John R. Brandon, PhD

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Code on GitHub

John provides modeling and statistical support to his clients, including a National Science Foundation initiative for Fishery Science, and The Makah Tribal Council (Neah Bay, WA). Previously he worked as a staff environmental consultant, developing photo-identification, and point- and line-transect survey designs for wildlife monitoring and mitigation studies in Alaska and Canada. His field assignments have included vessel and aerial surveys for marine protected species in the Pacific, Atlantic and Arctic Ocean.

Education

2003-2009 PhD, Quantitative Fisheries Science. University of Washington, Seattle.

1994-1998 BSc, Biology, Ecology and Evolution. University of California, San Diego

Professional Positions

2016—present

Population Dynamics and Statistical Consultant to the The Makah Tribe, Neah Bay, WA:

Computational risk assessments of proposed gray whale hunt plans and catch limit algorithms. Involves collaboration with lawyers representing the tribe; the tribe's lead biologist; federal agency and international scientists. This work is relevant to both: (i) the International Whaling Commission which has jurisdiction over the hunt quotas, and (ii) the ongoing U.S. domestic process under NOAA for determining whether the Makah Tribe should be granted a statutory waiver to resume their whaling tradition as provided in the Treaty of Neah Bay (1855).

2014-present

Management Strategy Evaluation Consultant:

U.S. National Science Foundation's Industry and University Cooperative Research Center for Fishery Science. This work has involved collaboration with a team of scientists, representatives from Atlantic commercial finfish fisheries, and agency scientists (NMFS). The focus of research is applying analytical methods to reduce uncertainty in estimates of conservation risk for commercial fisheries bycatch of marine mammals. A recent project, funded by the Western Pacific Fisheries Management Council (Honolulu, HI), was published and includes an open source code repository for reproducibility (Brandon et al. 2017).

2009–2015

Biostatistician / Fisheries Scientist (Staff):

Aerial Survey Lead for monitoring and mitigation efforts around Shell's Arctic Offshore Exploratory Drilling Program: LGL and Greeneridge Sciences, Inc. I trained local Alaskan Native Iñuit to join a crew of field scientists and collect aerial survey data; coordinated LGL's aerial survey effort with our client's oil and gas operations in the Arctic, and; developed simulations varying spatial survey effort allocation, which led to an aerial survey design that maximized the statistical power of detecting industrial effects on the bowhead whale migration route. Developed R (GIS) code to automate post-survey map production,

including overlapping aerial effort and sightings data, acoustic call detections, marine industrial activities and shipboard sightings data. The maps were used to support analyses of potential disturbance and meet permit reporting requirements.

Selected Publications and Reports

Brandon, J.R., Punt, A.E., Moreno, P. and Reeves, R.R. 2017. Toward a tier system approach for calculating limits on human-caused mortality of marine mammals. *ICES J. Mar. Sci.* 74: 877 – 87.

Robertson, F.C., Koski, W.R, Brandon, J.R., Thomas, T.A. and Trites, A.W. 2015. Correction factors account for the availability of bowhead whales exposed to seismic operations in the Beaufort Sea. *J. Cetacean Res. Manage*. 15: 35 – 44.

2014 LGL Alaska Research Associates, Inc., JASCO Applied Sciences, Inc., and Greeneridge Sciences, Inc. 2014. Joint Monitoring Program in the Chukchi and Beaufort Seas, 2012. LGL Alaska Final Report P1272-2 for Shell Offshore, Inc. ION Geophysical, Inc., and Other Industry Contributors, National Marine Fisheries Service, and U.S. Fish and Wildlife Service. 320 p. plus Appendices.

Alter, S.E., Simmonds, M.P and Brandon, J.R. 2010. Forecasting the consequences of climate-driven shifts in human behavior on cetaceans. *Mar. Policy.* 34: 943 – 954.

Kaplan, C.C., G.C. White, T.L. McGuire, J.R. Brandon, S.W. Raborn, M.R. Link, and Blees, M.K. 2009. Application of mark-resight methods to estimate abundance of Cook Inlet Beluga Whales. Chapter 2 In: Photo-identification of beluga whales in Upper Cook Inlet, Alaska: Mark analysis, mark-resight estimates, and color analysis from photographs taken in 2008. Report prepared by LGL Alaska Research Associates, Inc., Anchorage, AK, for National Fish and Wildlife Foundation, Chevron, and ConocoPhillips Alaska, Inc.

Turvey, S.T., Pitman, R.L., Taylor, B.L., Barlow, J., Tomonari, A., Barret, L.A., Zhao, X., Reeves, R.R., Stewart, B.S., Wang, K., Wei, Z., Zhang, X., Pusser, L.T., Richlen, M.R., Brandon, J.R. and Wang, D. 2007. First human-caused extinction of a cetacean species? *Biol. Letters.* 3: 537–540.

Bio

2015

2010

2009

2007

Originally from Davis, CA. Mom and Dad are a botanist and entomologist. Eldest son of two; brother captains marine ferries in Alaska. Became interested in wildlife science and quota limits when I was taught to how to fish and hunt as a kid. Now married, and a father of two. I enjoy gardening and surfing in my free time.

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