine biodiversity forum*

This forum was planned to be held in Naples in 2002 but have apparently not materialized. N

#### # Other initiatives

- TV series: contact by J.-P. Féral with producers did not lead to something concrete.

- Due to the departure of the programmer, MDREF: the marine diversity reference data base project is cancelled.

## 2/ Financial situation

Accumulated balance in €		
accumulated balance 01/01/1999	24115,28	travel/accomodation/symposia -17336,14
contributions received	21197,12	printed matter -299,34
Interest	399,38	other costs -6407,71
other income	12688,81	bank costs* -472,50
	<b>58400,59</b>	<b>-24515,69</b>
Balance 28/02/2001 in €	<b>33884,90</b>	

The minutes and the financial report were approved.

## 3/ MARS awards and MARS medal of honour

Two awards of 2000 € for Young Scientists have been awarded to:

- Maria Salomidi of the University of the Aegean, related to the Institute of Marine Biology Crete, Greece, on the topic "*Hard Bottom Benthic Communities: Towards a New Concept in Assessing and Monitoring Marine Biodiversity*" to be studied at the Centre d'Océanologie de Marseille, France.
- Lara Arroyo of the Universidad Complutense de Madrid, Spain, on the research topic "*Effect of drifting algal mats on meiobenthic communities in the northern Baltic Sea: Implications on Harpacticoid copepod diversity and dispersal*" to be studied at the Hüsö Marine Laboratory and the Åbo Academy, Finland.

At least, two other awards will be attributed in 2002. This only concerns young scientists (max 35 years old) of regular members (full payment institutes).

The announcement will be made as soon as possible. The dead line for application is the 1<sup>st</sup> of October 2002.

Whether awards for the "best thesis" should be given was discussed at some length. It was finally decided that it would take too much effort and the idea was abandoned.

The MARS medal of honour will be attributed every 2 years. As already mentioned, the 2002 and first medal was awarded to Professor Otto Kinne.

#### **4/ EU Fifth framework programme: BIOMARE and MARBENA**

BIOMARE news can be found on line at  
<<http://www.biomareweb.net>>

Contract negotiations have been started on MARBENA : Creating a long term infrastructure for marine biodiversity research in the European Economic area and the Newly Ascending States (cf. annex 2 for objectives) Members of the MARS executive committee constitute the MARBENA advisory committee. The first initiatives are an e-conference in Spain in May (will be organized by Carlos Duarte) and one in Denmark in October. Contacts by C. Heip.

The list of all proposed projects are in annexe 1. Most proposals are relevant to the objectives of the MARS network. Some countries, like France, organise part of the activities of the marine laboratories within a network of ecological observatories (project FORMICCA). The question is now how MARS will be able to support proposal in the next framework programme.

#### **5/ Eurocores**

see minutes of last meeting

#### **6/ DIVERSITAS**

see § 1

#### **7/ CoML**

The CoML had its last SSC meeting in the Netherlands (Leiden) and is looking for active cooperation with European scientists and the EU. A delegation has visited the EC in Brussels to explain the programme. Possibilities within the 5<sup>th</sup> and 6<sup>th</sup> FP will have to be further explored. The next SSC meeting will be in Europe as well (Aberdeen). MARS could be part (connected in some way) of the Census. Links to oil industry and fisheries are also possible. Both going deeper and deeper are interested by marine biology and ecology. During the discussion S. Hawkins underlined the necessity to make a "field supported" update of the fauna and floras of Europe. More information can be found on the CoML web site (<http://www.coml.org>)

#### **8/ DIWPA**

F. Buchholz participated in a 3-day workshop at Seto Marine Lab (Univ. of Kyoto, Japan), headed by Prof. Y. Shirayama and introduced "Aims and Procedures of BIOMARE", in June,

2001. As a CoML – core project and for the purposes of IBOY, monitoring of three co-dependent gradients in the coastal zone throughout the DIWPA region (Siberia to New Zealand, 45°N to 45°S every 10° of lat.), to a depth of 10 m (15 and 20 m are optional) were agreed upon. These are latitudinal and related gradients or clines; gradients induced by human impacts; and temporal gradients (long-term monitoring). Some protocols/procedures related to BIOMARE were harmonized, e.g. questionnaires of sites and indicators. The wish was clearly expressed to further coordinate research with MARS and BIOMARE. F. Buchholz will provide further information.

