

Amy Marie Van Cise

Woods Hole Oceanographic Institution - 86 Water St, Woods Hole, MA 02543
(781) 686-6753 - avancise@gmail.com

Education

Scripps Institution of Oceanography, University of California San Diego

Ph.D.: Biological Oceanography, September 2017

M.S.: Marine Biology, 2012

University of New Hampshire

B.S.: Biology – Marine and Freshwater, Magna cum Laude, Presidential Scholar, 2004

B.A.: English/Journalism, Magna cum Laude, Presidential Scholar, 2004

Academic Experience

Postdoctoral Scholar, Woods Hole Oceanographic Institution, Woods Hole, MA, Feb 2018-present.

Advisors: T. Aran Mooney, Ph.D., Carolyn Tepolt, Ph.D., Amy Apprill, Ph.D.

Examine differences in the vocal repertoire and epidermal microbial communities in Bristol Bay and Cook Inlet populations of beluga whales.

Graduate Student Researcher, Scripps Institution of Oceanography, La Jolla, CA, Jul 2011-Sept 2017.

Advisors: Phil Morin, Ph.D., Jay Barlow, Ph.D., Lisa Levin, Ph.D.

Thesis: “Gene-culture coevolution in a social cetacean: integrating acoustic and genetic data to understand population structure in the short-finned pilot whale (*Globicephala macrorhynchus*)”

Peer-reviewed Publications

Van Cise, AM, RW Baird, CS Baker, S Cerchio, D Claridge, R Fielding, BL Hancock-Hanser, J Marrero, KK Martien, A Mignucci, EM Oleson, M Oremus, M Poole, P Rosel, BL Taylor, PA Morin. 2019. Oceanographic barriers, divergence, and admixture: Phylogeography and taxonomy of two putative subspecies of short-finned pilot whale. *Molecular Ecology*, *In press*.

Van Cise, AM, SD Mahaffy, RW Baird, TA Mooney, J Barlow. 2018. Song of my people: Dialect differences among sympatric social groups of Hawaiian short-finned pilot whales. *Behavioral Ecology and Sociobiology* 72:193

Hill, MC, AR Bendlin, **AM Van Cise**, A Millete-Winfrey, AD Ligon, AC Ü, MH Deakos, EM Oleson. 2018. Short-finned pilot whales (*Globicephala macrorhynchus*) of the Marianas: Individual affiliations, movements, and space use. *Marine Mammal Science* DOI: 10.1111/mms.12567

Van Cise, AM, KK Martien, SD Mahaffy, RW Baird, DL Webster, JH Fowler, EM Oleson, PA Morin. 2017. Familial social structure and socially-driven genetic differentiation in Hawaiian short-finned pilot whales. *Molecular Ecology* 26(23): 6730–6741.

Van Cise, AM, MA Roch, TA Mooney, RW Baird, J Barlow. 2017. Acoustic differentiation of Shiho-and Naisa-type short-finned pilot whales in the Pacific Ocean. *Journal of the Acoustical Society of America* 141(2): 737-748.

Van Cise, AM, PA Morin, RW Baird, AR Lang, KM Robertson, SJ Chivers, RL Brownell, KK Martien. 2016. Redrawing the map: mtDNA provides new insights into the distribution and diversity of short-finned pilot whales in the Pacific Ocean. *Marine Mammal Science* 32:1177-1199.

Cammen KM, Andrews KR, Carroll EL, Foote AD, Humble E, Khudyakov JI, Louis M, McGowan MR, Olsen MT, **Van Cise AM**. 2016. Genomic Methods Take the Plunge: Recent Advances in High-Throughput Sequencing of Marine Mammals. *Journal of Heredity* 107(6): 481-495. (*INVITED REVIEW*)

Bagulayan, A, JN Bartlett-Roa, AL Carter, BG Inman, EM Keen, EC Orenstein, NV Patin, KNS Sato, EC Sibert, AE Simonis, **AM Van Cise**, and PJS Franks. 2012. Journey to the center of the gyre: the fate of the Tohoku Tsunami debris field. *Oceanography* 25(2):200–207.

