

**Farallon Island NWR
Monthly Report
December 2016**

Biologists: Jim Tietz, Ryan Berger and Russ Bradley

Island Visitors

Point Blue crew this month included: Ryan Berger, Russ Bradley, Marjorie Cox, Laurel Ann Curry, Jacob Drucker, Sarah Guitart, Kris Lannin-Liang, Zack Mikalonis, Alessandra Moyer, Alyssa Olenberg-Meltzer, and Jim Tietz

USFWS crew included: Jonathan Shore

Dec 3: “Hokahey” (skipper Jan Passion) brought out resupplies for seasonal switch and Point Blue winter crew Ryan Berger, Marjorie Cox, Sarah Guitart, and Alessandra Moyer. Three people toured the island. The seasonal switch was canceled due to deteriorating sea and weather conditions early in the North Landing process. No gear was transferred and the three people that toured the island departed.

Dec 7: USACE “Dillard” (skipper Kixon Meyer and crew) performed the backup seasonal switch patrol run for Point Blue. The winter crew of Ryan Berger, Marjorie Cox, Sarah Guitart and Alessandra Moyer arrived to the island along with supplies. No one toured the island. Departing were Fall crew members Boo Curry, Jacob Drucker, Alyssa Olenberg-Meltzer and Jim Tietz. Fall crew member Zack Mikalonis remained on the island as the carry-over intern.

Dec 18: “Steadfast” (skipper Kixon Meyer) brought out resupplies, Point Blue winter intern Kris Lannin-Liang and USFWS’s Jonathan Shore. Three people toured the island. Departing the island were Point Blue’s Zack Mikalonis and Alessandra Moyer.

Dec 21: USCG Helicopter departed the island with USFWS’s Jonathan Shore.

Dec 30: “Starbuck” (skipper John Wade) brought out resupplies, Point Blue winter intern Ross Nichols and Farallon program manager Russ Bradley. Departing the island was Point Blue biologist Ryan Berger.

West End Island Visitors

Dec 14: Berger, Cox, Guitart and Moyer West End to conduct pinniped research.

Weather/Ocean

The month of December was “typical” early winter conditions with a mix of southerly and northwesterly winds and a few calm periods. Total precipitation recorded this month equaled 4.47 inches, which fell mostly during three significant storms and several minor disturbances. Mean noon day air temperature was 12.5°C, with a standard deviation of 0.54°C, a high of 15.0° C recorded at 1200 on the 9th and 21st, and a low of 6.5° C

recorded at 0600 on the 24th. Mean sea surface temperature was 11.92°C, with a standard deviation of 0.54°C, a high of 12.92°C on the 2nd and a low of 11.11°C on the 31st.

Oiled & Entangled Wildlife

California Sea Lion – Six individuals with embedded entanglements (5 unknown, 1 rope) around the neck were observed this month.

Breeding Birds

Ashy Storm-Petrel – The first predated bird by Burrowing Owls was detected on the path to Light House Hill on Dec 12. No other observations were detected this month.

Leach's Storm-Petrel – None were noted this month.

Brandt's Cormorant – Many were observed roosting on offshore islets and foraging in feeding flocks around the island.

Pelagic Cormorant – Adults were observed roosting at normal roost sites.

Double-crested Cormorant – None were seen this month.

Western Gull – The number of birds roosting fluctuated throughout the month. By month's end many mornings resulted in the majority of the colony attending territories. It was noted throughout the Fall and into the Winter that birds were regurgitating pelagic red crab.

California Gulls – The number of birds roosting at night on the Marine Terrace and in the bays fluctuated.

Common Murre – Murres attended in large numbers sporadically throughout the month which seemed to coincide with calm periods prior and after large storm events.

Pigeon Guillemot – None were seen this month.

Cassin's Auklet – Many were heard at night vocalizing and freshly dug burrows were seen the next day on multiple occasions this month.

Rhinoceros Auklet – One individual was seen on multiple occasions foraging off East Landing and Blowhole Peninsula towards the second half of the month.

Tufted Puffin – None were seen this month.

Black Oystercatchers – Birds were observed roosting at usual locations along shoreline.

Canada Goose – None observed this month.

Pinnipeds

The lighthouse pinniped census was conducted three times this month.

