

Farallon Islands Monthly Report

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

April 2021

Amanda Spears, Pete Warzybok, Mike Johns aspears@pointblue.org

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: Danielle Devincenzi, Rebecca Forney, Mike Johns, James Lee, Amy Miles, Amanda Spears, and Pete Warzybok.

Bonny Doon Environmental Systems, Inc. contractors: David Gill, Michael Guilbert, and Gary McNeil.

April 2nd: **Army National Guard** arrived via Chinook helicopter and departed with 8.5 years' worth of septic sewage. Five people toured the island.

April 3rd: **Bonny Doon** contractors departed via helicopter (arrival was on March 31st).

April 12th: **"So Good"** (skipper Harmon Shragge) brought out Danielle Devincenzi and Pete Warzybok, departed with Mike Johns.

West End Island Visitors

None

© 2021 Point Blue Conservation Science

COVID-19: In response to ongoing concerns over impacts of this global pandemic, certain precautionary measures were taken this month to minimize the risk of COVID-19 infecting island personnel: staff and research assistances were required to quarantine for a minimum of 14 days prior to arrival and provide proof of a negative test; the use of PPE by crew members and island personnel was required during the patrol runs and landing operations; and no offisland breaks were granted to crew members. Only essential personnel are currently permitted on the island until further notice.

Weather/Ocean

Monthly weather is summarized in Figure 1. Moderate to strong NW winds dominated this month and the island received 0.35 inches of rain, most of which occurred on the 25th. The range of midday air temperatures fell within the long-term normal range for this month, with an average of 12.24 ± 1.53 °C. This was 0.81 °C lower than the long-term average for the month. Sea surface temperature (SST) readings from the island were considerably lower than the longterm normal range for this month, with an average of 10.81 ± 0.29 °C. This was 1.42 °C below the long-term average for the month.

