Infrastructure development : The Fluvial and Marine Research Station Sfântu Gheorghe (2002)

The Marine and Fluvial Research Station Sfântu Gheorghe has been created - under the authority of the Faculty of Geography of UB - at Sfântu Gheorghe, Tulcea county by Decision no. 2938/October 25, 2002 of the President of the University of Bucharest (UB), on November 1, 2002.

Professor Emil E.I.A. Vespremeanu is to be founding director of the Station. He belongs to Bucharest University.

The Station supplements the existing specialized institutions in this field in Romania and aims at "opening new perspectives to oceanographic research and education at the University of Bucharest".

The station's own periodical "*Lucrarile Statiunii de Cercetari Marine si Fluviale Sfântu Gheorghe*" (*Proceedings of the Marine and Fluvial Research Station Sfântu Gheorghe*) intends to reflect the research and teaching activities in situ of the faculty members and coworkers every year.

The first volume of the "*Proceedings*", published by Editura Universitatii din Bucuresti, and edited by Professor E. Vespremeanu, in 2003, shows the reasons for the creation of the station, its scopes, scientific research objectives, a brief historical review on the creation of the Station, its concise presentation, statute (6 chapters), functioning regulations (11 articles), permanent research staff (8 people at the time being), recommendation of the Station as ideal place for establishing a base for research and practical training for students, as well as 14 major scientific papers delivered already before the creation of the Station and published in various domestic and foreign journals.

We do welcome the creation of this new scientific establishment devoted to limnological and marine sciences, especially to the investigation and protection of the coastal (deltaic) environment, both necessitated by the increasing importance of the concept of integrated coastal zone management nowadays.

We are glad to join Professor E. Vespremeanu in expressing best wishes of success, prosperity and long life to this new-comer in the Romanian and international scientific community.

Dr. Alexandru S. Bologa

***Accreditation:* The Laboratory for physical and chemical analyses**

The Laboratory for Physical and Chemical Analyses, belonging to National Institute for Marine Research and Development "Grigore Antipa", was accredited on October 2003 by RENAR (Romanian Accreditation Association) in conformity with SR EM ISO/CEI 17205:2001.

Accreditation was granted for physical and chemical analyses in the following fields: sea water pollution monitoring, nutrient load, and nutritional value of marine flora and fauna.

The list of accredited analyses includes: sea water nutrients determination, sediment and organisms heavy metals content determination, determination of the organochlorided pesticides in sediments, polyaromatic hydrocarbons in sediments, and nutritional value of the marine organisms.

The laboratory uses high standard equipment: VV-VIS spectrophotometer, atomic absorption spectrophotometer, gas chromatograph with electron capture and mass spectrometer.

Adriana Cociasu

***Scientific news* : Tokyo Declaration on Securing the Oceans**

After three years of hard work by the Ship Ocean Foundation of Japan on the future securing of the Oceans, a new concept of ocean governance has been proposed. This is reflected in the Tokyo Declaration on Securing the Oceans, which calls for the implementation of ocean governance as an integral part of comprehensive security. The declaration requires that all aspects of ocean management, including military activities, the peaceful use of the oceans, resource extraction, environmental management and scientific research be addressed in an integrated manner.

This Declaration is based on the deliberation by 26 eminent ocean law and policy experts and was adopted by the Third International Conference on Geo-Agenda for the Future : Securing the Oceans, hosted by the Institute for Ocean Policy, Ship & Ocean Foundation, at Tokyo, Japan, 2-3 December 2004.

Kazumine Akimoto and Hiroshi Terashima, Senior Researcher and Executive Director respectively of the Institute for Ocean Policy, Ship & Ocean Foundation, Tadao Kuribayashi Professor at the Tokyo Eiwa University, and Gao Zhiguo, Executive Director of the Chinese Institute of Marine Affairs (CIMA) took part in the formulation of the Declaration.

Tokyo Declaration on Securing the Oceans

The concept of Securing the Oceans, which we advocate, regards the implementation of ocean governance as an integral part of comprehensive security. It requires that all aspects of ocean management, including military activities, the peaceful use of the oceans, resource extraction, environmental management, and scientific research should be addressed in an integrated manner.

The concept of Securing the Oceans provides a comprehensive and integrated approach to ocean problems as a whole. It promises a significant improvement on the pattern of sectoral specific initiatives.

