



Farallon Islands Monthly Report

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

March 2018

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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 this month included: Trevor Barclay, Pierro Becker, Gavan Borgias, Katie Douglas, Garrett Duncan, Mike Johns, Grace Kumaishi, Kathryn Roy.

March 2: **“USGS Helicopter”** departed with NOAA/GFNM staff and intertidal crew Jan Roletto, Greg Baker, Rob Ricker, and Natalie Cosentino-Manning.

March 4: **“Starbuck”** (skipper John Wade) departed with Kathryn Roy. 6 people toured the island.

March 10: **“Hulicat”** (skipper Tom Mattusch) brought out Jonathan Shore, and vegetation monitoring crew: Barbara Holzman, Quentin Clark, Brian Peterson, Joshua Nuzzo, and Morgan Stickrod. 3 people toured the island.

March 17: **“Valkerie”** brought out PRBO staff Gavan Borgias, Katie Douglas, Mike Johns, and Grace Kumaishi. Departed with Trevor Barclay and Garrett Duncan. 4 people toured the island.

March 17: “**Hulicat**” (skipper Tom Mattusch) brought out Team Spinach crew Jeremy Gordon, Aaron Echols, John Reyes, Amelia DuVall, Sasha Petrenko, and Stephen Cavell.

March 24: “**Hulicat**” (skipper Tom Mattusch) brought out NexGen Energy Systems crew: Garrett Duncan and Mike McGoey. Matthew McKown (Conservation Metrics) and Gerry McChesney deployed Song Meters to monitor Ashy Storm-Petrel vocal activity. Tom Mattusch toured the island. Departed with Team Spinach crew Gordon, Echols, Reyes, DuVall, Petrenko, Cavell, along with Grace Kumaishi and Jonathan Shore.

March 31: “**Kitty Kat**” departed with Garrett Duncan and Mike McGoey.

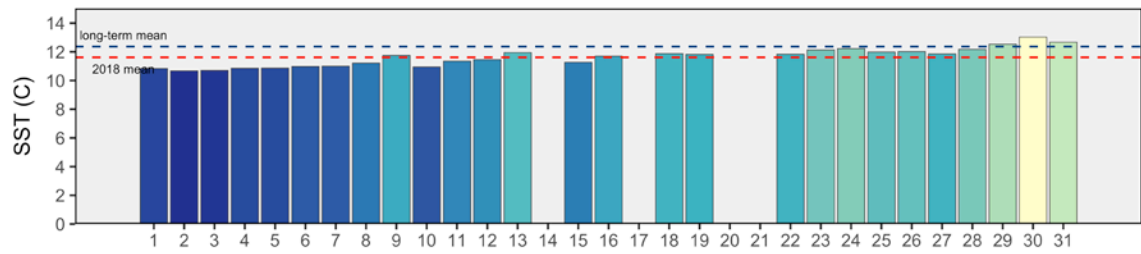
West End Island Visitors

There were no visits to West End.

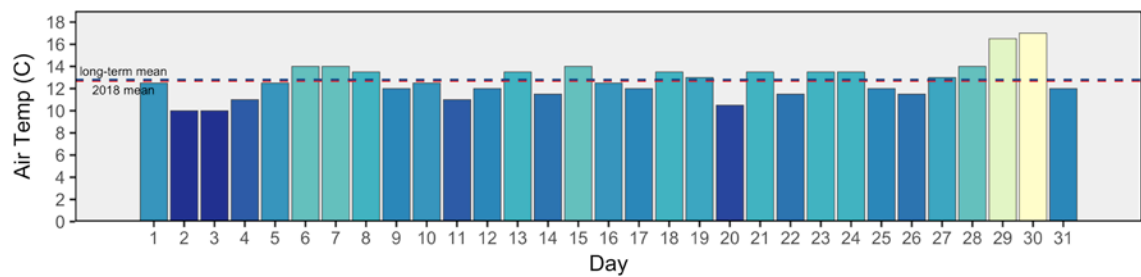
Weather/Ocean

Graphs depicting weather observations. Warm colors = higher values, cool colors = lower values, with monthly (red dashed line) and long-term mean (blue dashed line).