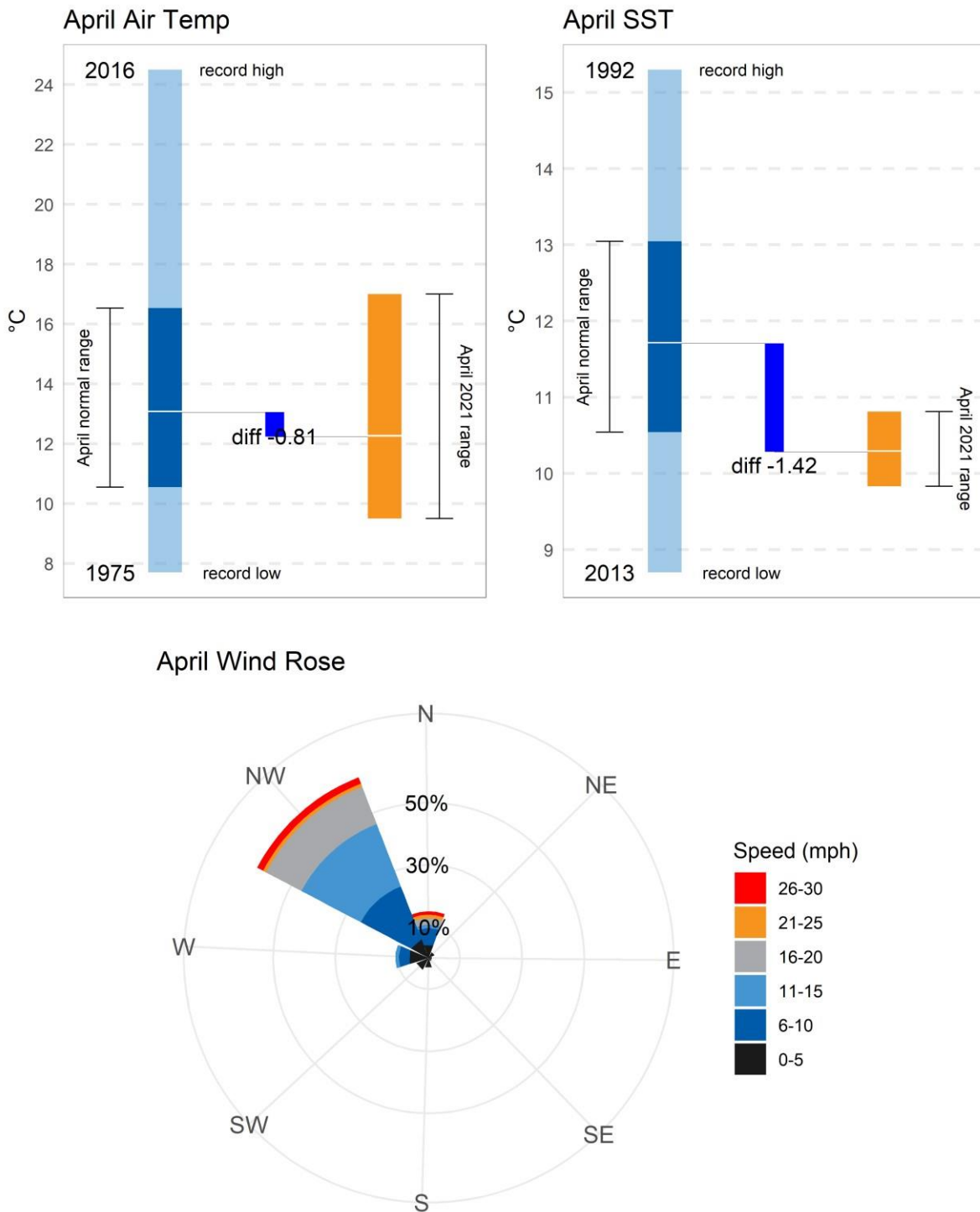


Figure 1. Noon air and sea surface temperature data summary. Light blue depicts the long-term (1971 – 2020) range of observations with years given for record highs and lows; dark blue shows the long-term range of averages for April. Orange depicts the range of current (2021) observations. Differences between the long-term and current means are shown in red if above normal, and blue if below normal. Daily wind speed (color scale) and direction binned into sectors for morning, noon, and afternoon observations for this month. Larger bars indicate more wind from that direction.

Oiled & Entangled Wildlife

One immature Western Gull was observed at North Landing with a thick oil coving 50% of its body.

Two *Zalophus* were seen with unknown material embedded in their necks.

Feeding Flocks

April 2nd: One feeding flock was observed one mile south of the island; 300 gulls were observed feeding on an unknown food source.

April 22nd: One feeding flock was observed five miles southwest of the island; 2,000 gulls and four unknown cetaceans were observed feeding on an unknown food source.

April 25th: One feeding flock was observed three miles southeast of the island; 1500 gulls, cormorants, and murres present feeding on an unknown food source.

Breeding Birds

Storm-Petrels – One standard 3-hour mist netting session was conducted at the Carp Shop this month; 38 total birds captured (33 new and 5 recaptures). Two Leach's storm-petrels were detected, but not captured. The first wing walk surveys began on the 7th. The first social attraction effort at the ashy castle began on the 5th and was completed on the 19th, one adult was observed attending from within on the 8th. Song meter ARUs were deployed on the 21st.

Brandt's Cormorant – The first well-built nests were noted during a breed check on the 15th. By the 20th, significant abandonment of breeding sites island-wide had occurred in relation to consistent and strong gale-force winds we had experienced through the latter half of the month.

Pelagic Cormorant – The first breed check of the season began on the 5th. Many adults continued to attend well-built nests through the end of the month, and the first egg was observed at XX Channel on the 29th.

Double-crested Cormorant – The first breed checks of the season began on the 26th; 44 birds and 8 well-built nests were observed.

Western Gull –Resighting efforts in followed plots began on the 1st, and breed checks began on the 22nd. The first egg was observed on the 25th at a nest just off the path on Lighthouse Hill.