Hoping that this concept will serve in developing a deeper appreciation of the importance of ocean governance, and encourage individual states to achieve harmony between the exercise of their sovereignty and ocean

governance as espoused in the United Nations Convention on the Law of the Sea (UNCLOS) and Agenda 21.

Believing that this is the way forward to achieving peace and sustainable development in the world's oceans, and thereby to ensuring the survival and prosperity of mankind.

Reaffirming not only that the UNCLOS and Agenda 21 constitute international agreement, to which almost all countries are pledged to adhere, but that their implementation requires the full cooperation and coordination of all countries.

Trusting that it is now the time to clarify this in expressions of political will at both the national and international levels.

We therefore propose the following measures for building political will and implementing this new security concept of Securing the Oceans :

1. Building political will

1.1. Proposals to individual states and international organizations

We propose to individual states, as well as the United Nations and other international organizations, to join in initiatives to realize and promote a new security concept, Securing the Oceans.

1.2. Creation of an international ocean think tank

An international think tank for Securing the Oceans should be established. Along with its policy studies and research activities, such a think tank should serve as a network center for national ocean research institutions in the region and host international conferences for ocean researchers.

1.3. Establishing outreach programs

Educational programs should be expanded and public awareness raised regarding the need for Securing the Oceans, in light of the importance of our common ocean heritage. As a part of these efforts, it is advocated that the introduction of an Ocean Ambassador program as well as the establishment of awards to formally recognize individuals who have contributed to Securing the Oceans should be instituted.

1.4. Establishment of a coordinating mechanism and cross-sectoral body for ocean affairs

Each state should establish a coordinating mechanism and cross-sectoral body to develop and apply integrated national approaches to ocean issues.

1.5. Holding « Securing the Oceans » international conferences on a Regular basis

« Securing the Oceans » international conferences should be held on a regular basis, inviting broad participation, including that of individual states, intergovernmental and non-governmental organizations, academia, and local governments. Ocean Summit and ministerial level meetings should be held concurrently with the international conferences.

2. Towards implementation of Securing the Oceans

2.1. Conflict prevention and environment protection systems

Systems and strategies should be formulated in regional societies for confidence building and the prevention of conflict, and the protection of ecosystems and the environment. Codes of conduct regarding peace and the environment, standards for the pacific settlement of disputes, and pollution response manuals should be formulated.

2.2. Surveillance, monitoring, and enforcement systems

States should create surveillance, monitoring, and enforcement systems for piracy, maritime terrorism, fishing, the environment, and illegal dumping at sea.

2.3. Information sharing

States and regional organizations should share necessary information for Securing the Oceans such as on piracy, maritime terrorism, illegal trade, illegal fishing, environmental pollution, and marine ecosystems. They should work to create systems to facilitate such exchange of information.

2.4. Burden sharing

In recognition of coastal states' burdens in discharging their ocean governance responsibilities, user states should provide to coastal states appropriate financial and technological assistance. States and organizations should work to create systems to facilitate such cooperation.

2.5. International cooperation for capacity building

The capacity building necessary for Securing the Oceans requires international cooperation. User states are called upon to provide both material and human resource support especially to developing coastal countries.

3 December, 2004, Tokyo, Japan

Dr. Alexandru S. Bologa

Scientific News : **GEF / Black Sea Regional Activity Centre for Environmental Aspects of Fisheries and Other Marine Living Resources Management**

1. General informations

Black Sea Regional Activity Centre for Environmental Aspects of Fisheries and other Marine Living resources Management (RAC FOMLRM) is created in 1994 and based on National Institute for Marine Research and Development "Grigore Antipa" Constanta (ROMANIA) (NIMRD).

NIMRD, previously Romanian Marine Research Institute, was established in 1970. The Institute operates under coordination of the Ministry of Environment and Waters Management. NIMRD is the leading marine and fisheries research institute in charge with national and international responsibilities in the field of marine science.

At the same time, the Institute is technical operator of the marine monitoring network (physical, chemical and biological) and for coastal erosion survey.

The permanent staffs consist in 115 peoples (16 Ph.D., 12 trainers for a doctor's degree) working in three operational departments and other three support departments:

- Oceanography and Coastal Engineering Department,
- Marine Ecology and Environmental Protection Department,
- Marine Living Resources Department.

