

Farallon Islands Monthly Report

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

March 2021

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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.

Southeast Farallon Island Visitors

Point Blue crew: Mackenzie Cahill, Sabrina Dahl, Garrett Duncan, Rhett Finley, Rebecca Forney, Mike Johns, James Lee, Amy Miles, Anna Pedersen, and Amanda Spears.

March 3rd: **“Outer Limits”** (skipper Jim Robertson) brought out the Arcadis crew: Mia Jauregui, Tim Walker, Rob Moniz, Sarah Fioravanti, and Sarah Roy. Josh Gravenmier toured the island.

March 4th: **“Outer Limits”** (skipper Jim Robertson) departed with the Arcadis crew.

March 13th: **“Barbarossa”** (skipper Harmon Shragge) brought out James Lee and departed with Rhett Finley.

March 26th: **“John A.B. Dillard”** (skipper Kixon Meyer) brought out Amanda Spears, Mike Johns, Rebecca Forney, and Amy Miles. They departed with Garrett Duncan, Sabrina Dahl, Anna Pederson, and Mackenzie Cahill. No persons toured the island.

March 31st: Contractors from Bonnie Doon were brought out via helicopter. One person toured the island.

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 off-island breaks were granted to crew members. Only essential personnel are currently permitted on the island until further notice.

West End Island Visitors

March 11th: Dahl, Duncan, Finley, and Pedersen conducted Northern Elephant Seal and Northern Fur Seal counts, tagged weaners, and recorded tag resights.

Weather/Ocean

Monthly weather is summarized in Figure 1. Light to moderate NW winds dominated this month and the island received 1.27 inches of rain. The range of midday air temperatures fell within the long-term normal range for this month, with an average of 12.47 ± 2.05 °C. This was 0.46 °C lower than the long-term average for the month. Sea surface temperature (SST) readings from the island were considerably lower than the long-term normal range for this month, with an average of 10.24 ± 0.19 °C. This was 2.14 °C below the long-term average for the month.

