

Farallon Islands Monthly Report

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

December 2020

Garrett Duncan
gduncan-SEA@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.

Southeast Farallon Island Visitors

Point Blue crew: Mackenzie Cahill, Sabrina Dahl, Garrett Duncan, Rhett Finley, My-Lan Le, and Anna Pedersen.

USFWS crew: Alyssa Clevestine

December 8th: **CA US Army National Guard chinook helicopter** brought out a new PV generator, new dumperjet, and new fire locker and departed with the dysfunctional 15 kw “Buffy” and “Peevey” generators, the old Billy Pugh, and some miscellaneous bulky trash.

December 11th: **“Outer Limits”** (skipper Jim Robertson) brought out Mike McGoey and departed with Alyssa Clevestine.

December 15th: **Specialized Helicopters** brought out Glenn Charbonneau for a day trip to inspect the new PV generator.

December 19th: **“Freda B”** (skipper Paul Dines) brought out Anna Pedersen and departed with My-Lan Le.

December 25th: **Santa** with a sleigh pulled by elephant seals.

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: The use of PPE was required by newly arriving interns prior to and during the landing; the frequency of regular supply runs was reduced from twice a month to once a month; no off-island breaks were granted to crew members; and no visitors were permitted to tour the island. Only essential personnel are currently permitted on the island until further notice.

West End Island Visitors

December 18th: Duncan, Le, and Finley conducted Northern Elephant Seal and Northern Fur Seal counts and recorded tag resights.

December 30th: Duncan, Cahill, and Dahl did a census of the Mirounga rookery, finding the first WEI pup of the season and recorded tag resights.

Weather/Ocean

Monthly weather is summarized in Figure 1. Light to moderate NW winds dominated this month. The island received 1.42 inches of rain this month, which fell on the 13th, 17th, and the 26th. Fog was noted on 12% of weather observations. The range of midday air temperatures fell within the long-term normal range for this month, with an average of 12.9 ± 1.4 °C. This was 0.31 °C higher than the long-term average for the month. Sea surface temperature (SST) readings from the island were notably lower than the long-term normal range for this month, with an average of 11.25 ± 0.25 °C. This was 1.27 °C below the long-term average for the month.

