

R/V Tiglax Field Season 2016

Spring:

One of the most important aspects of shipboard life, because you are so far removed from your normal shore-side life, is food. When one is shore-side one can visit any restaurant on any given day, and options abound for the cuisine for that day. On board it's different: you get what the chef makes. Period. Crewmembers will often make requests to the chef on board to somehow unconsciously connect to "It's my life and I have a choice and I will eat what I like." The refuge and passengers are lucky: on board Tiglax the chef makes great food with a variety of selections meeting all the special needs of today's eaters.

In the spring we purchase our groceries under a contract for the season. In simpler terms, we shop in May for food we will consume until September. Our first voyage of the year can entail 50+ days at sea without visiting a store for resupply. This is in large part because of the remoteness of the refuge we support and the vast distances it comprises without any major ports to replenish our ships stores. It is almost a throwback to early days of sailing when a ship got under way with literally tons of stores to support them for the length of their voyage--the old whalers could be gone for years. Obviously times have changed, and we are not whalers; we are modern day sailors, but this year the chef wanted to provide better quality food for the crew. In 2015 she spent a portion of the winter learning the art of butchering meats. So in the true tradition of



Figure 1. First passenger of the year: 1 pig

sailing, during load out for the field season in April our first passenger outside of the crew was a pig. He was not alive, just in the round with his head on, to be cut into portions in the days ahead, to be for our consumption during the entire field season. We ate a lot of pork this year! Thank goodness we have three freezers on board, otherwise it would have been just salted pork and that would have been a little too much throwback for us modern sailors.

The ship got underway, pig and all, for our spring GLOBEC cruise on April 25th. This cruise takes us out into the Gulf of Alaska on what's called the Seward line, which extends some 150 miles offshore from Resurrection Bay. Once the ship completes the 13 stations on the line we usually head into Prince William Sound to conduct more sampling in a much more pristine environment. After the completion of loading all scientific winches, gear and personnel, we headed out to do the line. Ol' Mother Nature showed up in full force as we began the line, and we decided to head to the Sound early and let the Gulf come down a bit.

On the morning of the 1st as we approached Columbia Bay there was a unique noise coming from either the rudder room or engine room. A series of tests were performed and it was determined that there was a problem with the split coupler in the engine room. This is an assembly that joins the shaft, shaft brake and the reduction gear to the main engine. We had discussions with the chief scientist and the main office and it was decided to end the cruise, head back to Seward, and haul the boat out of the water to make the necessary repairs.



Figure 2. Tiglat hauled out at the Seward Marine Center.

The philosophy on shipyards is once you come out of the water you never know what day you will go back in. The arrangements were made to haul us on the 4th, which was great considering the circumstances: the sooner, the better. We were high and dry by 1500h. The yard foreman put men on the job immediately to get to the heart of the issue and by 1730h that evening we knew what we were faced with. Some of the bolts that join the split coupler and the shaft had backed out; not

all of them, otherwise it could have been disastrous. Only three remained in place, which is extremely unusual considering they were installed in 2014 and had been in place for nearly two years. It was now a matter of finding new bolts and putting the assembly back together and getting the boat back in the water to continue our season.

We replaced all the bolts on both shaft assemblies while we were out of the water because our confidence in the starboard shaft having the same issue was real; therefore, both were inspected and repaired. The yard accomplished both tasks and the vessel went back in the water by 1400h on the 6th, the shortest yard period in the ship's history.

Maritime Field Season

Once the repairs were completed we headed back to Homer with a brief stop at East Amatuli to install the field cameras that monitor seabirds at different locations on the island. One site is in a precarious location on the east-facing cliffside that involves a bit of a technical climb on the cliff to get to the proper camera location. Along with that, this is a tidal rip area which poses problems for launching small boats. The conditions were just right for the operation: the wind had died out and became light westerly, which gave us a lee to accomplish our work.