The Institute hosts the following four Focal Points, corresponding to the Black Sea Activity Centres Network: Biodiversity, Pollution Monitoring and Assessment, Pollution from Land Base Resources, Methodologies for ICZM.

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2. Sector of work

RAC FOMLRM coordinates and ensures the necessary programmatic support and provision of practical technical support for functioning of related Advisory Group of Black Sea Commission in the field of protection and rehabilitation of marine ecosystem in particular for conservation and sustainable use of living marine resources.

3. Additional sectors of work

- Technical support for implementation of national legal framework and of regional and international conventions: UNCLOS, ACCOBAMS, CITES, Bucharest Convention, etc.
- Promoting ecosystem-based fisheries management approach and FAO Code of Conduct provisions;
- Technical support for implementation of sectorial EU Directives: Shellfish Directive, Habitat Directive, NATURA 2000, etc.;
- Conducting of environmental impact assessment studies;
- Recommendation of policy measures in the inter-sectorial areas of environment and fisheries and aquaculture.

4. Current responsibilities under Commission on the Protection of the Black Sea Against Pollution

a/ Drafting recommendation and policies for:

- Legally Binding Instruments for Fisheries;
- Implementation ecosystem-based fisheries management;
- Implementation FAO Code of Conduct;
- Strengthening the relationships between fishery sector and environmental authorities (national and regional);
- Measures for prevent illegal fishing practices;
- Harmonization of legal and institutional framework (especially enforcement system);
- Improvement of fisheries management through harmonized methodologies (assessment, indicatory, etc.);
- Improvement of the aquaculture practices and technologies;
- Measure to reduce marine mammal's by-catch.

b/ Assessment of the efficiency of fisheries management system and impact of existing practices on the marine ecosystem.
c/ Drafting of projects for protection and rehabilitation of marine living resources and specific habitats.
d/ Ensuring the regular information flow.
e/ Activity as a regional consulting body with international organization.

5. Statement of capacity

5.1 Equipment capacity

- Research vessel STEAUA DE MARE 1 (25 m length, 570 HP);
- Survey boat MARSUINUL (8 m length, 150 HP);
- CTD;
- Equipment for trawling survey for ichtyoplanktonic and juveniles studies, etc.;
- National Fisheries data Base;
- National Dolphins Data Base;
- Specialised laboratories.

Research vessel *STEAUA DE MARE 1*

Survey boat *Marsuinul*

5.2 *List of projects/activities carried out under BSEP (1992-2004)*

- 1994, BSEP. Marine Aquaculture in the Black Sea Region (Assessment the status of marine aquaculture in the region by international experts mission);
- 1995, GESAMP. Opportunistic settlers and the problem of the ctenophore *Mnemiopsis leidyi* invasion in the Black Sea;
- 1995, BSEP. Survey of the Fisheries Fleet and Processing Capacity;
- 1996, BSEP. Black Sea Transboundary Diagnostic Analysis;
- 1997, BSEP. Preparation of the project: "Support for the sustainable integration of Fisheries Activity Centre based in Constanta, Romania";
- 2004, BSERP. Booklet: Code of practices; responsible Fisheries in the Black Sea in cooperation with TUDAV;
- 2002-2004, BS Commission. Technical Draft of Legally Binding Document on Fisheries and Conservation of Living Resources in the Black Sea;
- 2003-2004, BS Commission. List of species whose exploitation should be regulated. (Annex IV at Protocol for Biodiversity and Landscape Conservation in the Black Sea);
- 2001-2004, BS Commission. Contribution at National Sectorial Reports.
- 2004 - BSERP/BS Commission. Elaboration of the regional methodology for assessment of pelagic and demersal species of commercial interest.

5.3 *Operational staff of RAC FOMLRM*

Operational staff consists in the following persons:

Name/Surname	Responsibility	Field of expertise
1. Dr. Simion NICOLAEV e-mail: nicolaev@alpha.rmri.ro	**DIRECTOR**	- Fishery engineering - Fishery biology
2. Dr. Gheorghe RADU e-mail: gpr@alpha.rmri.ro	Expert	- Fishery biology (stock assessment, modelling and survey)
3. Dr. Ionel STAICU	Expert	Fisheries statistics
4. Dr. Tania ZAHARIA e-mail: zahar@alpha.rmri.ro	Expert	- Marine aquaculture - Habitats and protected areas
5. Dr. Elena RADU e-mail: eradu@alpha.rmri.ro	Data base administrator	- Fishery biology - Data Base

6. Maria MOLDOVEANU e-mail: mary@alpha.rmri.ro	Office coordinator	- Biology and ecology of zooplankton

LRM

Operational staff is supported by Marine Living Resources Department Team, which consists in 11 researchers, and 7 technical staff (6 Ph.D.).

