

Charles W. Finkl
Christopher Makowski *Editors*

Diversity in Coastal Marine Sciences

Historical Perspectives and
Contemporary Research of Geology,
Physics, Chemistry, Biology, and Remote
Sensing

Coastal Research Library

Volume 23

Series Editor

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Charles W. Finkl • Christopher Makowski
Editors

Diversity in Coastal Marine Sciences

Historical Perspectives and Contemporary
Research of Geology, Physics, Chemistry,
Biology, and Remote Sensing

 Springer

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ISSN 2211-0577

ISSN 2211-0585 (electronic)

Coastal Research Library

ISBN 978-3-319-57576-6

ISBN 978-3-319-57577-3 (eBook)

DOI 10.1007/978-3-319-57577-3

Library of Congress Control Number: 2017946080

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Printed on acid-free paper

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The registered company is Springer International Publishing AG

The registered company address is: Gewerbestrasse 11, 6330 Cham, Switzerland



Festschrift in Honor of Assoc. Prof. Dr. Alexandru S. Bologa

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Alexandru Bologa: Some Reminisces and Appreciation of His Devotion to Science, History, and Life

In spite of being born in Braşov, Transylvania, on September 8, 1947, and still loving mountains and forests forever, Alexandru Ş. Bologa's fate was tied to the sea. Coasts and oceans were his first scientific interest that set him on a course of scientific endeavors for the rest of his professional career. And although he is from the mountains of Romania, his love for the sea had him focus more on life-forms on the seafloor and in the water column.

His teachers from the German section of the first lyceum "Andrei Şaguna" in his hometown inculcated a general love for learning, and one of them inspired in particular his love for nature and biology. Alexandru graduated from the Faculty of Biology at "Babeş-Bolyai" University in Cluj-Napoca, in 1970, where he met outstanding professors that inspired him to emulate their examples to work in and help develop appropriate laboratories, archives, libraries, and museums. Cluj-Napoca remains till now his favorite city in Romania.

Later, in Constanţa, Alexandru was employed by the Romanian Institute for Marine Research, now referred to as the National Institute for Marine Research and Development (NIMRD) "Grigore Antipa", the new name for the research institute of 27 years ago. Dr. Bologa's main research endeavors began with his first love in marine biology, which included green, brown, and red seaweeds along the Romanian Black Sea coast. This early scientific interest was eventually extended to marine planktonic primary production, radioactivity and radioecology, bibliographies, and computerized databases. Last but not least, the fascinating history of the marine sciences was added over time to his repertoire.

His initial studies delved into marine flora and efforts to deal with this subject area in a broad ecological sense, as well as referring to certain more specific related aspects, fostered or directly brought about by meeting Dr. Maria S. Celan. She was duly noted by a most important Romanian predecessor, Dr. Grigore Antipa, who recommended her to Professor Ioan Borcea, the founder of the first Romanian marine research institution (the Marine Zoological Station at Constanţa, Agigea) in 1926. She became Romania's greatest marine algologist, after returning to her homeland with her valuable Ph.D. thesis obtained in Paris (1940). Her work set the

stage and study basis of Romanian benthic algology. And, after Alexandru's father, she became his second role model. During Alexandru's university studies, Professor Dr. Ana P. Fabian, a plant physiologist, initiated his scientific research, becoming a third role model.

A generous chance invitation to complete Alexandru's desire to introduce the C^{14} method for estimating planktonic primary production and productivity came from the All-Russia Research Institute of Marine Fisheries and Oceanography (VNIRO) in Moscow. So he joined its 13th scientific cruise on board the R/V *Akademik Knipovich* in the east-central Atlantic Ocean in 1974. This experience offered both professional and personal attributes to Alexandru's career, for which he was sincerely grateful. The cruise went well, and after returning home, Alexandru was able to introduce the abovementioned method by liquid scintillation counting for the first time in Romania.

A totally new experience was found by joining three of the total four scientific cruises organized by his institute, within a major research contract, in Libyan territorial waters, on board of the Romanian trawler (adapted with laboratories) *Delta Dunării*, between 1975 and 1976. At this time, Alexandru faced many unexpected situational complexities. The biggest technological problem was related to the need of measuring the planktonic primary production of those waters using the chlorophyll method (in the absence of C^{14} facilities), but the procedure was complicated by the sea's extreme oligotrophic feature. This difficulty was related to the fact that he had to filter hundreds of liters of seawater with most of the results below the detection limit.

Another extreme training event in the fields of marine radioactivity and radioecology occurred at the IAEA's International Laboratory of Marine Radioactivity in Monaco (1986). This was the result of a frustrating yearlong confrontation with the communist authorities and their usual fearful attitude, *à compris*, concerning the freedom of travel. The instruction was, unfortunately, quite short (3 months allowed by the home country instead of the 1 year approved by Vienna) but nevertheless very welcomed. Alexandru succeeded in this effort, and it proved to be even more opportune because it took place immediately after the unforgettable Chernobyl tragedy. The anticommunist revolution that took place at the end of the 1980s brought immense joy for Alexandru to escape the undeserved and much too long communist nightmare for his country. Before the revolution, there were many more hopes than those that actually came true. But as they say, *hope dies last*.