#### **9/ NAML**

cf. § 1

#### **10/ UNESCO-ROSTE**

C. Heip will contact P. Lasserre to discuss what will be the future interactions between UNESCO and MARS.

#### **11/ MARS future activities**

During the conference of directors in Venice in 2001 (cf. minutes and the report) the future activities of MARS were discussed. Five groups will discuss the future MARS strategy concerning:

- Model organisms (A. Picard)
- Genomics (J.-P. Féral)
- Pelagial in shelf sea ecosystem, including meroplankton (F. Buchholz)
- Transition to deep sea (D. Billet)
- Long-term ecological observations (S. Hawkins)

A sixth group may discuss on land-ocean exchanges.

#### **12/ MARS business: secretariat, web site, newsletter, inventories, elections**

The lack of a secretariat during last year as well as the many activities and commitments related to MARS (Euroconference, Biomare, Marbena) had again caused a delay in updating the web page and editing the newsletter. To improve on this situation it was decided to invite the VLIZ (Flemish Institute of Sea Research) to become responsible for the web page. The cost will be 2000 € per year. The secretariat will for the time being move back to Yerseke, with the president. Herman Hummel will again be the executive secretary. A scientific officer will be engaged to help the executive secretary and the president. On a base of 2 days a week, the cost is estimated at 16000 € per year (to be checked).

Roles of the

- executive secretary: editor of the Newsletter, leads selection procedures for awards, develops new initiatives (own initiatives or from executive meeting), contact point for information on MARS activities.
- secretary-treasurer: controller of the financial affairs, final responsible for notes on meetings. Co-owner of the MARS list-server. Helped by the scientific officer to control finances and producing minutes and reports of MARS meetings.
- scientific officer (acting secretary) assists the MARS President and executive secretary, sends invoices, administration, works out and updates relevant MARS databases (on MARS members, facilities of MARS institutes), works out notes of meetings in co-operation with secretary-treasurer.

The executive committee thanks Herman Hummel for his support of MARS even at times when he did not have the official function.

An electoral committee consisting of A. Eleftheriou, J.-P. Féral and C. Heip will prepare the election of members of the next steering committee, by inviting nominations. H. Hummel will present next year the list of the vacant positions. The future president will be elected at the next Conference of Directors and must have a high profile in Europe to assume his lobbying role.

### 13/ Conference of the directors 2003

The next conference will be held in Amsterdam or Paris on 17-19 October 2003.

### 14/ EU Networking

MARS will propose and eventually support a network of excellence together with other partners, but is not going to be a network by itself. MARS is more concentrated on the shelf than on the deep sea but has several member laboratories, which are principally interested in deep-sea research.

### 15/ Miscellaneous

# UNESCO gave 35000 US\$.  
25000 US\$ will be used to organise the summer school in Poland: *Comparison of biodiversity in different seas in Europe* in May-June 2003 (H. Hummel). This sum is enough for 5 teachers and 20 students.  
10000 US\$ will be used for MARS (salary of the scientific officer).

# Other propositions for summer schools:

2004 – Helgoland: shelf seas ecology

(sediments and rocks), F. Buchholz

2005 – Marseille: model organisms, J.-P. Féral

***The next meeting of the MARS Executive Committee will be held on Saturday 1<sup>st</sup> March 2003***

Jean-Pierre Féral, Banyuls-sur-mer  
23<sup>rd</sup> March 2002

**[Annex 1: List of project - proposals submitted under the late FP5 - Programme](#)**

Total 21 projects of which 9 successful

### **Successful/under negotiation:**

- CHARM: Characterisation of the Baltic Sea Ecosystem: Dynamics and Function of Coastal Types. Co-ordinator: Bo Rieman, NERI, DK  
- BIOCOMBE: The Impact of Biodiversity Changes in Coastal Marine Benthic Ecosystems.

