

Farallon Islands Monthly Report

Report to the U.S. Fish and Wildlife Service Farallon Islands National Wildlife Refuge

June 2019

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Point Blue Conservation Science – Point Blue advances conservation of birds, other wildlife and ecosystems through science, partnerships and outreach. Our highest priority is to reduce the impacts of habitat loss, climate change, and other environmental threats while promoting nature-based solutions for wildlife and people, on land and at sea. Visit Point Blue on the web www.pointblue.org.

Island Visitors

Point Blue crew: Sean Gee, Eva Hasegawa, Mike Johns, Cole Jower, Grace Kumaishi, Haley Land-Miller, Amy Miles, Theresa Rizza, Maya Sterett, Pete Warzybok. **San Jose State University:** Scott Shaffer. **USFWS:** Yeimy Cifuentes, Gerry McChesney, Michael Pierson. **Contractor:** Paul Holzberger

June 1st: **“Outer Limits”** (skipper Jim Robertson) brought out USFWS Team Spinach crew Gerry McChesney, Yeimy Cifuentes, and Michael Pierson. Departed with Pete Warzybok, Haley Land-miller, and Scott Shaffer. The following people toured the island. **Point Blue:** Nancy Gamble, Mani Oliva, Ryan DiGaudio, Elizabeth Cameron, Anki Gelb, Larry Gelb, Tina Humphrey, Mack Mushkat, Scooter Simmons, Robert Stevenson, Julie Baldocchi, Bennett Smith. **USFWS:** Anne Morkill. **Electrician:** Paul Holzberger.

June 15th: **“Valkyrie”** (skipper Jamis MacNiven) brought out Pete Warzybok, Haley Land-miller, Eva Hasegawa, and Paul Holzberger. Departed with Mike Johns, Grace Kumaishi, Gerry McChesney, Michael Pierson, and Yeimy Cifuentes. 3 people toured the island.

June 16th: **"Salty Lady"** (skipper Jared Davis) picked up Paul Holzberger.

June 22nd: **"Salty Lady"** (skipper Jeff Knight) brought out Sean Gee and departed with Cole Jower.

June 29th: **"Starbuck"** (skipper John Wade) brought out Grace Kumaishi and Mike Johns. Departed with Maya Sterett, Theresa Riza, and Pete Warzybok. 2 people toured the island.

Weather/Ocean

Light to moderate northwest winds dominated the month of June, typical for the California coast during this time of year (Fig. 1). The island received no rain this month. A 2-day heat wave on the 10th and 11th resulted in a new record high air temperature for June and second highest ever recorded on SEFI, at 31 °C. The average temperature was 15.94°C, 1.95 °C higher than the long-term average for June (Fig. 2). The upper range of SST readings from the island stayed above the long-term range for this month, with an average of 12.16 °C. This was 0.63 °C higher than the long-term average SST for June (Fig. 2).

