T. Aran Mooney

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Woods Hole Oceanographic Institution www.whoi.edu/sites/amooney
Marine Research Facility – MS #50 sensoryecology.blogspot.org
Woods Hole, MA 02543, USA

EDUCATION

2008 Ph.D., Zoology, Marine Biology specialization
University of Hawaii at Manoa, Honolulu, Hawaii
"Temporal effects of sound on the odontocete auditory system: an electrophysiological study"
Advisor: Paul Nachtigall
2003 M.S., Zoology, Marine Biology specialization
University of Hawaii at Manoa, Honolulu, Hawaii
"Testing the efficacy of acoustically enhanced gillnets to reduce odontocete bycatch"
Advisor: Paul Nachtigall
2000 B.S. in Biology, magna cum laude, Spanish minor

University of New Hampshire, Durham, New Hampshire

PROFESSIONAL EXPERIENCE

2014-present	Associate Scientist, Biology Department, Woods Hole Oceanographic Institution
2010-2014	Assistant Scientist, Biology Department, Woods Hole Oceanographic Institution
2012-present	Scientific Advisor, National Marine Life Center, Borne MA
2008-2010	Postdoctoral Scholar, Woods Hole Oceanographic Institution
	Supervisor: Dr. Darlene Ketten
	Focus on comparative hearing in whales, dolphins, fishes and cephalopods.
May-Aug 2008	Grass Postdoctoral Fellow, Marine Biological Laboratory
	Supervisor: Dr. Roger Hanlon
	Auditory compatibilities of the squid, Loligo pealeii
2001-2008	Graduate Assistant, University of Hawaii
	Research Advisor: Dr. Paul Nachtigall
2006-2007	Scientific Consultant, e2M

2006-2007 Scientific Consultant, e2M

April 2002 Scientist, Atlantic Marine Mammal Survey, NMFS / NOAA
2001 Hatchery Assistant, Aquaculture, Breeding, and Genetics Center
Virginia Institute of Marine Science, William and Mary College

RESEARCH INTERESTS

I am interested in the sensory biology and physiological ecology of key marine organisms in pelagic and reef environments. I often use bioacoustics as a means to address these overarching questions:

- How do marine organisms detect the world around them? How sensitive are they and how do they respond to particular stimuli?
- How do specific adaptations facilitate or constrain a species' ecological interactions?

• How do human activities, such increasing anthropogenic noise, changing environments or human interactions, impact an animal's detection of biologically relevant cues and signals?

PEER-REVIEWED PUBLICATIONS (*postdocs, graduate or undergraduate students in the Mooney Lab)

- 1. Mooney, TA, Castellote, M, Jones, I, Quakenbush, L, Hobbs, R, Gaglione, E and Goertz, C. 2018. Local environmental soundscapes relative to hearing sensitivity in beluga whales (*Delphinapterus leucas*). 2, doi.org/10.22261/JEA.QZD9Z5. *Journal of Ecoacoustics (Invited paper)*
- **2.** Lillis*, A, and **Mooney, TA.** 2018. Snapping shrimp sound production patterns on Caribbean coral reefs: relationships with celestial cycles and environmental variables. *Coral Reefs.* 37(2): 567-607. doi.org/10.1007/s00338-018-1684-z
- **3. Mooney, TA**, Castellote, M, Quakenbush, L, Hobbs, R, Gaglione, E and Goertz, C. 2018. Variation in hearing within a wild population of beluga whales (*Delphinapterus leucas*). *Journal of Experimental Biology*. 221: jeb171959. doi: 10.1242/jeb.171959
- **4.** Lillis*, A, Caruso, F, **Mooney, TA**, Llopiz, J, and Eggleston, D. 2018. Drifting hydrophones provide an ecologically meaningful approach to underwater soundscape measurements in coastal benthic habitats. *Journal of Ecoacoustics* 2: p.STBDH1. doi.org/10.22261/ JEA.STBDH1
- **5.** Zakroff*, C, **Mooney, TA**, Wirth, C. 2018. Ocean acidification responses in paralarval squid swimming behavior using a novel 3D tracking system. *Hydrobiologia*. 808(1): 83-106 doi: 10.1007/s10750-017-3342-9
- **6.** Kaplan*, MB, Lammers, MO, Zang, E and **Mooney, TA**. 2017. Acoustic and biological trends on coral reefs off Maui, Hawaii. *Coral Reefs*. 37(1): 121–133. doi: 10.1007/s00338-017-1638-x
- 7. Lillis*, A, Perelman, J, Panyi, A and **Mooney, TA**. 2017. Sound production patterns of bigclawed snapping shrimp (*Alpheus* spp.) are influenced by time-of-day and social context. *Journal of the Acoustical Society of America*. 142: 3311-3320. doi: 10.1121/1.5012751
- **8.** Silva*, T, **Mooney, TA**, Sayigh, L and Baird, RW. 2017. Successful suction-cup tagging of a small delphinid species, *Stenella attenuata*: Insights into whistle characteristics. *Marine Mammal Science*. 33(2): 653-668 doi: 10.1111/mms.12376
- 9. Van Cise*, AM, Roche, MA, Baird, RW, Mooney, TA and Barlow, J. 2017. Acoustic differentiation of Shiho- and Naisa-type short-finned pilot whales in the Pacific Ocean. *Journal of the Acoustical Society of America*. 141: 737–748. doi: 10.1121/1.4974858
- **10. Mooney, TA,** Lammers, MO, Kaplan, MB. 2016. Singing whales generate high levels of particle motion: implications for acoustic communication and hearing? *Biology Letters.* 12: 20160381. doi: 10.1098/rsbl.2016.0381
- 11. Fossette, S, Kakani, K, Goldbogen, J, Bograd, S. Wyatt, P, Howard, MJ, Knowles, T, Haddock, S, Bedell, L, Hazen, E, Robison, B, Mooney, TA, Shorter, KA, Bastian, T, Gleiss, T. 2016. How to tag a jellyfish? A methodological review and guidelines to successful jellyfish tagging. *Journal of Plankton Research.* 38(6): 1347–1363. doi: 10.1093/plankt/fbw073 *Cover Article.* -
- **12.** Kaplan*, MB and **Mooney, TA**. 2016. Coral reef soundscapes may not be detectable far from the reef. *Scientific Reports*. 6: 31862. doi: 10.1038/srep31862
- **13. Mooney, TA,** Samson, JE, Schlunk, A, and Zacarias, S. 2016. Loudness-dependent behavioral responses and habituation to sound by the longfin squid (*Doryteuthis pealeii*). *Journal of Comparative Physiology A*. 202: 489-501. doi: 10.1007/s00359-016-1092-1
- **14.** Long*, M, **Mooney, TA**, and Zarkroff, CA*. 2016. Extreme low oxygen and decreased pH conditions naturally occur within developing squid egg capsules. *Marine Ecology Progress Series*. 550: 111–119. doi:10.3354/meps11737

15. Lucke, K, Popper, AN, Hawkins, AD, Akamatsu, André, M, Branstetter, BK, Lammers, M, Radford, C. Stansbury, AL, **Mooney, TA**. 2016. Auditory sensitivity in aquatic animals. *Journal of the Acoustical Society of America*. 139: 3097-3101. doi: 10.1121/1.4952711

- **16. Mooney, TA**, Kaplan, MK, Izzi, A, Conti, L, Sayigh, L. 2016. Temporal patterns of cusk eel sounds on Horseshoe Shoals, Ma. *Aquatic Biology*. 24: 201-210. doi:10.3354/ab00650
- 17. Silva*, T, Mooney, TA, Sayigh, L, Baird, RW, and Oswald, J. 2016. Whistle characteristics, repeated whistle types and daytime dive behavior in Hawaiian pantropical spotted dolphins (*Stenella attenuata*). *Journal of the Acoustical Society of America*. 140: 421–429. doi: 10.1121/1.4955081
- **18. Mooney, TA**, Katija, K, Shorter, KA, Hurst, T, Fontes, J, and Afonso, P. 2015. ITAG: An ecosensor for fine-scale behavioral measurements of soft-bodied marine invertebrates. *Animal Biotelemetry*. 3(1): 31-44. doi:10.1186/s40317-015-0076-1ITAG
- **19.** Kaplan*, MK and **Mooney, TA**. 2015. Ambient noise and temporal patterns of boat activity in the US Virgin Islands National Park. *Marine Pollution Bulletin*. 98 (1-2): 221-228. doi: 10.1016/j.marpolbul.2015.06.047
- **20.** Kaplan*, MB, **Mooney, TA**, Partan, J, and Solow, A. 2015. Coral reef species assemblages are associated with ambient soundscapes. *Marine Ecology Progress Series*. 533: 93-107. doi: 10.3354/meps11382
- **21. Mooney, TA**, Yan, J, Yu, U, Ketten, DR, and Jen, IF. 2015. Hearing abilities and sound reception of broadband sounds in an adult Risso's dolphin (*Grampus griseus*). *Journal of Comparative Physiology A*. 201(8):751-61. doi: 10.1007/s00359-015-1011-x
- **22.** Samson*, J, **Mooney, TA**, Hanlon, R, and Guskerloo, S. 2014. Graded behavioral responses and habituation to sound in the common cuttlefish, *Sepia officinalis*. *Journal of Experimental Biology*. 217 (24): 4347-4355. doi: 10.1242/jeb.113365
- **23.** Pfister, CA, Esbaugh, A, Frieder, C, Baumann, H, Bockmon, E, White, M, Carter, B, Benway, H, Blanchette, C, Carrington, E, McClintock, J, McCorkle, D, McGillis, J, **Mooney, TA** and Ziveri, P. 2014. Detecting the unexpected: A research framework for ocean acidification. *Environmental Science and Technology*. Special Issue on "Ocean Acidification: its Causes, Consequences, and Cures" 48 (17): 9982–9994. doi: 10.1021/es501936p
- **24.** Kaplan*, MB, **Mooney, TA**, Sayigh, L, Baird, R. 2014. Repeated call types in Hawaiian melonheaded whales (*Peponocephala electra*). *Journal of the Acoustical Society of America*. 36(3): 1394–1401
- **25.** Scharr*, AL*, **Mooney, TA**, Schweizer, FE, and Ketten DK. 2014. Aminoglycoside induced damage in the statocyst of squid, *Doryteuthis pealeii*. Biological Bulletin. 227(1): 51-60
- **26.** Castellote, M#, **Mooney, TA**#, Hobbs, R, Quakenbush, L, Goetz, C, Gaglione, E. 2014.