California Sea Lion – Diet analysis via fecal samples were conducted early this month with 25 samples processed. An increase in detection of shark bitten animals was noted during the second half of the month (5 individuals). Overall numbers

declined throughout the month, and the count of 898 animals on the 31st was the lowest of the year. Very few *Zalophus* were observed on the Marine Terrace this month. The mean lighthouse count was 1652, with a high count of 2511 on the 1st.

Steller Sea Lions – Overall numbers were relatively stable this monthly but with a spike in numbers during the middle of the month and a decline at the end. The mean lighthouse count was 88, with a high of 152 counted on the 17th.

Northern Elephant Seal – Numbers continued to slowly decline as immature animals departed the island. The mean lighthouse and ground count was 146, with a high count of 171 on the 16th. The winter crew began daily monitoring breeding animals in the middle of the month. By month's end there were 4 cows and 4 pups with several large sub-adult males but no bulls on the island. The nursing behavior study began at the end of the month. The thermography study is in the beginning stages and will be in full swing during January. On the 28th it appears that an extremely rare set of twins was born to a cow in the Sand Flat colony. While the birth was not observed, the extremely small number of cows and observations from the 28th suggest this to be the most likely outcome, which we will try to get genetic samples to confirm.

Harbor Seal – Numbers were variable due to persistent large swells and coincident high tides (high tide or swell result in reduced haul out areas). The mean lighthouse count was 41, with a high of 104 counted on the 23rd.

Northern Fur Seals – Overall numbers decreased as more of the colony heads out to sea for the winter. The mean lighthouse count was 146, with a high of 171 counted on the 16th. One ground count was conducted on West End Island on the 22nd. This survey counted 140 individuals.

Cetaceans

There were 15 one-hour standardized whale watches conducted this month using the Apple iPad and Spotter App. Numbers below include individuals seen incidentally.

Humpback Whale – They were observed almost every day this month, for a total of 63 sightings. The high count was 15 observed on the 6th. One juvenile appears to now be resident at the island.

Gray Whale – A single individual was seen resident at the island throughout the month. Migrants began being regularly observed on the 17th. In the 2nd half of December there were 37 gray whale sightings.

Risso's Dolphin – 10 were seen on the 28th.

Unidentified Whale – In addition to the whales listed above, 22 unidentified whales were also seen.

Sharks

One attack was seen this month when a shark breached after a pinniped in Fisherman's Bay on Dec 11.

Bats

None detected.

Salamanders

Three standard surveys were conducted. The survey on the 8th detected 24 salamanders (22 large and 2 small), while the survey on the 16th detected 29 (28 large and 1 small), and the survey on the 31st detected 23 (2 tiny, 3 small, and 18 large). All salamanders caught on the 8th and 16th were swabbed for chytrid fungus as part of a new project collaboration with San Francisco State University professor Vance Vredenburg (with new graduate student Alessandra Moyer). The island-wide survey was conducted on the 29th and detected 20 individuals: 1 small and 19 large. All of these individuals were swabbed for chytrid fungus.

Owls

To our knowledge no new birds arrived on the island in December. Fall Burrowing Owl intern, Zack, introduced the winter crew to the monitoring protocol and location of recently used roosts. The winter crew will continue to conduct surveys daily. At month's end there was thought to be 4-5 owls on the island (PRBO, CGCat, LHH, Heligoland Hill and Tower Point). One Barn Owl was detected several times throughout the month.

Crickets

No cricket surveys were conducted this month.

Mice

Two island-wide trapping surveys were conducted this month, showing a marked decline in mouse abundance. The first three-night session was concluded on the 14th and had a 19% success rate, while the second session was concluded on the 29th and had 18% success.

Violations

Dec 27th – A white Carver (CF 7002 GN) was fishing in many location around the island inside the MPA. Attempts to hail on the marine radio were not fruitful. The violation was called in to CalTips with a description of vessel and people on board.

Maintenance

Island biologists conducted routine maintenance checks on the PV system and generators weekly. Monthly changes of water filters, crane greasing and outboard motor operation were also conducted. In the middle of the month the water catchment pad was weeded to allow for better water catchment. Water was successfully pumped from the Settling Tank to the Cistern upon arrival after collection during late November and early December.

