



# **Animal Sonar Processes and Performance**

Edited by  
**Paul E. Nachtigall and  
Patrick W. B. Moore**

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# Animal Sonar Processes And Performance

**Marc Bekoff, Colin Allen, Gordon M.  
Burghardt**



## **Animal Sonar Processes And Performance:**

**Animal Sonar** Paul E. Nachtigall, Patrick W.B. Moore, 2012-12-06 The first meeting on biosonar that I had the opportunity to attend was held in 1978 on the Island of Jersey in the English Channel That meeting organized by Professor R G Busnel and Dr Jim Fish was my introduction to an exciting and varied group of hard working and dedicated scientists studying animal echolocation They are by nature a very diverse group They tend to publish in different journals and rarely interact despite the fact that they all work on echolocation When they do interact as a group as they did in Frascati Italy in 1966 in Jersey in 1978 and during the meeting reported in this volume the meetings are intense interesting and exciting This volume is a composition of a series of contributed papers written to foster an interdisciplinary understanding of the echolocation systems of animals The echolocation pulse production studies in bats and dolphins have recently been concentrated on the ontogeny of infant pulses other studies with three dimensional computer graphics and x ray computed tomography have concentrated on finally resolving the old controversy concerning the site of dolphin echolocation click production Much has been accomplished on the analysis of bat neural structure and function The intense effort directed toward understanding the structure connections and functional properties of parallel auditory pathways and the parallel and hierarchical processing of information by the mustached bat has led to dramatic breakthroughs in understanding brain function Animal Sonar P. E. NACHTIGALL, P. W. B. MOORE, 2014-09 *Echolocation in Bats and Dolphins* Jeanette A. Thomas, Cynthia F. Moss, Marianne Vater, 2004 Although bats and dolphins live in very different environments are vastly different in size and hunt different kinds of prey both groups have evolved similar sonar systems known as echolocation to locate food and navigate the skies and seas While much research has been conducted over the past thirty years on echolocation in bats and dolphins this volume is the first to compare what is known about echolocation in each group to point out what information is missing and to identify future areas of research Echolocation in Bats and Dolphins consists of six sections mechanisms of echolocation signal production the anatomy and physiology of signal reception and interpretation performance and cognition ecological and evolutionary aspects of echolocation mammals theoretical and methodological topics and possible echolocation capabilities in other mammals including shrews seals and baleen whales Animal behaviorists ecologists physiologists and both scientists and engineers who work in the field of bioacoustics will benefit from this book

**Consciousness** Josh Weisberg, David Rosenthal, 2022-07-06 CONSCIOUSNESS Consciousness is a thought provoking collection of classic and contemporary philosophical literature on consciousness bringing together influential scholarship by seminal thinkers and the work of emerging voices who reflect the diversity of the field Editors Josh Weisberg and David Rosenthal have selected discussions that animate modern debates and connect consciousness to broader philosophical topics Providing an expansive view of the philosophical landscape of consciousness studies this carefully calibrated reader features classic work from the past four decades by seminal thinkers such as Thomas Nagel David Lewis Ned Block Gilbert Harman

and Daniel Dennett as well as important recent work from David Chalmers Fiona Macpherson Joseph Levine Kathleen Akins and other contemporary philosophers Divided into five parts Consciousness explores the nature of consciousness consciousness and knowledge qualitative consciousness and theories of consciousness A final section on agency and physicalism includes work by Galen Strawson and a previously unpublished article by Myrto Mylopoulos Philosophically challenging yet accessible to students Consciousness is an ideal reader for many undergraduate and graduate courses on consciousness or philosophy of mind as well as a useful supplementary text for general classes in philosophy and a valuable reference text for philosophers of mind cognitive scientists and psychologists

**Biosonar** Annemarie Surlykke, Paul E. Nachtigall, Richard R. Fay, Arthur N. Popper, 2014-07-19 Two groups of animals bats and odontocetes toothed whales have independently developed the ability to orient and detect prey by biosonar echolocation This active mechanism of orientation allows these animals to operate under low light conditions Biosonar is a conceptual overview of what is known about biosonar in bats and odontocetes Chapters are written by bat and odontocetes experts resulting in collaborations that not only examine data on both animals but also compare and contrast mechanisms This book provides a unique insight that will help improve our understanding of biosonar in both animal groups

**The Cognitive Animal** Marc Bekoff, Colin Allen, Gordon M. Burghardt, 2002-06-21 The fifty seven original essays in this book provide a comprehensive overview of the interdisciplinary field of animal cognition The contributors include cognitive ethologists behavioral ecologists experimental and developmental psychologists behaviorists philosophers neuroscientists computer scientists and modelers field biologists and others The diversity of approaches is both philosophical and methodological with contributors demonstrating various degrees of acceptance or disdain for such terms as consciousness and varying degrees of concern for laboratory experimentation versus naturalistic research In addition to primates particularly the nonhuman great apes the animals discussed include antelopes bees dogs dolphins earthworms fish hyenas parrots prairie dogs rats ravens sea lions snakes spiders and squirrels The topics include but are not limited to definitions of cognition the role of anecdotes in the study of animal cognition anthropomorphism attention perception learning memory thinking consciousness intentionality communication planning play aggression dominance predation recognition assessment of self and others social knowledge empathy conflict resolution reproduction parent young interactions and caregiving ecology evolution kin selection and neuroethology

**Sensory Abilities of Cetaceans** Jeanette A. Thomas, Ronald A. Kastelein, 2013-11-11 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

*From Animals to Animals 2* Jean-Arcady Meyer, H. L. Roitblat, Stewart W. Wilson, 1993 More than sixty contributions in *From Animals to Animals 2* by researchers in ethology ecology cybernetics artificial intelligence robotics and related fields investigate behaviors and the underlying mechanisms that allow animals and potentially robots to adapt and survive in uncertain environments Jean Arcady Meyer is Director of Research CNRS Paris Herbert L Roitblat is Professor of Psychology at the University of Hawaii at Manoa Stewart W Wilson is a scientist at The Rowland Institute for Science Cambridge Massachusetts Topics covered The Animat Approach to Adaptive Behavior Perception and Motor Control Action Selection and Behavioral Sequences Cognitive Maps and Internal World Models Learning Evolution Collective Behavior

**The Journal of the Acoustical Society of America** Acoustical Society of America, 2005  
 日本 (Japan), 1972 Brain, Behavior and Evolution, 1990 **Bioacoustics**, 2008 *Journal of Comparative Physiology*, 2006 *African Zoology*, 2003 **Journal of Experimental Biology**, 2008 Australian Mammalogy, 1990  
European Research on Cetaceans European Cetacean Society. Conference, 2000 *Proceedings*, 2005 *Directory of Published Proceedings*, 1991 **Kenneth S. Norris** Kenneth Stafford Norris, 2010 Kenneth Norris was an historian in the tradition of Aldo Leopold He was the father of American marine mammology and discovered much of what we know about the social life of dolphins and whales This title includes an oral history with Norris as well as his collection of research interests in desert biology herpetology and marine mammology

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