

Washington D.C. Chapter of the Acoustical Society of America
~ Invited Lecture ~
Wednesday, May 2, 2008

“Marine Mammals and Noise: Scientific Applications and Perspectives on a Contentious (and misrepresented) Issue”

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The issue of anthropogenic sound and its potential effects on marine life has become a visible and rather contentious issue. Essentially all of the public focus, legal challenge, and much of the research effort on this matter has centered (with some justification) on the range of possible impacts from military sonar systems. However, an objective scientific assessment of this issue reveals a host of broader issues that merit consideration and investigation. This presentation will consider the current state of scientific information, how uncertainty in key areas is fueling debate and disagreement, and future challenges in policies and regulations regarding sound-producing activities in the ocean, with particular emphasis on scientific applications to inform these societal choices. Specific attention will be given to a multinational study to investigate marine mammal responses to active sonar and other sounds being conducted at the U.S. Navy’s Atlantic Undersea Test and Evaluation Center (AUTEK) in the Tongue of the Ocean, Bahamas (see: <http://www.nmfs.noaa.gov/pr/acoustics/brs-07.htm>). The speaker is the principal investigator for this study, which includes researchers from the University of St. Andrews, Bahamas Marine Mammal Research Organization, Woods Hole Oceanographic Institution, Cornell University, Duke University, Marine Acoustics, Inc., NATO Undersea Research Center, Naval Undersea Warfare Center, and others.

B.L. Southall Biography

Dr. Brandon Southall is a fisheries research biologist and director of NOAA's Ocean Acoustics Program within the NOAA Fisheries Office of Science and Technology. Brandon completed graduate studies (M.S. in Marine Science in 1998 and a Ph.D. in Ocean Sciences in 2002) on hearing in seals and sea lions as well as effects of noise on their hearing, including: auditory masking, temporary threshold shifts, and age-related hearing loss. He also conducted and continues fieldwork on northern elephant seal acoustic communication, measuring vocalization source levels, natural ambient noise conditions, assessing context-specificity of vocal parameters, and signal directionality. Dr. Southall joined the Ocean Acoustics Program in 2003 and has been involved in the development of acoustic exposure criteria for marine mammals, organizing two international symposiums on shipping noise and marine mammals, preparing a U.S. delegation informational paper on the shipping noise issue to the International Maritime Organization, providing technical advice on regulatory policies and mitigation strategies for minimizing noise impacts, and organizing an ongoing series of educational lectures at nearly 20 locations across the nation on marine noise issues. He is also the principal investigator of the behavioral response study being conducted in the Bahamas with several dozen partners from academia, conservation, and government scientists from eight countries. He has three adorable children with whom he enjoys fishing and playing baseball.