California Gulls – Numbers of adults seen on the island remain low. There was no evidence of breeding observed this month.

Common Murre – The first breed checks began in the Upper Upper and Upper Shubrick study plots on the 16th. An egg was discovered at site 210 in Upper Shubrick the same day, documenting the second-earliest lay date recorded on the island. The first egg in the Upper Upper study plot was observed on the 23rd. A leucistic murre was observed from the Corm Blind on the 9th.

Pigeon Guillemot – Ten new nest boxes were built and installed on Lighthouse Hill on the 6th. The raft count census completed on the 26th, with a high count of 3,010 individuals observed on the 12th. The first breed checks of the season began on the 27th; two sites at garbage gulch had two eggs, a tie for the earliest lay date ever recorded for the island.

Rhinoceros Auklet – The first breed checks of natural sites using a camera began on the 2nd. The first egg was observed in a natural burrow on the 7th and the first egg for the artificial nest box sites was detected on the 16th. Many birds began to attend and lay eggs in the nest boxes around the 21st.

Tufted Puffin – Several adults were seen regularly attending nearshore waters and known breeding sites throughout the month.

Cassin's Auklet – Chicks were detected for the first time this season on the 8th, with many sites to follow as the month progressed. PRBO boxes reached 91% occupancy and known-age boxes 75% occupancy. Temperature loggers were deployed in known-age boxes and clay modules on the 11th.

Amy Miles returned this month to complete validation experiments and physiological sampling of adults during the incubation and chick rearing periods; 78 paired fecal and plasma samples were collected during the incubation period. Physiological sampling for the chick-rearing period began on the 29th.

Black Oystercatchers* – Four to twelve individuals were observed daily either roosting or flying around the island, though no signs of breeding activity was detected.

**We no longer conduct dedicated monitoring of this species, and only incidental breeding behaviors and attempts are noted.*

Pinnipeds

Weekly counts have been postponed until May 15th. This was chosen to reduce workload for island biologists until the window of long-term peak numbers for all species, to reduce effort while still capturing high counts.

California Sea Lion – Scat sampling began on the 18th and was completed on the 29th, with 25 samples collected. Two aborted fetuses were observed at Sea Lion Cove on the 28th.

Harbor Seal – The first pup of the season was observed on the 18th.

Northern Fur Seal – A yearling was observed loafing around at Sea Lion Cove.

Canada Goose

Six nests were discovered this month, and the first chicks were observed on the 15th. By the end of the month, most of the nests and chicks were predated; 5 chicks from two families remain.

Cetaceans

Standard Survey – Nine one-hour standard whale watches were conducted this month from the Lighthouse using the Ocean Alert app. Several gray whales (up to 12 individuals) continued in nearshore waters around the island by the end of the month. A humpback whale mother and calf were observed traveling by the island during a standard survey on the 25th. A few fin whales traveled by the island on the 3rd and the 4th, and one minke whale was spotted near the island on the 3rd. Sightings for the month of April are summarized in Figure 2.

