
THE BLACK SEA EXPLORER

One cruise, a lot of experiences

Issue no. 23
01.04.2009

Content

- **page 1: About the cruise**
About SESAME
- **page 2: Description of an experiment**
About Plankton
Photo of the Issue
- **page 3: Interview**
Message from the youngsters
The seashore in 50 years from now
- **page 4: About Jellyfish**
Newsflash
Menu
Forecast for the day
Bibliography



It's well known that sea cruise will take you to lands known best for their history, variety of terrains, unique cultures and long-standing traditions. Romania is a very beautiful country, that will always let u explore a wonderful sea view and a gorgeous zooplankton and phytoplankton under water. .

SESAME is a 4-year European Union-funded project designed to study the Mediterranean and Black Sea ecosystems and their abilities to provide goods and services with high societal importance, such as tourism, fisheries and ecosystem stability through conservation of biodiversity. The need for consistent information, together with the indispensable linking of natural and socio-economic sciences, on these two ecosystems have mapped out SESAME's research path. Both the Mediterranean and Black Sea have been experiencing intensive development and exploitation due to their strategic geographical position, and are equally susceptible to human pressures and climate change. SESAME has been suitably created to assess the changes that have occurred in these ecosystems over the last 50 years , while simultaneously predict changes in the ability of the two seas to sustain essential ecosystem functions in the next 50 years.



DESCRIPTION OF AN EXPERIMENT FROM THE CRUISE

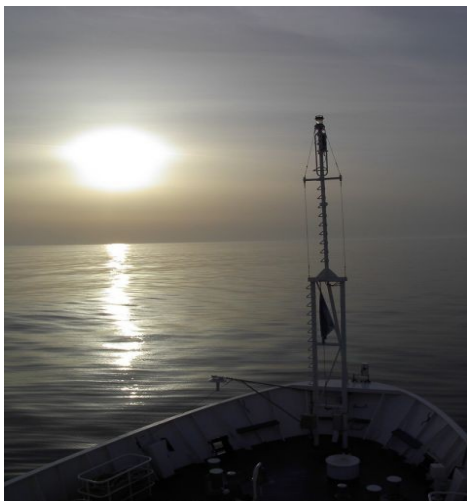
Once arrived at the S-RO2-004 station we are getting started to work again. The Biology & Oceanography team, those whom I didn't presented yesterday, are starting the phytoplankton and benthos sampling, under Prof. Gomoiu Marian Traian careful supervising. In the meantime, Dr. Opreanu Priscila is sampling the phytoplankton from the CTD water containers and Dr. Tania Begun and Dr. Adrian Teaca are sampling the benthos. After that, they continue to work under the microscope. For all of them the working day lasts until late in the night. It wasn't easy, but all the teams tried to finish as soon as they could their activities in order to set moving to the next station, S-RO2-003 before sunset

ABOUT PLANKTON

Some marine diatoms - a key phytoplankton group
The name plankton is derived from the Greek word *πλαγκτος* ("planktos"), meaning "wanderer" or "drifter". While some forms of plankton are capable of independent movement and can swim up to several hundreds of meters ver-

several hundreds of meters vertically in a single day (a behavior called diel vertical migration), their horizontal position is primarily determined by currents in the body of water they inhabit. By definition, organisms classified as plankton are unable to resist ocean currents. This is in

organisms that can swim against the ambient flow of the water environment and control their position (e.g. squid, fish, and marine mammals).



“The photo watches towards the horizon, it has a vision towards the future, about walking forward and not looking back.”

Interview

Let's see what dr.Gheoghe Oaie told us about their great expedition :

1.Mr. Oaie, how did the crew cope with the duties. Did they get accustomed with them easily?

Well, after a week since we left in this expedition, everybody knew now which their duties are; my intervension, as the expedition leader is not necessary anymore.

2.What was your role in this expedition?Did you have any help?

I am a senior researcher at GeoEcoMar, but on this cruise, I work as a sedimentologist.Together with my colleague, Cristina Voicaru – technician at GeoEcoMar,we are choosing the most representative sample which is waiting to be processed in the ship's laboratory.

3.Was it any specific machine you had to use?

We worked with the multicorer, which is used for sampling in chemical, geochemical and biological applications. The coring head is hydraulically damped to ensure undisturbed samples. Quick change of tubes assures a high operational speed.

4. Did you have one assignement per day, or did it take longer for anything to be done?

It was one assignement that we completed in two days. Because we didn't succeed in finishing the CTD casts at the S-RO2-006 station the other day, as we were too tired on the fifth day, and only moved to S-RO2-005 station, where we worked hard the entire next morning in order to complete our work. At midday we started our way to the next location.Once arrived at the station we started working again.

5.How did the obserance on phytoplankton and plankton go?What steps did the teams follow?

The Biology & Oceanography team, did the phytoplankton and benthos sampling, under Prof. Gomoiu Marian Traian careful supervising. In the meantime, Dr. Opreanu Priscila was sampling the phytoplankton from the CTD water containers and Dr. Tania Begun and Dr. Adrian Teaca were sampling the benthos. After that, they continued to work under the microscope. For all of them the working day lasts until late in the night.It wasn't easy, but all the teams tried to finish as soon as they could their activities in order to set moving to the next station, S-RO2-003 before sunset.

