

R/V *TiġlaĶ* 2014 Field Season

Captain William Pepper

Lake Union Dry Dock

The ship left Homer on the 16th of February bound for Lake Union Dry dock in Seattle a one-way trip of approximately 1500 nautical miles. The Gulf of Alaska in February can be inhospitable; luckily we only encountered one small craft weather warning out of the south east so the ship bucked its way across the Gulf in 60 hours. Once clearing Cape Spencer it was calm water all the way to Seattle. We arrived on



Ballard bridge opening with Lake Union in the background.

Lake Union on the 23rd and it was the first time the ship has been in fresh water since she was built.

Monday the work began right on schedule and we were hauled out on the 3rd of March to begin the extensive work list. The list included 21 items from the keel to the flying bridge. All tanks below decks were to be cleaned along with a tank conversion to increase our black and grey water

capacity and installation of our new MSD, (Marine

Sanitation Device). The shafts and rudders were removed and shipped out for evaluation along with removing the ships original main engine keel coolers that were no longer working at an efficient level.

The boat deck, flying bridge, and fo'c's'le deck were all taken down to bare steel and resurfaced because with new non-skid deck paint. The ships dryer vents needed to be re-plumbed because they were no longer venting due to corrosion and buildup of years of material in the plumbing and of course she needed a hull and sutperstructure paint job.

The ship was in dry dock for 31 days and the project list was done by the 10th of April. We departed for Homer on Friday the 11th. The ship got as far as Shilshole Bay when we had to turn back to the Lake for a minor repair to a stuck valve. This is an example that just supports the old legend of never leave town on a Friday. Saturday morning the machinist arrived at 6; 30 am to make the valve change and we left the Lake for the final time on a glorious sunny Saturday morning with the lake filled with

vessel of all shapes and sizes enjoying the water. Refuge staff and family members came along for the ride north and contributed to putting the ship back together on the trip north.

Field Notes:

Our first charter of the year began on April 25th with Scripps Institute personnel aboard to set out four marine mammal monitoring buoys in various locations in the Gulf of Alaska. Two of the buoy locations were on the Pratt and Quinn Seamounts which are off the continental shelf approximately 280 nautical miles south of Kayak Island. It was a two day run for the boat and the weather was perfect and all went off without a hitch. One of the purposes of these buoys is to collect the audio signals of marine mammals who frequent the area to estimate the time and amount of mammals that visit the seamounts. These devices were to help the US Navy understand the distribution of marine mammals in an area that the Navy is considering ship operations. The Tiglax recovered the buoys in September under similar conditions

Upon the completion of buoy deployment we were bound for Seward to assist



Wave glider

UAF (University of Alaska Fairbanks) in their annual Seward Line cruise and PMEL (Pacific Marine Environmental Laboratory) with the deployment of two wave gliders and a unit called the Slocum named after Joshua Slocum one of the first single handed sailors to circumnavigate the globe aboard the sailing vessel Spray. This unit basically looks like a small plane that can be self-ballasted down to reach certain depths and then de-ballasted to rise again and record scientific data throughout its deployment. The wave gliders record

similar data but stay on the surface for the entire period which was from the first week in May till the 3rd week in September. These units are unmanned and were deployed near the entrance of Prince William Sound and were recovered in the Gulf of Alaska some 90 nautical miles south east of Seward. These units are also deployed in various locations around the state and could be more common in the future so mariners should keep a watchful eye for these unmanned craft

We completed all of our work in the Gulf and came back to our homeport with a week left to make preparations for the start of the Fish and Wildlife field season which began on the 18th of May. The annual monitoring camps of Chowiet, Aiktak, and Buildir were deployed without any major incidents. Usually the sea conditions at Buildir always make that deployment a challenge but this year Aiktak the most protected of all sites was the most challenging. The wind came up upon our approach to the island and once inside between the two islands of Ugamak and Aiktak the wind had reached 40 with gusts to 55 knots out of the North West and the current was at full strength. We were unsuccessful at anchoring on two occasions due to the conditions and subsequently

decided to live-boat the offload which was conducted safely considering the conditions. There is very little fetch between the two islands so the beach was workable just very challenging under the windy conditions.

