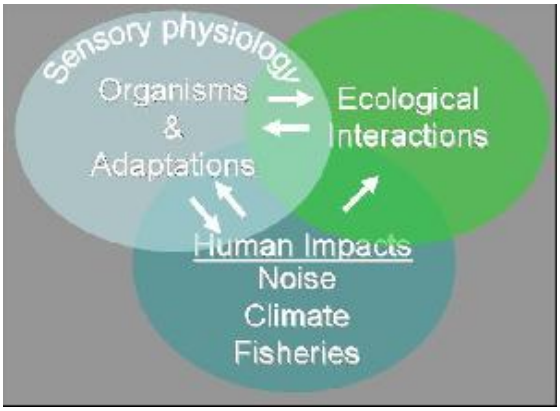
Print

T. Aran Mooney: The Sensory Physiology and Sensory Ecology Lab

An Introduction to Our Lab's Research

Research Interests

Welcome to the Sensory Physiology and Sensory Ecology Lab website! Our research is in the sensory biology of animals, primarily marine organisms. Specifically I am interested in how these animals detect the world around them, what they detect (i.e., what's important to the organism), and how these animals then relate to their environment (e.g., predator detection, prey localization, habitat identification, and conspecific communication). Our work in integrative in techniques and comparative in its research subjects. Our reserach involves dolphins, false killer whales, belugas, finless porpoise,risso's dolphin, squid, cuttlefish, coral reef fish, temperate fish, brown bears, polar bears, coral reef assemblages, and temparate soundscapes to name a few. Much of our work addressing bioacoustic related questions, but we certainly not limited to that modality. Some of this work stems from examining the potential influences of increasing human-produced noise in the marine environment or other stressors such as ocean acidification or fisheries bycatch. But our primary interests originate in examining the relationship of sensory physiology/sensory anatomy to animal behavior and ecological relationships. We have also addressed communication, bioacoustic tagging, and the sending-receiving of underwater acoustic signals using passive acoustic monitoring devices.



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The SPASE Lab organization. We typically start with questions and measurements of the organism and place them in the results in the context of ecological interactions and anthropogenic impacts. Our work as a bioacoustics focus.

Check out our research updates on our Blog:

Sensory Ecology

Read about our research expeditions and travels!

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Aran Mooney on a research cruise in Icelandic waters.

News and Updates !

- Check out the new video on our squid and ocean acidification research by Oceanus magazine.

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Loligo pealeii (Tom Kleindinst)

- We published two new articles this past few weeks. One on a new method to image squid hair cells and aminoglycoside-inducing damage to those hair cells. The other is on assessing the call patterns in melon-headed whales (a sound sensitive marine mammal species). See their links below and our publications page for the pdfs.

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- Summer student fellow Doriane Wheeler's work was recently highlighted.

Spotted dolphins riding our wake

Related Files

» Mooney's CV Feb 2012

- Max is in Palau, assisting Anne Cohen's lab to collect as they collect water samples and characterize the carbon chemistry of their reefs. He's also getting some acoustic measurements related to his PhD studies. Follow his work on our blog.

- Aran is a co-author on a new research review on Ocean Acidification. The work presents a research framework for studying OA that describes it as a biogeochemical event that impacts individual species and ecosystems in potentially unexpected ways. We characterize the links between carbon chemistry changes and effects on individuals and ecosystems, and enumerate key hypotheses for testing. Finally, we quantify how U.S. research funding has been distributed among these linkages, concluding that there is an urgent need for research programs designed to anticipate how the effects of OA will reverberate throughout assemblages of species.

- We recently published work on hearing tests in a wild population of beluga whales. The work is quite novel in that it describes the hearing abilities of a wild, presumably healthy, population of wild odontocetes. The work was published in the Journal of Experimental Biology. It was also summarized on the WHOI website and in other places such as:

SCIENTIFIC AMERICAN

Scientific American, "Wild Beluga Whales Pass Hearing Test" by Christopher Intagliata - May 20, 2014

- Aran Mooney was recently featured on NPR's Living On Earth segment, discussing sounds in the sea.

- Read our new article on the hearing abilities of Yangtze River finless porpoise and a WHOI summary of the work.

- Check out our recent article on Ocean Acidification in WHOI's Oceanus.

oceanus magazine

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Education

2008 - Ph.D. in Zoology (with a Marine Biology emphasis) - University of Hawaii at Manoa
2003 - M.S. in Zoology - University of Hawaii at Manoa
2000 - B.S. in Biology (with Spanish minor) - University of New Hampshire

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