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MARS/WAMS meeting 2014, Amsterdam, The Netherlands

By Christiaan Hummel



The annual MARS Directors meeting and WAMS International Assembly meeting "Future perspectives for marine sciences" was held from 26 to 28 March in Amsterdam, the Netherlands.

The meeting has been both successful and productive. Discussions were held on important subjects for the future of both MARS and WAMS. You can find the minutes of this meeting on the website: <http://www.marsnetwork.org/downloads>, (click the folder meetings), and further on in this newsletter.

An important decision that has been made during this meeting is to make an inventory of marine stations around the globe and in this way to revisit the "World Directory of Hydrobiological and Fisheries Institutions" by Robert Hiatt. This initiative is supported by IOC-UNESCO.



MARS Travel Awards in the news

In our last MARS newsletter we announced the two winners of the 2013 MARS travel award. Alessia Dinoi, one of the winners, even managed to get two articles printed on her travels to Perpignan in two local Italian newspapers, as was pointed out to us by Ferdinando Boero.

BORSA DI STUDIO INTERNAZIONALE AD ALESSIA DINOI, IMPEGNATA A LECCE PER LA LAUREA MAGISTRALE

Dall'ateneo del Salento alla Francia con un ambito «Mars travel awards»

● Alessia Dinoi, studentessa del corso di laurea magistrale in «Coastal and Marine Biology and Ecology» all'Università del Salento, si è aggiudicata uno dei «Mars travel awards», borse finanziate dal «Mars - The European network of marine research institutes and stations» per sostenere giovani ricercatori che si spostano per svolgere la loro attività.

Grazie a questa borsa, Alessia Dinoi ha potuto raggiungere il «Centre de recherches insulaires et observatoire de l'environnement» di Perpignan, in Francia, dove, con una borsa di studio «Erasmus placement», sta lavorando alla tesi di laurea magistrale sulla connessione genica di «donacilla

cornea», un mollusco bivalve che vive lungo la battaglia delle coste tra il Mediterraneo e il mar Nero.

La studentessa, di origini milanesi, si è laureata in Scienze Biologiche con indirizzo bio-ecologico all'Università di Milano Bicocca e ha poi scelto l'Università del Salento per la laurea magistrale perché «è l'unico Ateneo in Italia che offre questo corso in lingua inglese». A lei vanno le congratulazioni del rettore Vincenzo Zara: «L'entusiasmo e la disponibilità a mettersi in gioco e confrontarsi con la comunità scientifica internazionale - afferma - rappresentano due presupposti fondamentali per costruire un futuro ricco di sfide e opportunità».



RICERCATRICE Alessia Dinoi

IL RICONOSCIMENTO

Alessia Dinoi ha vinto il «Mars Travel Awards»

Molluschi, premiata ricercatrice

● Alessia Dinoi, studentessa del corso di laurea magistrale in «Coastal and Marine Biology and Ecology» all'Università del Salento, ha vinto uno dei «Mars Travel Awards», borse finanziate dal Mars - The European Network of Marine Research Institutes and Stations per sostenere giovani ricercatori che si spostano per svolgere attività di ricerca.

Grazie a questa borsa, Alessia ha potuto raggiungere il Centre de Recherches Insulaires et Observatoire de l'Environnement di Perpignan (Francia) dove, con una borsa di studio Erasmus Placement, sta lavorando alla tesi di laurea ma-



La ricercatrice Alessia Dinoi

gistrare sulla connessione genica di Donacilla cornea, un mollusco bivalve che vive lungo la battaglia delle coste sabbiose tra il mare Mediterraneo e il mare Nero. «Congratulazioni

ad Alessia - ha detto il rettore Vincenzo Zara - per questo bel l'inizio. L'entusiasmo e la disponibilità a mettersi in gioco e confrontarsi con la comunità scientifica internazionale rappresentano due presupposti fondamentali per costruire un futuro ricco di sfide e opportunità». Alessia Dinoi, milanese, si è laureata in Scienze Biologiche con indirizzo bio-ecologico all'Università di Milano Bicocca e ha poi scelto l'Università del Salento per la laurea magistrale perché «è l'unico Ateneo in Italia», sottolinea, «che offre questo corso in lingua inglese».