 Baseline hearing abilities and variability in wild beluga whales (*Delphinapterus leucas*). Journal of Experimental Biology. 217: 1682-1691. #Contribution: Equal contribution by the authors and sharing first authorship
- **27. Mooney, TA,** Li, SH, Ketten, DK, Wang, K, and Wang D. 2014. Hearing pathways in the finless porpoise, *Neophocaena asiaorientalis asiaorientalis. Journal of Experimental Biology.* 217: 444-452. doi: 10.1242/jeb.093773.
- **28.** Kaplan*, M, **Mooney, TA,** McCorkle, D, Cohen, A. 2013. Adverse effects of ocean acidification on early development of squid (*Doryteuthis pealeii*). *PLoS ONE* 8(5): e63714. doi:10.1371/journal.pone.0063714.
- **29. Mooney, TA**, Yamato, M, and Branstetter, BK. 2012. Hearing in cetaceans: From natural history to experimental biology. *Advances in Marine Biology*. 63: 197-246. *(invited review) *Cover Article**

30. Strobel*, SM* and **Mooney, TA.** 2012. Detection of low frequency tones and whale predator sounds by American sand lance *Ammodytes americanus*. *Journal of Fish Biology*. 81(5):1646-1664. doi: 10.1111/j.1095-8649.2012.03423.x.

- **31. Mooney, TA,** Li, SH, Ketten, DK, Wang, K, and Wang D. 2011. Auditory temporal resolution and evoked responses to pulsed sounds for the Yangtze finless porpoises (*Neophocaena phocaenoides asiaeorientalis*). *Journal of Comparative Physiology A*. 197: 1149–1158.
- **32. Mooney, TA**, Hanlon, RT, Christensen-Dalsgaard, J, Madsen, PT, Nachtigall, PE Ketten, DR. 2010. Sound detection by the longfin squid (*Loligo pealeii*) studied with auditory evoked potentials: sensitivity to low-frequency particle motion and not pressure. *Journal of Experimental Biology*. 213: 3748-3759.
- **33. Mooney, TA**, Lee, WJ, and Hanlon, RT. 2010. Long-duration anesthetization of squid (*Doryteuthis pealei*). *Marine and Freshwater Behavior and Physiology*. 43(4): 297–303.
- **34.** Apprill, A, **Mooney, TA**, Lyman, E, Stimpert, A, and Rappé, M. 2010. Bacterial communities associated with the skin of free-ranging and health-compromised humpback whales. *Environmental Microbiology and Environmental Microbiology Reports*. 3:223-232.
- **35. Mooney, TA**, Pacini, AP, and Nachtigall, PE. 2009. False killer whale (*Pseudorca crassidens*) echolocation and acoustic disruption: Implications for long-line bycatch and depredation. *Canadian Journal of Zoology*. 87: 726-733.
- **36. Mooney, TA**, Nachtigall, PE, Vlachos, S. 2009. Sonar-induced temporary hearing loss in dolphins. *Biology Letters*. 5: 565-567.
- **37. Mooney, TA**, Nachtigall, PE, Breese, M, Vlachos, S, and Au, WWL. 2009. Predicting temporary threshold shifts in a bottlenose dolphin (*Tursiops truncatus*): the effects of noise level and duration. *Journal of the Acoustical Society of America*. 125(3): 1816-1826.
- **38. Mooney, TA**, Nachtigall, PE, Taylor, KA, Rasmussen, MH, and Miller, LA. 2009. Auditory temporal resolution of a wild white-beaked dolphin (*Lagenorhynchus albirostris*). *Journal of Comparative Physiology A*. 195:375-384.
- **39. Mooney, TA**, Nachtigall, PE, Castellote, M, Taylor, KA, Pacini, AP, and Esteban, JA. 2008. Hearing pathways and directional sensitivity of the beluga whale, *Delphinapterus leucas. Journal of Experimental Marine Biology and Ecology.* 362(2): 108-116.
- **40.** Nachtigall, PE, **Mooney, TA**, Taylor, KA, Miller, LA, Rasmussen, MH, Akamatsu, T, Teilmann, J, Linnenschmidt, M, and Vikingsson, G. 2008. Shipboard measurements of the hearing of the white-beaked dolphin, *Lagenorhynchus albirostris*. *Journals of Experimental Biology*. 211(4): 642-647 *Cover Article.*
- **41.** Lammers, MO, Brainard, RE, Au, WWL, **Mooney, TA,** Wong, K. 2008. An ecological acoustic recorder (EAR) for long-term monitoring of biological and anthropogenic sounds on coral reefs and other marine habitats. *Journal of the Acoustical Society of America*. 123(3): 1720-1228.
- **42. Mooney TA**, Au, WWL, Nachtigall PE, and Trippel, EA. 2007. Acoustic and stiffness properties of gill nets as they relate to small cetacean bycatch. *ICES Journal of Marine Science*. 64(7): 1324-1332.
- **43.** Taylor, KA, Nachtigall, PE, **Mooney, TA**, Supin, AYa, and Yuen, MML. 2007. A portable system for the evaluation of the auditory capabilities of marine mammals. *Aquatic Mammals*. 33(1): 6-13.
- **44.** Nachtigall, PE, **Mooney, TA**, Taylor, KA, Yuen, MMY. 2007. Hearing and auditory evoked potential methods as applied to Odontocete cetaceans. *Aquatic Mammals*. 33(1): 93-99. *Cover Article.*
- **45.** Nachtigall, PE, Supin A Ya, Amundin, M, Röken, B, Møller, T, **Mooney, TA,** Taylor, KA, and Yuen, MMY. 2007. Polar bear, (*Ursus maritimus*), hearing measured with auditory evoked potentials. *Journal of Experimental Biology*. 210(7): 1116-1122. *Cover Article.*

46. Mooney TA, Nachtigall PE, Yuen MMY. 2006. Temporal resolution of the Risso's dolphin, *Grampus griseus*, auditory system. *Journal of Comparative Physiology A*. 192: 373-380.

- **47.** Nachtigall, PE, Yuen, MMY, **Mooney TA**, Taylor KA. 2005. Hearing measurements from a stranded infant Risso's dolphin, *Grampus griseus*. *Journal of Experimental Biology*. 208: 4181-4188.
- **48. Mooney, TA**, Nachtigall, PE, and Au, WWL. 2004. Target strengths of a nylon monofilament and an acoustically enhanced gillnet: Predictions of biosonar detection ranges. *Aquatic Mammals*. 30(2): 220-226.

BOOK CHAPTERS AND PEER-REVIEWED CONFERENCE PROCEEDINGS

- **1. Mooney, TA**, McCravy, KW, and Thomas, JA. Bioacoustical studies on invertebrates other than insects (Chpt 3). <u>In Press</u> (book chapter) In: Exploring Animal Behavior through Sounds: Applications of Bioacoustical Studies (Vol 2)
- 2. Lillis*, A, Mooney, TA. Loudly heard, little seen, and rarely understood: Spatiotemporal variation and environmental drivers of snapping shrimp sound production. Proceedings of Meetings in Acoustics. 27. 4th International Conference on the Effects of Noise on Aquatic Life, Dublin, Ireland 10-16 July, 2016. 4ENAL. 27(1): 010017. doi: 10.1121/2.0000270
- **3.** Kaplan*, MB, **Mooney, TA**, Lammers, MO, Zang, E. Temporal and spatial variability in vessel noise on tropical coral reefs. Proceedings of Meetings in Acoustics. 27. 4th International Conference on the Effects of Noise on Aquatic Life, Dublin, Ireland 10-16 July, 2016. 27, 005002. doi: 10.1121/2.0000250
- **4. Mooney, TA,** Castellote, M, Hobbs, R, Quackenbush, L, Goetz, C, Gaglione, E. 2016. Measuring hearing in wild beluga whales. In: Effects of Noise on Aquatic Life II. Popper, A, Hawkins A (eds). Volume 875 of the series Advances in Experimental Medicine and Biology. Springer Science+Business Media, LLC, New York. pp 729-735
- 5. Samson*, J, Mooney, TA, Hanlon, R, and Guskerloo, S. 2016. A brief review of cephalopod behavioral responses to sound. In: Effects of Noise on Aquatic Life. Popper, A, Hawkins A (eds). Volume 875 of the series Advances in Experimental Medicine and Biology. Springer Science+Business Media, LLC, New York. pp: 969-975. doi: 10.1007/978-1-4939-2981-8_120
- **6. Mooney, TA,** Hanlon, RT, Christensen-Dalsgaard, J, Madsen, PT, Ketten, DR, Nachtigall, PE. 2012. "The potential for sound sensitivity in cephalopods." in: The Effects of Noise on Aquatic Life. Popper, A, Hawkins A (eds). Springer Science+Business Media, LLC, New York. pg 125-128

MANUSCRIPTS SUBMITTED

- 1. Silva*, TL, Fay, G, Mooney, TA, Robbins, J, Carson, CD, Cole, T, Thompson, MA and Wiley, DN. Environmental drivers of toothed whale habitat use in a marine protected area. Submitted to *Marine Ecology Progress Series*
- 2. Zakroff*, C, Mooney, TA, Berumen, M. Dose-dependent responses, and small-scale variabilities, to ocean acidification during squid, *Doryteuthis pealeii*, development. Submitted to *Journal of Experimental Biology*
- **3.** Van Cise*, AM, Mahaffy, SD, Baird, RW, **Mooney, TA**, and Barlow, J. Song of my people: Dialect differences help maintain socio-genetic isolation among sympatric social groups of Hawaiian short-finned pilot whales. Submitted to *Behavioral Ecology and Sociobiology*
- **4.** Flaspohler, GE, Caruso, F, **Mooney, TA***, Katija, K, Fontes, J, Afonso, P and Shorter, KA.

