

# Eiren Kate Jacobson

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## EDUCATION

**Scripps Institution of Oceanography, University of California, San Diego**

*Ph.D. in Biological Oceanography*

*M.S. in Biological Oceanography*

**Dissertation Title:** Developing a passive acoustic monitoring network for harbor porpoise in California

*Advisors: Jay Barlow and Peter Franks*

La Jolla, CA  
Anticipated 2017  
March 2014

**Columbia College, Columbia University in the City of New York**

*B.A. in Environmental Biology*

**Thesis Title:** Song sharing between humpback whales of Madagascar and Gabon: Directional demographic exchange between populations in the Southern Hemisphere

*Advisor: Meredith Nettles*

New York, NY  
May 2010

## PUBLICATIONS

**Jacobson, E. K.,** K. A. Forney, and J. Barlow. 2017. Using visual survey data to estimate passive acoustic detection parameters for harbor porpoise abundance estimates. *Journal of the Acoustical Society of America* 141:219-230. DOI: 10.1121/1.4973415.

**Jacobson, E. K.,** K. A. Forney, and J. T. Harvey. 2015. Acoustic evidence that harbor porpoises (*Phocoena phocoena*) avoid bottlenose dolphins (*Tursiops truncatus*). *Marine Mammal Science* 31:386-397. DOI: 10.1111/mms.12154.

## TECHNICAL REPORTS

**Jacobson, E. K.,** K. P. B. Merckens, K. A. Forney, and J. Barlow. *In Review.* Comparison of harbor porpoise (*Phocoena phocoena*) echolocation clicks recorded simultaneously on two passive acoustic monitoring instruments. U.S. Department of Commerce. NOAA Technical Memorandum.

**Jacobson, E. K.,** K. A. Forney, and J. T. Harvey. 2016. Evaluation of a passive acoustic monitoring network for harbor porpoise in California. California Energy Commission. Publication number: CEC-500-2016-008. DOI: 10.13140/RG.2.1.2282.9680.

**Jacobson, E. K.,** T. M. Yack, and J. Barlow. 2013. Evaluation of an automated acoustic beaked whale detection algorithm using multiple validation and assessment methods. U.S. Department of Commerce. NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-509. DOI: 10.13140/RG.2.1.1234.3923.

## RESEARCH EXPERIENCE

**Scripps Institution of Oceanography, University of California, San Diego**

Graduate Student Researcher

*Supervisors: Jay Barlow and Peter Franks*

La Jolla, CA  
June 2012 - Present

**NOAA SWFSC Marine Mammal and Turtle Division**

Research Biologist

*Supervisor: Karin Forney*

Santa Cruz, CA  
August 2011 - June 2012

**Bio-Waves, Inc.**

Acoustic Technician

*Supervisor: Julie Oswald*

San Diego, CA  
February 2011 - August 2011

**NOAA SWFSC Marine Mammal and Turtle Division**

Acoustic Technician

Supervisor: Jay Barlow

La Jolla, CA

June 2010 - August 2011

**Wildlife Conservation Society**

Acoustic Technician

Supervisor: Salvatore Cerchio

New York, NY

November 2007 - March 2010

**ACADEMIC AWARDS AND FUNDING RECEIVED**

- 2016      International Statistical Ecology Conference Student Presentation Award  
            Edna Bailey Sussman Foundation Internship  
            Oliver Chair in Marine Biodiversity and Conservation Science Travel Award
- 2015      Kenneth E. Hill Endowed Fund for Marine Conservation Award  
            Achievement Rewards for College Scientists Scholarship  
            SIO Department Graduate Student Excellence Travel Award  
            E. W. Fager Award for Outstanding Contributions to Quantitative Education at SIO  
            Mia J. Tegner Memorial Fellowship in Coastal Ecology
- 2012      California Institute for Energy and Environment Research Grant  
            National Science Foundation Graduate Research Fellowship  
            National Science Foundation Integrative Graduate Education and Research Traineeship
- Pre-2010   Columbia College Dean's List  
            Columbia University Earth Institute Travel Grant  
            Columbia University Parent and Alumni Internship Fund Grant  
            Joseph Wood Krutch Scholarship  
            National Merit Scholarship

**CONFERENCE PRESENTATIONS**

- Jacobson, E. K.,** K. A. Forney, and J. Barlow. 2017. A simulation framework to investigate the statistical power of passive acoustic networks to detect trends in cetacean abundance. Oral Presentation, NOAA Protected Species Assessment Workshop. 17-19 Jan. 2017, Seattle, WA.
- Jacobson, E. K.,** K. A. Forney, and J. Barlow. 2016. Using visual survey data to estimate passive acoustic detection parameters for harbor porpoise abundance estimates. Oral Presentation, International Statistical Ecology Conference. 28 Jun.-1 Jul. 2016, Seattle, WA.
- Jacobson, E. K.,** K. A. Forney, and J. Barlow. 2015. Using visual survey data to estimate passive acoustic detection parameters for harbor porpoise abundance estimates. Oral Presentation, Society of Marine Mammalogy Biennial Conference. 14-18 Dec. 2015, San Francisco, CA.
- Jacobson, E. K.,** and K. A. Forney. 2015. Evaluating the use of C-PODs for passive acoustic studies of harbor porpoises. Oral Presentation, Society of Marine Mammalogy Biennial Conference Workshop on Harbor Porpoise. 12 Dec. 2015, San Francisco, CA.
- Jacobson, E. K.,** K. A. Forney, and J. Barlow. 2015. Using visual survey data to estimate passive acoustic detection parameters for harbor porpoise abundance estimates. Oral Presentation, 7th International Workshop on Detection, Classification, Localization, and Density Estimation of Marine Mammals. 13-16 Jul. 2015, San Diego, CA.
- Jacobson, E. K.,** K. A. Forney, and J. T. Harvey. 2014. Acoustic evidence that harbor porpoises avoid bottlenose dolphins. Invited Presentation, Southern California Marine Mammal Workshop. 31 Jan.-1 Feb. 2014, Newport Beach, CA.