5.4 *Information resources*

The RAC FOMLRM used all informational facilities of the NIMRD, i.e.:

- server
- internet
- computers
- library (20.000 books)
- publication "Cercetari Marine – Recherches Marines" issued in current international languages
- web page: www.rmri.ro.

Dr.Eng. Simion Nicolaev

***Scientific news* : GEF/ National focal point of Romania for Land Based Pollution Sources**

In accordance with the Permanent Secretariat of the Commission on the Protection of the Black Sea Against Pollution Work Programme in 2004 the Advisory Group on the Land Based Pollution Sources focused on following objectives:

- The development of harmonized Water Quality Objectives and Water Quality Standards in order to reduce the inputs of pollutants and setting up an appropriate timeframe for their introduction in the environmental management practice of the Black Sea coastal states;
- Revision of Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land-based Sources ;
- Development of the Global Programme of Action (GPA) for the Protection of the Marine Environment from Land-based Activities Work Programme for the Black Sea;
- Assessment of the relevance and applicability of the EU Water Framework for the improvement of the state of environment in the Black Sea region.

An Informational Strategy being presently implemented by the Permanent Secretariat of the Black Sea Commission, and supported by the **GEF Black Sea Ecosystem Recovery Project Implementation Unit**, distinguishes a number of activities, which require an extensive knowledge of - and experience in - the development of database management systems, including development of the required software and maintenance of up-date developed databases. Within the BSERP, together with the Permanent Secretariat of the Black Sea Commission organised a data and information gathering / country reporting exercise for each of the six Advisory Groups of the Black Sea Convention.

The activity of the Romanian national focal point Advisory Group on the Land Based Pollution Sources consisted in:

- 1. Filling in the provided database. The following Tables in Template were filled in:

***** 31.1.LBS , Code of Table in Template, with reference to emissions of green house gases;

* 32.1.LBS and 32.1.(a), Code of Table in Template, with reference to List of Hot Spots and Pollution Trends;

***** 34.1.LBS, Code of Table in Template, with reference to volumes and discharges of insufficiently treated waters and Accidental Pollution.

Preparation of progress and final technical reports on the fulfilment of the assignment.

- 2. In accordance with the ”Terms of Reference for the Focal Points associated with the Revision of the Protocol on Protection of the Black Sea Marine Environment Against Pollution From Land-Based sources and the UNEP GPA Work Programme for the Black Sea”, identification of potential data sources for information and completed LBS protocol and GPA questionnaires (Annex VIII “Situation in a Black Sea Country Relevant to the GPA” and Annex IX “Assessment of the Situation in a Black Sea Country Relevant to the Implementation of the Protocol on Protection of the Black Sea Marine Environment Against Pollution from Land Based Sources”).

Preparation of progress and final technical reports .

Victoria Piescu

***Scientific news*: GEF/ National focal point of Romania for Conservation of Biodiversity**

Between November 2003 and October 2004, Romania has had the chairmanship of the Black Sea Commission, a regional organization resulted from the Convention on the Protection of the Black Sea Against Pollution (Bucharest Convention) signed by all the Black Sea coastal states. One of the four focal points functioning in National Institute for Marine Research and Development (NIMRD) is the national focal point for the Conservation of Biological Diversity (CBD).

In 2004 CBD focal point carried out a very intense activity, filling and sending numerous documents to the Permanent Secretariat of the Black Sea Commission from Istanbul. The most important were:

- filling an empty database provided by the Permanent Secretariat (PS) and Project Implementation Unit (PIU) of the UNDP/GEF;
- the list of endangered, vulnerable, rare and extinct species from the Romanian Black Sea waters;
- the list of species protected by national legislation;
- policy measures relevant for biodiversity conservation in national waters (especially the laws elaborated in the last two years);
- the inventory of the Black Sea species from the national waters;
- the list of the national projects relevant for biodiversity conservation;
- the methodologies used in Romania for phytoplankton, zooplankton and zoobenthos, in order to elaborate a regional manual for Black Sea research.