- Quantifying the swimming gaits of veined squid (*Loligo forbesi*) using bio-logging tags. Submitted to *Journal of Experimental Biology *corresponding author*
- **5.** Song, Z, Zhang, Y, **Mooney, TA**, Wang, X, Smith, A, Xu, X. Investigation of acoustic reception pathways in finless porpoise (*Neophocaena asiaorientalis sunameri*) with insight into an alternative pathway. Submitted to *Bioinspiration & Biomimetics*
- **6.** Lillis, A, Apprill, A, Suca, JJ, Becker, C, Llopiz, J and **Mooney, TA***. Soundscapes influence coral settlement under light and dark conditions Submitted to *Journal of Experimental Biology* *corresponding author
- 7. Dinh, J, Suca, JJ, Lillis, A, Apprill, A, Llopiz, J and Mooney, TA*. Multiscale spatio-temporal trends of boat noise in U.S. Virgin Island coral reefs. Submitted to *Marine Pollution Bulletin.* *corresponding author

TECHNICAL REPORTS AND THESES

- **1. Mooney, TA**, Baird, RW, Tyack, PT, Nachtigall, PE, Millete, A, Webster, DL, & Schorr, GS. Bioacoustic behavior of Hawaiian insular false killer whales and melon-headed whales: A preliminary field report. ONR Marine Mammal & Biology Program Review. 16-19 April 2012. pg 87.
- **2. Mooney, TA** and Ketten, DK. 2010. Summary of harbor seal AEP hearing tests. Report to the Marine Animal Rehabilitation Center (MARC), University of New England. Sept 27, 2010. 8 pgs.
- **3. Mooney, TA** and Ketten, DK. 2010. Initial AEP hearing measures on UNE- MARC 09--078 Pv "Beverly" Report to the Marine Animal Rehabilitation Center (MARC), University of New England. Mar 27, 2010. 2 pgs.
- **4. Mooney, TA.** Li, S, Ketten, DK, Wang, D and Wang, K. Locations of auditory sensitivity and auditory temporal resolution of the finless porpoise. Report to the Chinese Institute of Hydrobiology. August, 2010. 7 pgs.
- **5. Mooney, TA.** 2008. Temporal effects of sound on the odontocete auditory system: an electrophysiological study. Ph.D. Dissertation. Department of Zoology, University of Hawaii. 188 pages. Advisor: Paul E. Nachtigall, Ph.D.
- **6. Mooney, TA,** Nachtigall, PE, Pacini, AF. 2007. Acoustic deterrents reduce false killer whale (*Pseudorca crassidens*) echolocation abilities but only so much. Report to Western Pacific Fisheries Management Council and IFF4.
- **7. Mooney, TA**. 2003. How do acoustically enhanced gillnets reduce bycatch: Measures of target strengths and flexural stiffness, and predictions of biosonar detection ranges. M.S. Report. Department of Zoology, University of Hawaii. 62 pgs. Advisor: Paul E. Nachtigall, Ph.D.
- **8. Mooney, TA**. 2001. Tag retention and mortality rates for *Homarus americanus*. Bigelow Laboratories and University of New England. 24 pgs. Advisor: Richard Wahle, Ph.D.
- **9. Mooney, TA.** 2000. Cytotoxic assay with two anti-neoplastic drugs using the soft-shell clam *Mya arenaria* as a model for studying acute myelocytic leukemia. Senior Thesis. 43 pgs. Advisor: Charles W. Walker, Ph.D.
- **10. Mooney, TA.** 1998. Ganhaarr: Traditional knowledge of *Crocodylus perosis* and *Crocodylus johnstoni*. School for International Studies Independent Study.

EXTERNAL PROFESSIONAL SERVICE AND LEADERSHIP

Research Adviso	ry Team / Workshops:	
2018	NOAA's Soundscape Metrics to Support Marine Protected Area Management,	
	Woods Hole, MA	
2016-present	Committee member and reviewer: Procedure for Determining Audiograms in	
	Toothed Whales through Evoked Potential Methods. Acoustical Society of America	
	and American National Standards Institute, Inc.	
2016-present	Co-Chair, International Quiet Ocean Experiment (IQOE) Working Group on	
	Acoustic Measurements of Biodiversity on Coral Reefs	
2016	Invited Speaker and Bioacoustics Expert. MA Windfarm MRP Site Characterization	
	Workshop. Woods Hole, MA	
2016	Co-Organizer, Session at International Coral Reef Symposium titled: Acoustic,	
	optical and chemical seascapes and their application to restoration and management.	
2015	Participant and Acoustics Outside Expert. NMFS Workshop to Define Criteria for	
	Characterizing Impacts of Deterrents on Marine Mammals. Seattle, WA.	
2014	Invited Speaker and Acoustics Expert. International Workshop on Marine Mammal -	
	Longline Bycatch Reduction Techniques. Woods Hole, MA.	
2013	Ocean Acidification Working Group: A Research Framework for Ocean	
	Acidification. Co-produced a review article to frame the way forward for OA	
	research.	
2013	3 rd International Conference on the Effects of Noise on Aquatic Life: Working	
	Group On Impacts to Marine Mammals.	
2010	National Marine Mammals and Sound: Science and Application Workshop	
2007	Invited Speaker and Workshop Participant (Acoustics). Fourth International Fishers'	
	Forum (IFF4). Costa Rica.	

Session Chair:

Acoustics and Conservation Session, 22nd Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia, Canada. 22-27 October, 2017.
 Animal Bioacoustics: The Diversity of Bioacoustic Signals. 5th Joint Meeting of the Acoustical Society of America and Acoustical Society of Japan, Honolulu Hawaii. 28 Nov - 2 Dec, 2016.
 Sensitivity Session. Oceanoise 2015. Vilanova i la Geltrú, Spain. 11-15 May 2015.

Neurobiology: Sensory Session. Society for Integrative and Comparative Biology. San Francisco, CA, 3-7 January, 2013.

Journal Manuscript Review: Journal of Zoology, Journal of Ecoacoustics, Animal Behavior, Biology Letters, PLoSONE, Journal of Neuroscience, ICES Journal of Marine Science, Journal of the Acoustical Society of America, Aquatic Mammals, Marine Mammal Science, Journal of Experimental Marine Biology & Ecology, Thermal Biology, Naturwissenschaften, Journal of Experimental Biology

Journal Editorial Board: Journal of Ecoacoustics

Grant Proposal Review. NSF Biological Oceanography, North Pacific Research Board, Leverhume Trust, South Carolina SeaGrant

Active Member: Society for Marine Mammalogy, Acoustical Society of America

INTERNAL WHOI PROFESSIONAL SERVICE

2012-2014	WHOI MIT Joint Program Admissions Advisory Committee
2011-2014	Biology Department Seminar Series Co-Coordinator
2013	Biology Department Technical Staff Annual Performance Review Committee

PARTICIPATION IN EDUCATION

2009-present Faculty in the WHOI-MIT Joint Program in Oceanography / Applied Ocean Science and Engineering

MENTORING OF POSTDOCTORAL SCIENTISTS

2018-present	Amy Van Cise (WHOI Postdoctoral Scholar) – primary advisor (but co-advising)
2016-present	Ashlee Lillis (WHOI Postdoctoral Scholar and Investigator) – primary advisor
2016-2017	Matt Long (WHOI Postdoctoral Scholar and Investigator) – co-advisor

MENTORING & ADVISING OF WHOI-MIT JOINT PROGRAM PH.D. STUDENTS

MENTORING OF GRADUATE STUDENTS FROM OTHER PROGRAMS

2017-present	Song Zhongchang (College of Ocean and Earth Science, Xiamen University, China;
	his primary advisor is at Xiamen University but he is spending 2 years in my lab,
	conducting part of his PhD research at WHOI)
2013-2017	Tammy Silva (Ph.D., UMass Dartmouth School of Marine Science and Technology;
	she obtained her PhD through UMass Dartmouth but she conducted all of her
	research through my lab; I informally co-mentored Tammy, along with Laela Sayigh)
2011-2013	Julia Samson (M.S., Wageningen University, NL; she obtained her PhD through
	Wageningen University but she conducted all of her research through my lab; I
	informally co-mentored Julia)

MENTORING UNDERGRADUATE AND HIGH SCHOOL STUDENTS

2018	Caitlyn Corkeron (Falmouth High School), Hadley Clark (California State University
	Monterey Bay), Toni Sleugh (Iowa State University), Seth Cones (Ohio University)
2017	Jessica Perelman (U Florida Veterinary School), Grace Kwon (Falmouth High School),
	Martha Clark [Falmouth Academy (high school)], Jason Dinh (Duke), Destiny Reese (Eckerd
	College), Hadley Clark (California State University Monterey Bay)
2016	Apryle Panyi (Richard Stockton University), Karen Ji (high school), Lucy Fitzgerald (Eckerd
	College), Morgan Bennett-Smith (Occidental College)
2015	Apryle Panyi (Richard Stockton University), Genevieve Flaspoehler (University of Michigan)

2014 Dorianne Wheeler (UC Berkley; WHOI Summer Student Fellow), Annamaria Izzi (Cornell), Jessie Doyle (James Madison U), Greg Niguidula (RPI)

2013 Mary Ann Lee (Ohio Wesleyan University; WHOI Summer Student Fellow), Aimee Boucher (Duke University), Samantha Zacarias (CSU Northridge), Casey Zakroff (King Abdulla University of Science and Technology), Andrea Schlunk (New England Aquarium/ Universität Bremen), Ethan Altshuler (Falmouth Academy), Robert Eder (Falmouth Academy)

- 2012 Jordan Carduner (Duke University), Luca Lamoni (U St. Andrews)
- 2011 Max Kaplan (U St. Andrews; WHOI Summer Student Fellow), Amy Streets (U Maryland), Margot Wilsterman (Connecticut College)
- 2010 Alexandra Scharr (Pomona College)
- 2009 Sarah Strobel (Princeton U), Alexandra Scharr (Pomona College)
- 2002-2008 Research Mentor for Undergraduates, Dept. of Zoology, University of Hawaii Mentoring of six undergraduate students in the design of short research experiments, collecting and analyzing data, interpreting results and preparation of a short paper/presentation.