The 2nd International Ocean Research Conference (IORC)



The 2nd International Ocean Research Conference (IORC) is an opportunity for the scientific community to come together to plan the coming decade of international collaboration in marine science and technology, with a view to improving ocean governance. The Conference will focus on how ocean sciences have progressed in the last 20 years and will discuss the coming decade of international collaboration in marine sciences and technology. The conference

will be comprised of keynote lectures, panels, oral presentations and poster sessions. The oral presentations will be structured in three topics:

- 1. Building Scientific Knowledge. Marine research and observations for climate, ecosystem functioning and security*
- 2. Applying knowledge for societal benefit: Achieving ecosystem management and sustainability*
- 3. Improving governance and building capacities*

Key Dates:

Conference: 17-21 November 2014
Workshops: Sunday 16 November 2014
Poster Sessions: Monday 17 November & Wednesday 19 November 2014

Registration:

• Regular Fee (15 April onwards): 175 €

EMBOS Training School: “Marine Biodiversity Observation: A system to bring theory and practice together

Herewith we announce the second EMBOS Training School, entitled “Marine Biodiversity Observation: A system to bring theory and practice together”, to be held from 12 to 17 May, 2014, in Santander, Spain.



The Training School will be hosted by the Environmental Hydraulics Institute (University of Cantabria, Santander, Spain), and is co-organised by the Monitor Taskforce (NIOZ-Yerseke, Netherlands)

In the Training Schools students and young researchers can experience how marine biodiversity is observed and biodiversity indicators are calculated and used in science and policy.

A further description of the Training School and venue you may find in the attachment.

The EMBOS action can provide a fund for (major part of) the costs of travel and subsistence.

Students and young researchers that wish to participate are invited to apply by means of the EMBOS Training School Application Form.

Deadline for applications is 25th April.

For more information contact Herman Hummel at herman.hummel@nioz.nl

MARS/WAMS position paper

The role of marine stations in biodiversity research

Ferdinando Boero* & Christiaan Hummel**

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** Royal Netherlands Institute for Sea Research, The Netherlands

Marine Stations have always had, and still have, a prominent role in marine research to study marine life. Many scientists have used marine stations to study particular phenomena, using marine species as model organisms. In order to keep fulfilling this important role a detailed knowledge on the biodiversity of surrounding habitats is necessary. The Marine stations also have an important role in providing easy access to these organisms.

In earlier days, marine stations investigated marine biodiversity, producing species lists and information about their ecology and phenology. This happened, for example, in stations such as Naples, Roscoff, Plymouth and Woods Hole. These inventories containing precious bio-ecological information on a vast array of species sometimes are more than 100 years old.

Nowadays, the role of marine species as model organisms is of much lower importance, but the extensive knowledge on biodiversity, as present at marine stations, is growing more important by the day. Even more so after the Rio Convention on Biological Diversity. With the awareness that human impacts on biodiversity can be disrupting ecosystem functioning severely, studying biodiversity has become a stringent priority

In the Marine Directive of the EU, biodiversity is the Descriptor nr 1 in the list of descriptors of Good Environmental Status (GES). But how to measure biodiversity? And where? And how to compare the present status of biodiversity with previous states, so as to ascertain its condition? Another descriptor of GES is the functioning of food webs. But how to measure this if we do not know what species do and how they interact? The basic knowledge on marine species is rapidly vanishing in a time in which this knowledge is being recognized as more and more important. The knowledge and expertise needed to answer these questions is still available at marine stations, but with major funding cuts and intended closure of some stations, the question rises for how long this knowledge and expertise will still be there?

What do marine stations have to do to stay on top?

