ODESSA BRANCH A.O. KOVALEVSKY INSTITUTE OF BIOLOGY OF THE SOUTHERN SEAS (OBIBSS), NATIONAL ACADEMY OF SCIENSES OF UKRAINE

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http://www.nas.gov.ua/en/Structure/dgb/obibss/Pages/default.aspx

The city of Odessa from olden times was known as a leading centre for marine studies. N.N. Miclucho-Mclay, the famous seafarer and anthropologist initiated the decision of the Novorossisk (Odessa) Society of Natural Scientists dating from 1871 to organize biological stations in Russia- the first, the Sevastopol Biological Station in Crimea.

The interest of studying the Black Sea and its resources especially on the northwestern shelf in the mid 1950s prompted the idea of establishing a marine scientific unit. At that time the Institute of Hydrobiology was conducting research in near coastal water bodies, limans and river deltas. Studies on the highly productive zones of the Ukrainian shelf under the influence of river runoff were required. Professor, Dr. K.A. Vinogradov (1902 1989) was invited to head the Odessa Biological Station (1954 1972) established on the basis of a marine laboratory of the Institute of Hydrobiology. It was the first academic establishment in Odessa. Its objective was the integrated study of the dynamics of the hydrobiological regime of the northwestern Black Sea in conditions after retrieving the Dnieper and Dniester runoff. Also this area is highly influenced by the Danube, one of the largest rivers in Europe.

In 1964 the three Ukrainian marine biological stations of Sevastopol, Odessa and Karadag carrying out studies in the Black Sea were joined in the A.O.Kovalevsky Institute of Biology of the Southern Seas. Having been transformed into the Odessa Branch A.O. Kovalevsky Institute of Biology of the Southern Sea (OBIBSS), the former Odessa Biological Station continued to develop and expand its studies in the northwestern Black Sea as a completely independent legal entity from the IBSS parent institute in Sevastopol with the juridical rights to determine its own scientific policy, to form its budget and fulfill all kinds of financial operations.

From the five researchers working there in 1954, today it has a staff of 118, including 73 research associates (1 academician, 8 DSc and 22 PhD). In 1961 a marine research vessel

Michlucho-Maclay was procured for scientific expedition work which furrowed the Black, Azov, Caspian and Mediterranean seas for more than 30 years until 1989 having performed 143 expeditions. Today, a small diving boat “Sprut” is used as a research vessel for scientific studies in near coastal waters.

Major areas of the OBIBSS activities

Since its foundation OBIBSS has been conducting long term studies of man-made changes of aquatic ecosystems on the northwestern shelf and coastal water bodies. The study areas are highly productive shelf zones of river runoff of the Danube, Dnieper and Dniester rivers entering the Northwestern Black Sea (NWBS). Man-made eutrophication has had the greatest impact on ecology, biodiversity and biology of marine organisms (microflora, meiobenthos, phytoplankton, zooplankton, macrophytobenthos, macrozoobenthos). Some populations and whole communities may serve as ecological indicators of sea water quality. Studies include also: modeling of water dynamics, the spread of alien species, and assessment of man made impact on water quality, hydrobiological amelioration of sea waters, mariculture and biotechnology of processing of sea products.

Areas of specialty

marine biology and ecology, marine fungi, microbiology, phytoplankton, zooplankton, meiobenthos, benthos, fish parasites, algae, eutrophication, plankton blooms, mollusks, crustaceans, marine physiology and biochemistry, toxicology, productivity, monitoring, pollution, physical oceanography, water masses and circulation, currents, air-sea interaction, nutrients, heavy metals, organics (petroleum hydro carbons), marine biota, marine sediments and waters, suspended matter.

Key implemented international projects:

COPERNICUS, European River-Ocean Project (EROS-2000, EROS 2001), BSERP, GLOBALLAST, NATURA /2000, NATO Science for Peace, NEAR, TACIS project in monitoring in near Danube water bodies, GEF WB project on Conservation of biodiversity in the Danube Delta, ALARM.

Project team

- Professor, Dr. Boris Alexandrov is director of OBIBSS
- Dr. Yuriy Kvach, Senior Research Associate graduated in biology from Odessa I.I. Mechnikov State University in 1999

- Dr.Mikhail Son Research Associate graduated in biology from Odessa I.I.Mechnikov(now) National University in 2004

Role in the project

Data base information has been received for more than a 30 year period so that the survey of marine communities according to a number of parameters can be established in the most impacted areas as compared to earlier historical records for the purpose of protecting and conserving species, habitats, ecosystems or ecological processes. Recommendations will be provided on the organization of monitoring, the assessment of the state and on prognosis of changes in aquatic NWBS ecosystems all of which will serve as an input to the EnviroGRIDS project.

As an associated partner the expected outcome will expand networking and develop common views of participating expert scientists, and more interactive access to data.