June Wind Rose

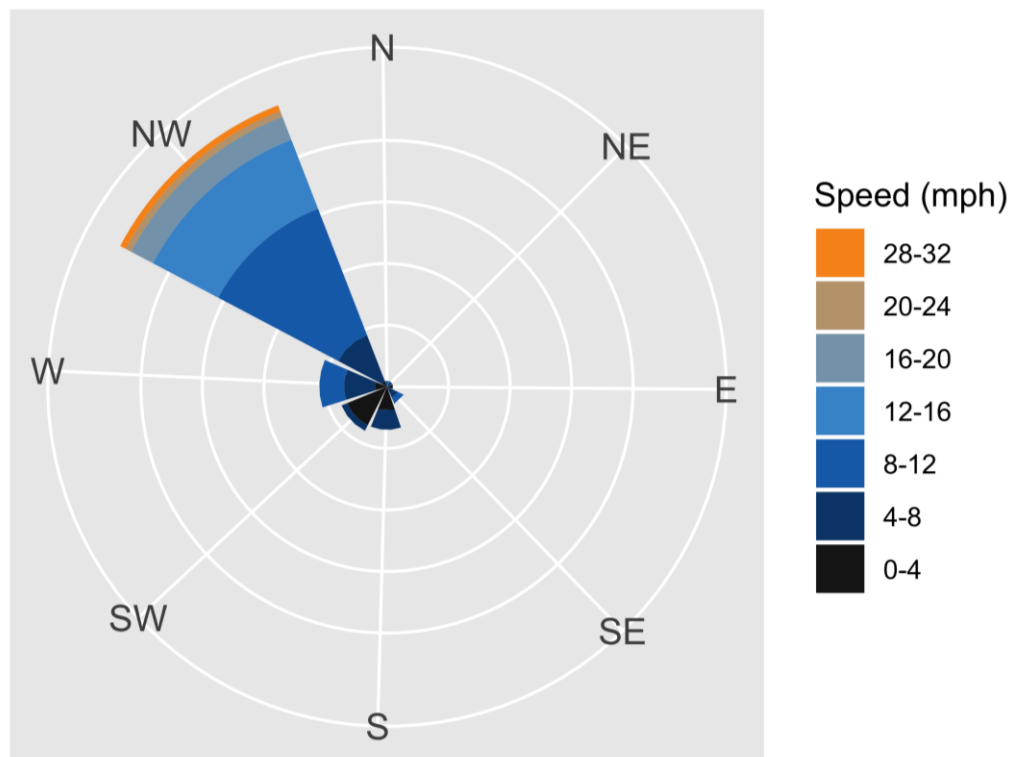


Figure 1. Summary of daily wind speed (color scale) and direction binned into sectors for morning, noon, and afternoon observations for this month. Larger bars means more wind from that direction.

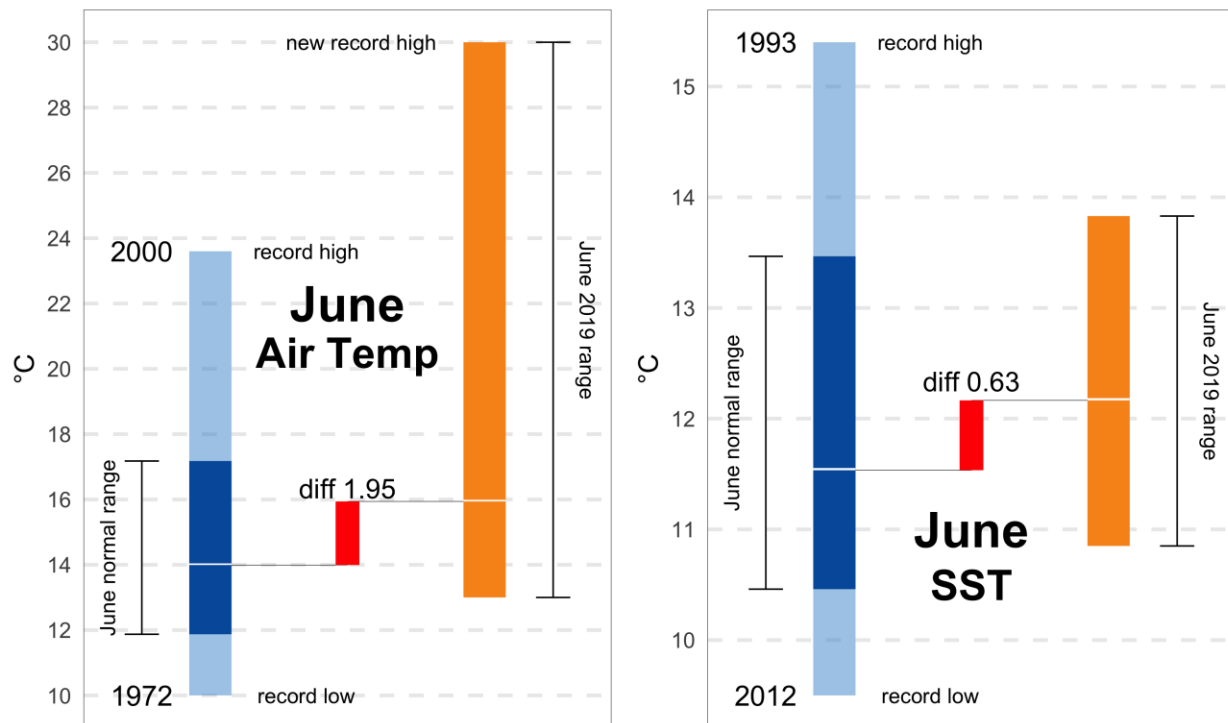


Figure 2. Noon air and sea surface temperature data summary. Light blue depicts the long-term (1971 – 2018) range of observations with years given for record highs and lows, dark blue shows the long-term “normal” range (average highs and lows). Orange depicts the range of current (2019) observations. Differences between the long-term and current means are shown in red if above normal, and blue if below normal.

Oiled & Entangled Wildlife

3 adult California Sea Lions were seen with monofilament embedded tightly around the neck, and a Common Murre was seen with a small patch of oil on its breast.

