U.S. Fish & Wildlife Service / Alaska Maritime National Wildlife Refuge / Aleutian Islands Unit

FROM THE WILDSIDE

April 2016

Happy Birthday, National Wildlife Refuge System!

President Theodore Roosevelt created the first national wildlife refuge on March 14, 1903, at Pelican Island, Florida, to protect brown pelicans and other birds from extinction through plume hunting. For 113 years, national wildlife refuges have protected the natural resource wealth of our incredible country and returned to the American people the benefits of clean air and water, healthy ecosystems and world-class recreation. The Refuge System now includes more than 560 national wildlife refuges and 38 wetland management districts covering over 150 million acres plus more than 418 million acres of marine national monuments. More than 47 million people visit refuges every year, hearing the songs of birds, watching the curious behavior of mammals and feeling the thrill of humpback whales breaching over ocean waves. (For more photos taken on public lands: https://www.instagram.com/usinterior/)

Emperor Goose project

Brian Uher-Koch sent this brief report of his work on Adak in January: "The U.S. Geological Survey Alaska Science Center (USGS-ASC) biologist's trip to Adak in January to collect data on wintering Emperor Geese was a success. The abundance of snow and increased daylight was a nice contrast from brown, snowless Anchorage. Although access to some of the survey locations proved difficult due to snow, we reached our goal for the number of avian influenza samples collected. Numbers of Emperor Geese were lower than previous year's surveys, although this may be related to the large tides while we were there. Emperor Geese wintering in Adak appear to spend more time foraging on vegetation and seaweed than in Kodiak where their primary diet consists of mussels. We will be planning another trip to Adak in late March."

USGS-ASC biologists are making two visits to each of three wintering islands to evaluate habitat and physiological condition of geese, this winter and next. These data, combined with information collected on the breeding range, should help determine whether and how emperor goose numbers are constrained by their wintering environment, which will enable objective decisions about future hunting and conservation measures for the species.

Above left: Emperor geese on Adak
Far left: Brian immersed in the glamorous work of collecting feces
Near left: Banded emperor goose on the breeding grounds

Photo from the Lab

Analysis of seabird diets can provide researchers with a window on changes in the ocean ecosystem. This is why our field biologists collect gurge from a variety of species with different foraging strategies and habitats every summer. All the auklet (crested, least, parakeet, whiskered and Cassin's) samples now come to Adak for analysis. It might sound unappealing, poking through piles of puke, but it is actually fascinating, peering into an alien world full of tiny creatures near the bottom of the food chain. Look at this copepod…Swallowed on a bleak and stormy night by a whiskered auklet on the 4th of July, 2012, carried back to a hungry chick on Buldir, puked up prematurely during interception by Refuge biologists, transported to Homer on a lurching ship and back out to Adak three years later, vigorously rinsed before analysis...this *Paraeuchaeta elongata* is STILL waiting for her eggs to hatch (right).

Captain's Log

As preparations for this year's field work get underway in Homer, and the ship gets ready for her first research cruise departing 28 April, here are some highlights from Captain Pepper's account of the 2015 field season aboard the R/V *Tiglax*:

Spring

The first mission of 2015 was to recover four acoustic buoys from seamounts off the continental shelf in the Gulf of Alaska, where they were deployed in fall 2014 for Scripps University. The weather was a gale all the way to the first buoy, but the conditions subsided, and two days later all buoys were aboard and we were headed out to do the annual Global Ocean Ecosystem Dynamics (GLOBEC) cruise. GLOBEC is one of the longest running oceanic research projects conducted in the Gulf of Alaska; *Tiglax* has been collecting water from the same stations for nine consecutive years. Last year's tests gave scientists early indications of a warming trend in the deep water off the shelf.

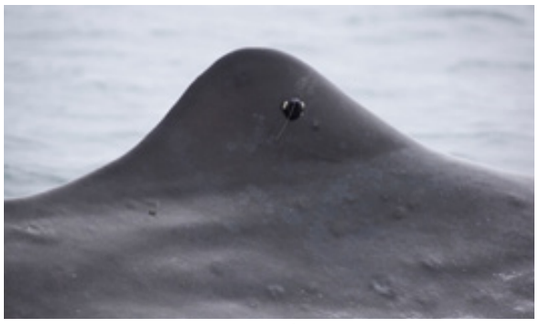
Summer

The weather in May was a bit blustery to start out. Our first camp to deploy was on Chirikof, located east of the Semidi Island group in the Gulf of Alaska. Chirikof is very

challenging to work due to the shoaling and reef systems that surround it. The wind began to freshen as we approached the island, and crews were deployed in marginal conditions. By the second week in June we had already experienced hurricane-force winds on two occasions, which put a damper on getting the western camp of Buldir out. The crew was eventually put ashore miles from camp on a marginal day, and spent the next few days walking their summer supply of gear around the coast to the camp site, a tedious and very time consuming hike over extremely rugged terrain.

By the time the Summer Solstice comes around the refuge is abundant with wildlife. The annual sea lion cruise with the National Marine Mammal Lab (NMML) scientists began on June 19th, and for the next 19 days we visited a large percentage of the sea lion rookeries in the Aleutians from Unimak to Attu. Traveling to the rookeries you see the sea lions with their newborn pups screaming at the world around them, as Atka mackerel move inshore in large schools to stake their claim in the cycle of life and orcas police the environment for the weak or naive.

