

Advances in Polar Ecology

Yuri Mikhalev

Whales of the Southern Ocean

Biology, Whaling and Perspectives of
Population Recovery

 Springer

Advances in Polar Ecology

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Advances in Polar Ecology

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Annotation

This monograph examines the distribution and migration patterns of whales of the Southern Ocean. It defines distinct populations on the basis of phenes, as well as whale breeding zones, which are located in the adjacent to the Southern Ocean waters at lower latitudes. The book records the presence of a new species of killer whale in the Southern Ocean – *Orcinus nana*. Prenatal growth patterns, pregnancy and lactation duration, and mean sizes of newborn whales are determined. Methods for the graphic recording of registering structures are described, and an original method for their decoding is proposed to determine animal age. The age of sexual and physical maturity and life expectancy are determined. Earlier unknown “pair formations” on the lower jaw of baleen whales and sperm whales are described, together with their macro, histological, and electronic microscopic structure.

The impact of the extermination of whales on the Southern Ocean ecosystem is examined, recommendations for control of the current state of whale populations are given, and perspectives of whale population recovery are estimated. Regions that could be used as testing areas for whale registration method are defined.

The book is intended for biologist-cytologists, ecologists, and other specialists interested in cetaceans and for biology students.

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Having examined *Whales of the Southern Hemisphere: Biology, Whaling and Perspectives of Population Recovery*, written by doctor of biology and professor of the Institute of Marine Biology of Ukrainian National Academy of Science (Odessa, Ukraine), Yuri Mikhalev, the Marine Mammal Council (Russia) concluded that the book is about a very important issue, contains high-level scientific research, and should be published.

Yuri Mikhalev is a member of the Council and has worked in the area of whale biology since 1964. He participated in six cruises of Soviet whaling fleets *Slava*, *Sovetskaya Ukraina*, *Yuri Dolgoruky*, and scientific-research boat “Bodry-25” as a member of a scientific team. Before starting his teaching career, he was a chief at the marine mammal laboratory at the Odessa branch of AzCherNIRO. Based on a huge amount of scientific data, he published more than 100 papers. His first thesis was about the biology of the Southern Ocean fin whale reproduction (Scientific Council of All-Union Institute of Sea Fishery and Oceanography, Moscow, 1972). He completed two doctorate theses concerning the biology of Southern Hemisphere

whales, focusing on “environmental protection and rational use of natural resources” (Scientific Council of the Institute of Ecology Problems and Evolution, Russian Academy of Science, Moscow, 1997) and “zoology” (Scientific Council of the Institute of Zoology, National Academy of Science of Ukraine, Kiev, 2005). He was awarded the “150 Years of Antarctica Discovery” Medal for his research on the Southern Ocean cetaceans.

Yuri Mikhalev actively opposed illegal whaling and the falsification of scientific data by whaling fleet authorities. He did much to save the true whaling data that the government tried to destroy and hide from the public.

Since 1994, he has been an independent expert of the Scientific Committee of International Whaling Commission (IWC).

This book is not a compilation of other scientists’ research. Rather, it includes only issues that the author himself studied. Nevertheless, partly as a result of discussions with other researchers, many aspects of whaling in the Southern Hemisphere, as well as whale distribution, growth, reproduction biology, and recovery capability, are carefully examined in this book. The book also analyzes the influence of whaling on the Southern Ocean ecology, and the author forecasts perspectives of whale population recovery. The book suggests recommendations for management and suggests regions of the world’s oceans that could be used as research areas for improving scientific methods of estimating abundance. The solutions proffered by Yuri Mikhalev on many issues are original, and they, as well as his hypotheses, will provoke discussion such that this book will be useful for both specialists and beginners. I believe it could be read with interest even by anyone who is interested in cetacean biology.

Chairman of the Council, Member-Correspondent of *Russian Academy of Science*.



A. V. Yablokov

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I have warm memories of the director of L.S. Berg Museum of the Kishinev University, Alexandra Matveevna Didusenko. Like all other graduates of our chair, who went to the different corners of the Soviet Union, I considered it my duty to supply the museum with new exhibits. The cooperation with Aleksandra Matveevna lasted for many long years. I was extremely touched upon receiving the letter from her daughter with the sad news of Alexandra Matveevna's death, in which she informed me that some hours prior to her death she wrote to me that she saw me as the next director of the museum. It was Alexandra Matveevna who recommended me for work at the Odessa AzCherNiRo Laboratory (later transformed into the Odessa VNIRO branch on whaling and after that into the AzCherNiRo Branch). I am also sincerely grateful to the director of this laboratory, Arcady Vasilevich Krotov, who sent me to the whaling flotilla scientific group and after defending my master's thesis appointed me the head of the laboratory of marine mammals. Arcady Vasilevich was a quick-witted person with delicate humor and great life experience. Conversations with him on the chessboard have taught me a lot.

During the Odessa period of my life, I have had the good luck to form my views under the influence of great people and scientists including the head of zoology and chair of Odessa I.I. Mechnikov National University, Professor Ivan Ivanovich Puzanov (“the last encyclopedist of the twentieth century”) and the outstanding geneticist, Alexander Aleksandrovich Malinovsky; they both desperately struggled against “lysenkovschina,” the governmental biological ideology of that time.

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