Breeding Birds

Storm-Petrels – Two standard 3-hour mist netting sessions were conducted this month. The first was at Lighthouse Hill on June 3th with 33 new and 9 recap ASSP, and 1 new LHSP. PIT tags were deployed on most birds and physiological samples were taken from 9 birds. The second session was at the Carp Shop on June 10th with 29 new and 1 recap ASSP. PIT tags were deployed on all birds and physiological samples were taken from 19 birds. Social attraction playbacks in the newly constructed storm-petrel artificial habitat, now called the “Ashy Castle”, began on June 14th, and were continued on a regular 3-day schedule during the two-week period around the new moon thereafter.

Brandt’s Cormorant – An all-island census was conducted on June 8th, followed by a boat-based census on June 10th. The first chicks were seen at both Sea Lion Cove and Corm Blinds on June 9th. Although this has been a poor year for most species, no major abandonment or chick deaths were observed for cormorants in June.

Pelagic Cormorant – An all-island census was conducted on June 8th, followed by a boat-based census on June 10th. The first eggs were seen on June 24th, but still very little nesting activity was noted.

Double-crested Cormorant – The first chicks were seen on Maintop using a spotting scope from the Lighthouse on June 11th. Hatching likely occurred a week prior given the difficulty of seeing recently hatched small chicks in the nests.

Western Gull – The first chicks in K-plot were discovered on June 6th. The first chicks were old enough to band in H-plot east on June 12th. Gull regurgs predominately consisted of anchovy.

California Gulls – 5-day breed checks continued throughout June, but very little nesting activity has been observed. Despite relatively large flocks of 30-100 on several occasions loafing on the Marine Terrace, only 2 well-built nests were found by the end of the month.

Common Murre – A series of unusual rain events in May, a record breaking heat wave in mid-June, and a presumed poor foraging year have led to many dead eggs and chicks in both followed plots. The first chicks at Upper Upper and Upper Shubrick were seen on June 13th and 14th respectively. Standard 2-hour diet watched began on June 19th, with anchovy the dominate prey seen in the murre chick diet. To summarize the common murre GPS tagging study this season, graduate student Sean Gee deployed 20 (6 at USP, 14 at SLC) and recovered 16 (6 at USP, 10 at SLC) GPS tags during the incubation period, and deployed 12 (10 at USP, 2 at SLC) and recovered 9 (8 at USP, 1 at SLC) during the chick-rearing period. 7 tags paired with TDR's were recovered, and 2 were lost.

Pigeon Guillemot – Productivity for guillemots appears to be low this year, with very few second chicks surviving and fewer active sites than in previous years. The first chicks were found during regular breed checks on June 11th. A total of 18 GLS tags were recovered this year, including 2 that were deployed in 2017. Preliminary model runs again show them traveling to British Columbia in the winter. A total of 30 geolocator devices were deployed at sites on Lighthouse Hill and Garbage Gulch during June.

Rhinoceros Auklet – Similar to other species this year, rhinoceros auklet productivity is also down. There have been many abandoned chicks, with even more showing signs of slow growth or losing weight by the end of the month. The first chicks were found on June 5th. Standard netting sessions to collect diet samples began on June 22nd. The first round of collections revealed almost exclusively large anchovy in rhino diet this year, many of which were larger than the chicks could swallow. As part of the graduate work of Cole Jower with San Jose State University to understand the foraging patterns of provisioning parents, 10 GPS/TDR combo tags were deployed on breeding adults, 5 of which were recovered.

Tufted Puffin – Early season puffin surveys were completed on June 13.

Cassin's Auklet – This has been an extremely poor year for Cassin's auklets. We noted numerous dead chicks during the month of June, with only 10 nest boxes with chicks in the PRBO productivity study. There was very little activity of auklets at night, making it difficult to collect diet samples. Of the 17 samples we've collected so far, most contained mysids and few contained substantial amounts of krill. The first fledging event occurred in a known-age nest box on June 27th. We deployed 30 light-sensing geolocator tags on known-age adults to continue the study of non-breeding winter movements.

Pinnipeds

California Sea Lion – Numbers are noticeably down this year. On average there were 3,092 (SD \pm 327) individuals counted during the weekly pinniped census from the lighthouse, with a high count of 3,471 individuals on the 20th. There was a high count of 468 pups on the 20th.

Steller Sea Lions – On average there were 167 (SD \pm 8) individuals counted, with a high count of 176 on the 14th. There was a high count of 102 pups on the 8th.

Northern Elephant Seal – There were between 3 and 32 individuals counted in June.

Harbor Seal – Harbor seal numbers were variable, due to the variety of tide and swell conditions during the weekly census. On average there were 60 (SD \pm 12) individuals counted, with a high count of 74 on the 20th.

