

Ecological baselines: inland whales, seabirds and their prey in the Great Bear Fjordland, BC
Eric Keen

To assess the impacts of human activities on highly mobile cetaceans on the west coast, one cannot simply count whales. The biological oceanography of the area must be monitored on multiple levels. This is the need facing British Columbia's north coast, where endangered whales are returning to a historical inland foraging ground just as several oil and natural gas tanker proposals have been approved for the confined waterways. In 2013, a highly collaborative field effort was launched to baseline the dynamics of these inland whales from a 12m research sloop. Cost-effective methods were developed to implement distance sampling for cetaceans and seabirds, the photo-identification of fin and humpback whales, active and passive acoustic surveys, and oceanographic sampling (zooplankton, CTD, and Secchi casts). As I evaluate Season 1 and look ahead to Season 2, I am eager for input from and collaboration with other researchers in the west coast community.

Correspondence: ekeen@ucsd.edu

Assessing 'Observer effect' from an aerial platform during marine mammal focal observations on Risso's dolphins, short-beaked common dolphins and killer whales in the Southern California Bight

Kate Lomac-MacNair, Mari A. Smultea, Cathy E. Bacon

We systematically video-documented the behavior of a subsample of Risso's dolphins, short-beaked common dolphins (SBCD) and killer whales in the Southern California Bight (SCB) (2009-2011) to assess whether the observation aircraft (fixed-wing Partenavia) affected selected behavioral variables. Focal observations were conducted from the aircraft to examine potential changes in group cohesion (minimum and maximum distance between nearest neighbors in body lengths [BL]) and heading reorientation rate, to the plane circling at altitude ~213 m (700 ft), 305 m (1000 ft), 457 m (1500 ft) and 610 m (2000 ft) and radial distance ~0.5-1 km. Dependent parameters were selected based on previous studies showing that they are indicative of disturbance to anthropogenic or natural threatening stimuli. Ten focal sessions were analyzed: eight of Risso's dolphins, one SBCD, and one killer whale. A total of ~194 minutes (min) was spent observing Risso's dolphins, ~27 min of SBCD and ~29 min of killer whales. Data were divided into four plane altitude categories ~213 m, 305 m, 457 m, 610 m and pooled into "low" (~213 m and 305 m) and "high" (457 m and 610 m). Paired t-tests were used to test the null hypothesis that mean maximum cohesion (C) and mean reorientation (R) of groups do not vary significantly based on plane altitude. For cohesion (C) no significant effects were found for the eight Risso's dolphin focal sessions ($p = 0.447$), one SBCD ($p = 0.602$) and one killer whale: $p = 0.197$. For reorientation (R) no significant effects were found for the eight Risso's dolphin focal sessions ($p = 0.591$) and one killer whale ($p = 0.936$); the sample size was too small to calculate reorientation for SBCD. Results suggest (1) that our small plane circling at radial distance >500 m and altitude ~213 - 610 m did not cause measurable changes in cohesion and reorientation or other observable changes for the three species (based on small sample size), and (2) "undisturbed" baseline observations can be made on these species from our aircraft within the parameters examined. We believe this is due to the aircraft remaining 0.5-1 km radial distance from the animals and at altitudes well outside the theoretical 26-degree sound transmission cone ("Snell's Cone") below the aircraft for the air-through-water interface. This is important when using the aircraft to assess baseline marine mammal behavior and potential effects of anthropogenic activities relative to management and conservation needs.

Correspondence: cathyebacon@gmail.com

SOUTHERN CALIFORNIA MARINE MAMMAL WORKSHOP

JANUARY 31 – FEBRUARY 1, 2014

• NEWPORT BEACH, CA •



All photos credited to Robert Perry ©2014 www.CondorExpressPhotos.com

SPONSORED BY:



PROGRAM CONTENTS:

WORKSHOP SCHEDULE (p. 1–2)

SPEAKER BIOGRAPHIES (p. 3–12)

LIST OF ATTENDEES (p. 13–18)

ACKNOWLEDGEMENTS (p. 19)

APPENDIX 1: POSTER ABSTRACTS

APPENDIX 2: EVALUATION FORM