

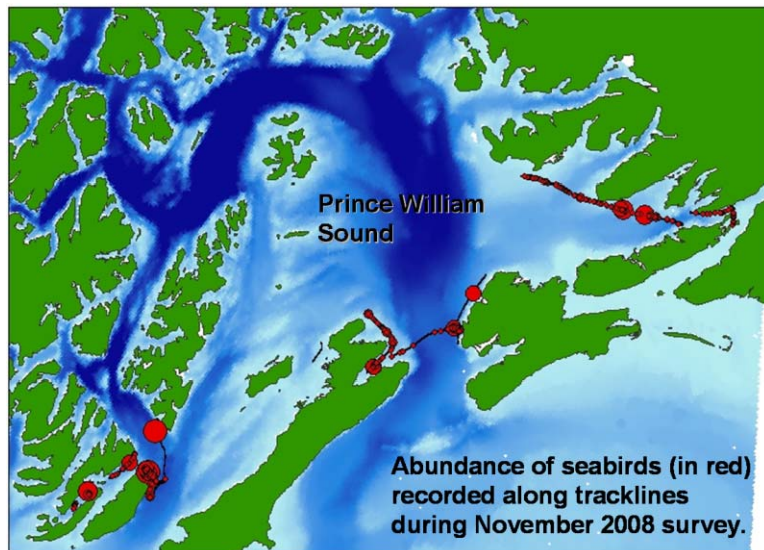
Winter Seabird Surveys – Neil Dawson

November 2007:

The Prince William Sound herring population plays a key role in the Prince William Sound ecosystem, but has not recovered since its crash in 1993. To enhance our understanding of the pressures faced by herring, researchers are studying the potential impact of predation by seabirds and marine mammals, with funding from the Exxon Valdez Oil Spill Trustee Council. The effect of predation on herring recruitment may be especially important in winter when juveniles gather to form large schools in fjords and bays in PWS.

I undertook seabird surveys in November 2007 and January 2008 to establish abundance and distribution of species likely to be feeding on herring, joining marine mammal experts Jan Straley (University of Alaska Sitka), Suzie Teerlink and John Moran (both of Auke Bay Marine Lab, Juneau), who were particularly interested in numbers of humpback whales remaining in the Sound rather than taking their usual migration to Hawaii each winter.

The November survey lasted 5 days between the 25th and 29th. The weather was unseasonably fair and allowed for good coverage of three different areas of the Sound. Seabirds were surveyed over 11 different transects spanning a total of 134km. Data was also collected on temperature and salinity throughout the water column at various sites to enable us to establish common features between areas of high activity.



Less than an hour out of Cordova Harbour we encountered our first humpback whales along with concentrations of seabirds. And for the entire journey there was little time to enjoy the view as 2001 birds of 21 species were recorded in addition to a staggering 81 humpbacks and more than 60 orca (in a meeting of two

Pods). The restricted hours of daylight were the only limit to survey time.

Birds and whales were spread across the whole area surveyed and feeding frenzies were not comparable with the event of spawning herring in the spring, suggesting that food was abundant in a number of areas and not restricted to a small number of bays.

Common Murres, Glaucous-winged Gulls and Pelagic Cormorants were the most numerous with Marbled Murrelets and an impressive number of Loons close behind. Marbled Murrelets are of particular interest as their numbers are thought to have declined rapidly over the past 20 years from Alaska to California. Their small size and limited diving capabilities mean they may depend on the availability of juvenile herring to sustain themselves in winter.

January 2008

Another 5 day cruise was undertaken between 24th and 28th January 2008. Very little data is collected at this unpredictable time of year. However, this is the most energetically-demanding time for seabirds. Therefore any opportunity to develop our understanding of their distribution and feeding habits at this time is very important in their conservation. Thankfully a large storm passed shortly before we left and the weather allowed us plenty of survey time.



Humpback whale

On the previous survey in November it had been necessary to stop the boat regularly to allow identification of individual humpback whales. Feeding whales were observed all over the Sound. However, this time there were 3 definite hotspots. During transit between these locations, bird surveys could be conducted. In all we carried out 19 bird

transects covering over 250km of PWS. Whale activity seemed to be more concentrated because herring had formed their huge, dense schools; adults in deeper water separate from juvenile schools.

Birds were also more concentrated with Glaucous-winged Gulls and Common Murres again most numerous. However Marbled Murrelets and Loons, particularly Pacific Loons were observed in large densities in some areas. Whales were again seen in

surprisingly big numbers for mid-winter. 51 individual humpbacks were identified and a large group of 30-40 orcas were seen.

Prince William Sound is an incredible venue for wildlife year-round. And it seems that the distribution of birds and marine mammals can change dramatically, even over the course of a winter. This survey program will continue into winter 2008/09 and research may reveal the pressures faced by herring and give insights into the food webs which make this area so rich in wildlife.