After a week in port loading cargo for the field season the ship left its home port for Chirikof Island, south and slightly east of Kodiak, to put out two two-man fox recheck camps on the east and west sides of the island. These camps were a follow-up to 2015's eradication of fox off the island. It was believed that there was one sly fox left. The camps would be there until we returned in July; at that time we found that there were five fox that resided on island over the winter of 2015.

Upon the completion of setting up Chirikof we proceeded to another island in the Semidi group, Chowiet, to put out our first seabird field camp for the year. This is one of the first camps out and this year the last to be picked up. It was a veteran crew that had spent three summers consecutively working for the refuge, which makes camp set-up easy because of crew experience. The two biologists returning spent the previous year there so they knew what to expect.

There is always a small sense of anxiety as you approach the island, no matter how many times you have been in the field, because the first sight of the island will tell you how all the buildings survived the winter. Generally the wheelhouse is full, and all the binoculars are being used trying to get a glimpse of the cabin. Is it still there? Is the roof on? How did it survive the winter? Any visitors? One hopes all is well, but this year as we approached the old vets saw the buildings and did a quick count. 'UH oh, we are missing a building--there are two standing, that's the good news; the bad news is, the outhouse is gone! Well, there is some consolation here: at least you know the hole is still there. Once ashore the crews began to find walls of the latrine scattered about the hillside. How do you spell relief?

Next the ship crossed the Gulf of Alaska heading south by west and transited through the Shumagin Islands to our next destination, Outer Iliasik Island, in search of fox. This spring's trip west included a series of checks on islands looking not only for fox but rabbits, along with the offload of our second annual monitoring site, Aiktak, located in the Krenitzin Island group. Outer Iliasik was found to be free of fox, and Unalga Island in the Baby Island group was not.

Then there is Poa Island, once a stronghold for the Krenitzin Island rabbit population, which was drastically reduced in 2011 to one, who has had the island to him- or herself since. Our mission was to re-con the island and decipher if the lone rabbit had miraculously reproduced or died off, and, if possible, reduce the island population to the original goal of zero. We stationed the Invasive Species Biologist on island hours before sunset because historically that is the time the rabbits come out of their dens and begin foraging for the evening. It was poised to be a long night, unless the old hare came out into the general area he had been seen in previous years, and rested on his laurels in this island Eden.

The grass on these islands gets quite high in places, making it hard to navigate and detect a rabbit hole, which is why it is important to investigate in the spring. The island has high cliffs but is small in size, and there are thousands of puffins that reside on the cliffs and very top of the island. The rabbits tend to stay in their respective holes on the upper plateau of the island, and the biologist knew where our lone survivor lived. It's a steep climb to the top to get to the spot where he or she had been seen in the past. When one arrives there one could be out of breath, and as our biologist approached

ground zero, there was the lone rabbit standing enjoying his view, and he did what rabbits do: he hopped. He hopped just fast enough and far enough not to be seen again for the rest of the night, nor was any other sighted that night. We learned that the population of one still exists.

The ship headed southwest in the morning for Adak and then on to Buldir to deploy the last annual monitoring camp and make some overdue cabin repairs. The buildings we use for camp living were constructed in 1997 and in 2006. They are of 2x6 constructions and are located in a very harsh environment. They have metal roofs instead of shingles because of the harsh wind conditions in the Aleutians. Last



Figure 3. Repairing the Buldir cabin wall.

year we realized that the metal roofing screws were just rusting away on the Aiktak cabin, which was constructed in 1996, and the Buldir cabin had experienced water damage to the siding on the west wall due to hard driving rain. While at Aiktak the ship's crew and science party all pitched in to remove the old metal roofing and replace with new. The work at Buldir, on the other hand, was a bit more extensive. The siding had to be removed, exposing the interior of the building to the elements, and then of course re-sided. The



Figure 4. New wall at Buldir thanks to John, Bill and Tim.