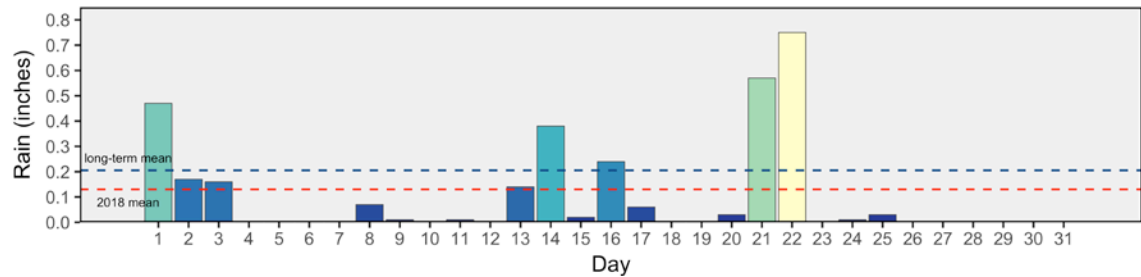
March 2018 Sea Surface Temp



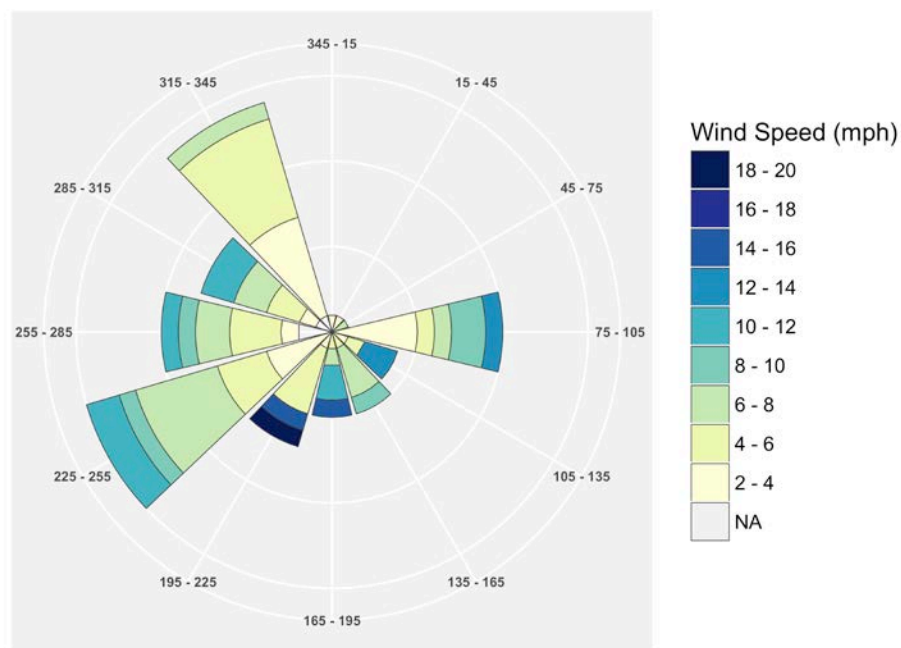
March 2018 Air Temp



March 2018 Rainfall Totals



MAR 2018 Wind Rose



Daily wind speed intensity (color scale) and direction binned into sectors (bars, 0-360). Larger bars = more wind from that direction.

Oiled & Entangled Wildlife

Four California sea lions were seen with monofilament or an unknown substance embedded in their necks. No oiled animals were observed.

Breeding Birds

Storm-Petrels – Carp Shop site 15 had a bird attending on March 27th. Standard wing walks to document predation rates began on March 28th.

Brandt's Cormorant – Birds started attending colonies at Sea Lion Cove and the Corm Blind in low numbers on March 26th. Resighting effort for banded birds at the Sea Lion Cove and Corm blinds began on March 27th.

Pelagic Cormorant – Nothing to note.

Double-crested Cormorant – Nothing to note.

Western Gull – Nothing to note.

California Gulls – Only a handful of birds have been seen on the marine terrace.

Common Murre – Murres started regularly attending colonies island-wide in late March. Resighting efforts for banded birds began at the Upper Shubrick Point colony on March 25th and Upper Upper from the Corm Blind on March 26th.

Pigeon Guillemot – The first individual was sighted on the water on March 17th. Large rafts were observed by the end of the month, with a small number of birds beginning to attend sites close to the water. None were seen on Lighthouse Hill.

Rhinoceros Auklet – Nest boxes were cleaned and repaired in preparation for the breeding season.

Tufted Puffin – No Tufted Puffins were seen.

Cassin's Auklet – Peak egg laying occurred 2 weeks earlier than the long-term median (Fig. 1), with 228 active nest boxes discovered in the known-age study (KA) on March 29th. The first egg was found in the KA study boxes on March 19th and in the PRBO study boxes on March 23rd. The first adult was banded March 27th. A total of 19 GLS tags were recovered (9 on March 29th, 8 on March 30th, and 2 on March 31st).