Co-ordinator: Herman Hummel, NL

- COSA: Coastal sands as biocatalytical filters  
Co-ordinator: Markus Hüttel, Max Planck Inst. Bremen, D

- MAFCONS: Effects of beamtrawl fisheries on benthic fauna (macro, meio and epibenthos).

Contact persons: Simon Greenstreet, John Lancaster, UK

- COST – IMPACT: Costing the Impact of demersal fishing on marine biodiversity  
Co-ordinator: M. Austen, PML, UK

- BIOCASE: Biological Collections Access System in Europe

Co-ordinator: Walter Berendson, D

- MARBENA: Creating a long-term infrastructure for marine biodiversity research in the European Economic Area and the Newly Associated States

Co-ordinator: Carlo Heip, NL

- OASIS: Oceanic Seamounts: An Integrated Study

Co-ordinator: Dr. Christiansen, University of Hamburg, D

- EUROGEL: European Gelatinous Zooplankton: Mechanisms behind Jellyfish Blooms and their Ecological and Socio-Economical Effects: Norway

### **Rejected:**

For the sake of discretion, only acronyms are given. Contact details to project participants are available through Fred Buchholz, fbuchholz@awi-bremerhaven.de :  
BARACA, BIOCLIMA, BIOCLIME, CAVES, IMPORTAL, LIMPET, LITUS/SANDY, MARISK, NABIS, SENSMARE, VIRTUOSO, ZEBRA

**MARBENA: Creating a long term**

**infrastructure for marine biodiversity research in the European Economic Area and the Newly Ascending States**

(ibid Annex 2 to the executive meeting)

Co-ordinator: Carlo Heip  
Assistant Co-ordinators: Pim van Avesaath,  
Herman Hummel

Problem definition

Concertation and co-ordination at European scale is urgently required to implement long-term and large-scale marine biodiversity research. Several activities have already been deployed within this respect: BIOMARE (Implementation and networking of large-scale long-term marine biodiversity research in Europe) will produce recommendation for a network of flagship and reference sites and a review of indicators, and M@RBLE (Electronic conference on marine biodiversity in Europe) produced the first appearance of marine biodiversity on the EU policy scene through the e-conference and the link to EPBRS (European Platform for Biodiversity Research Strategy). Both projects are already, or soon will be, concluded.

The realisation of the European Research Area in the sixth framework programme of the EU that will start in 2002 makes the prolongation of these efforts essential. The next series of activities should be used to create a lasting network for marine biodiversity research in Europe. Such a network must adequately prepare and exploit the possibilities of the next framework programme and the European Research Area, must improve the infrastructure for marine (biodiversity) research and its accessibility and utilization by European scientists, and must increase the visibility of marine biodiversity issues for science managers, politicians and other end users, including the public at large.

Objectives

The present project is being proposed with the following overall objectives:

To create the infrastructure for marine biodiversity research in Europe by creating a pan-European platform (network) of marine scientists, with strong links to the different stakeholders in Marine Biodiversity Issues, from the EU-EEA and the Newly Ascending Nations, and that covers the European seas from the Arctic to the Atlantic, the Mediterranean and the Black Sea.

To create awareness on the issues at stake and enlarge the visibility of marine biodiversity research in Europe, the platform will make the issues - the scientific questions and the relevance of the outcome of the scientific

research - clear to a non-scientific audience, it will communicate with EU policy makers and politicians, with global organisations and programmes, national and other EU biodiversity platforms and disseminate relevant information to the public at large.

NIOO-CEME will act as the coordinator of the project. The project lasts from 2002 to 2005.

Planning 2002

The first year of the project will be used to establish a network of marine research institutes and other stakeholders involved in the European marine biodiversity issues, and to provide its required research infrastructure. For this, the market of 'supply and demand' of marine biodiversity information will be mapped, RTD catalogues will be made and several workshops will address bottlenecks of the future development of marine biodiversity research at a pan-European scale. To increase the visibility of the marine biodiversity issues, electronic conferences will be organized that can feed the discussions at the EPBRS meetings that will be hosted and organised by Spain and Denmark in 2002.