- The old inventories must be carried out again, not only with simple species lists but also with improved knowledge on species' phenology and ecological roles. The primary places where these inventories have to be carried out are obviously those where the first inventories have been made, i.e. the marine stations. A biodiversity assessment after a century can be a good indicator of biodiversity changes, and yields a reliable comparison of the former reference and present situation.
- New inventories and assessments must be done at further places, so as to create a network of reference points where biodiversity is well known.
- Long term series are being carried out at several marine stations, but each long term series has its own variables and collection methods. These long term series are the core of biodiversity observatories and should be properly harmonized and expanded to other representative areas, so as to set up a network of biodiversity observatories, as is aimed by e.g. EMBOS (the European Marine Biodiversity Observatory System). Those observatories should be the core of the assessment of the quality of the biodiversity-based descriptors of GES. These descriptors are not as easy to assess as the physicochemical ones. But, once the genomic approach is coupled with a sound taxonomic and ecological approach, then the assessment of species pools might become more automatized than before, allowing for quick and reliable data, based on sound knowledge.
- In former days, marine stations used to produce large monographs on marine life. These monographs are outdated and must be renewed, revisited and transferred to electronic formats, in order to be stored in species (distribution) lists such as those of ERMS and WORMS and GBIF, to facilitate data accesibility
- Each species can be assessed from a molecular point of view, so as to have sound links between genomics and traditional taxonomy. Moreover, the exploration of biodiversity with novel methods might reveal model species for the investigation of important phenomena, including the extraction of molecules of biotechnological importance.
- Ocean literacy is also a crucial issue, and marine stations have an important role to fulfill in this, with their strong tradition in capacity building and public outreach. So-called "citizen science" can be easily coordinated from a marine station.

Marine stations have the potential to play a prominent role in the study of the marine realm. The supply of both the knowledge and expertise are present at those marine stations to answer the demands from a variety of stakeholders including those by European Directives. Now, the time is ripe to take advantage of an already existing network that is there to fulfil all these demands.

Minutes MARS/WAMS meeting, Amsterdam

MARS Directors meeting & WAMS international assembly meeting
"Future perspectives for Marine Sciences"
26-28 March 2014, Amsterdam, the Netherlands

MARS Directors meeting (Wednesday 26 March)

The meeting was opened and the participants were welcomed to the meeting by the MARS president Herman Hummel.

The agenda and the minutes of the last meeting in Brussels were adopted

MARS now has 59 members in 24 countries, and is well represented all over Europe. The finances of MARS are



positive, even after establishing several new activities.

Recent actions included a.o.:

1. The establishment of a permanent secretariat
2. Regularly mailings of the MARS Newsletter. This has already brought results, such as the increased discussion between country representatives for the EC programmes and MARS on the strong focus of ocean-going research in the first call of the Blue Growth part of the new Horizon 2020 programme (with hardly any attention to the coastal zone and no attention at all for the Mediterranean or Baltic). Now, after the increased discussion more attention will be paid to the Mediterranean, in the second call..
3. The MARS survey, to prepare MARS for the future, and to be informed on how the members think this future should look. The results were published in the booklet "The role of marine stations in the 21st century".
4. The publication of the MARS business plan (in the previously mentioned booklet). In the booklet is described how MARS can survive and thrive in the future.

Some of the main challenges for MARS in the future are:

1. The weakened connections of MARS to the EC should be strengthened.
2. How to achieve a stronger focus on the MARS role and mission?
3. How to balance between low fees and a stronger basis for communication to be lead by a secretariat. Herman Hummel explains that it is costly for MARS to maintain a fully staffed permanent secretariat with continuous outreach, therefore we have to find a balance through a part-time secretariat.
4. Representation of marine stations in EC and European networks. Pim van Avesaath suggests that MARS can join EuroMarine, in order to represent the marine stations. Isabel Sousa Pinto says that it is still unclear in which direction EuroMarine will develop. It may be bigger in the future, and if so, then MARS may join EuroMarine. It is suggested to wait and see what happens to EuroMarine. Christos Arvanitidis adds to this that MARS has already been functioning for a long time and EuroMarine has not, therefore it is better to wait and see. Antoine Gremare noticed that there are no marine stations in EuroMarine, which means that they have less or no voice. Because MARS is the voice of the marine stations, it can join EuroMarine when needed.
5. To remain the "window of opportunity" for smaller institutes. To this end, the possibility of a small fee for smaller institutes (< 25 fee) should be maintained.
6. To adopt new directions of research. The majority of members feel that MARS members should incorporate socio economic issues, and also the website and newsletter should pay more attention to this. Yet, also some directions of research that are judged to be classic could be revived. As such Nando Boero will compose a MARS/WAMS strategy document for marine biodiversity research at marine stations