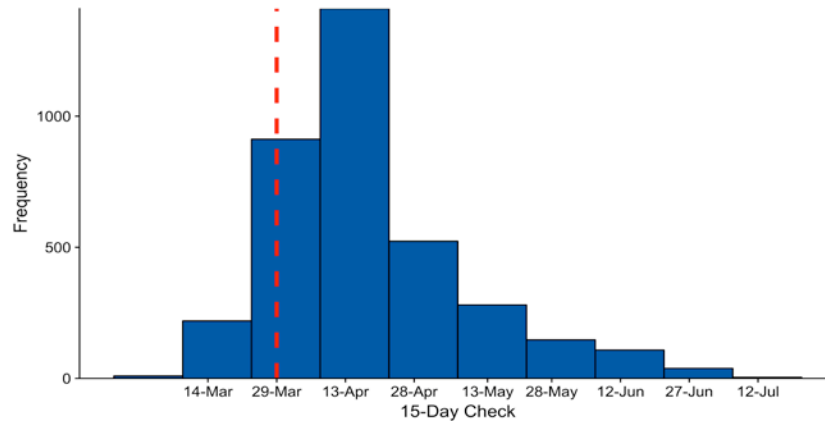


Figure 1. Histogram of lay dates recorded on 15-day intervals for first attempts of Cassin's auklets from 1983 - 2017. Red dashed line indicates peak lay date for 2018.

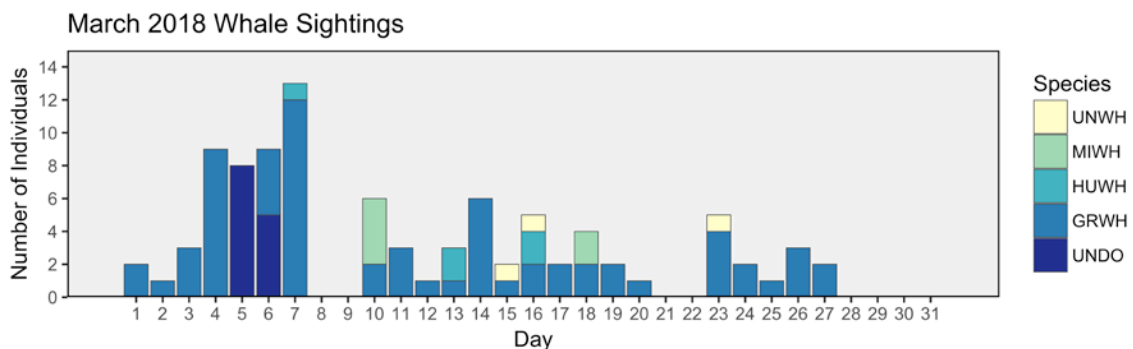
Black Oystercatchers – Standard monitoring studies for this species have been canceled this year, given the effort required to document breeding behavior for a small population of a non-target species. Opportunistic band resighting and breeding notes will still be recorded.

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, as a way to reduce effort while still capturing high counts. The final Mirounga cow departed on March 15th.

Cetaceans

Standard Survey – Twenty two one-hour standard whale watches were conducted this month from the Lighthouse using the Apple iPad and Spotter App. Daily high counts from standard watches and incidental observations are summarized below.



UNWH = unknown baleen whale, MIWH = minke whale, HUWH = humpback whale, GRWH = gray whale, UNDO = unknown dolphin

Sharks

No shark activity was observed.

Salamanders

Standard salamander surveys were conducted March 13th. 54 salamanders were found under cover boards respectively. Chytrid swab samples were collected for 32 individuals.

Owls

A total of 3 owls occupied the island in the beginning of the month, with only 2 remaining by the end of the month seen at regular roosting sites around Rabbit Cave Catacombs and Rabbit Cave.

Crickets

No cricket surveys were conducted this month.

Mice

Mouse trapping ended on March 6th with a 4% success rate.

Inverts and Intertidal

Crew visited Jewel Cave on March 28th and noted the beginnings of an urchin barren.

Plants

Vegetation monitoring crew led by Barbara Holzman surveyed previously existing and newly established vegetation, rapid assessment, and fine-scale assessment plots in both treated and untreated areas throughout the island. *Tetragonia* appears to have reduced from 2015. Possible new weed species *Glebionis coronarium* was noted. A sample was taken for ID confirmation. Collected non-native and native samples for herbaria.