**NEW FUNDING BY MARS: MARS AWARD WINNERS**

The MARS executive installed and distributed the following grants and awards.

- The Honorary MARS fellow.

Colleagues of outstanding reputation in marine science will be honored with a MARS fellowship.

In 2001 Prof.Dr. Otto Kinne was nominated and awarded for his longstanding contribution to the marine science community. Prof. Kinne accepted the award that will be delivered at the Third MARS Conference of Directors in October 2003.

- The MARS Travel Award for Young Scientists.

Each year two awards of 2000 Euro will be granted to promising young scientists to study a research topic at another member institute.

In 2001 two grants were awarded to  
- Lara Arroyo of the Universidad Complutense de Madrid, Spain, on the research topic "*Effect of drifting algal mats on meiobenthic communities in the northern Baltic Sea: Implications on Harpacticoid copepod diversity*

and dispersal" to be studied at the Hüsö Marine Laboratory and the Åbo Academy, Finland.

- Maria Salomidi of the University of the Aegean, related to the Institute of Marine Biology Crete, Greece, on the topic "*Hard Bottom Benthic Communities: Towards a New Concept in Assessing and Monitoring Marine Biodiversity*" to be studied at the Centre d'Océanologie de Marseille, France.

In 2002 a travel grant was awarded to Piotr Kuklinski

Their reports are given below.

Carlo Heip & Herman Hummel, NIE-CEMO, Yerseke, the Netherlands

#### **MARS travel award - winner 2001a - application**

**Effect of drifting algal mats on meiobenthic communities in the northern Baltic Sea. Implications on Harpacticoid copepod diversity and dispersal.**

#### **Lara Arroyo Hailuoto**

The research topic will be carried out at the Hüsö Marine Laboratory and the Åbo Academy (Finland), in co-ordination with Dr. Erik Bonsdorff and Dr. Katri Aarnio.

Our aim is to study the importance of drifting algal mats to the meiofaunal assemblage (focusing on harpacticoid copepods) in the northern Baltic Sea.

This will include investigating the effects of drifting algae on the meiofauna of areas populated by juvenile flounders, which use meiofauna (especially harpacticoid copepods) as food, and evaluating the possible implications on the fish. Also, we will analyse meiobenthic tolerance to oxygen depletion caused by drifting algae and evaluate the changes produced in the community as a result of the shifts produced in the trophic and species composition of the macrofauna of the same areas due to this oxygen deficiency. Furthermore, we will investigate the implications of drifting algae on harpacticoid copepod diversity and dispersal, the species interchange between drifting and "local" seaweed and the potential use of drifting algae as stepping stones in the re-colonisation of adjacent previously defaunated sediments.

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Fax. 34 91 3944947

E-mail: nlarroyo@bio.ucm.es

Lara Arroyo is a Spanish student, completing her PhD at the Complutense University of Madrid in co-ordination with the CEAB, in Blanes (Gerona, Spain). Her doctoral project is on meiofauna associated to *Laminaria ochroleuca*, in the northern coast of Spain, and her current main interest is in the ecology of phytoplankton harpacticoid copepods.

#### **MARS travel award - winner 2001a - report**

**Effect of drifting algal mats on meiobenthic communities in the northern Baltic Sea. Implications on Harpacticoid copepod diversity and dispersal.**

#### **Nina Larissa Arroyo Hailuoto**

During the stay at Hüsö Biological Station in spring 2002, planning of sampling and experimental work for the project was undertaken. Objectives were defined more clearly and some pilot sampling and experiments accomplished.

We started sampling of algal communities (*Cladophora glomerata*, *Ceramium tenuicorne*, *Pilayella littoralis*, *Fucus vesiculosus* and drifting algal conglomerates) and surrounding sediments at two different sites in the Åland islands. Since then, sampling has been done fortnightly at one of the sites (Hinderbergsviken) and monthly at the other (Äppelö viken), from May to October. Both meiofauna and macrofauna have been extracted and are now in the process of being sorted and identified.