Technical Reports

Van Cise, AM, CS Baker, M Oremus, M Poole, P Rosel, R Fielding, RW Baird, EM Oleson, A Mignucci, S Cerchio, J Marrero, KK Martien, PA Morin. 2017. Global mitogenome and nuclear SNP phylogeography of short-finned pilot whales. Prepared for the U.S. Pacific Fleet Environmental Readiness Office. 20 pp.

- Van Cise, AM**, PA Morin, RW Baird, EM Oleson, KK Martien. 2016. Relatedness and genetic structure in island-associated and pelagic short-finned pilot whales. Appendix in Hill et al. 2016. Cetacean Monitoring in the Mariana Islands Range Complex, 2015. Prepared for the U.S. Pacific Fleet Environmental Readiness Office. PIFSC Data Report DR-16-01.36 pp. + Appendix
- Morin, PA, **AM Van Cise**, KK Martien. 2015. Mitogenome phylogeography of short-finned pilot whales in the North Pacific, with reference to the Mariana Islands. Appendix II in Hill et al. 2015. Cetacean Monitoring in the Mariana Islands Range Complex, 2014. Prepared for the U.S. Pacific Fleet Environmental Readiness Office. PIFSC Data Report DR-15-003. 56 pp. + Appendices.
- Martien, KK, MC Hill, **AM Van Cise**, KM Robertson, SM Woodman, L Dollar, VL Pease, EM Oleson. 2014. Genetic diversity and population structure in four species of cetaceans around the Mariana Islands. NOAA-TM-NMFS-SWFSC-536. La Jolla, CA.
- Van Cise, AM**(ed.). 2011. AMLR 2009/10 Field Season Report: Objectives, Accomplishments and Tentative Conclusions. NOAA-TM-NMFS-SWFSC-47. La Jolla, CA.
- Van Cise, AM**(ed.). 2009. AMLR 2008/09 Field Season Report: Objectives, Accomplishments and Tentative Conclusions. NOAA-TM-NMFS-SWFSC-445. La Jolla, CA.

Presentations and Posters

- Van Cise, AM**, PR Wade, CEC Goertz, K Burek-Huntington, K Parsons, R Hobbs, A Apprill. Through the Looking Glass: Using Epidermal Microbiomes to Peer into Beluga Health. Poster presentation at: 2nd International Workshop on Beluga Whale Research and Conservation, 2019 March 12-14, Mystic, CT.
- Van Cise, AM**, PA Morin, KK Martien, RW Baird, SD Mahaffy, EM Oleson, TA Mooney, DL Webster, J Barlow. Song of my people: Dialect differences among sympatric socio-genetic groups of Hawaiian short-finned pilot whales. Oral Presentation at: 22nd Biennial Conference on the Biology of Marine Mammals, 2017 Oct 23-27, Halifax, Canada.
- Van Cise, AM**, KK Martien, RW Baird, SD Mahaffy, EM Oleson, PA Morin. Gene-culture co-diversity: Nuclear SNPs reveal link between social and genetic structure in Hawaiian short-finned pilot whales. Oral Presentation at: Global Biodiversity Genomics Conference, 2017 Feb 21-23, Washington, DC.
- Van Cise, AM**, KK Martien, RW Baird, EM Oleson, PA Morin. Family Ties: Nuclear SNPs reveal link between social and genetic structure in Hawaiian short-finned pilot whales. Workshop presentation at: 21st Biennial Conference on the Biology of Marine Mammals, 2015 Dec 12-18, San Francisco, CA.
- Van Cise, AM**, KK Martien, RW Baird, EM Oleson, PA Morin. Nuclear SNPs reveal link between social and genetic structure in Hawaiian short-finned pilot whales. Poster presented at: 21st Biennial Conference on the Biology of Marine Mammals, 2015 Dec 12-18, San Francisco, CA.
- Van Cise, AM**, MA Roch, RW Baird, S Rankin, J Barlow. A comparison of classification methods for detecting population structure in social cetaceans. Speed talk and poster presented at: 7th International Detection, Classification, Localization and Density Estimation Workshop, 2015 July 13-16, San Diego, CA.
- Van Cise, AM**, KK Martien, RW Baird, KM Robertson, SJ Chivers, PA Morin. Piloting the Pacific: Population structure in short-finned pilot whales in the Pacific Ocean. Oral presentation at: 20th Biennial Conference on the Biology of Marine Mammals, 2013 Dec 9-13, Dunedin, New Zealand.
- Van Cise, AM**, KK Martien, RW Baird, KM Robertson, SJ Chivers, PA Morin. Mitochondrial diversity in short-finned pilot whales in the Pacific Ocean: evidence of multiple genetically distinct populations. Poster presented at: 20th Biennial Conference on the Biology of Marine Mammals, 2013 Dec 9-13, Dunedin, New Zealand.
- Van Cise, AM**, RW Baird, S Baumann-Pickering, S Rankin and J Barlow. Characterization of short-finned pilot whale (*Globicephala macrorhynchus*) clicks and calls near the Hawaiian Islands. Poster presented at: 13th International Conference of the American Cetacean Society, 2012 Nov 9-11, San Diego, CA.
- Van Cise, AM**, TF Hakala and JA Bolker. Histological and biochemical comparison of skin development in normal and malpigmented summer flounder. Poster presented at: NOAA Flatfish Biology Conference, 2002, Westbrook, CT.

