Preface

Natural and anthropogenic processes can cause temporal and spatial changes in ecological systems. Therefore, analyses of the structure and functioning of various ecosystems should be based on long-term, rather than single or even seasonal, observations. Conclusions are more accurate when based on long-term data series that allow us to differentiate background (or natural) variations in the dynamics of an ecosystem from an anthropogenic component. Such long-term studies have been carried out extensively in meteorology but not in biological oceanography.

A scientific team headed by Prof. V.V. Kuznetzov established a research biological station on the White Sea in 1957. Since that time, during the past 40 years and for every 10 days, scientists from the Zoological Institute, Russian Academy of Sciences (ZIN RAS), have collected samples at a fixed point using standard equipment and techniques. Using a research vessel in summer and from the ice cover in winter, they obtained samples of zooplankton and measured oceanographic variables at different depths. This work represents an excellent example of a long-term study of marine ecosystems. Unfortunately, this data has been accessible only to a limited number of scientists who could read Russian. Other scientists knew little about the results of these studies, which were published in Russian journals.

However, the publication of this book and the original data contained on the CD-ROM is now made publicly available to the broader scientific community. The effort to compile a digital database and process all the information has been accomplished in a joint collaborative effort between researchers of the Zoological Institute, Russian Academy of Sciences, and the U.S. National Oceanic and Atmospheric Administration (NOAA). We hope this example of fruitful collaboration of Russian and American scientists will serve to further development of international science.

Director of the Zoological Institute, Russian Academy of Sciences

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