SUPERVISING

2018-present	Adam Smith (WHOI Visiting Investigator) - primary supervisor
2017-present	Jenni Stanley (NOAA Researcher, WHOI Guest Investigator) – primary WHOI
	Supervisor; her main supervisor is at NOAA but she sits and collaborates as part of
	my lab; informally co-mentoring
2017-present	Paul Caiger (NOAA Researcher, WHOI Guest Investigator) –primary WHOI
	Supervisor; his main supervisor is at NOAA but he sits and collaborates as part of
	my lab; informally co-mentoring

TEACHING: COURSES & LABS

2016-17	Effects of Noise on Aquatic Animals, WHOI-MIT Joint Program topics course. Co-
	taught with Laela Sayigh.
2015-16	Ocean Acidification, WHOI-MIT Joint Program topics course
2012-13	Sensory Biology, WHOI-MIT Joint Program. Co-taught with Laela Sayigh.
2003	Graduate Teaching Assistant, Department of Zoology, University of Hawaii
	Taught senior/graduate level Developmental Biology Lab.
2002	Graduate Teaching Assistant, Biology Program, University of Hawaii
	Taught upper level <i>Ecology and Evolution</i> lab. *Rating above course and dept. average*
1999	Undergraduate Teaching Assistant, "Introductory Biology" Dept of Biology, UNH
1998	Undergraduate Teaching Assistant, "Introductory Physics" Dept of Physics, UNH

TEACHING: INVITED LECTURES

2018	University of Iceland Marine Mammal Biology course, lecture on: Hearing in belugas
2015, 2017	MBL's Biology of the Inner Ear course: Squid hearing
2013	Howard University's visiting Marine Biology course, lecture on: Sound science in squid
2013	WHOI Summer REU students. Sound Science: Hearing in marine mammals & squid
2012	BP Short Course on Biological Oceanography: Bioacoustics
2011	BP Short Course on Biological Oceanography: Bioacoustics
2011	WHOI Summer Fellow Lecture Series: Hearing in marine mammals
2011	WHOI Animal Behavior course: "Reef Bioacoustics"
2010	SUNY, College of Environmental Science & Forestry: "Squid hearing"

2010	Tufts Veterinary School: lecture on "Cephalopod auditory anatomy"
2009	Harvard University's: "Marine Biology the Deep Ocean" course
2009	WHOI Marine Mammal Science course: "Hearing and Sensory Ecology"
2008-2010	Woods Hole Summer Science School (for 10-12 yr olds) "Marine Mammal Biology"
2007	Univ. of Hawaii - Zoology Dept. Marine Bioacoustics Course (5 lectures)
	(Included beginner MatLab and Intro to Marine Acoustics)
2007	Univ. of Hawaii - Marine Options Program Marine Biol. Summer Course (3 lectures)
2007	Univ. of Hawaii - Marine Mammal Biology Class (2 lectures)
2004-2006	Univ. of Hawaii - Zoology Dept: "Marine Mammal Hearing and Effects of Sonar"
2003	Eckerd College: "BioSonar Capabilities of Marine Mammals"

FIELD EXPERIENCE

2016-present	Hearing & noise impacts in Auks: Implications for the marbled murrelet <i>Project leader</i> .
-	Field-based physiological evoked potential hearing in puffins and murres
2016	Particle motion of singing humpback whales Project leader
	Particle motion and linear array measurements of song propagation
2014-present	Concurrent measures of squid fine-scale behavior and local environment <i>Project leader</i>
1	Beta-testing of the ITAG (invertebrate eco-sensor tag) in Azores, Portugal
2013-present	Acoustic diversity of coral reefs (US Virgin Islands) Project leader
1	Surveyed coral and fish species cover, deployed acoustic moorings
2013	Hearing, pilot-tagging and kinematics of the veined squid (Azores, PT) Project leader
	Measured the hearing of 10 squid, Vemco tagged six to address attachment methods
2012-2016	Health assessments and acoustic ecology of Bristol Bay belugas
	Acoustics team lead for audiograms, sound production and acoustic behavior in wild
	belugas in a capture-release setting (incorporated with other health measures)
2010-2013	DTagging Hawaiian false killer and melon-headed whales (4 cruises) <i>Project leader</i>
	Acoustic behavior, baseline ecology and habitat use of odontocete species of concern
2012	Hearing pathways of a Risso's dolphin (Hualein, Taiwan) Project leader
	Audiogram and comparative auditory physiology
2010	Hearing of the Chinese Yangtze River porpoise Project leader
	Audiograms, auditory temporal processing and hearing pathways
2004-2008	Hawaiian humpback whale bioacoustic behavior
	Localization, movement and behavior measured via towed acoustic array and D-Tags
2006-2007	Icelandic auditory research expeditions
	Capture, study and release of wild white-beaked dolphins and minke whales.
2005	Polar bear hearing expedition, Kolmården, Sweden
	Study of polar bear hearing range and sensitivity
2004-2006	SPLASH (Structure of Population, Levels of Abundance, and Status of Humpbacks)
Summer 2004	Dept. of Fisheries and Oceans, University of the Azores, Portugal
	Survey of soniferous fishes and using passive acoustics to monitor MPAs
Summer 2003	B Friday Harbor Laboratories, Univ. of Washington, Marine Bioacoustics Workshop –
	project: target strength of salmon.

DATA CONSULTATION

2010 Report contributor: Marine Mammals and Sound Workshop. Report to the National Ocean Council Ocean Science and Technology Interagency Policy Committee. July 13th and 14th,

2010

2010 Data applied to NMFS Proposed Regulations: "Taking of Marine Mammals Incidental to Specified Activities," Federal Register: June 8, 2010 (Vol. 75, No. 109)

2010 Data applied to Fish and Wildlife Service Proposed Regulations: "Proposed Rules for Safe and Nonlethal Deterrents to Polar Bears," Federal Register: April 26, 2010 (Vol. 75, No.79)

AWARDS RECIEVED

Corporation of Marine Biological Laboratory Elected Member – Woods Hole, MA	2009
Grass Foundation Fellowship – Marine Biological Lab, Woods Hole, MA	2008
AAAS Excellence in Science Program – Nominated by UH Zoology Dept.	2007-2008
Best Student Paper Presentation – Acoustical Society of American Conference	2006
Outstanding Teaching Assistant – University of Hawaii, Biology Program	2001

OUTREACH: PUBLIC & MEDIA

- Developing (or work with WHOI Communications Dept to write) a press release or "Lay Language Summary" for most scientific publications, in order to improve communication of research to the broader public.
- Aiming to make all my publications "open access" to facilitate dissemination of science to the broader public.
- Pre-school: Guest lectures at the Woods Hole Day Care Cooperative, teaching preschool children about marine biology (1 class in marine mammals, 1 class in cephalopods). Along with a science journalist, co-writing an enhanced e-book on sounds in the sea, an outgrowth of lecturing for the WHOI Journalism Fellows.
- Elementary school: Guest lectures at the Woods Hole Science School, teaching Marine Mammal Biology.
- High school: Developing a video-based squid dissection manual for high school teachers entitled "Squid have ears too!" Mentored two science fair students on a cuttlefish behavior project 2013). They placed 2nd in the MA Regionals and reached the State Science Fair.
- Beyond: Participated in the WHOI "Science Made Public Series" a series of public talks
 designed to communicate novel, timely and exciting science to a lay audience. These Woods
 Hole lectures provide the opportunity to communicate to hundreds of children and adults
 during the course of the summer vacation season.
- Lectured in the WHOI Ocean Science Journalism Fellowship series, a one-week, residential
 experience for professional writers, producers, and editors working for print, broadcast,
 radio, and Internet media. The program allows extended and detailed face-to-face
 interactions with scientists and journalists, facilitating an ideal way to communicate to the
 public. These efforts can help relay the science and conservation to journalists, who are
 skilled and trained to outreach to the public.
- Our lab research blog has over 27,000 hits from all over the world. www.sensoryecology.blogspot.com/
- Squid Hearing: Featured or interviewed in squid related TV programs including: the BBC, National Geographic's Inside Nature's Giants', and Canada's Daily Planet; press and web articles include TIME, Yahoo!.com, BBC, The Seattle Times, Global Animal, MSNBC, Physics Today, Daily Mail, Tree Hugger.com, One India News, Macleans, Dive Photo Guide and many others.

• Squid Ocean Acidification: TIME, Scientific American, Discovery, Climate Central, Current Biology, Headlines and Global News and others.

- Sonar/Marine mammal: Nature, Science, The New York Times, The Times (London), Christian Science Monitor, The Telegraph (London), Agence France-Presse (AFP-Paris), Le Monde (Paris), New Scientist, Discover Magazine, Acoustic Ecology Institute and others.
- Soundscapes and wind-farm noise impacts: NPR's Living on Earth, various local NPR stations including WCAI and KDLG (Alaksa), Cape Cod Times, Oceanus and others.