The inventory of the Black Sea species from the national waters was requested by the Permanent Secretariat as an additional document of the list of endangered, vulnerable rare and extinct species. Those documents should form a baseline for elaboration of the Annex II for the Black Sea Biodiversity and Landscape Conservation Protocol (List of Species of the Black Sea Importance). The Annex II should be finalized during 2005.

The inventory of the species from the national waters includes the species belonging to phytoplankton, zooplankton and zoobenthos identified between 1996 and 2003, namely:

- 364 phytoplankton species belonging to 7 phyla;
- 74 zooplankton species belonging to 18 systematic groups;
- 212 zoobenthic species belonging to13 systematic groups and 6 superior taxons.

Phytoplankton was not considered as part of Annex II of the Protocol, being very adaptable to the environmental changes and not needing special measures for protection and conservation. Phytoplankton inventory is very important for assessing and monitoring eutrophication, a very important objective of the Black Sea Commission, too.

At the Ministry of Environment and Waters Management's request, CBD focal point elaborated an explanation for the ratification of the Black Sea Biodiversity and Landscape Protocol to the Convention on the Protection of the Black Sea against Pollution. Although the Protocol was signed at the Ministerial Conference on July 14, 2002, at Sofia (Bulgaria), initially by the ministers of environment of four coastal states, and at present by the five signatory states (except Russia), this document was ratified only by Bulgaria and Turkey by now.

The explanation for the ratification of the Protocol was elaborated according to the Law No. 590/2003, regarding treaties, with respect to:

- the necessity for ratification of the Protocol by the Romanian Part;
- the finality for ratification of the Protocol by the Romanian Part;
- the negotiations history;
- date, place and the signatory person for the Romanian Part;
- presentation of the relevant provisions of the Protocol from the perspective of the Romanian Part, of its implications on the legal obligation and other anterior international agreements assumed by the Romanian Part, on internal legislation, respectively, including from the point of view of the compatibility with community rights, and the necessary measures for adaptation.

The two above mentioned coastal states ratified the Black Sea Biodiversity and Landscape Conservation Protocol without the Annex II (List of Species of the Black Sea Importance) and IV (List of Species Whose Exploitation should be Regulated), those documents being not yet finalized.

Drd. Valeria Abaza

***Scientific news*: Revision of phytoplankton, zooplankton and zoobenthos inventory occuring in Romanian Black Sea transitional and coastal waters**

In 2003, the Permanent Secretariat of the Black Sea Commission (Istanbul) requested the Black Sea coastal states to prepare an inventory of the species occurring in their territorial waters as well as of the threatened species. These two lists are to be used for elaboration of the Annex II of the Protocol for Biodiversity Conservation and the Black Sea Landscape.

Within this action, the Lists of phyto- and zooplanktonic, as well as benthic organisms, and their frequency of appearance (%) in the Romanian Black Sea waters between 1996 and 2003 were prepared.

- 364 phytoplanktonic species pertaining to 7 algal groups were identified. The Diatoms represented 42%, Dinoflagellates - 20%, Chlorophytes - 19%, Cyanophytes - 11%, and other groups - about 7% from the total. The great changes produced in the phytoplankton communities during the intensification of eutrophication consisted in a high quantitative development of the blooming species, some of them quantitatively insignificant or even absent from the planktonic flora before the eutrophication period (e.g. dynoflatellates *Heterocapsa triquetra, Scripsiella trochoidea* and *Prorocentrum scutellum*). *Microcystis orae* occurred in Romanian coastal waters in the late '80ies, then between 2000 and 2002 it registered ample developments, in densities higher then 200 mil. cells/l. After 2000, the numerical abundance of dynoflagellates and other non-siliceous species (which produced blooms in 1970 and 1980), besides the maintenance of the diatoms as numerical dominant group, is explained by the strong increase of the Si:P ratio.

- In the zooplankton, 74 taxa pertaining to 18 groups were identified, the Tintinnidae having the highest number of species (14 species - 18.9%), followed by the Calanidae Crustacean with 13 species - 17.6%. Other planktonic crustaceans - the Cladocers - participated with 11 species, while the Rotifers - tiny planktonic species, but very important for the trophicity of an aquatic basin, had 11 representatives. Remarkably is the fact that, after 2000, some copepods from the Pontellidae Family, whose

populations almost disappeared due to eutrophication -*Pontella mediterranea* and *Anomalocera pattersoni* -, occurred for the first time after 1986. Ecologically, this fact is very significant, proving the improvement of the Romanian Black Sea quality.

