

Farallon Islands Monthly Report

Report to the U.S. Fish and Wildlife Service

Farallon Islands National Wildlife Refuge

July 2019

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**Island Residents**

**Point Blue crew**: Sean Gee, Eva Hasegawa, Mike Johns, Grace Kumaishi, Haley Land-Miller, Amy Miles, Emma Railey, Theresa Rizza, Miles Sheuering, Maya Sterett.

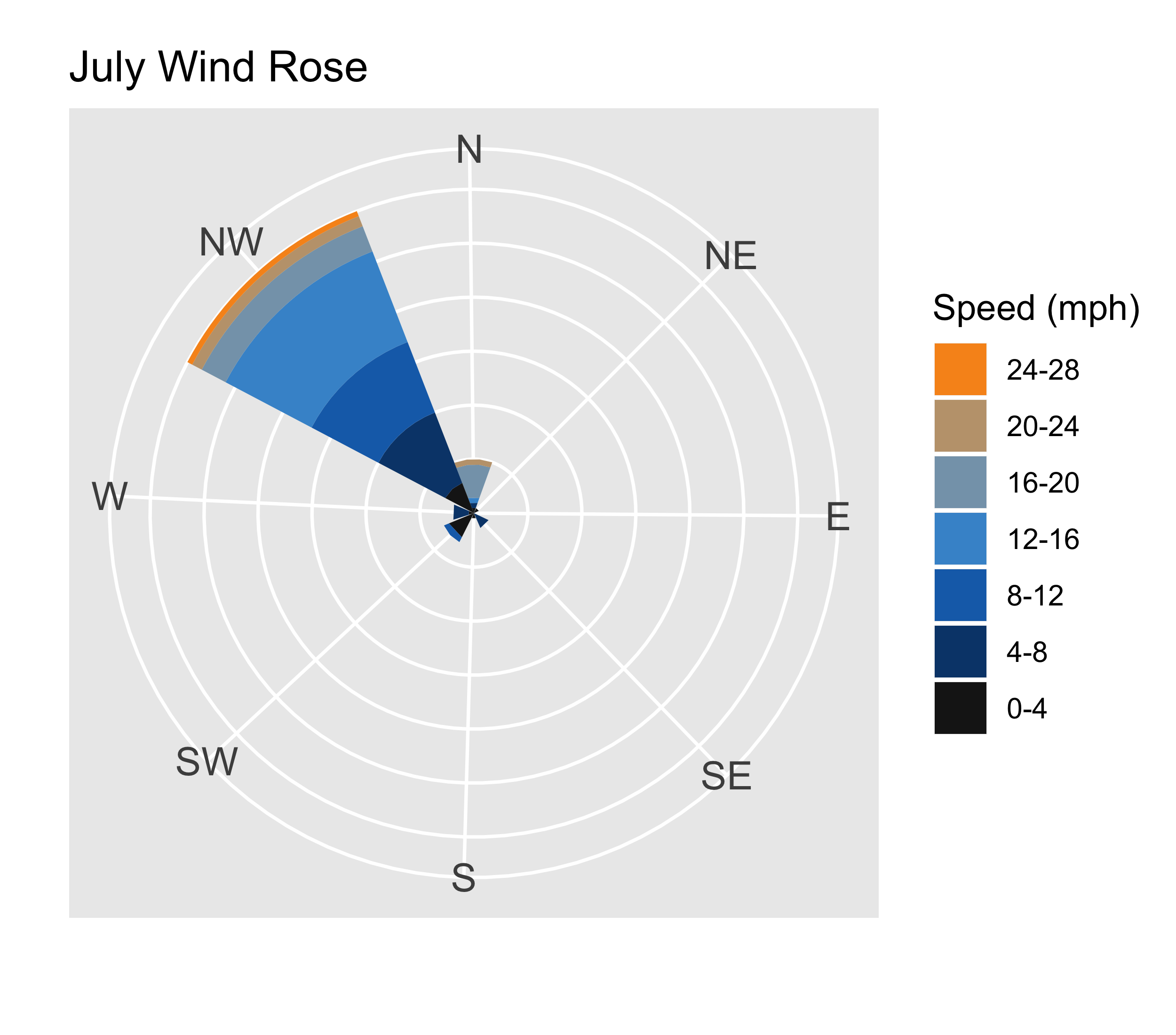
**Island Visitors**

July 13st: “**Envolée”** (skipper Nathalie Criou) brought Theresa Rizza, Maya Sterett, and Emma Railey and departed with Sean Gee and Amy Miles. Four people toured the island.