Northern Fur Seals – Fur seal numbers sharply increased throughout June, reflecting the arrival of females and new pups. The mean of the weekly lighthouse census counts was 359 (SD \pm 227) individuals, with a high of 648 on the 28th. The expansion of individuals from the Indian Head colony continues, with many seen around Jordan Channel and on Weather Service Peninsula, and a single animal on Sand Flat. There was a high count of 308 pups on the 28th.

Cetaceans

Standard Survey – Due to poor sighting conditions, only 7 one-hour standard whale watches were conducted this month from the Lighthouse using the Spotter App. Daily high counts from standard watches combined with incidental observations are summarized in Figure 3. No dolphins were observed.

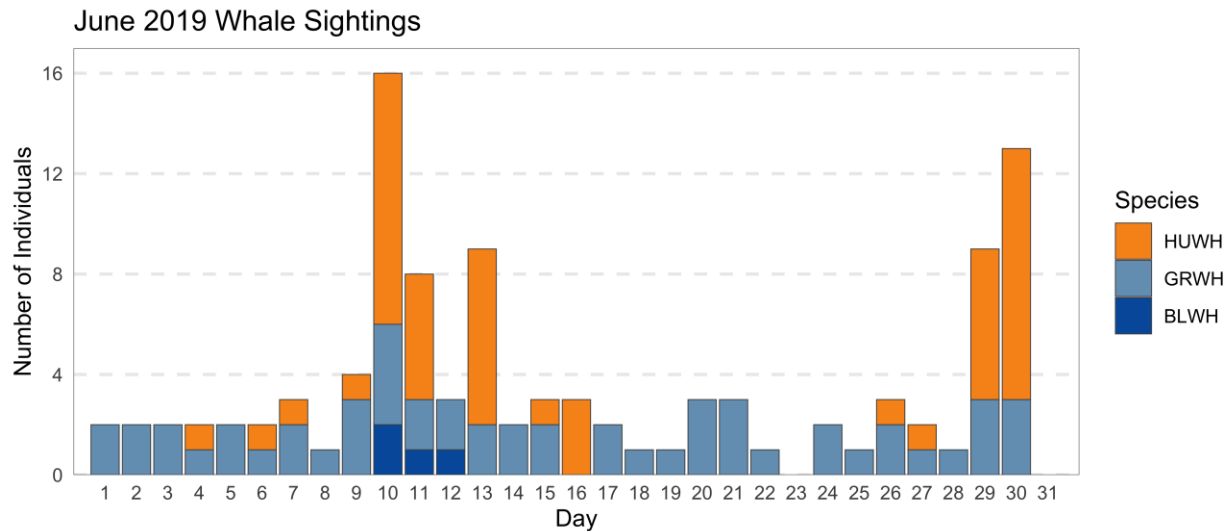


Figure 3. Daily high counts of Cetaceans from SEFI. HUWH = humpback whale, GRWH = gray whale, BLWH = blue whale.

Sharks

No predation events this month.

Salamanders

No surveys were conducted.

Owls

No burrowing owls were observed.

Crickets

Finished a 3-night standard survey session at Corm Blind, Gap, and North Landing pocket caves and Rabbit Cave on June 14th.

Bats

None were observed.

Mice

No mouse trapping sessions were conducted.

Inverts and Intertidal

There was a dense concentration of sea nettles (genus *Chrysaora*) seen in Fisherman's Bay on June 26th.

Oceanic Events

Nothing to report.

Plants

USFWS “Team Spinach” conducted invasive plant control in accessible areas in June. This included pulling and praying mustard (*Sisymbrium*), spinach, *Malva* sp., *Sonchus* sp., and *Chenopodium* around the cistern and water catchment pad. They also spent many days spraying *Tetragonia*, *Plantago*, *Malva* sp., *Chenopodium*, *Sonchus* and *Erharta* at Rabbit Cave, the Marine Terrace, around the house, Carp Shop, and Powerhouse. Several mustard plants were found and removed on the marine terrace and around the Catchment Pad. Extensive germination of *Lasthenia* and spinach was observed, most likely in response to heavy May rains.

Violations

Two recreational fishing boats were seen actively fishing within the no-take reserve. Both were successfully hailed on channel 16 and both were convinced to stop fishing and leave the area.

Maintenance

Island biologist Johns conducted routine weekly maintenance checks on the PV system and generators. Monthly changes of water filters and crane greasing were conducted. In addition, electrician Paul Holzberger of P&H Electric conducted repairs and inspections on June 1 and 15. The electrical short in the PRBO House was fixed. The locking mechanism on the East Landing crane control panel had not been working. Paul found that the inside of the handle needs to be sprayed with WD40 regularly (it now works). He also inspected the electrical panel during crane operations to attempt diagnosis of occasional breaker trips. He found that the crane lift motor contactors chatter when engaged, indicating a problem. He recommends replacing the contactors.