INVITED CONFERENCE PRESENTATIONS

- 1. Mooney, TA. Lillis, A, Kaplan, MB, Suca, J and Lammers, MO. Variability in coral reef soundscapes, spatiotemporal differences, biophysical and behavioral drivers and associations with local biota. 173rd Meeting of the Acoustical Society of America. Special Session:

 Advances in the emerging research field of ecosystem acoustics. Boston MA, 25–29 June 2017
- **2. Mooney, TA**, Sayigh, L, Kaplan, MB, and Silva, T. Massachusetts Windfarm MRP Site Characterization Workshop. Woods Hole, MA. 15-16 September 2016.
- **3. Mooney, TA**, Samson, JE and Hanlon, RT. Cephalopods' anti-predator responses to sound differ based upon sound level, frequency and prior experience. Coastal Environments Session. Oceanoise 2015. Vilanova i la Geltrú, Spain. 11-15 May 2015.
- **4. Mooney, TA**, Castellote, M, Hobbs, R. Quakenbush, L, Goertz, C and Gaglione, E. Hearing in wild beluga whales: variability and trends in consistently good ears. Watkins Memorial Marine Mammal Bioacoustics Symposium. New Bedford Whaling Museum, New Bedford, MA. 27-29 March, 2015.
- **5. Mooney, TA**, Kaplan, M**, Baird, R, and Partan, J. DTAGs, DAWGs, and Towfish: Using multiple recording platforms to characterize odontocete acoustic space. 166th Meeting of the Acoustical Society of America, San Francisco, CA, 2-6 December 2013.
- **6. Mooney, TA**. False Killer Whale Bioacoustics, Deterrents and Adaptations: Implications for longline bycatch. International Marine Mammal Longline Bycatch Mitigation Workshop. Woods Hole, MA. 22-25 October, 2013.
- **7. Mooney, TA**, Li, S, Ketten, DK, Wang, K, and Wang, D. Hearing pathways in the finless porpoise, *Neophocaena phocaenoides*, and implications for noise impacts. 161st Meeting of the Acoustical Society of America. Special Memorial Session in Honor of Ron Schusterman and Dave Kastak. Seattle, Washington, 23-27 May 2011.
- **8.** Ketten DK, Williams, CR, **Mooney, TA**, Matassa, K, and Patchett, K. *In vivo* measures of hearing in seals via Auditory Evoked Potentials (AEP), Otoacoustic Emissions (OAE), and Computerized Tomography (CT). 161st Meeting of the Acoustical Society of America. Special Memorial Session in Honor of Ron Schusterman and Dave Kastak. Seattle, Washington, 23-27 May 2011.
- **9. Mooney, TA**, Hanlon, RT, Christensen-Dalsgaard, J, Madsen, PT, Ketten, DR, and Nachtigall, PE. The hearing of the longfin squid (*Loligo pealeii*) and sensitivity to low frequency noise. 2nd International Meeting on "The Effects of Noise on Aquatic Life." Cork, Ireland, Aug 15-20, 2010.
- **10. Mooney, TA**, Hanlon, RT, Christensen-Dalsgaard, J, Madsen, PT, Ketten, DR and Nachtigall, PE. Do squid hear echolocating predators? Acoustic sensitivity of the longfin squid, *Loligo pealeii*. 5th Animal Sonar Symposium. Kyoto, Japan. September 14-18, 2009.

11. Mooney, TA, Nachtigall, PE, Pacini, A. 2007. Acoustic masking to reduce false killer whale long-line bycatch. 4th International Fishers Forum. Puntarenas, Costa Rica. November 12-15, 2007.

12. Mooney, TA, Nachtigall, PE, Supin, YA, Yuen, MML, Taylor, KT. 2006. The need for speed: The utility of rapid hearing tests. 20th Conference of the European Cetacean Society. Gdynia, Poland. April 2-7, 2006.

INVITED LECTURES & PUBLIC PRESENTATIONS

- 1. Mooney, TA. Listening to coral reefs and what they can tell us. Harbor Branch Oceanographic Institute. HBOI Ocean Science Public Lecture Series. February 28, 2018.
- **2. Mooney, TA.** Bling for small things: tagging small odontocetes and squid. Scripps Institute of Oceanography. April 19, 2017.
- **3. Mooney, TA**. Using coral reef soundscapes to quantify reef communities and human-usage. Pacific Islands Fishery Science Center, NOAA. March 31, 2016.
- **4. Mooney, TA**. Sounds to warm you on a cold winter's day: Using coastal soundscapes to quantify coral reef communities and anthropogenic activities. Northeast Fishery Science Center, NOAA. Woods Hole, MA. December 3, 2015.
- **5. Mooney, TA** and Castellote, M. Effects of noise from Cook Inlet on beluga hearing. Mystic Aquarium, Mystic CT. November 10, 2015.
- **6. Mooney, TA,** Llopiz, J, Apprill, A, and Kaplan, MB. 2015. Coral Chorus: Linking ambient soundscapes to local biota. University of the Virgin Islands. November 17, 2015.
- **7. Mooney, TA**. Sounds of Science: Linking ambient soundscapes to local biota. University of Rhode Island. Graduate School of Oceanography. Narragansett, RI. October 28, 2015
- **8. Mooney, TA** and Castellote, M. Beluga Whale Hearing and the Effects of Ocean Noise. Mystic Aquarium, Mystic CT. April 7, 2015.
- **9. Mooney, TA.** Squid ears, tag bling and that CO₂ thing: Cephalopod sensory ecology in a changing ocean. Hopkins Marine Lab, Stanford University. February 27, 2015.
- **10. Mooney, TA.** Do you hear what I hear? Population variation and 'unrepresentative' species. Biology Department Seminar. Woods Hole Oceanographic Institution. October 2, 2014.
- **11. Mooney, TA.** Coral Reef Soundscapes in the Virgin Islands National Park, St John, USVI. Webinar to the National Park Service. February 26, 2014.
- 12. Mooney, TA. Acoustic ecology of belugas. Mystic Aquarium, Mystic CT. September 26, 2013.
- **13. Mooney, TA.** Marine mammal hearing and auditory evoked potentials. Department of Veterinary Medicine. National Chiayi University. Taiwan. December 16, 2011.
- **14. Mooney, TA.** Eco-Physiology, bioacoustics and sensory ecology of marine animals. Department of Biology. National Cheng Kung University. Taiwan. December 15, 2011.
- **15. Mooney, TA.** Sound sensitivity in cephalopods: Hearing, predator detection and ocean noise. University of North Carolina, Wilmington. September 30, 2011.
- **16. Mooney, TA.** Detection of sound by the longfin squid. Duke University Marine Lab. March, 2011.
- **17. Mooney, TA.** Hearing in marine animals: from dolphins to squid. Knight Fellows Lecture. Woods Hole Oceanographic Institution. September 13, 2010.
- **18. Mooney, TA.** The hearing of odontocetes and their prey: Sensory ecology and anthropogenic impacts. University of North Florida, Biology Department. February 4, 2010.
- **19. Mooney, TA**, Ketten, DR, Hanlon, RT, Christensen-Dalsgaard, J, Madsen, PT, and Nachtigall, PE. Squid hearing and their ability to detect echolocating predators. Office of Naval Research, Marine Mammals and Oceanography Program Review, December 7-10, 2009.

20. Mooney, TA. The hearing and travels of Icelandic white-beaked dolphins. WHOI Science Made Public Series. Woods Hole, MA. July 21, 2009.

- **21. Mooney, TA**. How much sound is too much? Noise, naval sonar and the dolphin auditory system. Biology Department Seminar. Woods Hole Oceanographic Institution. April 9, 2009.
- **22. Mooney, TA**. Predicting the effects of noise on odontocete cetaceans. Zoology Department Seminar. University of Hawaii. April 11, 2008.
- **23. Mooney, TA**. A bit of the ecology of the white-beaked dolphin. 2007. Hanauma Bay Nature Preserve Community Education Lecture. Honolulu, HI. April 6, 2007.
- **24. Mooney, TA**, Santos, PA, Nachtigall, PE, and Santos, R. 2005. Fish, dolphins and whales: Fish sounds and dolphin bycatch. University of the Azores, Horta, Faial, Pt. August 18, 2005.

MEETING PRESENTATIONS & ABSTRACTS

- 1. Mooney, TA, Flaspohler, GE, Caruso, F, Katija, K, Fontes, J, Afonsol P and Shorter, KA. Fine-scale locomotion patterns of the veined squid, *Loligo forbesi*, measured using a novel biologging tag. 2018 Ocean Sciences Meeting, Portland OR. 11–16 February, 2018.
- 2. Mooney, TA, Kaplan, MB, Lammers, MO and Zang, E. Local bioacoustic soundscapes reflect coral reef community complexity. 2018 Ocean Sciences Meeting, Portland OR. 11–16 February, 2018.
- **3. Mooney, TA**, Castellote, M, Quakenbush, L, Hobbs, R, Gaglione, E and Goertz, C. Loud and clear: hearing abilities and variability within a population of wild beluga whales (*Delphinapterus leucas*). 22nd Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia, Canada. 22-27 October, 2017.
- **4.** Castellote, M, **Mooney, TA**, Russel D. Andrews, RD, Deruiter, S, Quakenbush, L, Goertz, C, Hobbs, R, and Gaglione, E. Castellote Acoustic foraging behavior of beluga whales via combined technology: satellite telemetry, passive acoustics, accelerometry, and stomach temperature sensing. 22nd Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia, Canada. 22-27 October, 2017.
- **5.** Andrews, R, Castellote, M, Goertz, C, Hobbs, R, **Mooney, A**, and Quakenbush, L. Development and application of new biotelemetry tools for studying beluga foraging ecology. 22nd Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia, Canada. 22-27 October, 2017.
- **6. Mooney, TA**, Kaplan, MB and Lammers, MO. Loud and Clear: Characterization of particle motion in humpback whale song and its potential in communication. 5th Joint Meeting of the Acoustical Society of America and Acoustical Society of Japan, Honolulu Hawaii. 28 Nov 2 Dec ,2016.
- 7. Mooney, TA, Castellote, M, Quakenbush, L, Hobbs, R, Goertz, C, Gaglione, E and Kaplan, MB. Say What? Hearing abilities and subsequent variability for a wild population of beluga whales (*Delphinapterus leucas*). 5th Joint Meeting of the Acoustical Society of America and Acoustical Society of Japan, Honolulu Hawaii. 28 Nov 2 Dec ,2016.
- **8. Mooney, TA** and Samson, JE. Loudness-Dependent Behavioral Responses, Predator Evasion, and Habituation to Sound by the Longfin Squid *Doryteuthis pealeii*. 4th International Conference on the Effects of Noise on Aquatic Life, Dublin, Ireland 10-16 July, 2016.
- **9. Mooney, TA**, Castellote, M, Quakenbush, L, Hobbs, R, Goertz, C, Gaglione, E and Kaplan, MB. Hearing Sensitivity and Variability in a Wild Odontocete Population (Beluga Whales) and the Relationship of Hearing Loss to Echolocation. 4th International Conference on the Effects of Noise on Aquatic Life, Dublin, Ireland 10-16 July, 2016.

