

Gennady Polikarpov, Vice President of the Eco-Ethics International Union, celebrates his 80th birthday

The first time I met Gennady, a young enthusiastic zoologist and radioecologist from the A.O. Kovalevsky Sevastopol Biological Station (SBS), Academy of Sciences of the USSR, was in 1961 at a conference at the Novorossiysk Biological Station. He organized the marine radioecology laboratory at SBS, the first one on the Black Sea and one of the first in the world. At the conference he presented a paper on 'Radiobiological investigations on the Black Sea'. My paper was on 'Unstudied biocoenosis in the Black Sea'. We discovered that our subjects were strongly connected: radioactive fallout (Gennady regarded it as a radioecological factor) affects and interacts with marine hyponeuston (a newly recognized marine community). Our collaboration has continued to this day.

Prof. Dr. Biol. Sc. Gennady G. Polikarpov, who is now a prominent scientist and a founder of marine radioecology, Academician of the National Academy of Sciences of Ukraine, will be 80 years old in 2009. He was born on August 16, 1929 in the village Bolshaya Glushitsa ('Far Beyond'), in the boundless 'sea' of steppes in the Samara Region of Russia, into the family of a postal worker with a very modest salary. The decisive development in Gennady's life occurred as a 10 year old schoolboy in the town of Kagan, near Bukhara in Uzbekistan. Gennady became an active young naturalist at the biological laboratory in the Children's Technical and Agricultural Station. He loved excursions to the Kyzyl-Kum desert to study life in the 'sea' of sand. He understood that he would become a biologist.

In 1952, G. G. Polikarpov graduated from the N. G. Chernyshevsky Saratov State University as a zoologist, and after taking post-graduate biophysical courses (1953 to 1956) he obtained the degree of candidate of biological sciences (PhD) in biophysics (radiobiology) in 1957 at the M. V. Lomonosov Moscow State University. From 1956 on, G. G. Polikarpov worked at the A. O. Kovalevskiy Sevastopol Biological Station, which in 1964 was re-organized as the A. O. Kovalevskiy Institute of Biology of the Southern Seas (IBSS), now belonging to the National Academy of Sciences of Ukraine. Under the direction of G. G. Polikarpov, important research on the migration of radionuclides in marine biocoenoses and on the effects of ionizing radiation on aquatic animals and plants was conducted at the institute. Polikarpov formulated the radioecolog-



Academician Professor Dr. G. G. Polikarpov

ical conceptual model of zones of chronic ionizing irradiation and its influence on all levels of organization of life at all possible dose rates (now termed 'zones of Polikarpov').

Originally, G. G. Polikarpov developed a hypothesis about the zonality of chronic effects of different dose rates of ionizing radiation on living systems (from the minimum to maximum levels possible on Earth), which he formulated as early as 1977 in his invited paper at the health physics congress in Bologna (Italy). Presently, these studies are being developed further in the concept of radiation protection of the environment and man by the International Commission on Protection of the Environment.

The monograph of G. G. Polikarpov entitled 'Radioecology of Marine Organisms' (The Radioecology of Marine Organisms) was published by Atomizdat in 1964; a more comprehensive work was published in English in 1966. 'In *Radioecology of Aquatic Organisms* G. G. Polikarpov has produced the first monographic account of marine radioecology with emphasis on the interaction of marine organisms with environmental radioactivity and has formulated concepts and problems of this relatively new and important field of knowledge', wrote the editors, V. Schultz and A. W. Klement Jr. (p. XVI). In the late 1950s and early 1960s, G. G. Polikarpov participated in the successful campaign against the proposed offshore disposal of radio-

active wastes in deep-sea areas of the Black Sea. At the same time, he was active in radioecological studies of marine contamination by fallout from above-ground nuclear testing. He contributed to the success of the 1963 Moscow Treaty, which banned nuclear explosions in space, in the atmosphere, and under water. G. G. Polikarpov played an active role in radioecological investigations and in the elaboration of abatement measures during and after the Chernobyl nuclear power plant accident.

G. G. Polikarpov was awarded the State Order of Ukraine 'For merit' in connection with the International Day of the Environment in 2009. He is also an 'Honoured Man of Science and Technology of Ukraine (1998)', as well as Laureate of the State Prize of Ukraine in science and technology (2007). He has published about 700 scientific articles. The International Union of Radioecology (IUR) recognized G. G. Polikarpov's significant contribution to radioecology by honoring him with its highest award, the V. Vernadsky diploma 'In recognition of outstanding contribution to the development and dissemination of Radioecology' and the V. Vernadsky Gold medal 'For the major contribution to Radioecology' at the IUR General Assembly in Bergen, Norway, on 18 June, 2008. Together with the President of the Eco-Ethics International Union (EEIU), Prof. Dr. Dr. h.c. Otto Kinne, EEIU Vice-President Gennady Polikarpov initiated a new sphere of activity — ecological ethics. In the words of Gennady during his speech in Bergen: Demokritos 'was the grandfather of two great modern epochs: the epoch of atomic energy (the father of which is Henri Becquerel) and the epoch of eco-

ethics (the father of which is Otto Kinne)'.

One more outstanding feature of Gennady as a scientist is his ability to organize collective investigations by specialists in different areas towards solving the most complicated scientific tasks. Our fruitful collaboration resulted in publications on radioecology of neuston, and on the key role of the latter in marine life. Our joint research, developing the scientific legacy of V. I. Vernadsky, had the following outcomes: (1) it led to the discovery of viable spores and cysts of oxybionts among bacteria, freshwater and marine algae and fungi in the sulfidic bathyal zone of the Black Sea; (2) it identified 'hot points' in marine ecosystems; and (3) it re-defined contour biocoenoses of the sea.

On behalf of my colleagues in Ukraine and around the world, I congratulate Academician Gennady G. Polikarpov on the occasion of his anniversary and wish him further distinguished creative achievements.

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In my capacities as President of the Eco-Ethics International Union and as Editor-in-Chief of Marine Ecology Progress Series I add my congratulations and compliments to my friend of many years, Gennady G. Polikarpov.

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