Maintenance Needs

- The PV and Buffy generators are supposed to automatically start to give themselves monthly exercise. This is not happening, requiring they be manually started for exercise. (Exercise not needed during the winter months.)
- The cistern and other elements of the water catchment system are showing their age and are need of major repairs or replacement. The cistern continues to lose water at a rate ~250 gallons per month.
- The Settling Tank also appears to have a leak in it when water is above 5.1 feet.
- The Settling Tank measuring stick came undone and fell into the tank.
- Many sections of the wooden railing on Lighthouse Hill need repair.
- Several separations have been seen on the East Landing derrick slewing rope, possibly from jogging the slew.
- Substantial corrosion of the wedge-socket on the East Landing block.

- Several inches of water accumulate in the pipe shop after a good rain. A new threshold is needed to seal the door. Also, there could be a crack in the foundation.
- Several grease points on the crane are having difficulty taking grease.
- There are several broken sections of pipe around the island which have received temporary repairs with compression sleeves. **Island-wide, the water pipes are in dire shape and need to be replaced.**
- The kitchen drain is not draining well despite multiple attempts to clear it. Due to the age of the plumbing and the ongoing difficulty servicing pipes under the house, it may be necessary to abandon the current plumbing and install new pipes outside the house to connect the sinks and showers to the gray water system.
- The PRBO house kitchen counters especially around the sink continue to deteriorate. Replacement sometime in the next year is recommended.
- Very small coolant leak in 30kw Speedwagon generator radiator fins. Radiator needs to be replaced.
- Slow but steady leak in the PRBO fire hose spigot.

Solar/Electric

PV System

Distilled water used:	10 gallons
Distilled water reserves:	35 gallons

Generator run times

Kohler 15ROZ (Buffy):	2.7 hours	(1738.7 on meter)
Kohler 30REOZJC (Speedwagon):	0.8 hours	(611.7 on meter)
Kohler 40REOZK (Zeke):	15.6 hours	(314.9 on meter)
Kohler 15ROY61 (Peevey):	0 hours	(3882.5 on meter)
Webasto:	0 hours	

Power use

Facilities power use: Start = 77,697; End = 78,365; for total of 668 kWh

Fuel Reserves

Diesel used:	0 gallons
Diesel drums: 15.3 @55gal:	841 gallons
Kohler 15ROZ (Buffy) Tank:	7/8
Kohler 30REOZJC (Speedwagon) Tank:	7/8
Kohler 40REOZK (Zeke) Tank:	3/4
Kohler 15ROY61 (Peevey) Tank:	Full
Webasto Tank:	Full
Surplus gasoline for boat motors:	3.5 gallons
Safeboat tank:	Full
Zodiac tank:	Full

Water Reserves

Water used this month: Start = 259,450; End = 263,783; for a total of 4,333 gallons
Cistern: 7.75' or ~ 105,720 gallons

Gravity Tank:	empty
Settling Tank:	empty

Sightseeing Boats

The Salty Lady was seen on 11 occasions with an average of ~ 30 POB, the Sea Wolf on 3 occasions with ~ 10 POB, and Tiger Fish on 1 occasion with 25 POB.

Non-breeding birds

Clark's Grebe, Sooty Shearwater, Brown Booby, Brown Pelican, Canada Goose, Peregrine Falcon, Whimbrel, Phalarope sp., Glaucous-winged Gull, Caspian Tern, **Ancient Murrelet (2 adults with one half-grown chick off East Landing, June 1 and 10; first record of a chick in California)**, Eurasian Collared-dove, Barn Owl, **Costa's Hummingbird**, **Olive-sided Flycatcher**, Western Wood-pewee, **Pacific-slope Flycatcher**, Black Phoebe, **Ash-throated Flycatcher**, Barn Swallow, Red-breasted Nuthatch, **Gray Catbird**, **American Pipit**, Cedar Waxwing, Orange-crowned Warbler, Yellow Warbler, **Chestnut-sided Warbler**, **Magnolia Warbler**, Myrtle Warbler, Hermit Warbler, **Black-and-white Warbler**, **American Redstart**, **Ovenbird**, Common Yellowthroat, Wilson's Warbler, **Canada Warbler**, Western Tanager, Chipping Sparrow, White-crowned Sparrow, Oregon Junco, Rose-breasted Grosbeak, **Lazuli Bunting**.