The ship began conducting surveys and collecting biological samples in the Near Islands once all the camps were deployed. This segment of the schedule was interrupted when the ship rendered assistance to a vessel in distress in Attu with a full contingent of passengers. The Captain of the vessel requested that we provide safe transit for his passengers from Attu to Adak due to the unreliable working capacity of his vessel and his concern for the welfare of his passengers with the vessel in that condition on such a long transit back to Adak. The ship answered the request and provided safe transit for 12 happy passengers to Adak and one unhappy passenger to Gareloi.



Orca with satellite tag attached to dorsal fin

This year seemed to be the year of advancing technologies which became even more evident during the annual sea lion cruise with the National Marine Mammal Laboratory. They introduced a hexacopter to conduct surveys at the rookeries. This unit is carried in a medium sized pelican case which is brought to the general area near the rookery via skiff with its two pilots where they launch it and fly it over the rookery and photograph its occupants without disturbance. The instrument provides a close aerial documentation that can be reviewed over and over again to get accurate count of all residents at the time of flight.

The chief scientist incorporated in the charter, on a time available basis, the monitoring and tagging of Killer Whales. We documented numerous pods of whales with some pods containing over 20 whales. On two separate occasions whales were tagged, one from the ship and one from the skiff. The shooter explained that the tagging of an individual whale from a ship of this size was a first in all of his years of tagging. Generally whales don't approach the vessel close enough to get a good enough shot to insert the tag. On this occasion we were in the midst of a feeding frenzy where there were numerous whales and sea birds feeding on Atka mackerel. This particular whale surfaced 5 meters behind the vessel a few times before the actual tagging took place. This tagging process and documentation was done with the hope of understanding the whale's behavior in the Aleutians and their abundance.

The Sea lion cruise was the last trip of the first half of the season. At the completion of the trip we sailed back from Unalaska to our home port to replenish groceries and refuel and conduct our mid-season crew change. We departed for the second half of the season on the 15th of July bound for the Barren Islands to offload that

field camp and then set sail for the Semidi Islands. Arriving at Chirikof Island on the 17th the service began its vegetation study to look at the impact the cattle are having on the island. Later in the week we went to Simeonof Island in the Shumagin Islands to offload the FWS botanist and associate to conduct vegetation survey of that island where the cattle were removed in 1986. It was after this segment in the trip that the YCC students came aboard in Sand Point Alaska. The Youth Conservation Corp is a program that has incorporated eligible students with a deployment on board ship to learn biological and marine related skills along with enjoying the remote parts of the refuge. This year in particular was interesting in the fact that the project leader of this year's program was once a YCC student back in the first year of its inception.

R/V Tigla^{ax} **Facts:**

This year's marine mammal sightings from the bridge were as follows in order of abundance: Killer whales(375) Humpback whales(321) Dall porpoise(230) Fin whales(76) Sperm whale(35) Minke whales(19) Pacific white sided dolphin(8) Harbor porpoise(5) Northern Fur seals observed at sea not near a rookery (2) Grey whale(1) Blue whale(1) and although it is not a marine mammal we list sightings of Short tailed albatross here which in 2014 was a Tigla^{ax} record for sightings in one year of 14.

All the numbers were up for sightings in every species from 2013 except Minke whales. In June and July of 2014 during the NMFS cruise the ship conducted killer whale surveys which could play a role in the increase of their observations.

- Days at sea: 151
- Miles traveled on the ocean: 17,763
- Passengers: 135
- Ports of call: Adak, Atka Dutch harbor, Homer, Sand Point AK., Seattle WA., Seward AK.
- Dockings: 67
- Field camps supported: 7
- Federal User groups: DOE, NMFS, NOAA, NWS, PMEL USGS /AVO, USFWS
- NGO's : Memorial University Canada, Scripps Research Institute, University of Alaska Anchorage and Fairbanks, University of Buffalo New York, University New Brunswick Canada,
- Refugee projects supported: Adak logistical support, (4) Annual monitoring camps, Cattle vegetation studies at Chirikof and Wosnesenski, Chowiet storage shed construction, Formerly used defense site visits at Kiska and Attu and Great Sitkin, Kagalaska caribou study, Kanaga cabin removal, Kasatochi eruption studies, Puffin productivity study in the Alaska Peninsula Unit, Tigla^{ax} shipyard project at Lake Union Dry dock, Valor in the Pacific National Monument construction at Kiska, and the YCC student education program