Juvenile fish have also been sampled and their gut contents are now being examined.

The experimental procedures included

aquarium experiments in order to evaluate the effect of hypoxia/anoxia induced by drifting algal mats on the meiofaunal community, interactions between macrofauna and meiofauna as a result of hypoxic events induced by the algae and testing of the ability of meiofaunal organisms present on the drifting algae to re-colonise defaunated sediments.

Field experiments have concentrated on the effect of drifting algal mats on the meiobenthic community and its recovery after the mat had been eliminated.

In all cases, the harpacticoid copepod assemblage will be described and used as one of the main indicators of the processes under evaluation.

The stay at Husö Biological Station was extremely satisfactory, both in terms of the facilities and material available for the field sampling, the experiments, and the laboratory work, which were always available and in good condition, as in terms of the always positive disposition of all the people in charge to help and provide a good working atmosphere.

#### **MARS travel award - winner 2001b - application**

#### **Hard Bottom Benthic Communities: Towards a New Concept in Assessing and Monitoring Marine Biodiversity.**

##### **Salomidi Maria**

Several researchers have underlined the advantages of studying hard bottom epibenthic assemblages as they are spatially fixed and therefore easily monitored and manipulated. Usually, shallow marine assemblages in rocky subtidal show higher biodiversity status and thus stronger responses to anthropogenic pressures rather than their deeper counterparts. Moreover, their spatial and temporal variability does not range as largely as does in littoral habitats due to physical disturbance and climatic changes. The importance of the marine rocky habitats becomes more evident if one considers the fact that 85% of the benthic species characterized as endangered by the Protocol for the Marine Biodiversity in the Mediterranean Sea occur in hard substrate.

Due to the logistic difficulties that are inherent to rocky sublittoral sampling (e.g. laborious, costly, time-consuming, taxonomically intricate) there is comparatively little information on the ecology and dynamics of these particular ecosystems. At the same time, Marine Protected Areas are being continuously

established along the Mediterranean rocky shores. As a result, there is an increasing need for a new concept in assessing and monitoring the biodiversity status of these coastal ecosystems. Developing rapid bio-assessment techniques is becoming a major common goal in the field of marine biology. Recent approaches give priority to surrogate or key species to obtain a fast but efficient tool for biodiversity conservation and management action. All the above constitute the main objective of the present study and will be taken into serious account.

In Greece, despite the fact that rocky shores represent the largest part of the extensive coastline (16000km, including the islands), there is a paucity of scientific data regarding the indigenous hard-bottom benthic communities. Although there are several hard-bottom phytobenthic studies, seldom are they efficiently replicated in space and time. As regards zoobenthic communities, plenty of information exists on soft-bottom fauna composition (reaching down to species level) but very little is known about hard-bottom species and assemblages. Therefore, access to the European state of the art is considered crucial in order to develop new standards and/or refine existing methodologies.

Various visual census techniques are developed and widely used by many marine biologists around Europe. Such methods can provide us with the capability of effective qualitative and quantitative sampling over large areas with low effort and within short periods of time. At the same time, their non-destructiveness renders them invaluable tools especially when it comes to the biological assessment of marine protected areas or rare and endangered species.

This proposal is a significant opportunity for a PhD Greek student to visit an European Institute working on the above-mentioned issues, with a view to accomplish a know-how transfer and an intercalibration of current techniques / methodologies. Since the need for the spread of information throughout the scientific community is strongly promoted by the MARS network and the BIOMARE project, the present research topic as well as the aim of this proposal is believed to fall exactly within the scope of its activities.

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Maria Salomidi is a PhD student of the University of the Aegean, supported by the greek Institute of Marine Biology of Crete (IMBC) as well as the National Centre for Marine Research (NCMR). As a part of her PhD research activities she has been working towards the development and standardization of visual census techniques in assessing and monitoring hard bottom benthic communities with possible applications in coastal management. She is further interested in the determination of a methodological approach for rapid assessment of marine biodiversity as a tool for the selection and management of Marine Protected Areas.