The pump does appear to lose its prime after each pumping event which is time consuming in re-priming the system. Further examination should be conducted to remedy this problem. On December 20th the leaky radiator on the PV generator was replaced with a new radiator. The entire coolant system was flushed with distilled water 3 times in order to clean out the cooling system. On December 21st the 10 hour engine oil and filter change was conducted on the 25 hp Yamaha engine on the Zodiac. The fuel pump portion of the Webasto was taken off the island by Jonathan Shore in order to troubleshoot potential problems and replace.

Maintenance Needs

- The Safeboat and engine need to be serviced and returned to the island
- Repair liner in the Gravity tank
- The 30Kwh Kohler “Speedwagon” has a small but persistent coolant leak apparently emanating from the water pump. While the leak seems to have subsided in the last couple of months, it should still be monitored carefully.
- The dumper jet battery appears to be losing its charge quickly despite regular recharges. The reason for the rapid discharging is not known. The batteries are fairly new so the issue may be with the charger not bringing them up to full capacity.
- Webasto heater is not functioning and needs a new fuel pump. Currently off island.
- Cistern is losing water at a rate ~250 gallons per month and needs to be inspected.
- Settling Tank appears to have a leak in it when water is above 5.1 feet
- Some of the wooden railing on Light House Hill still needs repair.
- Cart path rail line needs several major repairs.
- Clean water line going to upstairs bathroom in PRBO house needs to be cleared to increase water pressure.
- PRBO upstairs toilet needs to be fixed so it flushes properly.
- Drain line from PRBO kitchen sink needs to be replaced.
- Front door and frame to PRBO house are rotting at bottom corner and need to be repaired or replaced. The weather stripping for all doors needs to be replaced to keep out weather, flies, and mice.
- Refurbishment of North Landing platform

Solar/Electric

PV System

Weekly checks were conducted on Wednesdays. All five arrays were on this month.

Generator run times

White Kohler (Buffy): 3 hours

Black Kohler (Speedwagon): 3.2 hours

PV Kohler: 16.3 hours

Webasto: Not working

Power Used: Start of month = 56,934; end of month = 57,500 for a total of 566 kwh

Fuel Reserves

Fuel Remaining:

Drums: 6 X 55g = ~330 gallons

PV Kohler Tank: $\frac{3}{4}$ Full

White Kohler Tank: Full

Black Kohler Tank: Full

Webasto Tank: $\frac{1}{4}$ full

Diesel Fuel used in December: 0 gallons

Water Reserves

Cistern: ~ 98,300 gallons (7'3")

Gravity Tank: empty

Settling Tank: 3 feet

3 water pumping sessions moved 15 feet of settling tank water into the cistern.

Water use at PRBO house water meter was 2,975 gallons.

Sightseeing Boats

Numbers of people on board are estimates.

Kitty Kat was sightseeing on 2 days with ~10 people onboard.

Sea Wolf was sightseeing on 3 days with ~10 people on board.

Huli Kat was seen on 1 day with an unknown number of people on board.

Non Breeding Birds

Pacific Loon, Common Loon, Eared Grebe, Western Grebe, Black-footed Albatross, Northern Fulmar, Pink-footed Shearwater, Sooty Shearwater, Short-tailed Shearwater, Black-vented Shearwater, Brown Booby, Blue-footed Booby, Northern Gannet, Brown Pelican, Surf Scoter, Black Scoter, Northern Harrier, Red-tailed Hawk, American Kestrel, Peregrine Falcon, Western Willet, Wandering Tattler, Whimbrel, Black Turnstone, Rock Sandpiper, Red Phalarope, Parasitic Jaeger, Pomarine Jaeger, Heermann's Gull, Herring Gull, Thayer's Gull, Glaucous-winged Gull, Black-legged Kittiwake, Ancient Murrelet, Barn Owl, Burrowing Owl, Black Phoebe, Tree Swallow, Barn Swallow, Rock Wren, American Robin, Varied Thrush, American Pipit, Audubon's Warbler, Myrtle Warbler, Western Palm Warbler, Sooty Fox Sparrow, Savannah Sparrow, White-crowned Sparrow, Golden-crowned Sparrow, Oregon Junco, Western Meadowlark.