Team Spinach sprayed most accessible locations, targeting *Tetragonia*, *Malva*, *Chenopodium*, and *Sonchus*, from March 18th through March 23rd. Opportunistic spraying occurred for *Ehrharta* on steep slopes, and *Plantago* on the Marine Terrace. The areas not sprayed because of weather and time were Lower Lighthouse Hill, part of Upper Lighthouse Hill, Upper Little Lighthouse Hill and Fertilizer Flat. All large *Malva* patches were sprayed except for allowable areas of *Malva arborea*.

Violations

On March 18th, the 40' fishing vessel SMEAGOL out of San Francisco, CA was observed tying off to the North Landing buoy. Refuge staff contacted this vessel via marine channel 16 to communicate the faulty state of the North Landing mooring. The SMEAGOL acknowledged this, stated that their anchor system was not functioning and

that they would detach from the North Landing mooring to re-position and moor on the East Landing mooring.

Maintenance

Island biologists Johns and Duncan conducted routine maintenance checks on the PV system and generators weekly. Monthly changes of water filters and outboard motor operation were also conducted as well as biweekly crane greasing. Specific fixes included a rewiring of the boiler room breaker box, new Webasto switch, new castle nut and inline fuel filter gasket on Honda 60 HP, and removal of the NL mooring ball chain.

Ron Elliot conducted annual inspection of the EL and NL mooring balls anchors on March 18th. See maintenance needs below.

Garrett Duncan and Mike McGoey conducted annual maintenance on the PV system, including battery equalization and replacement of cell 13.

Maintenance Needs

- New screens are needed on the PRBO house to keep out flies on “warm” days.
- Refurbishment of North Landing platform. Fabricate and install stainless steel guides for poles. This is currently in process.
- Corrosion of the cart path rail system appears to be accelerating and will need to be addressed soon, perhaps repaired with the old galvanized pipe when the water lines are replaced.
- Several separations have been seen on the East landing derrick slewing rope, possibly from jogging the slew. Perhaps tightening the slewing rope will mitigate this issue slightly until replacement.
- The PRBO house kitchen counters especially around the sink are continuing to deteriorate. Replacement sometime this year is recommended.
- Several inches of water accumulate in the pipe shop after a good rain. A new threshold is needed to seal the door.
- Several grease points on the crane are having difficulty taking grease.
- NL mooring buoy is no longer connected to the anchor and needs to be replaced.
- EL mooring anchor is upside down, causing a shortening of the chain and potentially compromising the integrity of the connection.

Solar/Electric

PV System

Distilled water reserves: 35 gallons

Generator run times

Kohler 15ROZ (Buffy): 17 hours
Kohler 30REOZJC (Speedwagon): 7.1 hours
Kohler 40REOZK (Zeke): 11.1 hours
Kohler 15ROY61 (Peevey): 0.4 hours
Webasto: 0 hours
Power Used this month: Start = 66,311; End = 67,144; for total of 833 kwh

Fuel Reserves

Diesel fuel used in February: 27 gallons
Drums: 4 1/4 x 55g = 234 gallons
Kohler 15ROZ (Buffy) Tank: Full
Kohler 30REOZJC (Speedwagon) Tank: Full
Kohler 40REOZK (Zeke) Tank: Full
Kohler 15ROY61 (PV) Tank: Full
Webasto Tank: 2/3 Full
Surplus gasoline for boat motors: 10 gallons
Safeboat tank: Full
Zodiac tank: Full

Water Reserves

Cistern: ~ 93,320 gallons (7'0")
Gravity Tank: empty
Settling Tank: 3.1'
Water use at house meter was 4,507 gallons (team spinach).

Sightseeing Boats

The **Kitty Kat** was seen 10 times with an average of 35 POB.

Non-breeding birds

Pacific Loon, **Common Loon**, Eared Grebe, Black-footed Albatross, **Pink-footed Shearwater**, Sooty/short-tailed Shearwater, **Northern Fulmar**, Canada Goose, Surf Scoter, Peregrine Falcon, Wandering Tattler, Whimbrel, Black Turnstone, Rock Sandpiper, Mew Gull, Herring Gull, Thayer's Gull, Glaucous-winged Gull, Glaucous Gull, **Eurasian Collared-dove**, Burrowing Owl, Black Phoebe, Rock Wren, American Robin, European Starling, Audubon's Warbler, Myrtle Warbler, UNK Yellow-rumped Warbler, Spotted Towhee, Sooty Fox Sparrow, White-crowned Sparrow, Golden-crowned Sparrow, **Oregon Junco**