

# 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*

La Jolla, CA

September 2017

March 2014

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

*B. A. in Environmental Biology*

New York, NY

May 2010

## RESEARCH EXPERIENCE

**Centre for Research into Ecological and Environmental Modelling**

**School of Mathematics and Statistics, University of St Andrews**

Research Fellow

*Supervisor: Len Thomas*

St Andrews, UK

June 2018 - Present

**School of Aquatic and Fishery Sciences, University of Washington**

**Affiliated with the NOAA AFSC Marine Mammal Laboratory**

Postdoctoral Research Associate

*Supervisors: André Punt and Charlotte Boyd*

Seattle, WA

September 2017 - Present

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

**Affiliated with the NOAA SWFSC Marine Mammal and Turtle Division**

Graduate Student Researcher

*Supervisors: Jay Barlow and Peter Franks*

La Jolla, CA

June 2012 - September 2017

**NOAA SWFSC Marine Mammal and Turtle Division**

Research Technician

*Supervisors: Jay Barlow and Karin Forney*

La Jolla, CA

June 2010 - June 2012

## PEER-REVIEWED PUBLICATIONS

**Jacobson, E. K.,** C. Boyd, G. K. Himes Boor, T. L. McGuire, A. E. Punt, K. E. W. Shelden, and P. R. Wade. *In Prep.* Assessing cetacean populations using integrated population models: an example with Cook Inlet beluga whales.

**Jacobson, E. K.,** K. A. Forney, and J. Barlow. *In Prep.* PAMPower: Investigating the statistical power of passive acoustic monitoring networks to detect trends in cetacean abundance.

**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. Merkens, K. A. Forney, and J. Barlow. 2017. Comparison of harbor porpoise (*Phocoena phocoena*) echolocation clicks recorded simultaneously on two passive acoustic monitoring instruments. U.S. Department of Commerce. NOAA Technical Memorandum NOAA-TM-NMFS-SWFSC-583. DOI: 10.7289/V5/TM-SWFSC-583.
- 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.

## CONFERENCE PRESENTATIONS

- Jacobson, E. K.,** K. A. Forney, and J. Barlow. 2017. PAMPower: Investigating the statistical power of passive acoustic monitoring networks to detect trends in cetacean abundance. Oral Presentation, Society of Marine Mammalogy Biennial Conference. 23-27 Oct. 2017, Halifax, Nova Scotia.
- Jacobson, E. K.,** K. A. Forney, and J. Barlow. 2017. Statistical power of passive acoustic networks to detect trends in cetacean abundance. Invited Presentation, European Cetacean Society Workshop on Static Acoustic Monitoring. 30 Apr.-3 May 2017, Middelfart, Denmark.
- 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.
- 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, New Zealand.
- 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  
*Supervisor: Karin Forney*

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

**Southeast Alaska Harbor Porpoise Survey**  
**NOAA NMML Cetacean Ecology and Assessment Program**  
Field Acoustician  
*Supervisor: Marilyn Dahlheim*

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

**California Current Cetacean and Ecosystem Assessment Survey**  
**NOAA SWFSC Marine Mammal and Turtle Division**  
Field Acoustician  
*Supervisor: Shannon Rankin*

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

**California Cooperative Oceanic Fisheries Investigations**  
**Scripps Institution of Oceanography and NOAA SWFSC**  
Graduate Student Researcher  
*Supervisor: James Wilkinson*

*R/V New Horizon, California  
November 2013*

**Monterey Bay Harbor Porpoise Aerial Surveys**  
**NOAA SWFSC Marine Mammal and Turtle Division**  
Visual Observer  
*Supervisor: Karin Forney*

*Monterey Bay, California  
October 2013*

**Southern California Behavioral Response Study**  
**NOAA SWFSC Marine Mammal and Turtle Division**  
Field Acoustician  
*Supervisor: Jay Barlow*

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

**Pacific Islands Cetacean and Ecosystem Assessment Survey**  
**NOAA PIFSC Protected Species Division**  
Field Acoustician  
*Supervisor: Erin Oleson*

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

**U.S. West Coast Harbor Porpoise Aerial Surveys**  
**NOAA SWFSC Marine Mammal and Turtle Division**  
Visual Observer  
*Supervisor: Karin Forney*

*California and Oregon  
September 2011 - December 2011*

**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*

## ACADEMIC AWARDS AND FUNDING RECEIVED

2017	NOAA NMFS OST Stock Assessment Analytical Methods Funding SIO Department Graduate Student Excellence Travel Award Edna Bailey Sussman Foundation Internship
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

## TEACHING EXPERIENCE

### Introduction to R

### Scripps Institution of Oceanography

Co-Instructor (with Jessica 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*

## 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