10. Mooney, TA, Kaplan, MB, and Lammers, MO. Motion in the Ocean: Characterization of Particle Motion in Humpback Whale Song and Its Potential in Communication. 4th International Conference on the Effects of Noise on Aquatic Life, Dublin, Ireland 10-16 July, 2016.

- **11. Mooney, TA**, Castellote, M, Quakenbush, L, Hobbs, R, Goertz, C, and Gaglione, E. Relationship between hearing ability and echolocation in individual wild beluga whales. 21st Biennial Conference on the Biology of Marine Mammals. San Francisco, CA. December 9-13, 2015
- **12. Mooney, TA** and Zakroff, C. Cephalopods and Ocean Acidification. 3rd Ocean Acidification PI Meeting. Woods Hole Oceanographic Institution, Woods Hole, MA. 9-11June, 2015
- **13.** Castellote, M, **Mooney, TA**, Hobbs, R. Quakenbush, L. Goertz, C and Gaglione E. Beluga whale hearing in a rapidly changing Arctic environment. Oceanoise 2015. Vilanova i la Geltrú, Spain. 11-15 May 2015. (Mooney was presenter).
- **14.** Kaplan, MB and **Mooney, TA**. Spatiotemporal variability in coral reef soundscapes, associations with local biota, and patterns of boat noise. Oceanoise 2015. Vilanova i la Geltrú, Spain. 11-15 May 2015. (Mooney was presenter).
- **15. Mooney, TA** and Castellote, M. Baseline hearing measurements in Alaskan belugas. Office of Naval Research, Marine Mammal Biology Program Review. Alexandria. Oct 20-22, 2014.
- **16. Mooney, TA**, Tyack, PT, Baird, RW, and Nachtigall, PE. Acoustic behavior, baseline ecology and habitat use of pelagic odontocete species of concern. Office of Naval Research, Marine Mammal Biology Program Review. Alexandria. Oct 20-22, 2014.
- **17. Mooney, TA**, Katija, K, Shorter, A, Hurst, T, Fontes, J and Afonso, P. Concurrent measures of fine-scale behaviors and basic oceanographic parameters in the veined squid, *Loligo forbesi*. 5th Bio-logging Science Symposium (BLS5). Strasbourg, France. Sep 22-27, 2014.
- **18. Mooney, TA**, Castellote, M, Quakenbush, L, Hobbs, R, Goertz, C, and Gaglione, E. Can you hear me now? Sensitive hearing and limited variation in wild beluga whales (*Delphinapterus leucas*). 167th Meeting of the Acoustical Society of America. Providence, RI. May 5-9, 2014.
- **19. Mooney, TA,** Kaplan, M**, Izzi, A, and Sayigh, L. Trends and variations in the baseline soundscape of America's first offshore wind farm. 167th Meeting of the Acoustical Society of America. Providence, RI. May 5-9, 2014.
- **20.** Castellote M, **Mooney, TA,** Hobbs R, Quakenbush LT, Goertz CEC, Gaglione E. First description of beluga whale hearing in the wild. Cook Inlet Beluga Whale Conference, Anchorage, AK. April 5, 2014.
- **21. Mooney, TA**, Castellote, M, Quakenbush, L, Hobbs, R, Goertz, C, and Gaglione, E. Say what? The auditory abilities and variations of wild beluga whales (*Delphinapterus leucas*). 20th Biennial Conference on the Biology of Marine Mammals. Dunedin, New Zealand. December 9-13, 2013
- **22. Mooney, TA**, Kaplan, M, Lamoni, L Boucher, A, and Sayigh, L. Passive acoustic monitoring of biological and anthropogenic sounds at America's first offshore wind farm. 166th Meeting of the Acoustical Society of America, San Francisco, CA. December 2-6, 2013.
- **23. Mooney, TA.** Castellote, M, Hobbs, R, Quackenbush, L, Goetz, C, Gaglione, E. Hearing in wild belugas relative to levels of background noise. 3rd International Conference on the Effects of Noise on Aquatic Life. August 11-16, 2013. Budapest, Hungary.
- **24. Mooney, TA**, Kaplan, M, Baird, RW, and Millete, A. 6th International Workshop on Detection, Classification, Localization, and Density Estimation (DCLDE) of Marine Mammals using Passive Acoustics, University of St Andrews, Scotland, June 12–15, 2013.

25. Mooney, TA, Li, S, Ketten, D, Wang, K, and Wang, D. Auditory temporal resolution and sound reception by the finless porpoise: comparative hearing in an 'unrepresentative' species. Society for Integrative and Comparative Biology, San Francisco, CA, January 3-7, 2013.

- **26.** Ketten, DR, **Mooney, TA**, Cramer, S, Arruda, J. Evidence of hearing loss in marine mammals via Auditory Evoked Potentials (AEP), Otoacoustic Emissions (OAE), and Computerized Tomography (CT). Hearing Physiology Special Session 11th European Conference on Underwater Acoustics (ECUA 2012), Edinburgh, UK
- **27. Mooney, TA**, Hanlon, RT and Streets, A. Physiological and behavioral responses to sound in the longfin squid (*Loligo pealeii*). Ocean Sciences Meeting. Salt Lake City, UT, February 20-14, 2012.
- **28. Mooney, TA**, Li, S, Ketten, D, Wang, K, and Wang, D. Hearing pathways of the finless porpoise: Form and function in an 'unrepresentative' species. 19th Biennial Conference on the Biology of Marine Mammals. Tampa, FL. November 27-December 2, 2011.
- **29. Mooney, TA.** Baird, RW, Tyack, PT, Nachtigall, PE, Millete, A, Webster, DL, & Schorr, GS. DTAGging Hawaiian insular false killer whales and melon-headed whales: A preliminary field report. Workshop: Science and Conservation of Hawaiian Odontocetes. 19th Biennial Conference on the Biology of Marine Mammals. Tampa, FL. November 26, 2011
- **30. Mooney, TA,** Ketten, DR, Nachtigall, PE, Williams, CR, and Matassa, K. Using auditory evoked potentials to examine hearing loss in aquatic animals: From marine mammals to squid. 34th Meeting of the Association for Research in Otolaryngology. Baltimore, MD, February 19-23, 2011.
- **31.** Apprill, AM, **Mooney, TA**, Stimpert AK, Lyman E and Rappé, MS. Specific bacterial communities associate with the skin of free-ranging humpback whales. 110th General Meeting of the American Society for Microbiology. May 27-27, 2010. **Best Poster Presentation**
- **32. Mooney, TA**, Hanlon, RT, Christensen-Dalsgaard, J, Madsen, PT, Ketten, DR and Nachtigall, PE. What squid hear: An evoked potential study of the longfin squid (*Loligo pealeii*). 33rd Mid-Winter Meeting of the Association for Research in Otolaryngology. February 6-10, 2010.
- **33. Mooney, TA**, Hanlon, RT, Christensen-Dalsgaard, J, Madsen, PT, Ketten, DR and Nachtigall, PE. Detecting echolocating odontocetes: Can squid hear toothed whale predators? 18th Biennial Conference on the Biology of Marine Mammals. Quebec, Canada. October 12-16, 2009.
- **34.** Yamato, M, **Mooney TA**, Ketten, DK, Cramer, S, and Arruda, S. Auditory Anatomy and Sound Reception in the beluga whale (*Delphinapterus leucas*) compared to the bottlenose dolphin (*Tursiops truncatus*). 18th Biennial Conference on the Biology of Marine Mammals. Quebec, Canada. October 12-16, 2009.
- **35. Mooney, TA**, and Ketten, DR. The why and how of testing hearing in stranded animals. Northeast Regional Stranding Network Conference. Salem, MA. March 26-29, 2009.
- **36. Mooney, TA**, Nachtigall, PE, Vlachos, S. Intense sonar pings induce temporary threshold shift in a bottlenose dolphin, *Tursiops truncatus*. Acoustics '08 Conference. Paris, France. June 29-July 5, 2008.
- **37.** Pacini, A, Nachtigall, PE, **Mooney, TA**, Castellote, M, Taylor, K, and Esteban, JA. Directional sensitivity and hearing pathways in the beluga whale, *Delphinapterus leucas*. Acoustics '08 Conference. Paris, France. June 29-July 5, 2008.
- **38. Mooney, TA**, Taylor, KA., Nachtigall, PE, Pacini, A, Castellote, M, Esteban, JA. Odontocetes don't all hear the same: directional sensitivity and hearing pathways in the beluga whale, *Delphinapterus leucas.* 17th Biennial Conference on the Biology of Marine Mammals. Cape Town, South Africa. Nov 28-Dec 3, 2007.