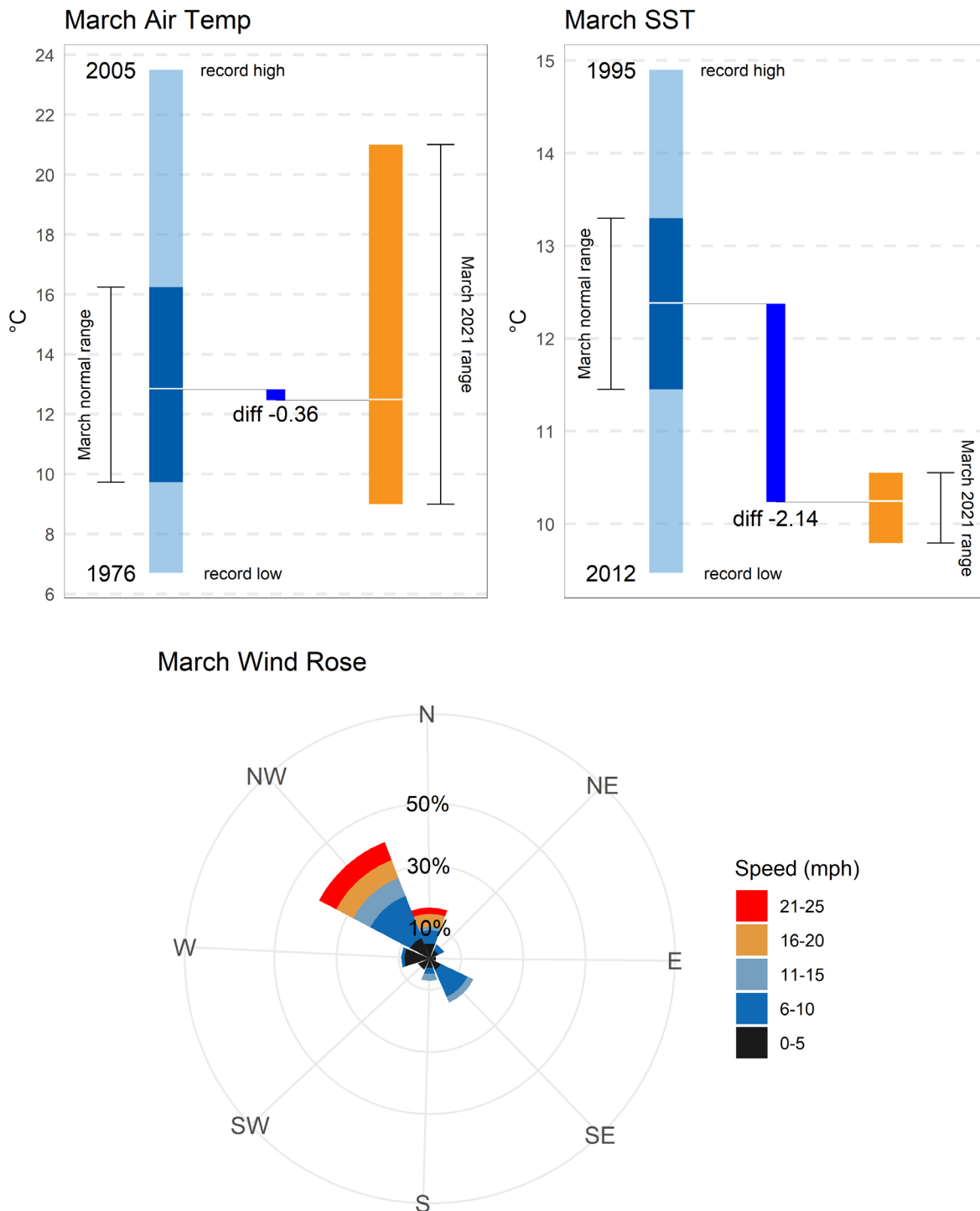


Figure 1. Noon air and sea surface temperature data summary. Light blue depicts the long-term (1971 – 2020) range of observations with years given for record highs and lows; dark blue shows the long-term range of averages for March. Orange depicts the range of current (2021) observations. Differences 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

Ten *Zalophus* were seen with monofilament, packing strap, fishing line or unknown material embedded in their necks.

Feeding Flocks

March 30th: One feeding flock was present 1.5 miles southeast of the island; 1500 gulls were observed feeding on an unknown food source.

Breeding Birds

Storm-Petrels – No storm-petrels were detected this month.

Brandt's Cormorant – Individuals were first detected attending and displaying at the Shubrick Cove colony on the 12th. Resighting at the Corm Blind and Sea Lion Cove colonies began on March 27th and the first breed checks and colony counts began on the 31st.

Pelagic Cormorant – Many adults were observed attending breeding sites at Tower Point, North Landing, Little Lighthouse Hill, and Sea Pigeon Gulch.

Double-crested Cormorant – The first adults were observed attending the Maintop colony on the 31st.

Western Gull – Many adults began to attend breeding sights and exhibit pair bonding behaviors, including copulation. A few nest scrapes and bowls were observed.

California Gulls – Numbers of adults seen on the island remain low.

Common Murre – Murres were observed attending regular breeding sites this month including Shubrick Point, Fertilizer Flat, Sea Lion Cove, Tower Point, Corm Blind, Maintop, and Saddle Rock. Pair-bonding behaviors and copulation increased notably on the 27th.

Pigeon Guillemot – Rafts of adults were first noticed near the island on the 13th and have continued to increase through the end of the month, with a noticeable increase observed on the 23rd. The raft count census began on the 30th with an initial count of 2,072 individuals.

Rhinoceros Auklet – Many fresh burrow digs were noticed island-wide on the 27th, though the number of adults observed on the waters surrounding the island remains low.

Tufted Puffin – The first adult on the island was detected at Little Lighthouse Hill on the 27th.

Cassin's Auklet – The PRBO nest box productivity checks began on the 2nd, and the KA/OA checks began on the 14th. Nine adults incubating eggs were discovered in the KA/OA boxes on the 14th. By the 29th, many breeding adults were observed incubating eggs in nest boxes of both

studies, with approximately 70% occupancy of the know-age/old-age nest boxes. The first RFID readers and pit tags of the season were deployed on the 27th.

Black Oystercatchers* – Four to eight 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

California Sea Lion – On average there were 2,735 (std \pm 158) individuals counted during the weekly pinniped census from the lighthouse, with a high count of 2,990 individuals on the 20th. An aborted fetus was observed at Sea Lion Cove on the 27th.

Steller Sea Lion – On average there were 68 (std \pm 6) individuals counted, with the high count of 77 on the 12th. The first bull was seen hauled out on Mussel Flat on the 7th.

Northern Elephant Seal – On average count of 68 (std \pm 18) individuals with a high count of 99 individuals on the 25th. The final cow departed SEFI on the 7th. On a trip to WEI on the 11th, 39 individuals were counted, including 4 adult males, 0 cows, and 31 weaners. Totals for the 2021 breeding season were as follows: 61 cows, 55 pups, and 40 weaners. Reproductive success was around 66%, natality 90%, and pup survival 73%.

Harbor Seal – On average there were 43 (std \pm 18) individuals counted, with a high count of 59 on the 25th.

Northern Fur Seal – On average there were 204 (std \pm 22) individuals counted, with the high count of 228 observed on the 4th. On a trip to WEI on the 11th, 266 individuals were counted, including 54 adult males.

Canada Goose

The first nests (2) were discovered near the NOAA weather station and Sea Pigeon Point on the 28th.

Cetaceans

Standard Survey – 31 one-hour standard whale watches were conducted this month from the Lighthouse using the Ocean Alert app. Large numbers of Gray Whales continued to be observed through the first three weeks of the month. Sightings for the month of March are summarized in Figure 2.