## POSTER PRESENTATIONS

**Jacobson, E. K.,** K. A. Forney, and J. T. Harvey. 2013. Acoustic evidence that harbor porpoises avoid bottlenose dolphins. Poster Presentation, Society of Marine Mammalogy Biennial Conference. 9-13 Dec. 2013, Dunedin, NZ.

**Jacobson, E. K.,** K. A. Forney, and J. T. Harvey. 2012. Developing a passive acoustic monitoring network for harbor porpoise in central California. Poster Presentation, Southern California Marine Mammal Workshop. 3-4 Feb. 2012, Newport Beach, CA.

**Jacobson, E. K.,** T. M. Yack, and J. Barlow. 2011. Evaluation of an automated beaked whale detector using multiple validation and assessment methods. Poster Presentation, 5th International Workshop on Detection, Classification, Localization, and Density Estimation of Marine Mammals. 21-25 Aug. 2011, Mt. Hood, OR.

## FIELD RESEARCH EXPERIENCE

### **Monterey Bay C-POD Array Development NOAA SWFSC Marine Mammal and Turtle Division**

Project Lead

R/V *Sheila B.*, Monterey Bay  
2013 - 2016

*Supervisor: Karin Forney*

### **Southeast Alaska Harbor Porpoise Survey NOAA NMML Cetacean Ecology and Assessment Program**

Field Acoustician

M/V *Lady Gundy*, SE Alaska  
July 2015 - August 2015

*Supervisor: Marilyn Dahlheim*

### **California Current Cetacean and Ecosystem Assessment Survey NOAA SWFSC Marine Mammal and Turtle Division**

Field Acoustician

R/V *Ocean Starr*, U.S. West Coast  
July 2014 - August 2014

*Supervisor: Shannon Rankin*

### **California Cooperative Oceanic Fisheries Investigations Scripps Institution of Oceanography and NOAA SWFSC**

Graduate Student Researcher

R/V *New Horizon*, California  
November 2013

*Supervisor: James Wilkinson*

### **Monterey Bay Harbor Porpoise Aerial Surveys NOAA SWFSC Marine Mammal and Turtle Division**

Visual Observer

Monterey Bay, California  
October 2013

*Supervisor: Karin Forney*

### **Southern California Behavioral Response Study NOAA SWFSC Marine Mammal and Turtle Division**

Field Acoustician

Derek M. Baylis, Channel Islands  
July 2013 - August 2013

*Supervisor: Jay Barlow*

### **Pacific Islands Cetacean and Ecosystem Assessment Survey NOAA PIFSC Protected Species Division**

Field Acoustician

R/V *Oscar Elton Sette*, Pacific Islands  
April 2012 - May 2012

*Supervisor: Erin Oleson*

### **U.S. West Coast Harbor Porpoise Aerial Surveys NOAA SWFSC Marine Mammal and Turtle Division**

Visual Observer

California and Oregon  
September 2011 - December 2011

*Supervisor: Karin Forney*

**NRDA Offshore Deep Meso- and Bathypelagic Fish Sampling Survey  
Bio-Waves, Inc. and Geo-Marine, Inc.**

Field Acoustician

*Supervisor: Tom Norris*

R/V *Pisces*, Gulf of Mexico

*June 2011 - July 2011*

**Hawaiian Islands Cetacean and Ecosystem Assessment Survey  
NOAA SWFSC Marine Mammal and Turtle Division**

Field Acoustician

*Supervisor: Shannon Rankin*

R/V *McArthur II*, Hawaiian Islands

*August 2010 - October 2010*

**TEACHING EXPERIENCE**

**Introduction to R**  
**Scripps Institution of Oceanography**  
Co-Instructor (with J. Carrière-Garwood)

*Spring 2015*

**ACADEMIC SERVICE AND COMMUNITY INVOLVEMENT**

**Marine Mammal Science**

Reviewer

*June 2015 - present*

**Women and Minorities in Science at SIO**

Co-Coordinator

*January 2013 - June 2016*

**SIO Ecology Seminar**

Co-Coordinator

*September 2013 - June 2014*

**Scripps Peers**

Mentor

*August 2014 - August 2015*

**San Diego Summer Training Academy for Research in the Sciences**

Graduate Advocate

*June 2012 - August 2012*

**Columbia University Environmental Biology Society**

President

*May 2008 - May 2010*

**OTHER EXPERIENCE**

**UW FISH 558: Decision Analysis in Natural Resource Management**

*Instructor: Andre Punt*

*Fall 2015*

**AquaMarina Center for Studies in Marine Science**

Field Assistant

*January 2009 - February 2009*

**Argentine Universities Study Abroad Program**

Student

*February 2009 - July 2009*

**NMFS Marine Resources Population Dynamics Workshop**

*Instructor: Jim Berkson*

*January 2008*

**SKILLS AND CERTIFICATIONS**

**Programming Languages:** R, Matlab, LaTeX, HTML, SAS, ArcGIS

**Acoustics Software Programs:** PAMGUARD, CPOD, ISHMAEL, Raven, XBAT, Triton

**Certifications:** Water Ditching and Survival

**Languages:** Fluent Spanish