

Obituary: Prof. Sc. D. ASEN STEFANOV KONSULOV (November 25, 1938 - May 28, 2010)

Asen Konsulov was born on 25 Nov., 1938 in the town of Dobrich, where he began his education and graduated from high school. In 1964 he finished his higher education in Sofia University, Faculty of Biology, Department of Hydrobiology. Immediately after he was invited and appointed as an expert – designer of the cooling system of hydrostructures of the Thermo-Electric Power Station - Varna being at that time under construction. It was located on Varna Lake shore where A. Konsulov started his first scientific studies on lake ecosystems. In 1968 when the Power Station was launched, the thirty-year-old hydrobiologist was awarded with a Medal of Labour by the Government of Republic of Bulgaria.



In 1970 he passed a competition and was appointed as a research associate at the Institute of Oceanography and Fisheries, Varna, where his work by 1989 was focused mainly on the composition and migration of the zooplankton communities in the Black Sea, adjoining marine lakes and the World Ocean.

In 1976 he defended a PhD thesis on the Black Sea zooplankton in front of the Bulgarian coast in which he had presented for the first time a full faunistic list of marine zooplankton species in front of the Bulgarian Black Sea coast and lake representatives from the adjoining Burgas and Madrensko Lakes.

His investigations are distinguished by an original approach. On the basis of the results from studies on the trophic potential of the pelagial he had established for the first time a scheme of vertical and horizontal distribution of the zooplankton-feeding sprat (*Sprattus sprattus sulinus*) in the shallow shelf zone in front of the Bulgarian coast and its commercial concentrations in the zone of 110-140 m isobaths. Identification of the location of sprat stocks during each season on the basis of the areals of zooplankton distribution which is its feeding diet, was a revolutionary deed for our fishing industry in 70-80ies of the past century. This lead to a great increase in catches of that very important commercial species and ensured full capacity work of our fishing fleet. Within the same period A. Konsulov registered an original invention

“Storm-proof installation for cultivation of mussels and oysters – *star* type” (Patent 28585/02.04.1979). As a recreational scuba diver with rational technical ideas he contributed a lot to the development of mariculture in Bulgaria.

In 1973 A. Konsulov took part in a scientific cruise funded by UNESCO onboard R/V *Sirolana* in Barents, Greenland, Norwegian and North Seas, along Spitsbergen island, during which he studied the representatives of the sub-arctic zooplankton.

On his initiative, in 1989, a Department of Marine Biology and Ecology at the Institute of Oceanology, BAS, Varna was founded which was headed by him over 10 years. As a scientist with academic rank (1987) he was immediately involved in the management of IO-BAS, consecutively holding the posts of Scientific Secretary (1989-1993), Deputy Director (1993-1996) and Director (1996-2000).

In the period after the political changes in Bulgaria when the scientific investigations of the Black Sea were associated in international projects funded by NATO and uniting researchers from the sixth Black Sea countries (“HydroBlack”, 1991; “CoMSBlack”, 1992-1993 and “NATO TU – Black Sea Project”, 1993-1997) A. Konsulov was a leader of the IO-BAS team and the cruises onboard the R/V *Akademik* in the Black Sea. For his activity as an Executive Committee Member he personally and his team were awarded with honorable plaquettes for distinguished contributions.

In 1993 A. Konsulov defended a thesis on “Biology, ecology and significance of the zooplankton in the Black Sea in front of the Bulgarian coast” for obtaining scientific degree “doctor of sciences”. The main contributions of this study include a scheme of seasonal zooplankton vertical migrations, confirmed autonomy of the Bulgarian sector of the western Black Sea basin referring development, distribution and re-distribution of plankton fauna, clarification of upwelling role in zooplankton dislocation and de-eutrophication of the coastal area, as well as in increasing the degree of eutrophication in open sea. For the first time A. Konsulov established the important role of the unicellular *euryphagous* *Noctiluca scintillans* in the vertical and horizontal transfer of organic matter and in the eutrophication process of the shelf in front the Bulgarian coast.

In 1999 A. Konsulov was elected senior scientist 1st degree in the field of ecology and ecosystem protection.