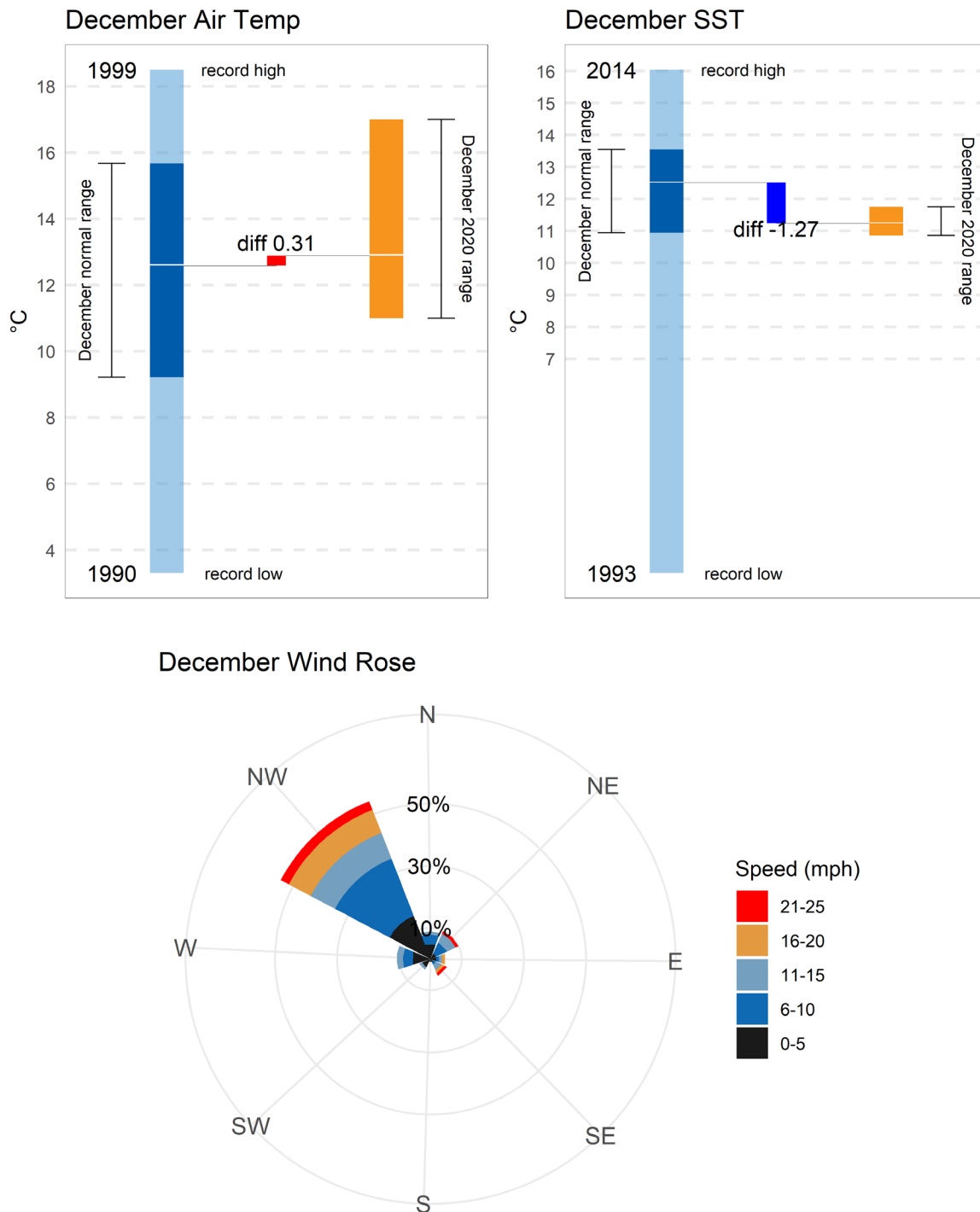


Figure 1. Noon air and sea surface temperature data summary. Light blue depicts the long-term (1971 – 2019) range of observations with years given for record highs and lows; dark blue shows the long-term range of averages for December. Orange depicts the range of current (2020) observations. Differences 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

Seventeen *Zalophus* were seen with monofilament, packing strap, ropes or unknown material embedded tightly around their necks. One Western Gull (immature) was entangled with a 6-pack holder.

Two Common Murres on the 12th and 16th and one Glaucous-winged Gull on the 19th were seen covered with brown/black crude oil.

Breeding Birds

Storm-petrels – No Ashy nor Leach’s Storm-Petrels were detected this month.

Brandt’s Cormorant – A few thousand birds were observed daily either roosting on offshore islets or feeding on the ocean.

Pelagic Cormorant – Approximately a hundred birds were observed daily roosting on cliffs.

Double-crested Cormorant – None were seen this month.

Western Gull – A few thousand birds were observed daily either roosting on the island or feeding on the ocean. In the early morning, a few thousand birds returned to their territories.

California Gulls – Low numbers were observed roosting on Sea Pigeon Terrace, Mussel Flat, and West Marine Terrace.

Common Murre – The Murre colony areas were fully occupied many days this month.

Pigeon Guillemot – None were seen this month.

Rhinoceros Auklet – None were seen this month.

Tufted Puffin – None were seen this month.

Cassin’s Auklet – On most dark nights, large numbers of birds landed on the island to dig out nest sites and vocalize.

Black Oystercatchers – Individuals this month were usually seen either paired up along the shoreline or in the large roosting flock at Low Arch.

Pinnipeds

California Sea Lion – On average there were 3,764 (std \pm 1770) individuals counted during the weekly pinniped census from the lighthouse, with a high count of 6,939 individuals on the 3rd. By the end of the month, very few individuals were using the Marine Terrace. The majority of individuals were present on the north side of the island from Sea Lion Cove to Aulon Peninsula.

Steller Sea Lion – On average there were 109 (std \pm 15) individuals counted, with the high count of 125 on the 20th and the 24th.

Northern Elephant Seal – Numbers decreased this month with the arrival of breeding age animals and departure of molted immatures. There was an average count of 119 (std \pm 21) individuals with a high count of 145 individuals on the 20th. The first cow arrived on the 9th and gave birth on the 14th. This is the earliest first pup in the last 10 years and the third earliest pup in our entire 46 year dataset. By the end of the month there were 5 cows, 2 pups and 5 large males on SEFI and 6 cows, 1 pup and 5 large males on WEI.

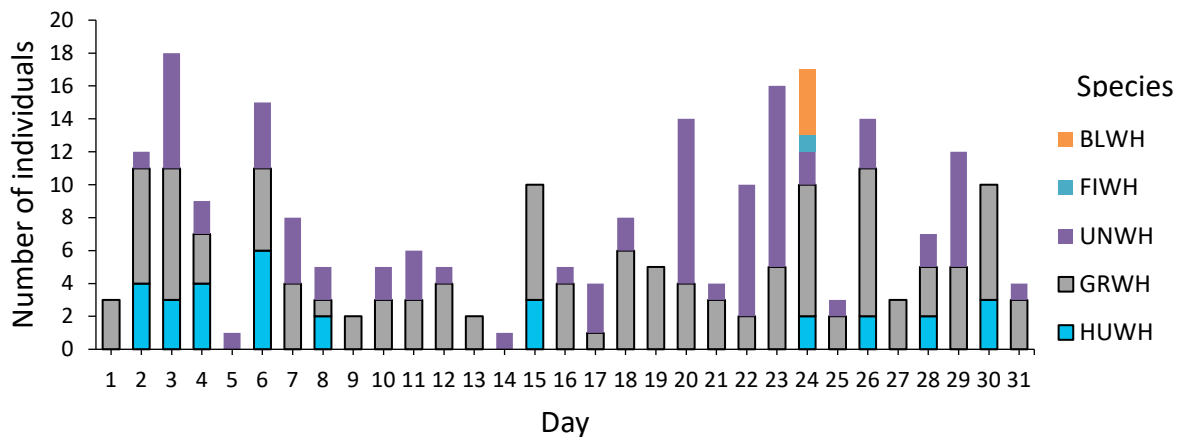
Harbor Seal – On average there were 26 (std \pm 21) individuals counted, with a high count of 47 on the 24th.

