Sensory Abilities of Cetaceans

**Laboratory and
Field Evidence**

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Sensory Abilities of Cetaceans

**Laboratory and
Field Evidence**

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To my husband, Victor Ramos, and my children, Julianne and Galen Thomas-Ramos, who provide endless support and encouragement because they realize that my passion for them is only rivaled by my scientific curiosity.

—J.A.T.

To Brigitte Slingerland, for her support during the last two years. I apologize for the many evenings and weekends that I confined myself to my study room.

—R.A.K.

PREFACE

This book evolved through the efforts of several organizations and the dedication of many individuals. In 1987, we received a request to propose a workshop topic for the Fifth International Theriological Congress (ITC) to be held in August 1989 in Rome, Italy. After looking up the meaning of the word "theriological" in the dictionary and discovering that it pertains to mammalian behavior, we decided a symposium on sensory abilities of whales and dolphins would be an interesting topic. The ITC convenes only every five years and has the distinction of being very well attended by scientists from around the world. We thought that hosting a workshop in conjunction with the ITC would attract a variety of international scientists that rarely have the opportunity to interact.

Fortunately for all involved, our prediction was correct. The first two days of the workshop, 23-24 August 1989, were held in conjunction with ITC and the nearly 1,000 attending scientists were able to view our posters and listen to lectures. The third day was limited to only about 65 invited scientists who were divided into topical working groups chaired by a rapporteur.

This book is organized by the working group topics of Sensory Anatomy and Physiology, Acoustic Senses, Vision/Tactition/Chemoreception, Communication, and Other Senses. The working groups took on very different characters, but each generated a great deal of enthusiasm, promising research ideas, and established a network of colleagues for future collaborations. The success of these working groups is attributed to the rapporteurs: Peter Morgane, Christopher Clark, Frank Awbrey, Karen Pryor, and Herbert Roitblat. The Concluding Comments by these rapporteurs in each section of the book gives you a "flavor" of the dynamic exchanges in these groups and the skill of the rapporteurs in stimulating ideas.

Drs. Luigi Boitani and Ernesto Campana, organizers for the 5th ITC, from the University of Rome provided endless advice and logistic support in coordinating our workshop at the ITC. The success of our workshop and this resulting book is due largely to their hard work.

Our workshop was selected as an Advanced Research Workshop (ARW) funded by the Scientific Affairs Division of NATO in Belgium. Dr. Craig Sinclair, the Director for the

Advanced Study Institutes Programme, encouraged our workshop and gave us a great deal of support. Additional NATO funds were obtained to support the participation of Portuguese scientists through the efforts of Mr. A. Trigo de Abreu.

A large number of US and USSR scientists were able to attend the meeting in Rome because Dr. Herbert Roitblat from the University of Hawaii generously obtained travel funds through a grant from the National Science Foundation.

Our colleagues at the Naval Ocean System Center deserve special recognition for the many ways that they contributed to the development of the workshop. We benefited immensely from the advice provided by Paul Nachtigall, Whitlow Au, Patrick Moore, Bill Friedl, and Sam Ridgway based on the experiences they gained when they organized a similar conference. We acknowledge Winifred Chrimer for her dedicated and careful work in coordinating the large amount of correspondence related to this workshop and book.

The preparation of this book was funded generously by a NATO publication grant from the Scientific Affairs Division in Belgium.

We thank Ruud de Clercq, director of the Harderwijk Marine Mammal Park, for providing the generous logistic support, which largely contributed to the success of the symposium. We also thank him for allowing one of us (RAK) to allocate a large part of his time to the organization of the symposium.

Lastly, we thank Western Illinois University and Harderwijk Marine Mammal Park for their full support in the task of editing the manuscripts in this book. Both organizations provided release time from other duties so that we could edit these papers in a timely manner.

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