Starting from 1990, Alexandru Bologa's professional multitasking activities included positions as scientific director of the NIMRD, associate professor at the University Ovidius of Constanța, editor in chief of the institute's yearly scientific journal (*Cercetări marine: Recherches marines*), and chairman of the local subcommittee (which he founded in Constanța in 1993) of the Romanian Committee of History of Science and Technology of the Romanian Academy, until his retirement in 2011. Other international responsibilities included being a national delegate to the International Commission for the Scientific Exploration of the Mediterranean Sea (CIESM) between 1993 and 2011, director at the International Ocean Institute (Malta) of the Black Sea Operational Centre (1996–2004), and national rapporteur

to the Commission of Oceanography (International Union of History and Philosophy of Science).

Research activities in Romania have always been plagued by financial difficulties, not the least of which occurred during the postrevolutionary free market economy. Governmental support has declined constantly, and the NIMRD constantly has to prove its efficiency in agreement with economic and social development of today's society and its ever-expanding demands on financial resources. Despite all of the weaknesses of the present democracy in Romania, being not easy in many ways and far from perfection, Alexandru graciously witnesses the long-expected collapse of a harsh communist regime. Casualties of the socialist regime ranged from simple farmers to Romania's intellectual elite. Victims of this regime included many outstanding scientists of Romania, including remarkable biologists.

Alexandru's election as full member of the Academy of Romanian Scientists, Section Biological Sciences, was followed in 2009 by the prize "George Emil Palade" for *Romanian Contributions to Black Sea Related Marine Sciences*. A selection of 31 authored and coauthored professional articles was published by Lambert Academic Publishing, Saarbrücken, Germany (2012). Unfortunately, and for obvious reasons, the Black Sea was practically ignored by the Western world during the dark era of communism. The region became visible, interesting, and attractive to foreigners for various reasons, notwithstanding its geopolitical dimension, as well as scientific concerns, research, environmental protection, development, innovation, new discoveries, and regional and international cooperation. The oceanographic realm known as the Black Sea, so adequately named as an "unicum hydrobiologicum", by the Russian physical oceanographer N. Knipovich in the early twentieth century, is characterized by its large continental shelf, water stratification, lack of vertical mixing, highest H₂S content of deep waters worldwide, strong freshwater input, increased levels of nutrients and detritus, weak water mass exchange with the Mediterranean Sea, large spatial and temporal variability of physical and chemical properties, about half salinities of those noticed in the World Ocean, and slightly different composition of ionic ratios. Poorer flora and fauna have been previously compensated by the very high biological productivity. Relatively few alien species have entered this very particular oceanic environment. By the end of the fifth decade of the twentieth century, the Black Sea underwent major changes that contributed to a severe ecological disequilibrium. Considerable efforts have been devoted after 1990 for the rehabilitation of this still highly endangered sea. Within these joint contemporary concerns, the continuous development of Romanian oceanography has enriched Black Sea research and expertise capacity. Some of Alexandru's preoccupations and results have positively influenced this domain.

As organizer of a NATO Advanced Research Workshop in Constanța on October 6–10, 1997, Alexandru was charged as a coeditor to ensure the high quality of the proceedings *Environmental Degradation of the Black Sea: Challenges and Remedies*, alongside with Professors Ümit Ünlüata and Şukru Beşiktepe from Turkey. The proceedings (Environmental Security – Volume 56, 1999) were published by Kluwer Academic Publishers (Dordrecht, the Netherlands) in cooperation with the NATO Scientific Affairs Division.

Alexandru Bologna is a member of numerous national and international scientific societies, such as Asociația Culturală Dobrogeția, Liga Navală Română, La Maison Roumaine (France), the International Phycological Society, the International Union of Radioecology, and the Eco-Ethics International Union, among others. Dr. Bologna is a member of the editorial boards of *Noesis* and *Studii și comunicări/DIS* (both of the Romanian Academy), *Studii și cercetări de oceanografie costieră* (University of Bucharest), *Marea Noastră* (Constanța), the International Ocean Institute (IOI) *Ocean Yearbook* (1996–2004), and the *Journal of the Black Sea/Mediterranean Environment* (TUDAV, Turkey).

Alexandru is an authorized translator and interpreter for the German language. As a multilingual, he loves reading and traveling, to enrich his knowledge base, feelings, and emotions sur place. In a word, Alexandru is a true scholar par excellence who is now enjoying his emeritus status.

As a final word in closing, I must sadly report our acknowledgment of the fact that the present leadership of the National Institute for Marine Research and Development (NIMRD) “Grigore Antipa,” from Constanta, did not allow for some unknown reason the participation of its employees in the Festschrift. As the home institute of Alexandru, this situation was most regrettable.

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Selected Publications of Alexandru Ş. Bologa

Professional Papers

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