6.I know everybody has to take specific care of their role in this expedition, that they have to be very attentive to details. Tell me more about that.

After each CTD sampling cast, the fourth scientists followed a working programme which became a kind of a daily ritual during this expedition.Sorin, the CTD operator, was checking permanently the CTD sensors functioning, in order to have everything in order for the following launching. Remzi, responsible with the equipment operation, dealt very precisely with the winch commands. Even if all of these seem to be very simple, only after a long exercise someone can follow the CTD operator and action consequently when needed.On the first day of this routine, by mid-day – the weather was very helpful; we succeeded to finish all the measurements and samplings according to the schedule.

Message from the youngsters on the land to the scientists at sea

Hi there! How are things going at sea? We hope your reasearch will have some beneficial result and we try to support you from the shore and help you with whatever you need. We are eager to learn from you and we can't wait for you to be back. Have a nice, safe and most of all, fruitful expedition. We are looking forward to hearing from you soon.

How do we see the seashore in 50 years?

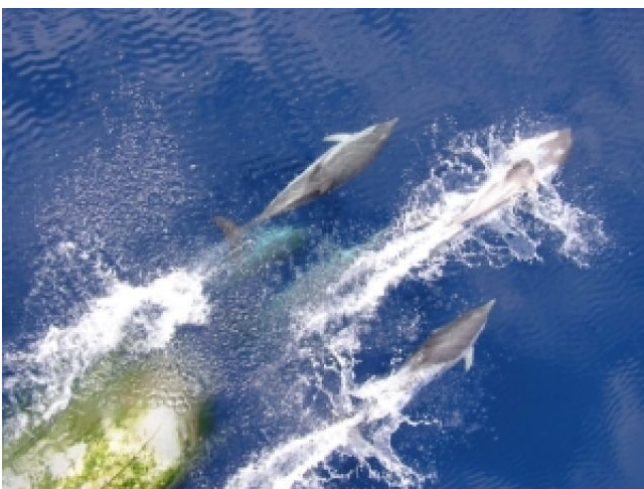
Well, we believe that the seashore could evolve in a multitude of ways, due to some environmental and non-environmental issues. We choose to be optimistic for our view and not take in account that the shore might move further in the coast because of the Global Warming. We choose to think that it will continue to look good or maybe become even better. Let us imagine an incredible land with golden beaches, with sunny skies and the sound of the seagulls echoing on the background like the soundtrack of our summers. Let us imagine an utopic land, never to be seen. Well, maybe things will not be like this in 50 years, but we surely hope that it will be. We hope that people would stop polluting the seashore and remember that the countries that have one are truly blessed and that it's a big tourist attraction.

Jellyfish

Jellyfish (also known as jellies or sea jellies) are free-swimming members of the phylum Cnidaria. They have several different morphologies that represent several different cnidarian classes including the Scyphozoa (over 200 species), Staurozoa (about 50 species), Cubozoa (about 20 species), and Hydrozoa (about 1000-1500 species that make jellyfish and many more that do not). The jellyfish in these groups are also called, respectively, scyphomedusae, stauromedusae, cubomedusae, and hydromedusae; "medusa" (plural "medusae") is another word for jellyfish. Jellyfish are found in every ocean, from the surface to the deep sea. Some hydrozoan jellyfish, or hydromedusae, are also found in fresh water. Most of the information about jellyfish that follows in this article is about scyphozoan jellyfish, or scyphomedusae. These are the big, often colorful, jellyfish that are common in coastal zones worldwide.

WEATHER FORECAST FOR THE DAY

We are forecasting a sunny, warm day. The wind will blow quite slow and the temperatures will rise up to 22 degrees Celsius. The sea temperature will remain constant: 15 degrees Celsius. In the evening, there might be a few clouds and a chance to rain, but as the wind will remain still, the water will not be agitated.



NEWS FLASH

On 10th September, while the crew was at the S-RO2-003 station, facing powerful wind, and trying to examine the samples we managed to get from the sea, we discovered a new species of phytoplankton, which was not supposed to be living in the Black Sea. We think that the currents from the Bosfor Strait which mix the Black Sea's water with the Mediterranean one, are responsible for bringing the new species here. Lately, after further researches, we found out that they are called planktorias excellent. Unlike the most phytoplakton, planktorias excellent is very long, reaching more than 20 metres, it has one central part, from which thin, long leaves grow periodically.

Menu

Breakfast : In the morning the Mare Nigrum Team will eat: Egg & Salmon Sandwich (contains smoked salmon, eggs, tomatoes, crushed red pepper flakes, red onion, fresh dill, fresh parsley and tomatoes) and will drink tea.

Lunch: They'll have a tasty and full of vitamins fish soup with radish and fried sturgeon with potatoes and mushrooms.

Dinner: At night, they'll have spaghettis with sea fruits.

! Between meals they can have a snack that includes fresh natural fruits.

Bibliography:

<http://www.sesame-ip.eu/public/>

http://www.kc-denmark.dk/public_html/multicorer.htm

Realized by : 10B3—12 STUDENTS

16-17 years old

“Ovidius” High School of Constanta, Romania

Basarabi Alley, no 2

Supervised by: Bucovala Carmen