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EDUCATION

2009 Ph.D. Ecology, University Program in Ecology, Duke University

2002 M.E.M. Resource Ecology, Nicholas School of the Environment, Duke University.

1997 B.S. Zoology, Department of Biology, University of Washington.

EMPLOYMENT

Marine Geospatial Ecology lab, Duke University

2017- Independent Research Scientist

Department of Psychiatry and Behavioral Sciences, Duke University Medical Center, Duke University, Durham, NC 27708, USA

2012- Joint faculty appointment (Consulting Associate)

Centre for Research into Ecological and Environmental Modelling, University of St Andrews, St Andrews, KY16 9LZ, Scotland

2016 Independent Senior Research Fellow funded by the Marine Alliance for Science and Technology for Scotland (MASTS)

2013 Independent Research Fellow funded by MASTS

2012 Named Research Fellow. Advisor - Len Thomas

Nicholas School of the Environment, Duke University, Durham, NC 27708, USA

2010 Postdoctoral Associate. Advisor - James Clark

2009 Postdoctoral Associate. Advisor - Patrick Halpin

National Oceanic and Atmospheric Administration, Southwest Fisheries Science Center, Fisheries Ecology Division, 110 Shaffer Rd. Santa Cruz, CA 95060, USA

2002 Ecologist (GS-11)

2002 Staff Research Associate III (Contractor through UC Santa Cruz)

Edgerton Research Laboratory, New England Aquarium, Boston, MA 02110, USA

2000 Assistant Scientist/GIS

Cascadia Research Collective, Olympia, WA 98501, USA

1997 Marine Mammal Observer

Oregon State University, Newport, OR 97365, USA

1995 Research Intern for Dr. Bruce Mate

Pacific Whale Foundation, Kihei, HI 96753, USA

1992 Field Research Associate

PUBLICATIONS

Journal Articles (34)

- 2018 Abrahms B, Scales KL, Hazen EL, Bograd SJ, **Schick RS**, Robinson PW, Costa DP. Mesoscale activity facilitates energy gain in a top predator. *Proc. R. Soc. B* 20181101.
- 2017 Schick, R. S., G. W. Humphris., T. W. Kelsey, J. Marston, and K. Samson. MapMySmoke: Feasibility of a New Quit Cigarette Smoking Mobile Phone Application Using Integrated Geo-positioning Technology, and Motivational Messaging Within a Primary Care Setting. *BMC Pilot and Feasibility Studies*
- 2017 Schick, R. S., J.J.D. Greenwood, and S. T. Buckland. An experiment on the impact of a neonicotinoid pesticide on honey bees; the value of a formal analysis of the data. *Environmental Sciences Europe*, **29**(1):1-10, DOI:10.1186/s12302-016-0103-8.¹
- 2016 Fleishman, E., Costa, D.P., Harwood, J., Kraus, S.D., Moretti, D., New, L.F., **Schick, R. S.**, Schwarz, L.K., Simmons, S.E., Thomas, L., and R.S. Wells. Monitoring population-level responses of marine mammals to disturbance. *Marine Mammal Science* **32**(3):1004–1021.
- 2016 Rolland, R., **Schick, R. S.**, Knowlton, A., Pettis, H., Hamilton, P., Clark, J. S., and S. D. Kraus. Health in right whales: from individuals to population. *Marine Ecology Progress Series* **542**:265–282.
- 2016 Towner, A. V., Leos-Barajas, V., Langrock, R., **Schick, R. S.**, Smale, M. J., Kaschke, T., Jewell, O. J. D. and Papastamatiou, Y. P. Sex-specific and individual preferences for hunting strategies in white sharks. *Funct Ecol.* doi:10.1111/1365-2435.12613
- 2015 Oedekoven, C., Fleishman, E., Hamilton, P., Clark, J. S. and **Schick, R. S.** Expert elicitation of seasonal abundance of North Atlantic right whales (*Eubalaena glacialis*) in the mid-Atlantic. *Endangered Species Research*. **29**(1):51–58.
- 2015 New, L., Hall, A. J., Harcourt, R., Kaufman, G., Parsons, E. C. M., Pearson, H. C., Cosentino, A. M. and **R. S. Schick**. The Modelling and Assessment of Whale-watching Impacts. *Ocean & Coastal Management* **30**(1):e7.
- 2015 King, S.L., **Schick, R. S.**, Donovan, C., Booth, C. G., Burgman, M. and Thomas, L., and J. Harwood. An Interim Framework for Modelling the Population Consequences of Disturbance. *Methods in Ecology and Evolution* **6**(10):1150–1158. doi: 10.1111/2041-210X.12411

¹Cited by the UK Expert Committee on Pesticides as part of the Department for Environment, Food and Rural Affairs of-