conditions on site had to be right in order to get this job accomplished in the time allotted. The extensive nailing pattern that was applied to the old siding created a very tedious endeavor, which during the early stages seemed to threaten the reality of the project. Eventually the old siding was removed, and it became quite clear that the framing had been compromised, and

reconstruction of the stud wall needed to be done in order to have a sound building again. At this point in the project more troops came ashore to accomplish the mission at hand. The science crews were out in the field and were expecting to come home to a warm cabin because the ship was scheduled to head west to Attu that evening. The ship's Chief Mate has an extensive background in home construction, and his helping hand after lunch expedited the reframing of the west wall. There was a flurry of work, cutting out old king studs, removing window sills, reframing the wall and replacing rim joists, then re-siding and trimming the window. The three man crew completed the work by supper as the science crews returned from the field, to a dry cabin. Not a bad day's work for a couple of boat guys and a contaminants biologist. Mission accomplished!

Summer

After completing our maintenance on the field camp structures we headed west to Attu to investigate Arctic and Aleutian tern populations and observe the progress of the Corps of Engineers work on island. On board we had a contaminants specialist who was the Fish and Wildlife representative that needed to be left on island to oversee the work. The Corps was involved in a soil contaminants removal project with a private contractor who had constructed a mobile camp on island at the old LORAN station. There had been numerous places on island documented to have PCBs and soiled areas of oil spills leaching out into the landscape. This is a two-year project that will create better habitat for the seabirds and geese that return to the island every year.

Heading east again the ship stopped at Buldir to assist the island scientists with work at Kittiwake Lane. The group of scientists went ashore at the colony and captured 10 birds with the purpose of installing geolocators on kittiwakes to better understand their winter habits. These will hopefully be recovered in the summer of 2017.

The ship was back in Adak by the 8th of June, just for a short stop to offload and reload passengers. We made a couple of stops along the way conducting surveys of offshore islands looking for rats while enroute to Atka to have an open house with villagers. It was the summer camp for the high school aged children while we were there. We arrived in the early hours of the 15th. The ship tied up to the dock on the north shore of Nazan Bay. The village is on



Figure 5. Overlooking the old Amlia Unangan village site.

the south shore, which put us miles away from town, and at first light we already had our first visitor. A young man of high school age appeared out of the darkness and stood alongside the ship. He was one of the summer camp's local residents, and was extremely enthusiastic to see the ship. We

welcomed him aboard, and he explained that he would be a

summer YCC student coming aboard in mid-July and just wanted to see the ship. As the morning wore on we developed a plan to take the camp kids over to the nearby island of Amlia to show them the old village site where the Unangax lived previous to taking residency on Atka in the late 19th century. This site, by Aleutian standards, is enormous in size and quite obvious once you are above the site on the hillside. We took the ship through Amlia Pass and anchored in Umquan Bay; from there we brought the kids ashore in the skiff and hiked up to above the village site. Once there, we had some discussions about their culture, and thought about some of the challenges of living there during that time period. The view from above shows the entire size of the village and gives you a perspective of why they chose to live there, mainly because of the resources available: as you can see in the photo above, the ocean shore is to the west and fresh water to the east; the crew is facing south. The barabararas are highlighted by their deep green color and their height above ground.

The Turn

The second half of the field season usually begins with the ship leaving from Homer after a resupply of food and fuel along with a liberty call for the crew for two days. The load out before leaving town was quite extensive due to the fact that the ship would be supporting a Department of Defense drilling project in Amchitka for 14 days in August. A drill rig and its accessories had to be loaded and lashed on the forward deck and would be there for the entire remainder of the season. The gear covered the forward deck except for small

lanes of travel to the foredeck and fo'c's'le. The drill rig itself stood over 9ft high.

Our first stop was at Chisik Island in Cook Inlet, a rare place for the ship to work, to survey the murre colony there and to look at commercial salmon set net sites that are in operation on and near refuge land. We continued on from there through the Barren Islands for more seabird surveys before arriving in Kodiak to take on passengers and inspect new lands acquired, The Triplets near Kodiak town, and inspect existing and old log transfer facilities that are around Afognak Island, which are permitted to operate in the near shore waters managed by Alaska Maritime NWR.

