

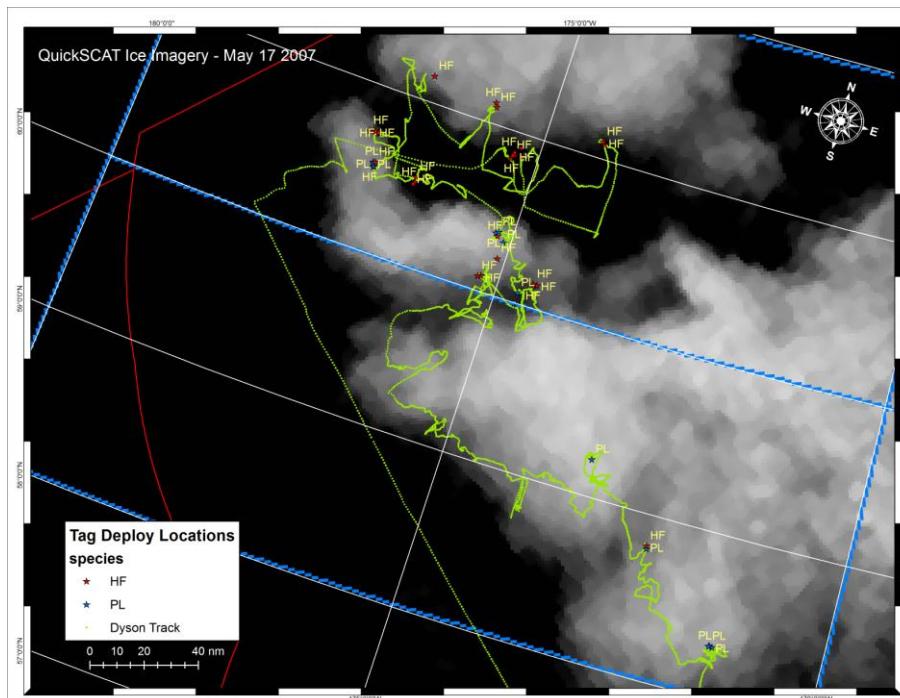


Final Field Report from the *Oscar Dyson*, Ice Seal Research, 31 May 2007

The 2007 ice seal research cruise aboard the NOAA vessel *Oscar Dyson* is now completed. In my view, this first-ever NOAA cruise dedicated to Alaska ice seal research was an unqualified success. I look forward to sharing all the findings as we proceed to gather more data from the satellite-tagged seals, and to analyze the samples. In the mean time, here is a brief summary of our activities and accomplishments:

We departed Kodiak on the afternoon of 3 May and arrived at the ice edge and began research operations on the morning of 6 May. Our typical day consisted of survey watches from 10 am to 10 pm ADT (about 6 am to 6 pm local apparent time), interrupted by small boat excursions to capture and tag seals when we encountered sufficient concentrations of seals and suitable ice. We conducted surveys or tagging operations daily until the evening of 28 May. We arrived in Dutch Harbor on the morning of 31 May. During the trip to Dutch Harbor, we encountered just enough wind and swell to remind us of how incredible the past 4 weeks of calm weather have been!

We conducted line-transect survey observations from the *Dyson's* bridge and recorded 296 seals or groups of seals while on effort, 47% of which were spotted seals, 22% were ribbon seals, <1% were bearded seals, and the remainder (30%) could not be identified to species, usually because they were too far away.



Cruise track, showing locations where ribbon (HF) and spotted (PL) seals were tagged. The ice is shown as it existed about mid-way through the cruise, on 17 May, and does not necessarily reflect the position of the ice edge encountered along the entire cruise track.

We captured 45 seals in all, comprising 31 ribbon and 14 spotted seals. We attached satellite transmitters to 27 ribbon and 10 spotted seals. Most of the transmitters were “SPOT” tags, attached to the seals’ hind-flippers, that will provide long-term movements and haul-out timelines, but only when the seals are hauled out with their flippers exposed. The remaining transmitters were “SPLASH” tags that provide more detailed information about locations at sea and diving behavior; these must be glued to the hair on the seals’ back or head and thus could only be attached to seals that had sufficiently completed their annual molt.

An adult male ribbon seal with a SPLASH tag.



The sampling for each seal typically included length and girth measurements, mass, blood, a small piece of skin for genetics analysis, and any fecal material that was present on the ice, for diet analysis. We obtained 13 blood, 45 skin, and 18 fecal samples from seals that we captured. In addition, we were able to collect 10 fecal samples and 14 samples of skin shed during the molt from seals that escaped our capture attempts. The dark flakes of skin are easy to find in the vicinity of molting seals’ resting sites, and they contain sufficient DNA to support genetic analyses for investigation of stock structure.



L to R: front - Heather Ziel, Dan Savetilik (AK Native partner); standing – Colleen Peters (Dyson Survey Tech), John Jansen, John Goodwin (AK Native partner), Shannon Fitzgerald (AFSC seabird observer), Peter Boveng, Josh London; background - R/V Oscar Dyson

Our success on this cruise was due in large part to the outstanding support we received from Commanding Officer Mike Francisco, his officers, and crew. The Wardroom, technicians, deck department, stewards, and engineers were all very capable and helpful. The entire group had a “can do” attitude, seemed to take a sincere interest in the research, and was a pleasure to work with. The vessel, also, proved itself to be well suited to supporting ice seal research, despite prior concerns by some that it would not be possible to accomplish the objectives within the constraints of the design limits for ice operations. Finally, as Chief Scientist, I could not ask for a more talented, experienced, and energetic team than the NMML Polar Ecosystems Program scientists and Alaska Native partners, all of whom worked tirelessly and cheerfully from beginning to end.

Best regards,

A handwritten signature in blue ink, appearing to read "Peter", is positioned above the typed name.

Peter L. Boveng
Polar Ecosystems Program Leader
National Marine Mammal Laboratory