#### **MARS travel award - winner 2001b - report Methods and techniques of hard bottom benthos study for ecological quality evaluation**

##### **Maria Salomidi**

Taking advantage of the MARS Travel Award, I was able to spend a month (July, 2002) at the *Station Marine d'Endoume (SME)* of the *Centre d' Océanologie de Marseille (COM)*. There, I had the opportunity to work with some of the world's leading scientists in the field of hard substrate benthic ecology, who trained me in certain methods and techniques, currently utilised in the assessment of the quality of marine environment.

During the first two weeks of my stay, I participated in the field activities of a COM monitoring project on macrofaunal communities. This project monitors the mass

mortality event of large benthic invertebrates in the Western Mediterranean Sea which occurred during summer 1999, along the coasts of Provence (France) and Liguria (Italy). Partial or whole necrosis was observed in filter-feeder invertebrates of hard substrates, keratose sponges and cnidarians being among the most severely affected. This event was attributed to the exceptionally high temperatures recorded in the area during summer 1999 and could be, thus, used as a case study of the effects of global warming on marine biodiversity.

Field activities included scuba diving in some biodiversity « hot spots » along the coasts of the *Callanques* and the *Riou Archipelago* (namely Riou, Plane, Jarre, Maïre, Congloué and other surrounding rocky islets). The sampling sites were either steep coralligenous sea cliffs -mainly characterized by the gorgonians *Paramuricea clavata*, *Eunicella singularis* and *Eunicella cavolinii* - or underwater caves and overhangs - characterized by the anthozoans *Corallium rubrum* and *Leptopsammia pruvoti* as well as a high number of sponge species.

Sampling was primarily non-destructive carried out, by means of visual and photographic techniques, included:

- Three permanent (1 x 2 cm<sup>2</sup>) and thirty random (0,25 x 0,25 m<sup>2</sup>) quadrats were visually sampled for each site in order to estimate the mortality / recovery rates, as well as the colonization of epibionts on dead gorgonians and sponges.

- Photographic sampling, which was performed in three marine caves. Sixteen permanent quadrats (0.20 x 0.20m<sup>2</sup>) were photo-sampled at each site in order to study the dynamics of the populations.

Destructive sampling was performed selectively in all sites in order :

to proceed with the taxonomic identification of certain species, which could not be accurately identified, from their photographs. The identification took place at COM's laboratories with the help of the taxonomists. A check list was constructed, including all species identified *in situ* or in the lab.

to proceed with the histological and cytological analysis of metal and other contaminant concentration (biomarkers) in certain individuals. Samples were collected from the sponges *Spongia officinalis*, *Oscarella tuberculata* and *Agelas oroides* as these species are shown to have high accumulation rates for most of the observed metals. Once field activities were completed, I was then trained in the various methods and

techniques used for the analysis of all collected samples.

In addition to field and laboratory training, I was given free access to the SME Library, which contains a very large collection of Journals and Publications. In addition, I had the opportunity of examining the private collections of certain taxonomists. COM Scientists kindly gave me free access to their own data, e.g. : publications, theses, books, CD-ROM's, etc. I believe that as a result my knowledge in benthic ecology and the evaluation of benthic organisms as bioindicators, has been substantially improved.

During my staying in Marseilles, I received most positive and fruitful experiences. Two of these were invaluable for me:

- seeing the breathtaking coralligenous of NW Mediterranean. Such a rich biodiversity within accessible depth limits (17-30m) is something rare in the Eastern Mediterranean, where the clearer and warmer seawater pushes these psychrophilic and sciaphilous organisms to depths lower than 50m.
- meeting and working with such knowledgeable scientists who always were willing as well as competent to share their unique and fundamental knowledge. It seemed to me that at the Station Marine d'Endoume, the sea is a passion rather than just a field of study. It was both a pleasure and a surprise for me to find out that all those people - no matter their age, status or commitments - still have their fins as their preferred pair of shoes!