The ship continued south to the Semidis to resupply field camps and to survey Chirikof Island; enroute we surveyed islands in the Sitkalidak Bay area on the east side of Kodiak that were found to have Aleutian and Arctic tern colonies. Upon completion of all the seabird colony surveys on Aghiyuk Island and cabin restoration work done at Chowiet, the ship returned to Kodiak to offload passengers and collect more before proceeding to Sand Point to take on our annual YCC students, who visited aboard ship as we transported them to Unalaska for summer camp. July is prime time for the refuge to survey seabird colonies to evaluate populations, which gives the students a rare view of seabirds in abundance. It has been expressed over and over again that this is the highlight of the students' field season. It is a program that has been in effect for over seven years now and has paid huge dividends in educating the youth and giving them future job opportunities.

The ship arrived in the Aleutians by the first week in August, and we were on contract with DOD and dockside in Amchitka by the 10th of August. At Amchitka we proceeded to drill test holes in numerous locations throughout the island. Every morning there was a safety briefing and on the second morning the safety topic was earthquakes and what the ship's response would be if there was one. We explained the ship would leave the protected waters of Constantine Harbor and go to sea to remove itself from potential extreme tidal action. Two years ago we had an 8.4 earthquake where we had to remove crews from shore-side activities on Attu, so it is something that can and does happen and needs to be prepared for. I left the safety briefing headed up to the crane station to begin moving freight ashore, and suddenly there was this loud crack and the ship seemed to be affected by it. I went outside to see if something drastic had happened with cargo, and there were two men ashore. I asked them

if they felt anything and they said yes, they thought it was me moving the crane and the dock felt the effects. No one had moved the crane. Earthquake!! We assembled everyone aboard and fired up the ship and went to sea in 12 minutes. Contact was made with the staff at Alaska Volcano Observatory once underway, and they confirmed there was an earthquake at Amchitka just minutes before. The ship stayed in deep water offshore until the Observatory could confirm that there was no tsunami warning, and we proceeded back to the harbor to continue our work. Safety drills do pay off.

Once the work was done at Amchitka there was little left of our field season. The ship headed west with three whale-tagging biologists to opportunistically put tags on killer whales if seen while enroute to Buldir and back to Adak. There are different pods of killer whales that are commonly seen in various passes. The scientists had four tags to put out if possible. Heading from Adak to Buldir is a 32-hour run, and we passed on the south side of Gareloi, where on numerous occasions pods have been observed. As the sun rose the ship was transiting Tanaga Pass, and, sure enough, we witnessed a pod of whales only long enough to identify and photograph before the thick August fog set in and stayed with us until midafternoon, which is quite common for this time off year. By then the ship had transited to the Rat Island Pass area, and another pod came into view just after supper; photos were taken but no tags deployed. This project has gone on for four consecutive years now, and one learns about the behavior of killer whales when they are being investigated by a small boat. It is quite obvious that they know you are near, and they are quite capable of keeping out of range of the tagging dart if they want to. It is only if they are curious, which is rare, or are feeding that you can get close



Figure 6. Shh. Be very quiet. We are hunting whales...

enough to install a tag; most of the time they stay just out of reach. That was the case for this entire leg of our trip: just out of reach.

With the Buldirians aboard there was one last stop, Kanaga Ranch, to inspect the condition of the oldest existing structure in the refuge before heading home. Its actual age is unknown but it is pushing 100 years. Last year there was a re-roofing project done on the cabin to stabilize it and protect it from the harsh elements that exist there. There had been a structural survey done along with a Minimum Requirements Analysis of the site because it exists in wilderness, before any action was taken. This year we wanted to check the



building and find out how the building overwintered with its new roof. We arrived late in the evening of the 30th of August in the fading light. After breakfast crews went ashore to inspect and found the cabin dry for the first time in many years. The new roof did its job: the old building held up through its first winter with the new roof

not causing any damage or structural problems. The crew did a general cleanup of the inside and attic spaces and left knowing the oldest historical structure in the refuge is still standing tall.