Grants and Fellowships

2019	Marine Alliance for Science and Technology in Scotland Fellowship	£7,450
2018-2019	Woods Hole Oceanographic Institution Postdoctoral Scholar Award	\$96,000
2017	Edna Bailey Sussman Research Fellowship	\$7,350
2016	PEO Scholar Award	\$15,000

2016	Edna Bailey Sussman Research Fellowship	\$7,350
2015	SIO Department Graduate Student Excellence Travel Award	\$500
2014	SIO Department Graduate Student Excellence Travel Award	\$300
2013	SIO Department Graduate Student Excellence Travel Award	\$2,000
2013-2016	NSF Graduate Research Fellowship	\$138,000
2013	SIO Interdisciplinary Graduate Education Research Grant	\$6,000
2012	SIO Interdisciplinary Graduate Education Research Grant	\$3,000
2011-2013	NSF/SIO Interdisciplinary Graduate Education Fellowship	\$114,000
2011	NOAA Internal Education Grant	\$4,000
2010	NOAA Preserve America Initiative Internal Fund	\$12,000

Field Experience

NOAA PIFSC Humpback Whale Survey, Mariana Islands, Marine mammal observer, 2019 Jan 5-24
NOAA PIFSC HICEAS, Hawaiian Islands: Marine mammal observer and biopsy collection, 2017 Jul 4-Sep 5
NOAA MML Harbor porpoise population structure Survey: Marine mammal observer and eDNA collection, 2016 Sept 6-21
NOAA Collaborative Large Whale Assessment Survey: Marine mammal observer and biopsy collection, 2015 Oct 25-Nov 9
SIO/NOAA Independent Hawaiian odontocete survey, Kona, HI: Small boat marine mammal observer, 2015 June 26-July 6
NOAA SWFSC CalCurCEAS, California Current: Passive Acoustic Technician, 2014 Sep 24-Oct 18
Cascadia Research Collective Hawaiian odontocete survey, Kona, HI: Small boat marine mammal observer, 2013 October 17-30
Cascadia Research Collective Hawaiian odontocete survey, Kauai, HI: Small boat marine mammal observer, 2013 July 25-Aug 3
Cascadia Research Collective Hawaiian odontocete survey, Kona, HI: Small boat marine mammal observer, 2013 May 9-29
Cascadia Research Collective Hawaiian odontocete survey, Kona, HI: Small boat marine mammal observer, 2012 Aug 12-19
NOAA/Cascadia Research Collective Behavioral Response Survey, Channel Islands: Marine mammal observer, 2012 Jul 25-Aug 9
NOAA Antarctic Ecosystem Research AMLR 2011 Survey: Zooplankton, phytoplankton, oceanography and fur seal scat technician, 2011 Feb-Mar
NOAA Antarctic Ecosystem Research AMLR 2010 Survey: Zooplankton, phytoplankton and fur seal scat technician, 2010 Jan-Mar
NOAA Antarctic Ecosystem Research AMLR 2009 Survey: Fur seal scat technician, 2009 Jan-Feb

Teaching Experience

Assistant Course Coordinator, “Marine Biodiversity, Conservation and Global Change” Summer 2016

- Assisted in the coordination, implementation, and leadership of a 40hr/week course covering integrative topics related to conservation biology (e.g. biodiversity, economics, governance and policy), as well as a week-long field course on Catalina Island in the Channel Islands.