- For the zoobenthos, 220 species were identified, out of which 144 were representatives of the macrozoobenthic fauna, pertaining to worms in a percentage of 20, mollusks - 24, crustaceans - 42, but also to other categories (phoronids, tunicates, arthropods - 14%). Comparatively with the '80ies, a slight rehabilitation of the qualitative composition of the zoobenthos was noted, due to the diminution of the phytoplanktonic abundance, and decline of the algal blooms.

Drd. Laura Boicenco
Maria Moldoveanu
Camelia Dumitrache

***Scientific events*: Visit of Dr. Jean Paul Blancheton, IFREMER, Palavas Les Flots Research Station, France**

Dr. Jean Paul Blancheton visited Romania in 2004, between August 2-8, in the aim to set up a research network among some research institutions in the Mediterranean and Black Sea basins.

He was invited on August 4, to participate in Constanta, at the National Institute for Marine Research and Development (NIMRD) "Grigore Antipa", to a meeting organized by the "Lower Danube" University, Galati, the NIMRD, Constantza and the GEF / Black Sea Regional Activity Centre for Environmental Aspects of Fisheries and Other Marine Living Resourcea Management and the National Fisheries Focal Point for the Black Sea, Constantza, in the presence of specialists in fishery and aquaculture from Romanian national and coastal institutions.

As President of the Aquaculture Subcommittee of the General Fisheries Council for the Mediterranean basin (GFCM) and national representative of France to the European Aquaculture Society (EAS), he shared knowledge and experience and sustained important oral contributions, concerning:

- major trends for future fish cultures,
- general, present, new developments in recirculation systems for aquaculture,
- characterisation, minimisation, treatment and valorisation of marine fish production systems wastewater,
- high rate algal pond (HRAP),
- water purification and fish health.

As coordinator of projects for aquaculture in controlled systems and scientist of IFREMER, his visit aimed also at developing the international collaboration in the field of mariculture, between France (IFREMER), Romania ("Lower Danube" University and NIMRD), Bulgaria (Institute of Oceanology, Varna) and Georgia (Institute for Marine Ecology and Fishery, Batumi). Within the Technological Research and Development field, he developed the ECONET project "The treatment and valorisation of aquatic effluents", with following important objectives:

- database of Black Sea macroalgae,
- investigations of different macroalgae selection, cultivation and use in aquaculture recirculated system for effluents purifying,
- tests for possible macroalgae biomass valorisation,
- indentification of HRAP optimal operating conditions in partner countries,
- qualitative and quantitative approach of zooplankton and benthic populations susceptible to a significant effect on the functioning of the HRAP,
- assessment of the effect of reusing a treated effluent in the recirculation system,
- possibilities to contact scientists from Algrave University, Portugal, involved in the SEAPURA project, to assure the success of the LAGUNEST project in Romania, Bulgaria and Georgia, according to described objectives.

The visit of Dr. Jean Paul Blancheton proved important for the development of new and efficient research and technology, future international and institutional collaboration, improvement of Eastern European scientists' skills and the perspective of young scientists' involvement in different kind of specialisations and collaborations.

Dr. Eng. Laura Alexandrov
Eng. Elis Metaxa

Book review : *Geografia Marii Negre (The Black Sea Geography)*, E. Vespremeanu, Ed. Universitatii din Bucuresti, Bucuresti, 2004, 236 pp.

In 2004 the Publisher House of the University of Bucharest (UB) edited *Geografia Marii Negre*, by Professor Emil E.I.A. Vespremeanu from the Faculty of Geography of UB. The book comes after transformer publications dealing with this subject: *The Black Sea*, vol. I. Black Sea General Oceanography, Bionomy and Biology (in Romanian) published by G. Antipa in 1941 and *The Black Sea in the Area of the Romanian Littoral. A Hydrologic Monograph* (in Romanian) by C. Bondar in 1973.

The Black Sea Geography follows a series of the author's articles and books covering a large field of marine research, such as *Oceanography* in 1993 (410 pp), *Medical Oceanography* (main author) in 2003.