April 2021 Cetacean Sightings

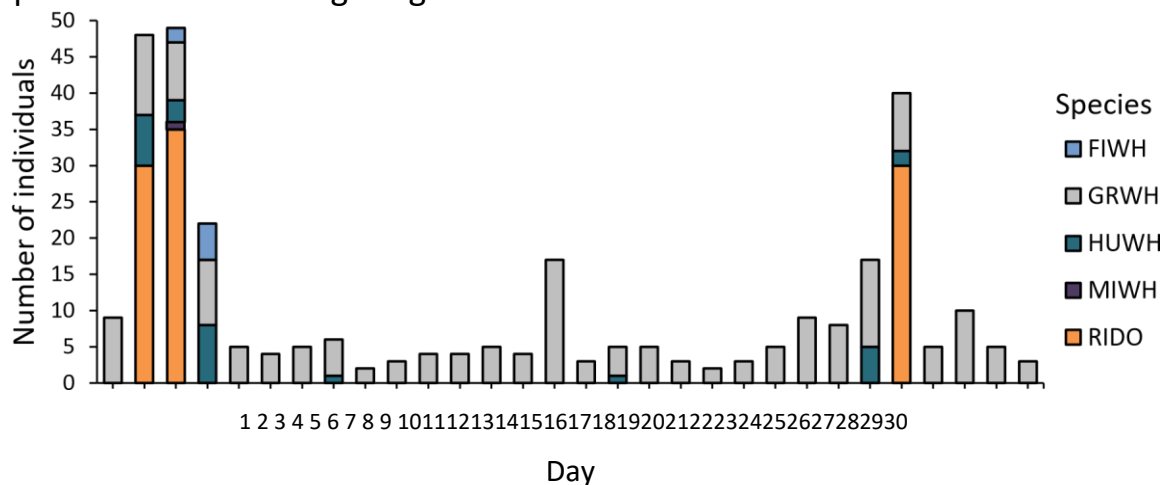


Figure 2. Daily high counts of cetaceans observed from Southeast Farallon Island for April 2021. FIWH = Fin Whale, GRWH = gray whale, HUWH = Humpback Whale, MIWH = Minke Whale, RIDO = Risso's Dolphin

Sharks

No shark attacks were confirmed this month.

Salamanders

Two standard surveys were conducted this month, one on the 2nd and the other on the 14th. Numbers of adults detected dropped considerably between the two surveys, from 20 individuals on the 2nd to 3 individuals on the 14th.

Owls

Two previously unidentified burrowing owls were observed during rhinoceros auklet camera checks on the 12th, one in burrow 376 at the Rabbit Cave Catacombs and the other in crevice 325 at the PRBO Catacombs. Daily owl surveys ended on the 18th after the last remaining bird on the east terrace was not detected for several days.

Crickets

Three nights of standard cricket surveys at Rabbit Cave, and pocket caves at Corm Blind Hill, The Gap, and North Landing were carried out on the 23rd, 25th, and 27th. The highest densities of crickets were observed in Rabbit Cave and the North Landing pocket cave.

Bats

No bats were detected this month.

Mice

Mice were infrequently detected this month.

Inverts

A black widow was seen in the Pumphouse.

Plants

Nothing to report this month.

Violations

April 2nd: One small fishing vessel was observed actively fishing within the MPA just off Saddle Rock.

Maintenance

Island biologists Spears conducted routine weekly maintenance checks on the PV system and generators. Monthly changes of water filters and crane greasing were conducted. The water quality test for March came back negative for Coliforms and E. Coli. David Gill and two assistants from Bonny Doon began routine maintenance of the septic system and prepared for

the scheduled pump-out of the septic waste on April 2nd. The waste was pumped into another septic tank and flown back to the mainland for disposal.

Additional maintenance performed this month are as follows:

- The rail cart was rebuilt with wood. It is quite solid and heavy now. However, wheels and axles are still heavily corroded.
- The door to the Murre Blind was fixed and reinforced with a fresh hinge and screws.
- Pumped the remaining sludge water from the Settling Tank into Garbage Gulch.
- Speedwagon was exercised for four hours this month.
- The PV batteries were topped off with 12 gallons of distilled water.
- The large, old wooden box on the Helo Pad was finally disassembled. Lots of solid 2x4s and large sheets of plywood were stored in the Carp Shop.