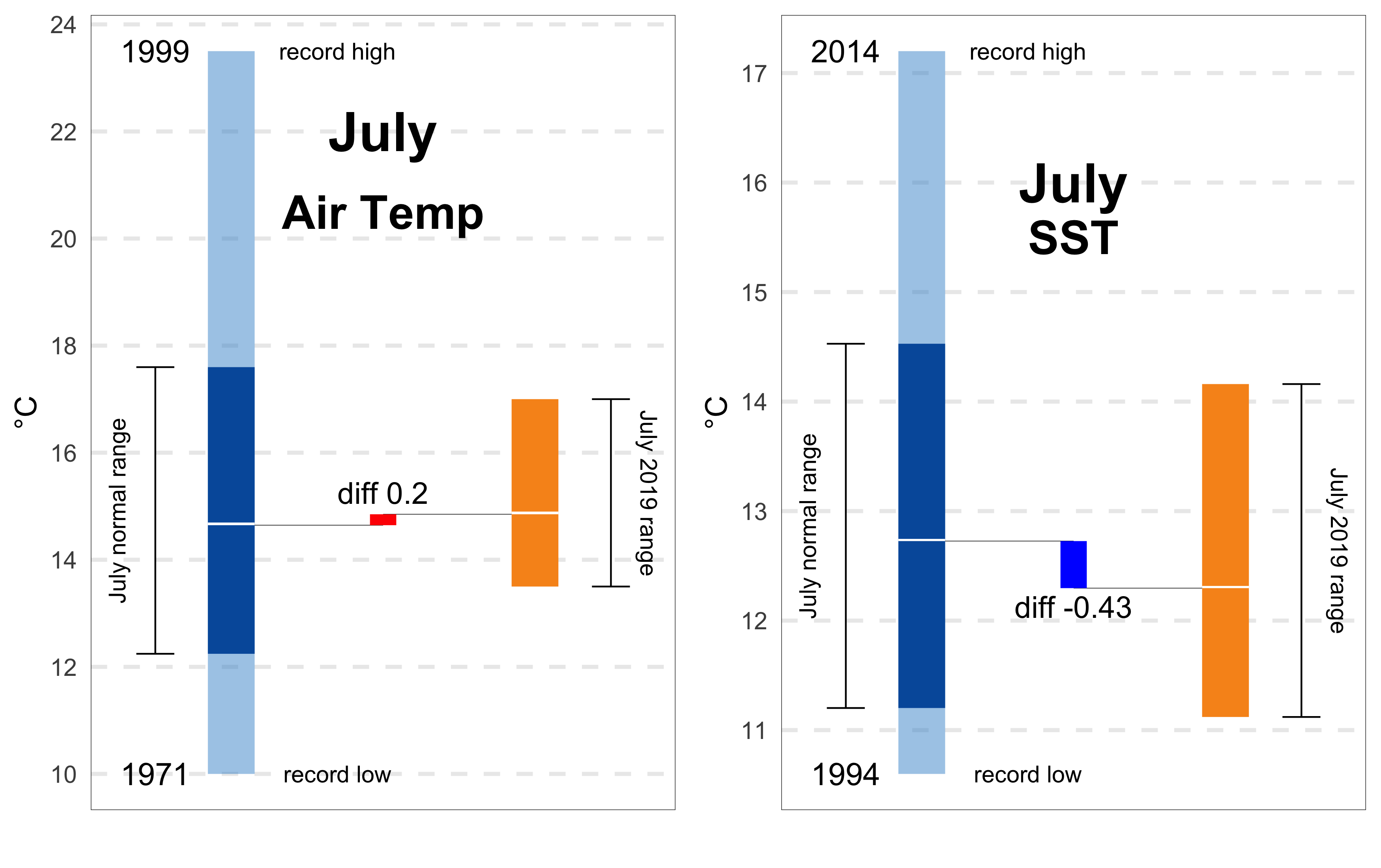
July 27th: “**Starbuck”** (skipper John Wade) departed with Haley Land-Miller and Emma Railey. Three people toured the island.

**Weather & Ocean**

The island experienced average weather conditions during the month of July. Light to moderate northwest winds accompanied by thick fog dominated (Fig. 1). The island received no measurable precipitation. The average temperature was 14.85°C, which is 0.2 °C higher than the long-term average for July (Fig. 2). Sea surface temperatures stayed within the long-term range for this month, with an average of 12.3 °C. This was 0.43 °C lower than the long-term average for July (Fig. 2).



**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**

Two adult California Sea Lions were seen with monofilament embedded tightly around the neck, and a Common Murre was seen with ~ 50% of its breast feathers covered with black oil.

**Breeding Birds**

**Storm-Petrels** – Due to persistent northwest winds, no standard netting sessions were conducted in July. Much of Lighthouse Hill and rubble surrounding the Helo and Catchment Pads were scanned using the large RFID tag reader, with no detections found. Either the birds are too deep within their crevices for detection, not enough birds have been PIT tagged, the PIT tags themselves are failing, or we simply are not scanning the right locations. The first chicks were seen during regular cam checks on July 9th on Lighthouse Hill. Social attraction playbacks continued in the newly constructed storm-petrel habitat structure affectionately coined the “Ashy Castle”.