March 2021 Cetacean Sightings

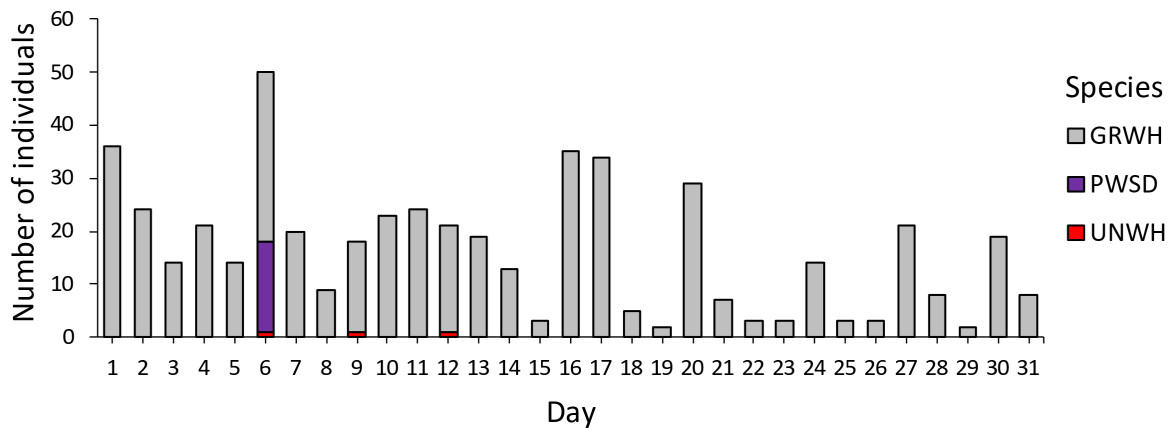


Figure 2. Daily high counts of cetaceans observed from Southeast Farallon Island for March 2021. GRWH = gray whale, PWSD = Pacific white-sided dolphin, UNWH = unidentified whale.

Sharks

No sharks were detected this month.

Salamanders

One survey was conducted on the 17th, yielding 39 individuals. Several salamanders were observed on Lighthouse Hill on the 19th.

Owls

Six individuals were seen in known roosting locations around the island. Several mass graves of ASSP were detected at new Heligoland roost site and near the Habitat Sculpture. By the end of the month, only two individuals were regularly detected attending their roosting sites.

Crickets

No surveys were conducted this month.

Bats

No bats were detected this month.

Mice

Mice were infrequently detected this month.

Inverts

An earthworm was detected under a spinach patch on the 1st. Many Pacific sea nettle jellies were observed in the nearshore waters of the island on the 20th.

Plants

Lasthenia maritima first began to bloom around the 16th.

Violations

March 2nd: A Coast Guard helicopter made a close pass at the island, flushing approximately 150,000 common murre.

Maintenance

Island biologists Duncan and 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 Bonnie Doon began routine maintenance of the septic system and prepared for the scheduled pump-out of solids on April 2nd.

Additional maintenance performed this month are as follows:

- The Coast Guard House door jam was fixed.
- A gasket along the main water line in the pump house was knocked out of place, spilling approximately 1,500 gallons of water before being fixed.
- Pumped 2,000 gallons of water from the Settling Tank into the Cistern.
- The NL jib crane was power washed.
- Some sections of the railing at the Lighthouse were repaired.
- The floors in the PRBO House were waxed.

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.

Solar/Electric

PV System

Distilled water used:	0 gallons
Distilled water reserves:	40 gallons

Generator run times

Kohler 30REOZJC (Speedwagon):	0 hours	(678.8 on meter)
Kohler 40REOZK (Zeke):	15.2 hours	(576.6 on meter)
Kohler 15REOZK (PeeVee Herman):	7.3 hours	(46.2 on meter)
Webasto:	9.2 hours	

Power use

Facilities power use: Start = 90,221; End =90,860; for total of 639 kWh

Fuel Reserves

Diesel used:	18.4 gallons
Diesel drums: 7@55gal	385 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
6 gallon boat tank:	Full
3 gallon boat tank:	Full

Water Reserves

Water used this month: Start = 311,906; End =315,695; for a total of 3,789 gallons	
Cistern:	6'0" or ~75,000 gallons
Gravity Tank:	empty
Settling Tank:	2.65'
Drinking water:	14 5-gal jugs

Sightseeing Boats

No sightseeing boats visited the island this month.

Non-breeding birds

Pacific Loon, **Red-necked Grebe**, Eared Grebe, Sooty Shearwater, Brown Booby, Northern Gannet, Canada Goose, Surf Scoter, Peregrine Falcon, Wandering Tattler, Whimbrel, Ruddy Turnstone, Black Turnstone, **Rock Sandpiper**, California Gull, Herring Gull, Iceland (Thayer's)

Gull, Glaucous-winged Gull, Black-legged Kittiwake, Eurasian Collard-Dove, Barn Owl, Burrowing Owl, Anna's Hummingbird, Black Phoebe, Rock Wren, Ruby-crowned Kinglet, Hermit Thrush, Audubon's Warbler, Myrtle Warbler, Spotted Towhee, Savannah Sparrow, "Sooty" Fox Sparrow, Lincoln's Sparrow, White-crowned Sparrow, Golden-crowned Sparrow, "Oregon" Junco, "Slate-colored" Junco, Red-winged Blackbird, Western Meadowlark.

Bold indicates an unusual or noteworthy species.