Maintenance Needs

- PV system charge controllers 3 and 4 are not functioning and need to be replaced.
- 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 has a leak in it when water is above 5.1 feet.
- The PRBO house kitchen counters especially around the sink continue to deteriorate. Replacement sometime in the next year is recommended.
- The HADS weather station is no longer transmitting data to the web. Attempts to reset the unit have failed and will require expert guidance to fix.
- The gutters and flashing on both houses are degrading and will need to be improved or replaced.
- Aluminum railings at East Landing and the lighthouse need repair.
- Powerhouse roof-access ladder mounts are badly corroded and need to be replaced.
- There are several locations in the PRBO house that show evidence of moisture penetration in the ceiling and/or walls. This includes a small leak in the closet next to the downstairs bathroom and recent water staining in the Walk-Through Room. Will continue to monitor but a professional roof inspection is recommended.
- The load cell battery and antenna at the EL crane were replaced, but now the load cell needs to be recalibrated. A2B is also non-functional.
- The Speedwagon generator continues to encounter rotor lock shutdown faults. This is likely due to a bad starter solenoid.
- The fresh water flow meter in the PBRO water closet is not functioning despite replacing the batteries.

- The diesel fuel pump flow meter in the Powerhouse is not functioning despite replacing the batteries.
- The rail cart axles are badly corroded and may need replacement in the near future.

Solar/Electric

PV System

Distilled water used: 12 gallons

Distilled water reserves: **Generator** 42 gallons

run times

Kohler 30REOZJC (Speedwagon): 4.4 hours (683.2 on meter)

Kohler 40REOZK (Zeke): 3.9 hours (580.5 on meter)

Kohler 15REOZK (PeeVee Herman): 8.3 hours (54.5 on meter)

Webasto: 16.5 hours

Power use

Facilities power use: Start = 90,860; End = 91,436; for total of 576 kWh

Fuel Reserves

Diesel used: approximately 20 gallons*

Diesel drums: 6@55gal ~350 gallons

Kohler 15REOZK (PV) Tank: 3/4

Kohler 30REOZJC (Speedwagon) Tank: Full

Kohler 40REOZK (Zeke) Tank: Full

Webasto Tank: Full

Gasoline for portable generator/boats: 21 gallons (9 gallons racing)

6 gallon boat tank: Full

3 gallon boat tank: Full

Water Reserves

Water used this month: Start = 315,695; End = 318,942; for a total of 3,247 gallons

Cistern: 5'9" or ~71,250 gallons

Gravity Tank: empty

Settling Tank: empty

Drinking water: 14 5-gal jugs

Sightseeing Boats

April 4th: The Salty Lady, 20 POB

April 12th: The Reuben Lasker (NOAA research vessel) passed within a half a mile of the island

April 17: The Salty Lady, 25 POB

April 18th: The Salty Lady, 10 POB

April 22nd: The Free to Be, 10 POB

April 24th: The Salty Lady, 9 POB

April 25th: The Salty Lady, 13 POB

Non-breeding birds

Pacific Loon, Common Loon, **Horned Grebe**, Red-necked Grebe, Eared Grebe, Black-footed Albatross, Sooty Shearwater, Brown Booby, Northern Gannet, **Greater White-fronted Goose**, Canada Goose, Surf Scoter, **Black Scoter**, **Long-tailed Duck**, Peregrine Falcon, Wandering Tattler, Whimbrel, Black Turnstone, **Rock Sandpiper**, Red-necked Phalarope, Bonaparte's Gull, California Gull, Herring Gull, Iceland (Thayer's) Gull, Glaucous-winged Gull, Black-legged Kittiwake, Eurasian Collard-Dove, Burrowing Owl, Anna's Hummingbird, Pacific-slope Flycatcher, Western Kingbird, **Violet-green Swallow**, Barn Swallow, Ruby-crowned Kinglet, **Townsend's Solitaire**, Hermit Thrush, Orange-crowned Warbler, "Audubon's" Warbler, "Myrtle" Warbler, Townsend's Warbler, Common Yellowthroat, Wilson's Warbler, Savannah Sparrow, "Sooty" Fox Sparrow, Lincoln's Sparrow, White-crowned Sparrow, Golden-crowned Sparrow, "Oregon" Junco, Black-headed Grosbeak, Brewer's Blackbird, Western Meadowlark, Brown-headed Cowbird.

Bold indicates an unusual or noteworthy species.