A passionate researcher, the author uses a vast bibliography, more than three hundred titles. Comprehensive graphics, maps and drawings make the book remarkably attractive.

Structured on 13 chapters, the monograph covers the entire range of marine disciplines from the history of the knowledge about the Black Sea to description of the straits, Danube's hydrographic basin, climatology, geology, sediments, flora and fauna. Population and human settlements from the Black Sea coasts are described as well as degradation and need for environmental protection. A very useful Glossary of oceanographic terms is provided too, which comes to clarify the correct use of certain specific scientific terms.

Author's confessed intention to upgrade the information about marine research and to put an order in the huge amount of information gathered in the last 150 years, leading the reader to essential elements, were tasks that have been remarkably fulfilled.

Drd. Viorel Malciu

Book review : *Insula Serpilor (The Serpent Island),* D. Padurean, Ed. Muntenia, Constantza, Publishing House Muntenia, Constantza, 2004, 557 pp and 21 annexes)

Insula Serpilor, the first national and international scientific monograph, by Dominut I. Padurean, a professor at "Mircea cel Batrân" Naval Academy in Constantza, Ph.D. in history, is the fruit of four years of documentary research.

The complex monograph is structured in seven chapters which contain extremely valuable data and information about the island: they cover respectively (1) geographical co-ordinates, geologic aspects, climate, waves, flora and fauna, (2) the island names between 777 BC and 2004, (3) cartographic presence between the 2nd and 20th centuries, (4) Achile's island between mythology and reality, (5) the lighthouse, (6) the island's political status until 1812, under tsarist occupation between 1813 and 1856, under ottoman domination between 1857 and 1878, Romanian land (1879-1947), 1948 unilateral annexation by the USSR, (7) island under Soviet control (1944/1948-1991) and Ukrainian (1991-2003) military base, issues concerning the territorial sea, the contiguous zone, the continental shelf and the Economic Exclusive Zone (EEZ), the Romanian-Soviet (1967-1987) and Romanian-Ukrainian negotiations regarding the continental shelf and EEZ of USSR, Ukraine and Romania, the Romanian parliamentary debates on Serpent Island, the treaty with Ukraine of June 2nd, 1999 regarding Serpent Island with related implications on this island, the consequences of the treaty on Romanian geostrategic interests in the Black Sea.

The dynamic and fascinating style, rigorously and permanently trying to objectively *audiantur et altera pars*, defends the position that Serpent Island continuous belonged *de jure* to Romania and its territorial rape - besides that of Bessarabia in 1812 and 1940, north of Bucovina and Hertza in 1940. The island has obvious geostrategic value and more recently acquired a growing economic importance. After 70 years of Romanian administration, its loss caused Romania a severe amputation, almost half of the 454 km of sea coastline it had owned from 1940 and 1948.

The book includes numerous interesting and original notes, such as the etymology of the northern branch of the Danube river, Chilia (of Chilia, Achillei) which comes from one of the ancient names of the island, viz. Achillea, Achilleis, Achilles, Achilleus, Achillis, and the ones containing the

adjective “white” (Léuke etc.), the noun serpent (snake) *Natrix tesselata* Laur., or others rare or incertain.

The whole argumentation based on numerous documents and quoted statements proves the legitimacy of considering the Serpent Island being Romanian land and claiming it accordingly (without forgetting incidentally, *Transylvania Romanian land : The Transylvanian issue according to an American*, by M.G. Lehrer, Bucharest, 1944, republished 1989). Another essential idea of the book refers to the notorious illegalities that brought about the separation of the island from the motherland. Regretful not only the present “owner” of the island, Ukraine, but also some contemporary Romanian ranking officials sustained the alienation of the island, notwithstanding legality and evidence.

The patriotic sober, robust and tonic attitude of the author, which we share, leads to a major conclusion: the necessity to continue negotiations to retrieve Serpent Island. The example of Japan’s the Kurile Islands may be cited here.

In spite of financial difficulties, translation of this outstanding monograph is recommended, eventually in a shorter version, at least in English, though it is also desirable in French and Russian.

Also to be considered well is appropriate distribution, e.g. to foreign embassies in Romania, Romanian embassies abroad, major libraries world wide, up to prestigious international juridical organizations.

Fiat justitia, ...