39. Apprill, AM, **Mooney, TA**, Stimpert AK, Lammers MO, Rappé, MS. A novel approach to examine environmental and health-related characteristics of humpback whales using the bacterial composition of epithelial skin. 17th Biennial Conference on the Biology of Marine Mammals. Cape Town, South Africa. Nov 28-Dec 3, 2007. **Best Poster Presentation**

- **40.** Taylor, KA, **Mooney, TA**, Nachtigall, PE, Rasmussen, M, Miller, LA., The high frequency hearing and temporal processing of caught-and-released white-beaked dolphins, *Lagenorhynchus albirostris.* 17th Biennial Conference on the Biology of Marine Mammals. Cape Town, South Africa. Nov 28-Dec 3, 2007.
- **41.** Pacini, A, **Mooney, TA**, Nachtigall, PE. False killer whale echolocation experiment to reduce long line bycatch: preliminary results. 17th Biennial Conference on the Biology of Marine Mammals. Cape Town, South Africa. Nov 28-Dec 3, 2007.
- **42. Mooney, TA**, Nachtigall, PE, Taylor, KA, Miller, LA, Rasmussen, M. Temporal resolution and broadband click thresholds in a caught-and-released white-beaked dolphin (*Lagenorhynchus albirostris*). 21st Conference of the European Cetacean Society. San Sebastian, Spain. April 22-25, 2007.
- **43.** Breese, M, **Mooney, TA**, Nachtigall, PE, Au, WWL, Vlachos, S. Temporary threshold shifts in the bottlenose dolphin (*Tursiops truncatus*), varying noise duration and intensity. 21st
 Conference of the European Cetacean Society. San Sebastian, Spain. April 22-25, 2007.
- **44. Mooney, TA**, Nachtigall, PE, Au, WWL, Breese, M, Vlachos, S. Temporary threshold shifts in the bottlenose dolphin (*Tursiops truncatus*), varying noise duration and intensity. 4th Joint Meeting of the Acoustical Society of America and the Acoustical Society of Japan. Nov 28-Dec 2 2006. ** Best Student Paper Presentation**
- **45. Mooney, TA**, Nachtigall, PE, Au, WWL, Breese, M, Vlachos, S. The effects of noise intensity and exposure duration and potential protective mechanisms in the bottlenose dolphin (*Tursiops truncatus*). Ocean Sciences Meeting. Honolulu, HI. February 20-24, 2006.
- **46.** Lammers, MO, **Mooney, TA**, Brainard, RE, Au, WWL. Passive acoustic monitoring of biological activity on coral reefs and in nearby waters. Ocean Sciences Meeting. Honolulu, HI. February 20-24, 2006.
- **47. Mooney, TA**, Nachtigall, PE, Au, WWL, Breese, M, Vlachos, S. Predicting noise induced threshold shifts in a bottlenose dolphin: Effects of noise duration, intensity, and frequency. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA. December 12-16, 2005.
- **48.** Taylor, KA, Nachtigall, PE, Yuen, MMY, **Mooney, TA**. A portable system to evaluate the auditory system of stranded marine mammals. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA. December 12-16, 2005.
- **49.** Lammers, MO, Stimpert, AK, Au, WWL, and **Mooney, TA**. Diel and spatial patterns in the singing behavior of humpback whales off Oahu, Hawaii. 16th Biennial Conference on the Biology of Marine Mammals. San Diego, CA. December 12-16, 2005.
- **50.** Lammers, MO, Stimpert, AK, Au, WWL, and **Mooney, TA**. Diel and spatial patterns in the singing behavior of humpback whales off Oahu, Hawaii. 150th Meeting of the Acoustical Society of America. Minneapolis, MN. October 17-21, 2005.
- **51. Mooney, TA,** Lammers, MO, and Nachtigall, PE. Monitoring for fish sounds: Characterization and diurnal trends of three species of Pomacentrids. Underwater Acoustic Measurements, Heraklion, Crete, Greece, June 28-July 1, 2005.
- **52. Mooney, TA**, Lammers, MO, Santos, PA, and Nachtigall, PE. An underwater system to monitor ecologically important fish sounds: Characterization and diel trends of three species of Pomacentrids. 149th Meeting of the Acoustical Society of America. Vancouver, B.C., Canada. May 16-20, 2005.

53. Mooney, TA, Nachtigall, PE, Yuen, MM, and Taylor, KT. Can you hear me now? Hearing thresholds of a stranded Risso's dolphin. University of Hawaii Testers Symposium. Honolulu, HI. March 17-18, 2005.

- **54.** Taylor, KT, Nachtigall, PE, Yuen, MM, and **Mooney, TA**. A portable system to assess the auditory status of stranded marine mammals. University of Hawaii Testers Symposium. Honolulu, HI. March 17-18, 2005.
- **55.** Nachtigall, PE, Yuen, MM, **Mooney, TA**, and Taylor, KT. Measuring hearing in a neonatal stranded Risso's dolphin (*Grampus griseus*). 148th Meeting of the Acoustical Society of America. San Diego, CA. November 15-19, 2004.
- **56. Mooney, TA**, Nachtigall, PE, and Yuen, MM. The modulation rate transfer function of a Risso's dolphin, *Grampus griseus*, using the envelope following response. 148th Meeting of the Acoustical Society of America. San Diego, CA. November 15-19, 2004.
- **57. Mooney, TA**, Au, WWL, and Nachtigall, PE. Will acoustically enhanced nets reduce odontocete gillnet bycatch because they are better sound reflectors? 148th Meeting of the Acoustical Society of America. San Diego, CA. November 15-19, 2004.
- **58. Mooney, TA,** Au, WWL, and Nachtigall, PE. A method to reduce marine mammal bycatch: Predicted harbor porpoise detection ranges of three experimental gillnets. University of Hawaii Testers Symposium. Honolulu, HI. March 11-12, 2004.
- **59. Mooney, TA**, Au, WWL, and Nachtigall, PE. Target strength and predicted biosonar detection ranges of three experimental gillnets: A method to reduce marine mammal bycatch. ASLO/TOS Ocean Research Conference. Honolulu, HI. February 15-20, 2004.
- **60. Mooney, TA**, Nachtigall, PE, Au, WWL, and Muhic, CM. Barium sulfate nets reduce bycatch: acoustic reflectivity or flexural stiffness? 15th Biennial Conference on the Biology of Marine Mammals. Greensboro, NC. December 14-19, 2003.
- **61. Mooney, TA**, Nachtigall, PE, & Au, WWL. Target strength of two gillnets and predictions of biosonar detection ranges. First Pan-American/Iberian Meeting on Acoustics. Cancun, Mex. Dec. 2-6, 2002.
- **62. Mooney, TA**, Nachtigall, PE, & Au, WWL. Can dolphins detect gillnets? Implications of reflective gillnets. Hawaii Institute of Marine Biology Colloquium. Kaneohe, HI. October 21-22, 2002
- **63. Mooney, TA** & Wahle, R. Tag retention and mortality rates of the American lobster, *Homarus americanus*. Gulf of Maine Foundation Symposium. Damariscotta, ME. August 1-2, 2000.

STUDENT & POSTDOC PRESENTATIONS & ABSTRACTS

- 1. Zakroff, CJ, Mooney, TA. Impacts, variability, and resilience in hatchling squid, *Doryteuthis pealeii*, paralarvae after chronic developmental exposure to acidification and warming. Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA, USA. January 3-7, 2018.
- **2.** Silva, TL, **Mooney, TA**, Sayigh, L and Baumgartner, M. Temporal and spatial distribution patterns of odontocetes in Massachusetts Bay using passive acoustics from ocean gliders. 22nd Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia, Canada. 22-27 October, 2017.
- **3.** Van Cise, A, Morin, P, Martien, K, Baird, R, Mahaffey, S, Webster, D, **Mooney, TA**, Oleson, E and Barlow, J. Song of my people: Short-finned pilot whales in Hawaii use vocal repertoire diversity to maintain social and genetic population structure. 22nd Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia, Canada. 22-27 October, 2017.

4. Kügler, A, Lammers, MO, Zang, E Kaplan, MB, and **Mooney, TA**. Oh whale, where art thou? El Niño as a possible source for lower humpback whale numbers off Maui, Hawaii in the 2015/16 breeding season. 22nd Biennial Conference on the Biology of Marine Mammals. Halifax, Nova Scotia, Canada. 22-27 October, 2017.

- **5.** Dinh, J, and **Mooney, TA**. Spatial and Temporal Variation of Boat Noise in U.S. Virgin Island Coral Reefs. Woods Hole Oceanographic Institution Biology Department Summer Student Research Forum. Woods Hole, MA. August 7, 2017. (speed talk and poster).
- **6.** Reese, DN, Caruso, F, Jones, I, Perelman, J, and **Mooney, TA**. Analysis of Doryteuthis pealeii Squid Locomotion Using a Novel Bio-logging Tag: Effects of Attachment, Water Flow, and Noise. Marine Biological Laboratory Research Experience for Undergraduates, Woods Hole, Ma, USA. August 17 2018. (talk and poster)
- **7.** Jones, IT, Suca, J, Llopiz, J, **Mooney, TA**. Characterizing Soundscapes and Larval Fish Settlement in Tropical Seagrass and Mangrove Habitats. Special Session: Advances in the emerging research field of ecosystem acoustics. 173rd Meeting of the Acoustical Society of America, Boston, MA, USA June 25-29, 2017.
- **8.** Kaplan, MB, Lammers, MO, **Mooney, TA**, Zang, E. 173rd Acoustic and biological trends on coral reefs off Maui, Hawaii Meeting of the Acoustical Society of America. Special Session: Advances in the emerging research field of ecosystem acoustics. Boston MA, 25–29 June 2017.
- **9.** Silva, T, **Mooney, TA**, Sayigh, L, Baumgartner, M. (2017) Temporal and spatial distribution patterns of toothed whales in Massachusetts Bay using passive acoustics from ocean gliders. 173th Meeting Acoustical Society of America. Boston, MA, USA, 25-29 June 2017 (poster)
- 10. Silva, T, Mooney, TA, Sayigh, L, Baumgartner, M. (2017). Listening for dolphins with robots: Using autonomous gliders to study dolphin occurrence in Massachusetts Bay. Dock-U-Mentaries Film Series: Fishing for Knowledge: Cooperative Research for Sustainable Fisheries in New England. New Bedford Whaling National Historical Park, New Bedford, MA, USA, 19 May 2017 (oral)
- 11. Silva, T, Mooney, TA, Sayigh, L, Baumgartner, M. (2017) Spatial and temporal habitat use of toothed whales in Massachusetts Bay using passive acoustic ocean gliders. Environmental Research Colloquium and Intercampus Marine Science Symposium. University of Massachusetts Boston, Boston, MA, USA, 19 April 2017 (oral)
- **12.** Silva, T, **Mooney, TA**, Sayigh, L., Baumgartner, M. (2017) Spatial and temporal habitat use of toothed whales in Massachusetts Bay. Stellwagen Bank National Marine Sanctuary Office Brown bag lunch, Scituate, MA, USA, 27 Feb 2017 (oral)
- **13.** Fitzgerald, LM, Long, M and **Mooney, TA**. Effects of Flow and Hypoxia on Developing Squid, *Doryteuthis pealeii* Egg Capsules. ASLO Aquatic Sciences Meeting, Hawaii, USA 27-3 February, March 2017. Poster
- **14.** Panyi, AJ, Lillis, A, **Mooney, TA**. Light Effects on Individual Behavior and Sound Production by Snapping Shrimp, *Alpheus heterochaelis*. Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA, USA 4-8 January, 2017. Poster
- **15.** Lillis, A, Panyi, A & **Mooney, TA**. Soundscape engineers: exploring the drivers of snapping behavior in Alpheid shrimp. Society for Integrative and Comparative Biology Annual Meeting, New Orleans, USA, 4-9 January, 2017.
- **16.** Silva, T, **Mooney, TA**, Sayigh, L, Baumgartner, M. (2016) Spatial and temporal habitat use of odontocete species in Massachusetts Bay using passive acoustic ocean gliders. Society for Women in Marine Science Symposium. Woods Hole Oceanographic Institution, Woods Hole, MA, USA, 30 Sept 2016 (poster)