Presentations were given on:

- GOOS, GEOSS, GEOBON by Isabel Sousa Pinto
- EMBOS, FixO3, JERICO by Herman Hummel
- European Marine Board, LifeWatch, EMODNET, and JPI-Oceans by Jan Mees. The Marine Board is not intended to fund marine sciences, yet mainly operates to promote a proper marine science policy based on expert opinions (often laid down in Position papers). Nando Boero asked whether MARS can be in the Marine Board in some way. Direct representation in the EMB is however at the level of national funding agencies, together with one major research facility per country. Sometimes observers are invited from the relevant networks in open sessions, but MARS cannot have a permanent seat in the Marine Board
- The situation of marine research in Albania, by Sajmir Beqiraj. Plans are developed to set up a marine station on the Albanian coast, yet until now the Albanian situation is challenging.

WAMS international assembly (Thursday 27 and Friday 28 March)

Presentations were given on:

- EuroMarine EMBRC, WAMS, and Horizon2020 Infrasupp 6 call, by Mike Thorndyke
- The Japanese Marine Stations, by Kazuo Inaba. Kazuo suggested to compose a revised version of the

world directory of hydrobiological stations and fisheries institutions, by Robert W. Hiatt. The idea is unanimously agreed upon. Moreover, Kazuo suggests that WAMS should be a network for pooling marine expertise, having marine courses, and an exchange of scientific information, through a symposium series.

- The Australian Marine Stations, by Ian Tibbetts. Ian indicates, that because of the size of Australia, a good use of resources is key to good marine sciences. There is a lack of capacity for research in certain areas. This may be important for WAMS to tackle, because WAMS could help with capacity building

- The Canadian Marine Stations, by Paul Snelgrove. Paul indicates that Canada has a long coastline and therefore sites are difficult, and consequently expensive, to access. In Canada some of the stations survive by giving semi-commercial courses.

- The Russian marine stations, by Alexander Tzetlin. Russia at the moment is interested in cooperation, and to develop infrastructures and invest money in this. This is mainly done in very large MPA's, yet with small numbers of staff.

- IOC-UNESCO, by Jorge Luis Valdes. WAMS could be used to provide data with a better spatial and temporal resolution and capacity building at a global scale.

In the plenary discussion a tentative priority list of joint global actions by WAMS is made, being:

- Directory of marine stations (update of RW Hiatt 1963) to be published as a book.

Kazuo Inaba, Mike Thorndyke, and Ian Tibbetts will work on a template for the book on marine stations. Paul Snelgrove, Luis Valdes and Herman Hummel will help in the editing process. Luis Valdes will set up a secretariat in order to facilitate the bringing together of this book. This secretariat will be financed by IOC-UNESCO. Time scale for the book to be published is the beginning of 2016.

Alexander Tzetlin suggests to add an inventory of biotopes and species lists per marine station. These inventories could also be incorporated in a list of stations on a website with a clickable map, to be coordinated by WAMS or MARS.

- Joint research proposals. WAMS can facilitate joint research proposals on a global scale. An example can be a joint proposal in the Horizon 2020 Infratop 6 call. To set up a draft proposal Mike Thorndyke will make an outline to be worked out with help of Kazuo Inaba, Ian Tibbetts, Paul Snelgrove and Herman Hummel.

- the WAMS Conference series. To exchange academic information it was agreed to organise every 2 to 4 years a joint symposium. The series could be joint with other global actions as e.g. the 2nd International Ocean Research Conference co-organised by IOC-UNESCO in Barcelona, Spain, 17-21 November 2014

Other actions will be included at a later stage, as:

- Joint marine courses

- Efficient use of actions and facilities (expeditions, use of instruments)

- Mechanisms to use in order to join remote stations together in a network (Australia, Russia)