Quitting Time

Well, as we say in the sailing business, it's time to take the old girl to the barn. It's always a nice thing for the crew to say we are heading east. The trip back to Homer takes about five days from Adak with camp pickups along the way; the ship arrived home on the 5th of September. The ship took on some much needed fuel and a small shot of groceries and then the next stop was the Gulf of Alaska to conduct our fall GLOBEC trip out of Seward.

We arrived in Seward in the morning of the 15th after a nice trip along the south end of the Kenai Peninsula. Upon arrival crews were ready to load gear and winches and head out, because for once we had a good looking

weather window. We arrived at our first station by 2100h that evening and began making CTD casts. The ship worked through the night and the next four days in a row without stopping, completing the line in record time. The highlight of the trip was not only the weather but the birds. As the ship crossed over the shelf some 90 miles from land and into the deep ocean things changed. We were greeted by fin whales foraging along the edge with flocks of hundreds of Buller's shearwaters, a sight you very rarely see near shore. These birds are very graceful in flight with a consistent wingbeat followed by a glide and a turn, and as they turn their dark backs become visible, which gives the viewer these contrasting colorful swooping flocks of dynamic seabirds that are quite pleasing to the eye.

The GLOBEC trip finished without a hitch. It went perfectly. We finished in Prince William Sound in the early morning of the 22nd with a storm brewing in the Gulf. As we departed Bainbridge Pass we were greeted by a 12-14ft ocean swell out of the southeast, which provided us with an interesting ride back to Seward.

The ship was finally moored in her berth and her field season complete by the 23rd of September. With another year completed I informed my crew and supervisors by mid-October that I would retire at year's end. I have had 22 outstanding seasons aboard Tiglax that will give me enjoyable memories to my grave. I could not have asked for or ever imagined such a satisfying job to be my career. I am so very thankful to have had the pleasure of working in an ecosystem that could be considered one of the highlights of the earth, and it was my office. So, in closing, I would especially like to thank the crews I've sailed with over the years for making this experience in my life so extraordinary, and to the ol' ship I've called home who took me there... You are one hell of a boat!!!

R/V Tiglax Facts

The ship's marine mammal surveys for the year are as follows: the largest number of marine mammals sighted was humpback whales at 193 followed by killer whales of which there were 140 sighted. The remaining in descending order of abundance were: fin whales 36, sperm whales 25, Baird's beaked whales 23, Pacific white-sided dolphins 20, Minke whales 18, and Stjeneger's beaked whales 3. There were only 7 short-tailed albatross sightings in 2016.

- *Days at sea: 136*
- *Miles traveled on the ocean: 13,940*
- *Passengers: 138*
- *Ports of call: Adak, Dutch Harbor, Homer, Kodiak, Seward*
- *Dockings: 59*
- *Field camps supported: 5*
- *Federal User groups: DOD, DOE, NMFS, NOAA, NWS, USGS/AVO, USDA, USFWS*
- *NGOs: University of Alaska Anchorage and University of Alaska Fairbanks*

Refuge projects supported: Adak logistical support, (4) annual monitoring camps, Atka Island open house, Chirikof Island habitat evaluation, East Amatuli camera installations, field camp construction at Aiktak, Buldir, and Chowiet, fox removal at Chirikof, Formerly Used Defense Site visits at Amchitka and Attu, Kanaga cabin stabilization project, Kasatochi eruption studies, kittiwake geolocator project at Buldir, Kodiak Island log transfer facilities survey, Kodiak Archipelago island surveys, Poa Island rabbit removal, re-con for fox on Outer Iliasik and Unalga islands, R/V Tiglax environmental education programs in Homer and Unalaska, Unalaska Island shoreline survey, Sud Island recheck for marmots.



Bairds Beaked Whales