- 2015 O'Toole, M. D., Lea, M-A, Guinet, C., **Schick, R. S.** and M. A. Hindell. Foraging strategy switch of a top marine predator according to seasonal resource differences. *Frontiers in Marine Science*. doi: 10.3389/fmars.2015.00021
- 2014 Belkin, I. M., Hunt Jr., G. L., Hazen, E. L., Zamon, J. E., **Schick, R. S.**, Prieto, R., Brodziak, J., Hare, J., Teo, S. L. H., Thorne, L., Bailey, H., Itoh, S., Munk, P., Musyl, M. K., Willis, J. K., and W. Zhang. Fronts, Fish, and Predators. *Deep-Sea Research II*. doi:10.1016/j.dsr2.2014.07.009.
- 2014 Mitchell, J.T., **Schick, R. S.**, Hallyburton, M., Dennis, M. F. Kollins, S. H., Beckham, J.C. and F.J. McClernon. Combined Ecological Momentary Assessment and Global Positioning System tracking to assess the spatial distribution of risk behavior: a proof of concept study targeting smoking behavior. *Journal of Dual Diagnosis* **10**:19–29. doi:10.1080/15504263.2013.866841
- 2014

2009 Urban, D. L., Minor, E. S., Trembl, E. A., and R. S. Schick Graph models of habitat mosaics. *Ecology Letters* **12**(3):260–273.

2009 Schick, R. S. and M. E. Lutcavage. Inclusion of prey data better predicts bluefin tuna (*Thunnus thynnus*) distribution. *Fisheries Oceanography* **18**:77–81.

2008 Schick, R. S., S. R. Loarie, F. Colchero, B. D. Best, A. Boustany, D. A. Conde, P. N. Halpin, L. N.

2002

- 2015 Feasibility of a new quit cigarette smoking mobile phone application (MapMySmoke) using integrated geo-positioning technology, and motivational messaging within primary care NHS setting, NHS Fife Research Bursary. Co-PI with John Marston (Pittenweem Medical Practice), Gerry Humpris (University of St Andrews School of Medicine), and Tom Kelsey (University of St Andrews School of Computer Science). Award: £19,420.
- 2015 Extending an aerial remote sensing platform using three digital sensors. Marine Alliance for Science and Technology for Scotland - Technology, Platforms & Sensors Small Grant Round. Award: £1,200.
- 2014 PCoD Lite - Using an interim PCoD protocol to assess the effects of disturbance associated with US Navy exercises on marine mammal populations. Co-PI with Cormac Booth, Mark Burgman, Carl Donovan, John Harwood, Len Thomas. US Office of Naval Research. Award: \$150,000.
- 2013 Scottish Universities Life Science Alliance LEADERS award to investigate movement patterns of human smokers. Award: £30,865.
- 2012 Statistical tools for fitting models of the Population Consequences of Acoustic Disturbance to data from marine mammal populations (PCAD tools II). Co-PI with Len Thomas, John Harwood, and Catriona Harris. US Office of Naval Research. Award: \$475,956.
- 2012 The Population Consequences of Disturbance Model Application to North Atlantic Right Whales (*Eubalaena glacialis*). Co-PI with Scott Kraus, Rosalind Rolland, and Amy Knowlton. US Office of Naval Research. Award: \$132,417.

PRESENTATIONS

Invited

- 2017 Departmental Seminar, Duke University Marine Lab
- 2015 Remote presentation to the North Atlantic Right Whale Recovery Plan Southeast U.S. Implementation Team. April 21st.
- 2015 Annual Research Symposium, School of Biology University of St Andrews, March 27th.
- 2014 International Marine Conservation Congress, Glasgow, Scotland. August 14th-19th.
- 2014 Hidden Markov Model Symposium, The Boyd Orr Centre for Population and Ecosystem Health, University of Glasgow, Scotland. February 13th.
- 2013 University of Aberdeen, Lighthouse Field Station, Cromarty, Scotland. October

- 2009 Ecological Modeling for Marine Mammalogists Workshop at the 18th Biennial Conference on the Biology of Marine Mammals, at Québec City, Quebec, Canada. October 11th.
- 2006 Departmental seminar, Department of Biology, UNC-Greensboro. Greensboro, NC. November 1st.
- 2004 Schick, R.S. and S.T. Lindley. 2004. Inferring Historical Within-basin Population Structure of Central Valley Steelhead Using Graph Theory. Presented during the Central Valley Steelhead Recovery Symposium at the American Fisheries Society meeting of the California-Nevada and Humboldt Chapters. Redding, CA. April 22nd-24th.
- 2002 Schick, R.S., and M.E. Lutcavage. Bluefin tuna (*Thunnus thynnus*) distribution in relation to sea surface temperature fronts in the Gulf of Maine (1994-1996). Presented during the Spatial Movement of Fish: Field Study, Modeling, and Management Perspectives symposium at the American Fisheries Society Annual Meeting. Baltimore, MD. August 18th-22nd.