Dr. Alexandru S. Bologa

Teaching activities: **Training Centre of Environmental Professions**

Sustainable use of natural resources, environmental management, education and ecological information addressed to all human categories should become programme of national priority for the Balkan countries. The new social and economical conditions in Romania require a new approach to the development of the "professional education" (training and re-training).

The **Training Centre of Environmental Professions** (TCEP) was established in January, 2002 through the collaboration project between *the Balkan Environmental Association (B.EN.A)* and the *National Institute for Marine Research and Development "Grigore Antipa"* in Constantza/Romania. The project was funded by the Ministry of Foreign Affairs of Greece - Department of the International Development and Co-operation (HELLENIC AID) in the frame of environmental protection.

The main objective of the Training Centre is to offer training on new professions to employed and unemployed persons, in order to improve their professional skills and to update their knowledge on modern environmental management.

The structure of the curricula is distributed in four modules of level (basic, intermediary, advanced and special); each specific course includes theory and practical activity on different fields of interests: Environmental Education, Ecology and Biodiversity, Environmental Legislation, The Control of Air, Soil and Water Quality, Protection and Environmental Management, Environmental Risk Assessment, Integrated Coastal Zone Management etc.

On 8th June, 2004 the authorization of the training courses was obtained, according to the Romanian legislation, approved by the Ministry of Labour, Solidarity and Family and the Ministry of Education, Research and Youth, for two categories: the courses for university graduates – specialization "environmental system manager" and the courses for lyceum graduates – specialization on "ecology technician".

Between 2002 and 2004, different training courses on environmental protection were delivered, as follows:

- 5 series for university graduates;
- 3 series for lyceum graduates;
- 2 special series for employees of the Romanian Coast Guard;

- 4 series for employees of the National Company of Oil – Petromar branch of Constanta.

In the frame of this activity, international seminars and workshops have been organized every year on different topics relating to the environmental skills, offering the opportunities to graduates to exchange their experience and information with respect to the environmental professions.

Dr. Eng. Simion Nicolaev –
Director of TCEP
Dr. Eng, Tania Zaharia –
Study Director of TCEP

Obituary : Professor Ramon Margalef (16 May 1919 – 23 May 2004)

Professor Ramon Margalef was one of the great ecologists of our time and a world expert in both limnology and oceanography. He had the ability to integrate concepts and ideas from different fields with insight from his naturalistic knowledge, to propose a coherent framework of unifying principles for the interpretation of ecological observations. Before modern sensors and computing power helped to highlight the importance of physical-biological interactions, R. Margalef saw the aquatic medium as an environment structured by turbulent motions at different scales (a manifestation of the external or auxiliary energy introduced by wind and currents), which interacted with organism adaptations.

One of the most inspiring conceptual models in phytoplankton ecology has been his classification of phytoplankton life-forms as a function of available nutrients and external energy. In one of his early publications, R. Margalef proposed the use of expressions derived from information theory to quantify ecological diversity. The significance of diversity in planktonic systems and its relationships with connectivity and ecosystem structure and function were a recurring topic throughout his scientific career. Other subjects in which he made outstanding contributions were the characterization of ecological succession on the basis of global parameters of the ecosystem such as the production to biomass ratio, the role of external energy in biological production, and the contacts between ecological succession and evolution. He was also a pioneer in adopting an integrative view of biogeochemistry.

R. Margalef insisted on considering man as an integral part of the biosphere, rather than as a bystander, and emphasized the need of interpreting the relationships among human societies within a general ecological context. R. Margalef combined his intellectual capacity with a high human quality. He was generous in sharing ideas and had a fine sense of humour. He was also an enthusiastic teacher that communicated his love for nature to students and coworkers.

During the American Association of Limnology and Oceanography (ASLO) 2005 Summer Meeting (http://www.aslo.org/santiago2005), Santiago de Compostella / Spain, 19-24 June, 2005, a special session “Understanding the plumbing of the biosphere : Theory and observations in aquatic systems

(Hommage to Ramon Margalef)" in honour of Prof. R. Margalef will take place as a tribute to his scientific legacy; it aims to feature contributions that will emphasize integration of theory and observation or provide opportunity for discussion on subjects that have been Margalef's favourites, such as (but not limited to) the relationships between diversity and ecosystem structure and function, the interactions between physics and biology and how these shape succession and selection of life forms, and the ecological role of boundaries and spatial organization in general.

Dr. Alexandru S. Bologa
Dr. Celia Marrase