The whaling crews were again successful, tagging four orcas as part of their ongoing study of identifying the resident and transient orcas visiting the Aleutians. One adult sperm whale was tagged off the coast of Shemya--an instrument was implanted in its dorsal fin to record its diving patterns and migratory movements (bottom right), but the crew was unsuccessful at getting alongside the whale a second time to get a biopsy sample. An adult male sperm whale is over 50 feet in length and seems much larger when traveling alongside in a 15-ft inflatable. Little is known about the Aleutian sperm whales, primarily large adult males who reside in the area for long periods of time before migrating south to the birthing grounds. They are frequently seen in deep water from Amchitka Pass to Stalemate Bank east of Attu.



On the 11th of July the ship departed Homer. Our first stop was to replenish the fox trappers on Chirikof, last visited in May. A long hot shower every two months is a good thing, so the ship appearing on the horizon was a welcome sight to the men. They arrived alongside in their skiffs once the anchor was firmly in the sand, and soon every washer and dryer was working furiously and the men were clean for the first time since they could remember. After resupplying the camps on Chowiet and Aiktak, we stopped in Cold Bay to deliver freight to Izembek NWR and remove old recyclables that had been accumulating at the station for years, and to pick up the Youth Conservation Corps (YCC) students. The five students, from Homer, Sand Point, and St Paul, were anxious to come aboard and sail north to the Pribilofs. They jumped right in assisting the crew with the loading of cargo before departure, and were put into a watch schedule for the transit north to teach them navigation and biological survey techniques and incorporate them into the daily jobs of the crew onboard ship including cooking and cleaning. The students brought a great attitude that enhanced the morale of the ship. We arrived at St George on the 16th of July and were met at the dock by a contingent of islanders awaiting freight we were to deliver. Surveys were conducted over the next few days of all islands using skiffs and remote controlled aircraft with the assistance of NMFS.

Once the ship concluded its work in the Pribilofs, we headed south for the remainder of the field season. Seabird surveys were conducted around Umnak Island in the eastern Aleutians and in the Islands of Four Mountains. In August there was a three-week sea otter survey in the Near and Rat islands, during which all the major islands were circumnavigated by two skiffs, and a complete population count was done. In conjunction with the skiff surveys, dive transects were conducted at four specific locations per island to estimate food density and availability.

We made a brief stop at the island of Kanaga to begin the stabilization of the last remnant on the refuge of the fox-trapping era in the Aleutians, which started when the US began leasing islands in 1882 and had run its course of being a profitable endeavor by the time of the Great Depression. In Kanaga Bay there are two remaining structures, erected sometime in the early 1920s by the Kanaga Ranch Company to conduct fox trapping and serve as a trade center. These are the oldest standing structures on Alaska Maritime NWR land. One is the old barn, a beautiful hand-built structure made out of clear Douglas fir on cement poured pilings and the other is a little ranch house, one storey with two bunks and a small kitchen inside made of similar materials. Over the years the cedar-shake roofs have been degraded due to their age and the continual onslaught of wind and rain, but overall the ranch house is in good condition considering its age. If left alone, however, it would be like all the other structures built in the Aleutians at that time, destroyed by the environment they were constructed in. A decision was made to stabilize it for the time being. The first step was to remove the old leaking shakes completely and replace them with temporary sheeting to stop the weather from coming in. Then we installed a metal roof on the old purlins, and now she can begin the process of drying out and combating the elements.

The trip home from Buldir, the site of our westernmost annual seabird monitoring camp, takes almost seven full days. All season long in the back of our minds was how the pick up at Chirikof would go at the end of the field season. The camp site was exposed to the southwest, and a storm could delay pick up for some time; by the end of a long field season, one of the hardest things to deal with is delays. With the other camps aboard and the boat full of field-season stories, the last one was about to be told. Three days out the weather prediction had a storm developing on the day of the Chirikof pick up. The ship only travels at ten knots, and storms can travel faster. As we approached the island, the wind began to increase, the barometer was dropping sharply, and there was very little visibility with a driving rain. All hands began recovering this large camp of four-wheelers and skiffs and hundreds and hundreds of traps that couldn't be left on island. The surf conditions were marginal to say the least but workable due to the experienced hands on scene. We had two skiffs operating simultaneously making good headway, until one of the skiffs operated by a trapper returning to shore for more gear came over the radio asking, "Do you guys see or hear me out here?" A bit of a sinking feeling in the fading light… We began sounding the ship's fog signal, and the operator heard it through the gale-force wind. He was guided back to the ship using the ship's radar and radio communications from the bridge. One happy camper was back aboard after a long 15 minutes. Using just one skiff to remove the rest of the camp, things began to slow down. The ebbing tide required the ship to be repositioned to recover the remaining gear, but by 2100h everything was on board, including all the wet and tired field crews, and we were bound for home with the wind on our stern.

(Pep's full 2015 report is online at https://absilcc.org/science/amnwr/Shared%20Documents/2015%20field%20season%20report.pdf)