17. Zakroff, C, and Mooney, TA. Interannual variability in response and resilience to ocean acidification stress in the embryonic development of coastal squid, Doryteuthis pealeii. Gordon Research Seminar on Global Ocean Change Biology. Waterville Valley, NH. July 16-17, 2016. Oral.

- **18.** Zakroff, C, and **Mooney, TA**. Stress responses and variable resiliency in the hatchlings of coastal squid, Doryteuthis pealeii, after chronic embryonic ocean acidification exposure. Gordon Research Conference on Global Ocean Change Biology. Waterville Valley, NH. July 17-22, 2016. Poster.
- **19.** Zakroff, C, and **Mooney, TA**. Stress responses and variable resiliency in the hatchlings of coastal squid, Doryteuthis pealeii, after chronic embryonic ocean acidification exposure. Gordon Research Conference on Global Ocean Change Biology. Waterville Valley, NH. July 17-22, 2016. Invited Flash Talk.
- **20.** Kaplan, MB, **Mooney, TA**, Lammers, MO, Zang, E. Temporal and spatial variability in vessel noise on tropical coral reefs. 4th International Conference on the Effects of Noise on Aquatic Life, Dublin, Ireland 10-16 July, 2016.
- **21.** Lillis, A, **Mooney, TA**. Loudly Heard, Little Seen, and Rarely Understood: Spatiotemporal Variation and Environmental Drivers of Sound Production by Snapping Shrimp, the Noisiest Animals in the Sea. 4th International Conference on the Effects of Noise on Aquatic Life, Dublin, Ireland 10-16 July, 2016.
- **22.** Panyi, A, Long, M, **Mooney, TA**. Effects of Ocean Acidification and Flow on Oxygen and pH Conditions of Developing Squid (*Doryteuthis pealeii*) Egg Cases. American Geophysical Union 2016 Ocean Sciences Meeting. New Orleans, LA. February 21-26, 2016.
- **23.** Fitzgerald, L, Long, M, **Mooney, TA**, Zakroff, C. Effects of hypoxia and flow on capsule conditions of developing squid (*Doryteuthis pealeii*). Marine Biological Laboratory Undergraduate Research Symposium. Woods Hole, MA. August 19, 2016. (talk and poster)
- **24.** Fitzgerald, L, Long, M, **Mooney, TA**, Zakroff, C. Oxygen conditions of developing squid (*Doryteuthis pealeit*) egg cases. Woods Hole Oceanographic Institution Biology Department Summer Student Research Forum. Woods Hole, MA. August 7, 2016. (speed talk and poster)
- **25.** Kaplan, M.B., **Mooney, T.A**., & Lammers, M.O. Characterization of the acoustic particle motion and pressure components of humpback whale song. Poster Presentation. 21st Biennial Conference on the Biology of Marine Mammals. San Francisco, CA. 13-18 December 2015.
- **26.** Silva, T, **Mooney, TA**, Sayigh, L, Tyack, P, Baird, R, Oswald, J. Whistle characteristics and daytime dive behavior of pantropical spotted dolphins (*Stenella attenuata*) in Hawaii. 21st Biennial Conference on the Biology of Marine Mammals. San Francisco, CA, USA, 13-19 December 2015.
- **27.** Pisani, T. **Mooney, TA**, Sayigh, L. Grey seal (*Halichoerus grypus*) vocalizations in Nantucket Sound. 21st Biennial Conference on the Biology of Marine Mammals. San Francisco, CA. December 9-13, 2015
- **28.** Long MH, Zakroff C, **Mooney TA**. Extreme low oxygen and decreased pH conditions naturally occur within developing squid egg capsules. Coastal and Estuarine Research Federation. Portland, Oregon. Presentation. November 2015.
- **29.** Panyi A, Long MH, **Mooney TA**, Zakroff C. Effects of ocean acidification and flow on oxygen and pH conditions of developing squid (*Doryteuthis pealeii*). Marine Biological Laboratory Undergraduate Research Symposium. August 2015.
- **30.** Panyi A, Long MH, **Mooney TA**. Oxygen and pH conditions of developing squid (D. Pealeii) egg cases. Biology Summer Student Research Forum, WHOI. August 2015.

31. Zakroff, C, **Mooney, TA**, and Wirth, C. Swimming Behavior of Paralarval Squid, *Doryteuthis pealeii*, raised under Ocean Acidification recorded with a Novel 3D Tracking System. Cephalopod International Advisory Council Conference, Hakodate, Japan, 6-14 November 2015.

- **32.** Zakroff, C, **Mooney, TA**, Maas, A, and Wirth C. CO2 Dose Response of a Developing Squid, Doryteuthis pealeii: Growth, Energetics, and Behavior. U.S. Ocean Acidification Principal Investigators' Meeting, Woods Hole, MA, USA, 9-11 June 2015.
- **33.** Kaplan, M & **Mooney, TA**. Spatiotemporal variability in coral reef soundscapes: associations with biota and vessel activity. Poster Presentation. Watkins Memorial Marine Mammal Bioacoustics Symposium. New Bedford, Massachusetts. 27-29 March 2015.
- **34.** Kaplan, M, **Mooney, TA**, and Baird, RW. Differences in melon-headed whale (*Peponocephala electra*) whistle characteristics sympatric populations in Hawaii. 20th Biennial Conference on the Biology of Marine Mammals Dunedin, New Zealand, 9-13 December 2013
- **35.** Milette-Winfree, AJ, Nachtigall, PE, **Mooney, TA**, Pacini, AF, Kaplan, MB**, Shedd, TG, Smith, AB, Quintos, CT, Vlachos, SA. Using a DTAG to quantify sound level and frequency shadowing of a "receiving" false killer whale. 20th Biennial Conference on the Biology of Marine Mammals Dunedin, New Zealand, 9-13 December 2013
- **36.** Milette-Winfree, AJ, Nachtigall, PE, **Mooney, TA**, Pacini, A, Shedd, TG, Smith, AB, Quintos, CT, Vlachos, SA. It takes two: The replication of a social interaction to quantify variations in acoustic cues with animal position and head morphology. The 41st Annual Symposium of the European Association of Aquatic Mammals, Nürnberg, Germany, March, 2013. **Best Student Poster**
- **37.** Kaplan, M, **Mooney, TA** and Partan, J. Spatiotemporal variability in coral reef soundscapes in St John, US Virgin Islands. 166th Meeting of the Acoustical Society of America, San Francisco, CA, 2-6 December 2013.
- **38.** Samson, J, **Mooney, TA**, Hanlon, R, and Guskerloo, S. Cephalopod behavioral responses and potential for habituation to acoustic stimuli. 3rd International Conference on the Effects of Noise on Aquatic Life. August 11-16, 2013. Budapest, Hungary.
- **39.** Kaplan, M and **Mooney, TA**. Adverse effects of elevated CO₂ concentrations on squid (*Doryteuthis pealeii*) development and early life. Society for Integrative and Comparative Biology, San Francisco, CA, January 3-7, 2013.
- **40.** Samson, JE, **Mooney, TA**, Gussekloo, SWS, Hanlon, RT. Behavioral responses to sound stimuli in cuttlefish (*Sepia officinalis*). Society for Integrative and Comparative Biology, San Francisco, CA, January 3-7, 2013.
- **41.** Kaplan, M and **Mooney, TA**. Effects of elevated CO₂ conditions on paralarval longfin squid (*Loligo pealeii*) development and early life. Ocean Sciences Meeting. Salt Lake City, UT, Feb 2012.
- **42.** Strobel, SM and **Mooney, TA**. Sand lance detection of low frequency tones and humpback whale megapclicks. 19th Biennial Conference on the Biology of Marine Mammals. Tampa, FL. November 27-December 2, 2011.
- **43.** Kaplan, M and **Mooney, TA**. Impact of elevated CO2 conditions on paralarval longfin squid (*Loligo pealeii*) development and early life. WHOI Biology Department Summer Student Seminar. Woods Hole, MA. August 11, 2011.
- **44.** Sharr, A and **Mooney, TA**. Aminoglycoside-induced hair cell damage in the statocyst of squid (*Loligo pealeii*). MBL Undergraduate Research Symposium. Woods Hole, MA. August 18, 2011
- **45.** Streets, A and **Mooney, TA**. Squid behavioral reactions to low frequency sound. MBL Undergraduate Research Symposium. Woods Hole, MA. August 18, 2011.