I would like to thank Dr. Perez and Dr. Garrabou for their pleasant and constructive collaboration. Dr. Vacelet and Dr. Bury-Esnault have always helped and enlightened me in a very courteous way. Dr. Bellan-Santini, Dr. Marinopoulos and Dr. Zibrowius were a wellspring of information and useful advice. Last but not least, many thanks to all the scientific, technical and administrative staff of COM and COM Library for making me feel at home on the very first day.

### **MARS travel award - winner 2002 - application**

#### **Bryozoan taxonomy and ecology**

#### **Piotr Kuklinski**

The principal aim of the study is to redress the paucity of knowledge in one of the most specious and ecologically profuse taxon and provide a baseline of bryozoan taxonomy and ecology in Svalbard. This would involve examination of the broad distribution and

abundance of bryozoans as a phylum, with respect to other encrusting benthos.

Investigations would consider the importance of the taxon as colonizers of other organism externa as well as primary substratum such rock. The structure of competition and potential for dispersal would also be measured in species and assemblages. It will be essential to simultaneously account for variability due to the effect of environmental variables, such as substratum stability (=size), water flow, depth and site. The intention is to construct an overview of the ecological position occupied by bryozoans with respect to other local benthos. A more detailed examination of bryozoan species would also be generated, which may be used as a predictor of environmental conditions (currents, temperature, salinity, light regime, sedimentation). Distribution of many bryozoans is likely to be related to factors such as depth, type of substrate (algae, rocks, shells, gravel, sand) and the angle of inclination of the substrate.

Aim of the visit is:

- 1) Transfer of broad taxonomical and ecological knowledge

Jean Georges Harmelin is the author of many classical publications in taxonomy and ecology of bryozoans. His knowledge is very well recognized worldwide and his reputation is not questionable. Today Dr Harmelin is retired but still very active in many field of science. There is no doubt that his exceptional knowledge should be transferred. The PhD project of the applicant is very relevant to the research done by Jean Georges Harmelin and Thierry Perez. Taxonomy of the bryozoan is not an easy task – help of Dr Harmelin will solve many problems.

- 2) Comparison of methodology

Sampling techniques used by excellent French team will be investigated and compared with the one employed by applicant on Svalbard.

- 3) Consultancy

Presentations of the PhD project conducted by applicant will led to discussions, which hopefully will be beneficial for both sides.

- 4) Research

If time allows the small joint project will be conducted investigated the bryozoan communities and competition on the rocks in relation to the rock size.

- 5) Help

To do the visit less „painful” for the hosts applicant will be helping in everyday work within the range of staff duties.

Expected results are:

- „fresh insight” into to PhD project of an applicant

- transfer and enhancement of taxonomical,

ecological knowledge and sampling techniques  
- firm cooperation will be established  
- possible joined publication about competition among bryozoans and communities on the rocks

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**NEW INTERNET ACTIVITIES BY MARS**

The MARS website has been thoroughly updated, re-addressed (<http://www.marsnetwork.org>), and a new webmaster (VLIZ, Belgium) has been assigned

Carlo Heip & Herman Hummel, NIE-CEMO, Yerseke, the Netherlands

**MARS-BIOMARE INVENTORY OF MARINE RESEARCH INSTITUTES**

In 1996, the member-institutes of the MARS network have been asked to fill in a questionnaire. This survey gives insight in the research-activities, organization and logistic facilities of the MARS member-institutes. These data have been updated in co-operation with the BIOMARE Concerted Action. Researchers and research institutes can use the web site of BIOMARE (<http://www.biomareweb.org>) in order to provide new entries or to get an overview of marine biology research activities in Europe.

The customer can make selections on basis of:

- Taxonomic groups
- Habitat / biotope?
- Location / geographic region
- Research disciplines

- Structure / facilities / address of the institute.

Chris Emblow, Ecoserve, Dublin, Ireland  
Pim van Avesaath & Herman Hummel, NIOO-CEME, Yerseke, the Netherlands

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