Northern Fur Seal – Numbers declined for the colony on West End this month as more individuals head to sea for the winter. On average there were 104 (std \pm 21) individuals counted, with the high count of 139 observed on the 20th. On the two trips to WEI, there were 238 and 331 individuals counted.

Cetaceans

Standard Survey – 15 one-hour standard whale watches were conducted this month from the Lighthouse using the Spotter App. Fog and/or wind hampered our ability to conduct these surveys. One to three gray whales were observed close to the island all month. Humpback Whales were seen intermittently throughout the month. Notably, a Fin Whale was seen traveling with a pod of Blue Whales on the 24th.

December 2020 Cetacean Sightings



Sharks

2 predation events were observed this month on the 5th and the 7th. Both were located near East Landing.

Salamanders

Salamander surveys were conducted on the 1st and the 15th, yielding 2 and 14 individuals.

Owls

4 individuals were consistently seen in known roosting locations around the island.

Crickets

No cricket surveys were conducted this month.

Bats

No bats were detected this month.

Mice

Mice were seen less frequently throughout the month, following the typical winter time population decrease.

Inverts

A red wood louse was found in a spinach patch on the 4th. A species of *ligia* (a.k.a. sea roach) was found on the block house at East Landing on the 11th. *Fissurellidea bimaculata* (limpet), *Codium* (algae), *Calliostoma ligatum* (Blue Top Snail), *Tonicella lokii* (Flame Lined Chiton), and *Leptasterias hexactis* (Six-Rayed Star) were found in Jewel Cave on the 13th.

Plants

Checks of areas where invasive plant treatments were conducted in November by USFWS personnel Gerry McChesney and Alyssa Clevenstine showed successful results on the southern and eastern sides but less so on the northern side of the island. Air temperatures at the time of treatments were a likely factor in the difference.

Violations

Six boats were documented fishing in violation of the State Marine Reserve. None of these boats were observed to disturb wildlife on the island. Most of these violations were called into California Fish and Wildlife.

Maintenance

Island biologist Duncan conducted routine weekly maintenance checks on the PV system and generators. Monthly changes of water filters and crane greasing were conducted. Nearly weekly crane trainings with personnel were conducted this month. Alyssa and Garrett drained all the fluids from both old PV generators in preparation for their departure; they were removed and a new PV generator, Dumper Jet, and a fire cabinet for the Carp/Pipe Shop were brought out by the Army National Guard. Two boards on the EL boat cradle were replaced. Recharged fire extinguishers for the island were delivered. The battery for 30 kw generator "Speedwagon" was replaced. The house marine radio power supply stopped functioning and a replacement was procured and installed. The Wolf oven gas orifice and safety valve were replaced and thermostat adjusted.

Maintenance Needs

- 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 is a small leak in the closet next to the downstairs bathroom in the PRBO house. The source was likely a hole underneath the eaves on the NW side of the house. Will continue to monitor.
- 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 Honda portable gas generator has a mysterious leak behind the air filter and is currently unusable.
- The North Landing Jib crane needs to be power washed and a life ring hook installed on the rocks near the platform.

Solar/Electric

PV System

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

Generator run times

Kohler 30REOZJC (Speedwagon):	4.5 hours	(672.6 on meter)
Kohler 40REOZK (Zeke):	8.5 hours	(549.1 on meter)
Webasto:	8 hours	

Power use

Facilities power use: Start = 88,565; End =89,137; for total of 572 kWh

Fuel Reserves

Diesel used:	79.7 gallons
Diesel drums: 8 @55gal:	440 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:	27 gallons
6 gallon boat tank:	Full
3 gallon boat tank:	Full

Water Reserves

Water used this month: Start = 305,197; End =307,406; for a total of 2,209 gallons	
Cistern:	5' 10" or ~72,500 gallons
Gravity Tank:	empty
Settling Tank:	2.35'
Drinking water:	15 5-gal jugs

Sightseeing Boats

No sightseeing boats visited the island this month.

Non-breeding birds

Pacific Loon, Eared Grebe, Sooty Shearwater, Brown Booby, Northern Gannet, Brown Pelican, Canada Goose, Surf Scoter, Peregrine Falcon, Wandering Tattler, Whimbrel, Ruddy Turnstone, Black Turnstone, Rock Sandpiper, Red Phalarope, California Gull, Herring Gull, Thayer's Gull, Glaucous-winged Gull, Glaucous Gull, Eurasian Collared-Dove, Barn Owl, Burrowing Owl, Anna's Hummingbird, Black Phoebe, Rock Wren, Ruby-crowned Kinglet, Hermit Thrush, Cedar

Waxwing, Townsend's Warbler, Palm Warbler, Spotted Towhee, Clay-colored Sparrow, Savannah Sparrow, Fox Sparrow, Lincoln's Sparrow, White-throated Sparrow, White-crowned Sparrow, Golden-crowned Sparrow, Western Meadowlark, House Finch, and Pine Siskin.