

CHRONICLE AND INFORMATION

ON THE 90th ANNIVERSARY OF PROFESSOR OLEG MIRONOV (1933–2022)



9 March, 2023, marks the 90th anniversary of the birth of Oleg Mironov – a well-known hydrobiologist, D. Sc. (1971), Professor, and organizer of the first marine sanitary hydrobiology laboratory in the USSR (1964), which was later transformed into the department (1971).

Almost all his scientific activity was connected with the Sevastopol Biological Station (until 1963) and A. O. Kovalevsky Institute of Biology of the Southern Seas. He worked as a librarian at IBSS even *prior* to going to university. In 1952, he entered Kirov Military Medical Academy in Leningrad and began specializing in marine sanitary ecology. Thus, he carried out a range of scientific works aimed at solving medical and environmental issues for the Black Sea Fleet. When teaching at the general hygiene department at the Grodno State Medical Institute, O. Mironov started active research on the radioactivity levels of environmental objects in the Grodno vicinity.

His studies on radioactivity were continued at IBSS. Here, he carried out a series of works on the biomigration of artificial radionuclides from sea to land (in particular, on strontium-90 and cesium-137 transport into human body by commercial hydrobionts).

In 1963, after defending his PhD thesis in medicine, he began working at IBSS of the Academy of Sciences of the Ukrainian SSR as a junior researcher. In 1964, IBSS scientific council decided to develop research on marine sanitary biology, and Oleg Mironov organized and headed the laboratory. In 1970, after defending his D. Sc. dissertation in biology, he launched experimental and field studies, the results of which are still of great practical and scientific interest.

He concentrated on investigating dangerous pollutants of seas and oceans – oil and oil products. By the mid-1970s, he substantiated the fundamental concept of *interaction of marine organisms and their communities with pollution as a part of the general natural process of matter transformation and energy transfer to the marine environment*. This concept determined the main research trends of IBSS marine sanitary biology department for decades. Moreover, it formed the basis of the international program on oil pollution biomonitoring in the Mediterranean basin. His investigations were of high relevance. This was confirmed by the fact that his team was involved in carrying out key state programs and projects, including “The World Ocean”, GIZM, “Environment”,

and GESAMP (Joint group of experts on the scientific aspects of marine environmental protection). Our colleagues studied the water areas of the Black, Caspian, and Barents seas, *inter alia* certain spots of the Pacific Ocean.

O. Mironov was the first one to analyze the effect of oil and oil products on mass species of the Black Sea hydrobionts: representatives of phyto- and zooplankton, fish, and benthos. Under expeditionary conditions, new data were obtained on the patterns of distribution, abundance, biochemical characteristics, and species composition of oil-oxidizing microorganisms in the Black, Mediterranean, and Red seas, as well as in various areas of the Pacific, Atlantic, and Indian oceans. Extensive studies of the destructive activity of oil-oxidizing microflora made it possible to calculate the potential ability of the Black Sea to self-purify from oil pollution.

Oleg Mironov authored the experimentally substantiated concept of the purposeful use of marine organisms and their communities for the purification of oil-containing (polluted) seawater and for sanitation of coastal water areas. The concept was implemented: technical hydrobiological systems were placed in several anthropogenically stressed areas off Sevastopol. This repeatedly confirmed the applied significance of fundamental research of the marine sanitary hydrobiology department. Currently, scientific trends laid down by O. Mironov are developed, and the effect of oil and oil products on the environment is studied in the chemoecology laboratory of IBSS radiation and chemical biology department.

His contribution to the organization of long-term monitoring studies in Sevastopol coastal and marine areas is invaluable. In 1973, he was the first to organize complex chemical and biological surveys of almost all the city bays. The investigations are carried out till now.

The results of his research were summarized in several monographs edited by him: *Interaction Between Sea Organisms and Oil Hydrocarbons* (1985), *Sanitary-Biological Aspects of the Sevastopol Bays Ecology in XX Century* (2003), and *Sanitary-Biological Investigations in Coastal Area of Sevastopol Region* (2009). Those represent a unique and scientifically based *anthropogenic history* of the region. Oleg Mironov published more than 400 scientific papers. His works are widely recognized not only in Russia, but worldwide.

A talented scientist and an excellent organizer, Oleg Mironov created a school of marine sanitary hydrobiologists–ecologists. Under his scientific supervision, more than 20 PhD theses were defended, as well as 1 D. Sc. dissertation. He was an active science communicator – he repeatedly appeared on television and gave comments in other media on actual environmental problems of our city and country. His articles were published in several newspapers and popular science magazines: *Native Nature*, *Chemistry and Life*, *Nature*, *Man and the Element*, and so on.

The bright memory of a remarkable scientist and an amazing person will forever remain in the hearts of his students, colleagues, and friends.

К 90-ЛЕТНЕМУ ЮБИЛЕЮ ПРОФЕССОРА ОЛЕГА ГЛЕБОВИЧА МИРОНОВА (1933–2022)

9 марта 2023 г. исполнилось 90 лет со дня рождения Олега Глебовича Миронова — кандидата медицинских и доктора биологических наук, профессора, организатора первой в СССР лаборатории морской санитарной гидробиологии, а также автора более чем 400 публикаций.