Highlights

During the second half of our field season USGS and the FWS concluded their co-operative 3 year study on Puffin diets sampling that began in Attu in 2012 and concluded on Cathedral Island near Old Harbor in Kodiak this year. The area that we conducted our surveys this year was at various islands along the Alaskan peninsula - places we don't usually visit. It was a good to increase our local knowledge of the area and one interesting tidbit that was learned on this segment of the study was how bears have an effect on the productivity of the burrowing puffins. On two islands there was direct evidence that burrows were visited and excavated by bears. There were no actual encounters with bears by the field crews but it is a factor that could influence productivity on the peninsula an issue that is not present out west. There are no bears west of Unimak Island

During the cruise in the Shumagin islands the ship transited Korovin Strait on the 17th of August where we



Breaching humpback whale

encountered a huge pod of Humpback whales. Historically we have viewed Humpbacks and Fin whales in this general area in abundance in the summer. This sighting was on a level unseen in the past. In every direction blows, fins, and breaching was visible. It was impossible to transit the area and not come into close contact with the whales. The weather was nice, there were no sea conditions to speak of, so we took 45 minutes

to drift among the leviathans and enjoy one of the true treasures of ocean travelling. One can only image what the state of the ocean was before commercial whaling took place in the 19th century. If this was just a hint of the state of the sea when the Aleuts travelled the area it's easily understandable why the bones are so prolific in the construction of their barabara's and consumed in their diet.

After the transit we set out for the Semidi Is group which originally was dedicated in 1932 as its own National Wildlife Refuge located east of the Shumagins in the western Gulf of Alaska but is now incorporated into Alaska Maritime NWR. It consists of nine islands but we conducted shoreline surveys of South Is and Aghiyuk Is while the Puffin diet survey team was ashore on Suklik Is. The ship has worked in the area on numerous occasions conducting transects and bird surveys but this visit was a real eye opener. The design of the survey was a circumnavigation of the islands from the ship as close to shore as possible to understand the island topography and document sea bird colonies. The density of murre, both common and thick billed residing on all sides of the island wherever there were cliffs available was remarkable. The numbers of birds observed was equivalent or greater to any site the ship has visited in all of the Alaska Maritime National Wildlife Refuge. In addition to the murre seen on Aghiyuk, there was a large group of approximately 50 harbor seals hauled out on the beach on the west side. When you visit the Semidi islands you can almost bet that you will find Fin whales

feeding there in the summer. The geological makeup of the islands is unique and extremely picturesque and, according to one old skipper, are known as "The cliffs of Dover."

Footnotes:

During the field season in June while we were visiting the island of Attu at Cape Wrangell when an earthquake registering 8 on the Richter scale hit Amchitka Island while we had field crews ashore. You could feel the chain of the anchor rolling across the bottom and crews ashore saw rocks tumbling down the hillsides. The ship received a call from refuge headquarters on the satellite telephone informing us that there was a tsunami warning for the area that the ship was in and the tsunami could hit in 30 minutes. The ship was anchored at the time near shore in 12 fathoms of water. Just a few years prior in Japan it was well documented the devastation that can be done by tsunami to boats people and everything that is in its path. This made for quite a drill to get all personnel off the beach and one photographer on an offshore islet back aboard and remove the ships from harm's way. There was a real sense of urgency and all eyes were on the shore to see if the water was changing in any way shape or form. The skiff was already in the water but before departing to pick up passengers the ships anchor was raised and began idling offshore then the skiff departed to recover personnel. It was an intense time waiting to see what Mother Nature had in store for us. Everyone was back aboard and the ship under full power heading offshore with minutes to spare of the 30 given to recover all passengers. The deckhand reported a larger swell on the beach when picking up the last crew from shore which was not substantial but distinguishable from the waves on the beach all morning. As we sailed the islands after the quake major sloughing could be seen on Agattu, Kiska, and Buildir. During the last week of the season we took DOE and Alaska Volcano Observatory personnel to Amchitka to look for damages to existing infrastructure and recalibration of instruments.

The field season ended on the 19th of September in Seward with a wedding scheduled for the deckhand on the 20th. In order for the groom to be on time for that special day he was released in Seward so he could drive to Homer and attend the rehearsal dinner. It's not good for a sailor, after a long season, to leave your bride who has been planning this event all summer waiting at the altar due to a gale warning....