Seminar Leader, “Genetic relatedness and kinship: data analysis methods” Fall 2014

- Coordinated and co-led a 10-week seminar covering peer-reviewed publications related to the seminar topic.

Outreach and Education Coordinator, “Virtual Research in Antarctica” 2010-2011

- Established a collaborative partnership between NOAA’s Antarctic Ecosystem Research Division and WhaleTimes, Inc. in order to provide Antarctic science lessons and materials to classrooms throughout the country, corresponding with the three-month Antarctic research season.
- Coordinated field trips for classrooms in the San Diego Unified School District to visit the SD Natural History Museum and meet Antarctic scientists. Planned and implemented age-appropriate field research activities to be conducted at the Museum.

Peace Corps Wetlands Educator

2005-2007

- Developed and led wetlands education seminars and activities, both in classrooms (ages K-12) and in wetlands, in order to educate students about the ecology and biodiversity, as well as the societal and economic value, of their local wetlands.

Other Experience

Biologist, June 2008 –June2011

Antarctic Ecosystem Research Division, Southwest Fisheries Science Center, NOAA

- Conducted field work in Antarctica up to two months a year.
- Coordinated field season and travel logistics, managed AERD budget.
- Edited and co-authored the yearly Field Season Report.
- Assisted PIs with laboratory procedures (e.g. cutting and aging fur seal teeth, bomb calorimetry, scat analysis, FAME preparation), data management and analysis as needed.
- Conducted outreach programs, e.g. “virtual” research trips to Antarctica with classrooms throughout the nation, design and implementation of an exhibition at the San Diego Natural History Museum, and hands-on research experiences for young San Diego women.

Peace Corps Volunteer, Sept 2005 –Dec 2007

Paracas National Reserve, San Andres, Peru

- Worked with municipalities, NGOs, and community groups in the buffer zone of Paracas National Reserve to develop and implement natural resource management plans based on the Peruvian national environmental management plan.
- Surveyed local wetlands to determine management need; worked with municipality and community members to develop and implement a wetlands management plan to be included in the local natural resource management plan.
- Coordinated with All-Hands Disaster Response to rebuild schools, irrigation canals, and basic public services in San Andres and neighboring communities after the August 2007 earthquake off the coast of southern Peru.

News Reporter, Aug 2004-Dec 2004

Gloucester Daily Times, Gloucester, MA

- Wrote up to four news stories a day covering events in the towns of Gloucester, Manchester and Essex.

Mentorship

Lianna Montgomery, WHOI intern; **Shayna Brody**, MAS student mentee, SIO CMBC; **Allison Lee**, MAS student mentee, SIO CMBC; **Tiffany Lowe**, BS intern, UCSD; **Grace Teller**, MS student mentee, SIO; **Alicia Amerson**, MAS student mentee, SIO CMBC; **Brett Garner**, MAS student mentee, SIO CMBC; **Sarah Urata**, MS intern, UCSD; **Madeline Perez**, intern, High Tech High; **Lisa Valtierra**, intern, High Tech High; **Alaine Ibarreche**, BS intern, University of San Diego

Synergistic Activities

WHOI Postdoc Association Treasurer, 2018-present

MARMAM listserv editor, 2014-present

San Diego Mountain Rescue Team, 2011-2017

Ocean Scientists for Informed Policy, 2013-2015

SIO Student Academic Committee, 2011-2017

Students@SIO co-chair, 2012-2013

All-Hands Disaster Response volunteer, 2007

Reviewer Activities

Aquatic Mammals

Aquatic Conservation

Journal of Heredity