

*This volume is dedicated to Dr. **RADOSNA MUŽINIĆ**, fishery biologist, who devoted the whole life to fishery research for benefit of the Croatian fishery and this Institute.*



**Dr. sc. Radosna Mužinić**  
**1916-2004**

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Dr sc. RADOSNA MUŽINIĆ died at the age of 87 on 5 April 2004. She was an internationally renowned and highly respected Fisheries scientist and Ichthyologist as well as leading scientist in small pelagic fish studies in Croatia.

Dr. Mužinić was born on 15 November 1916 in Metković. She has obtained her degree in biology in 1940, while in 1953 she got her PhD degree. She became scientific counsellor in 1967.

From 1946 up to her retirement, Dr. Mužinić has worked in the Institute of Oceanography and Fisheries. She has continued to work for IOF until the end of 1990 as outside collaborator. During 1956 she worked in the Great Britain sponsored by the British Council at Fisheries Laboratory in Lowestoft and Marine Laboratory in Aberdeen.

The scientific work of Dr. Radosna Mužinić is of a great importance not only for the Croatian, but also for the international scientific community. Her research referred to biology and ecology of commercially interesting Adriatic fish species, especially sardine, sprat, anchovy, Atlantic mackerel, Spanish mackerel, horse mackerel, red mullet, hake and grey mullet, and to some extent even the North Sea herring. The main field of her research was focused on sardine.

The scientific work of Dr. Radosna Mužinić covered different issues such as sub-population of sardine in the Adriatic (taking into account importance of this matter for better fishery management), biology of sardine and surmullet as well as ecology of sardine.

Especially important studies she has conducted were her pioneer research on sardine migration (with tagging method) and its causality in relation to fish physiological state, daylight, salinity, temperature, sea currents and zooplankton quantity and composition. Significant studies were led on distribution of pelagic and other fish species together with their relation towards environment, comparative analysis of their distribution as well as predator's preferences of these species in different parts of the Adriatic. Especially important are the studies on sardine and anchovy behavior in aquarium conditions together with research related to their possibilities of preservation of the species in captivity conditions. Nevertheless important are the studies referring to the sardine search for food, studying of its initial and mortality during the preservation experiment, fish growth and condition during experiment, analysis of mortality causes, light and temperature impact on the fish, formation of the groups – schools and aggregations, as well as fin damage, scale erosion, parasitism and other deformations. Behavior during experiment was compared with behavior in the nature. She has also studied catch of pelagic fish, their composition, space distribution, coincidences and alternations, long term and seasonal fluctuations. Among methodological problems outstanding are the following: study on sardine scales and otholits in order to determine the age, the first apply of tagging method for sardine, preservation of the sardine and anchovy in captivity conditions, anesthesia of sardine for the tagging and other interventions.

Dr. Radosna Mužinić has exerted herself on studying of Adriatic fish resources. With her intensive scientific work she has contributed to the better knowledge of these resources that before the World War II was poor and fragmentary.

She was the Head of Laboratory for Ichthyology and she led the Group for pelagic fish within the Institute of Oceanography and Fisheries until her retirement.

She was the member of the following associations:

- Croatian Biological Society
  - Ecological Society
  - Yugoslav Society for Research and Promotion of Maritime Affairs
  - Commission internationale pour l'Exploration scientifique de la Mer Méditerranée (CIESM)
  - General Fisheries Council for the Mediterranean (GFCM-FAO)
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Dr. Mužinić was the President of an International group for sardine and related species. She also, led the seminar on sardine tagging held in Split in 1964. Dr. Mužinić was a member of Administrative Board of the World scientific meeting on the biology of sardine and related species, held in Rome in 1959. Up to 1982 she lead working group of the Institute under the project "Research on pollutant effects on sea organisms and their populations" (FAO/UNEP).

Her papers are inevitable literature for all scientists and especially for ichthyologists. With her devoted and dedicated work she has marked fishery research of this Institute which is very important for the fishery management and economy.

In her research on pelagic fish she was very versatile and thus knew how to join fieldwork (that she has participated herself) with experimental and laboratory work.

Her great experience allowed her to participate in creation of scientific policy of the Institute. Dr. Mužinić has unselfishly transferred her knowledge to the younger colleges in order to maintain the continuity of research in this important domain. She has published 73 scientific papers, internationally reviewed, often with colleges from other countries and also 41 professional paper that make significant contribution to the Fishery Science and Ichthyology. Her paper results were cited worldwide.

She was respected by everyone who met her. Her death is a great loss to Croatia and to the world of Fisheries Science and Ichthyology. The cherished memories of Dr. sc. Radosna Mužinić will forever remain in the hearts of her friends, institutional colleagues and those national and international scientists who were fortunate to work with her and to know her.

Dr. sc. Gorenka SINOVČIĆ

Radosna MUŽINIĆ

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