Contributed

- 2018 Southall, B.L., R.W. Baird, M. Bowers, W. Cioffi, H. Foley, A. Friedlaender, C. Harris, J. Joseph, N. Quick, T. Margolina, D. Nowacek, A. Read, R. Schick, J. Shearer, Z. Swaim, D. Waples and D.L. Webster, J. Wisse. Atlantic Behavioral Response Study: Experimental Design, Analytical Methods, and Preliminary Results
- 2018 Pirotta, E., Booth, C. G., Costa, D. P., Fleishman, E., Harris, C., Joy, R., Kraus, S. D., Lusseau, D., Moretti, D., New, L., Schick, R. S., Schwarz, L. K., Simmons, S. E., Thomas, L., Tyack, P. L., Weise, M. J., Wells, R. S., Wilson, L., and J. Harwood. Understanding the population consequences of disturbance – reviewing the current state of PCoD research.
- 2015 Schick, R.S., Hewitt, R.C., Rodwell, S., Anderson, P., Martin, J., Kearns, M. and P. Thompson. Using UAVs to Monitor Size Structure and Body Condition in Harbour Seals. Unmanned Aerial Vehicles in Environmental Research. Liverpool John Moores University, Liverpool, England. July 7th-8th.
- 2014 King, S.L., Schick, R. S.⁶, Donovan, C., Booth, C.G., Burgman, M. and Thomas, L., and Harwood, J. An Interim Framework for Modelling the Population Consequences of Disturbance. International Marine Conservation Congress. Glasgow, Scotland. August 14th-18th.
- 2013 Fleishman, E., Hamilton, P., and

- 2011 Schick, R.S., Kraus, S.D., Rolland, R., Corkeron, P., Hamilton, P., Clark, C.W., and J.S. Clark. Potential effects of acoustic disturbance on foraging behavior, body condition, and demography in North Atlantic right whales. Presented at the 96th Annual Meeting of the Ecological Society of America, Austin, TX. August 7th-12th.
- 2011 Schick, R.S., Kraus, S.D., Rolland, R., Corkeron, P., and P. Hamilton. Potential effects of acoustic disturbance on foraging behavior, body condition, and demography in North Atlantic right whales. Presented at the Association for Environmental Studies and Sciences (AESS). Burlington, VT. June 23rd-26th.
- 2011 Thomas, L., **Schick, R.S.**⁶, Clark, J.S., and J. Harwood. Translating conceptual to parameterized models for multiple taxonomic groups. Presented at the Association for Environmental Studies and Sciences (AESS). Burlington, VT. June 23rd-26th. ~~6B~~^{rd-26th}.

- 2011 Curtice, C., **Schick, R.S.**, Dunn, D.C., and P. N. Halpin. Home Range Analysis of Hawaiian Monk Seals (*Monachus schauinslandi*) Based on Colony, Age and Sex. Presented at the 19th Biennial Conference on the Biology of Marine Mammals, Tampa, Florida, November 27th–December 2nd.
- 2008 Schick, R.S., S.R. Loarie, P.N. Halpin, Read, A.J., Slay, C.S., Kraus, S.D., Mate, B.R., Baumgartner, M.F., and J.S. Clark. Estimating habitat suitability in the migratory corridor of NW Atlantic Right Whales. Presented at the North Atlantic Right Whale Consortium Annual Meeting. New Bedford, MA. November 5th

2012 Guest lecturer for Models for Environmental Data, Duke University.

2012 Guest lecturer for Marine GIS, Duke University.

2007 Teaching assistant for Marine GIS. As TA I developed and taught 4 separate modules.

2007 Guest lecturer, Marine Environmental Science, Elon University (Undergraduate).

2006 Organized, received funding for, and led a multi-week seminar on "The Uses of Technology in Teaching," Duke University.

2006 Teaching assistant for Marine GIS, Duke University.

SERVICE

Research staff representative to the School of Mathematics and Statistics, University of St. Andrews.

Research staff representative to the Research and Teaching Staff Forum, University of St. Andrews.

Elected Board Member (January 2013 - December 2015), North Atlantic Right Whale Consortium.

Associate Editor, PLoS-ONE

Manuscript reviewer for: Ecological Applications, Biometrics, Deep-Sea Research II, PLoS-ONE, Ecology, Marine Ecology Progress Series, BMC Ecology, Journal of Applied Ecology, Ecological Modelling, Landscape Ecology, San Francisco Estuary and Watershed Science, Functional Ecology, Conservation Biology, Endangered Species Research, Progress in Oceanography, Methods in Ecology and Evolution.

Co-organizer of CREEM R-Users Group, University of St. Andrews.

PRESS

2016 Scientists devise an app to beat smoking. The Times, Gemma Fraser, 14 June 2016.

2009 Researchers Call for Second Look at Right Whale Protection ScienceInsider Blog Post, Science Magazine, Erik Stokstad, 18 August 2009.

2004 New Tools Reveal Treasures at Ocean Hot Spots, by David Malakoff, Science, 21 May 2004, Vol 304, pages 1104–1105.

EDP

Operating Systems: OSX, Linux, Windows

Software Applications/Languages: R, L^AT_EX, ArcInfo/ArcGIS, Matlab, Adobe Illustrator

INTERESTS

Piedmont Style Blues Guitar, Photography, Information Visualization, Ancestral Diets, Food & Cooking, Gardening