As a Focal Point of Bulgarian Black Sea biodiversity studies on a regional level (1994-1998) and a leader of the project “National Action Plan for protection of the Black Sea Biodiversity” (1998-1999) A. Konsulov is a major author of a series of publications summarizing data for the contemporary biodiversity state of the Black Sea shelf in front of the

Bulgarian coast. The most outstanding among them, in co-authorship with 17 more scientists, is the book *Black Sea Biological Diversity - National Report, Bulgaria*, issued by United Nations Publications, New York, in 1998. It presents all results from the investigations on the qualitative composition of phytoplankton, zooplankton, benthos, macrophytes and ichthyofauna of the Bulgarian shelf. An assessment is given on the state of separate coenoses and the trends in their structural changes are defined. The main reasons for introduction of protective and rehabilitation measure are stated in relation with the eutrophication processes and acute pollution. Recommendations on regional, national and local level are provided for preservation and reproduction of the Black Sea bioresources.

Particularly interesting are Prof. Konsulov's studies on the role of ctenophores – invaders *Mnemiopsis leidyi* and *Beroe ovata* in the Bulgarian Black Sea area, where they were registered for the first time by him, the latter one – first recorded by him in the Black sea. As an expert in the Work Group 35 of GESAMP (1995) and an author of a series of publications he contributed to the explanation of the trophic determination of Ctenophora's new species invasion into the Black sea, as well as the role of these species for the changes in the biological equilibrium of the pelagic ecosystem (1999).

Prof. Konsulov is an author of over 120 scientific publications and two monographs. He has taken part in 469 scientific cruises being a leader to most of them.

Significant is his contribution to the capacity building of young scientists. His work in the educational field started in 1979-1981 when he was appointed as a part-time assistant at the Medical Institute in Varna, where he conducted practical exercises of the medical students in Parasitology and Genetics at the Biological Department.

From 1996 to 2000 he was a part-time professor at N.Y. Vaptsarov Naval Academy, Varna, where he read lectures in Marine ecology and Hydrobiology.

In 2001 he was elected a full-time professor and Head of the Department of Ecology and Environment Protection at the Technical University, Varna, where he gave lectures in Marine Ecology and Zoology.

Prof. Konsulov guided and consulted 5 PhD students and 41 graduates in writing their theses, all of them successfully accomplished.

Some of his expertise activities include:

- Member of the Supreme Testimonial Committee (STC) at the Council of Ministers, Commission of Biological and Medico-biological Sciences (1998-2002);
- Expert of the Specialized Scientific Council of Zoology and Ecology at STC (1993-1997);

- Member of the Specialized Scientific Council of Shipbuilding, Navigation, Marine Sciences and Technologies at STC, Technical University, Varna (2002-2010);
- Expert at the National Agency of Evaluation and Accreditation at the Council of Ministers of the Republic of Bulgaria (2003);
- Long-term member of IO Scientific Council;
- Licensed expert at the Ministry of Environment and Waters, etc.

He was a member of a number of international organizations such as the Commission Internationale pour l'Exploration Scientifique de la Mer Mediterranee (CIESM - Monaco) and European Union for Coastal Conservation (EUCC-Leiden, the Netherlands).

Prof. Konsulov was a chairman and one of the founders of the Independent Society "Ekoglasnost" in Varna, 1989, which was among the founder-members of the Union of Democratic Forces in the town. From January, 1991 to November, 1991 he was appointed by the Bulgarian Government for a Secretary of Varna District Administration, elected from the quota of the nongovernmental democratic organizations.

Among his more significant awards are:

- 2003 – Honorable sign of the Institute of Oceanology for significant contribution to the creation and development of the Department of Marine Biology and Ecology at the IO, BAS, Varna on the occasion of the 30th anniversary of the Institute.
- 2007 – Honorary Diploma for contribution to the marine science on the occasion of 75th anniversary of the Institute of Fishing Resources, Varna.
- 2008 – Honorable sign of the Institute of Oceanology for contribution to the development of marine biology and ecology on the occasion of the 35th anniversary of the institute.
- 2009 – Honorable plaque of R/V Akademik for active participation in research cruises and on the occasion of 25th anniversary of the vessel.

All his active life and research activities were devoted to the development of marine ecological science and training of young scientists. With his enormous love of the sea, innovative ideas and interpretations of the results of the numerous scientific expeditions, he contributed to revelation of new secrets in the complex relations between the marine organisms and their habitats. Adding as well his achievements and original ideas in coastal protection and preservation, Prof. Konsulov undoubtedly remains an outstanding figure in the Bulgarian oceanographic science.

Dr. Tsenka Konsulova