**Brandt’s Cormorant** – A total of 148 chicks were banded at Sea Lion Cove sub colonies on the night of July 22nd, and 205 chicks at the Corm Blind sub colonies on the night of July 31st. Chicks received the year-cohort combo *GM00* (gray over metal on the left leg). Most chicks were mostly- to fully-feathered and wandering from the nests by the end of the month, with the first confirmed fledglings on July 24th. Total number of nests (and chicks) were lower this year than in previous year.

**Pelagic Cormorant** – There was a near complete absence of breeding effort this year for Pelagic Cormorants, with only a single confirmed nest with eggs. Obviously no chicks were produced this year, and regular breed checks concluded on July 24th. This follows a pattern of a poor breeding turnout in previous years at this location, potentially signaling the breeding population of Pelagic Cormorants on SEFI may be on its way out.

**Double-crested Cormorant** – Regular breed checks from the Lighthouse of the colony atop Maintop concluded on July 20th, when chicks were too large to distinguish from parents and wandering from the nests. The high count for chicks was 115.

**Western Gull** – Saturation banding of chicks from non-followed nests within all 4 study plots was conducted this month, in an effort to boost our sample of potential future known-age recruits. A total of 51 chicks were banding in C-plot on July 7th, 83 in H-west on July 8th, 63 in H-east on July 11th, and 83 in K-plot on July 12th. Numbers of chicks appeared anecdotally low this year. Chicks received the year-cohort combo *GM00* (gray over metal on the left leg). First fully-feathered and flying fledglings were noted in followed plots on July 18th.

**California Gulls** – As with the Pelagic Cormorants, California Gulls showed virtually no sign of breeding effort this year, with only a single persistent nest on the Marine Terrace that contained eggs. Regular breed checks concluded until July 27th, no chicks were produced.

**Common Murre** – The first fledges were noted on July 3rd in the Upper Shubrick plot and on July 8th at the Upper Upper plot. Mass fledging occurred around July 10th, with a continuous stream of jumping chicks witnessed by the crew from the Murre Blind. All chicks were gone in Upper Shubrick by July 19th, and 4 remained in Upper Upper by the end of the month. Diet watch ended on July 12th, with chick diet remaining almost exclusively anchovy throughout the month.

**Pigeon Guillemot** – Diet watches began on July 2nd, which were restricted to sites on Lighthouse Hill given most sites at Garbage Gulch had failed and there was an inadequate number of active crevices to make it worth the effort. Unlike auklets and murres, guillemots were managing to find some juvenile rockfish around the island, although their diet mainly consisted of sculpin and flatfish. There were no 2-chick broods by mid-July; all second chicks either failed to hatch or died within the first 15 days of hatching. The first mostly-feathered chick was banded on July 6th, and the first fledge was noted on July 26th.

**Rhinoceros Auklet** – Two sessions of four consecutive nights of netting occurred this month. The first 4-night session began on July 6th with 18 new and 25 recaptured birds, and the second began on July 18th with 14 new and 36 recaps. Diet samples collected during these sessions continued to be almost exclusively larger anchovy, with the occasional sablefish and a single juvenile rockfish. As part of a study looking at the winter movements of Alcidae from SEFI, 23 adults breeding in wooden nest boxes were outfitted with leg-mounted geolocators, either by extracting birds from boxes or if birds known to be breeding in boxes were captured during netting. The first mostly-feathered chick was banded on July 15th.

**Tufted Puffin** – Late season breed checks began on July 28th. Numbers appear slightly higher compared to early season checks, possibly indicating puffins were late to breed this year. Few birds carrying bill-loads of fish have thus far been noted.

**Cassin’s Auklet** – Cassin’s suffered a near-complete reproductive failure this year. The failure mostly occurred during the incubation stage, where eggs were either abandoned or lost. Of the 47 active boxes in the PRBO study, only 8 pairs managed to hatch chicks, and only 5 chicks remained alive by the end of July. Only a single fledge occurred by the end of the month in the PRBO study on July 25th. It is a similar story for the Known-age study boxes, with only 111 of the ~400 boxes containing active breeders, 26 of which hatched chicks, and only 10 of those chicks reached fledgling status. A likely cause for this failure was a lack of krill within the effective foraging radius of incubating parents, as very little pink feces (indicative of a diet of krill) was observed across the island, and chick diet samples looked different than in abundant krill years. Temperature loggers used to compare conditions in wooden vs. ceramic nest boxes throughout the breeding season were recovered on July 31st.

**Pinnipeds**

**California Sea Lion***–* On average there were 4,708 (SD ± 974) individuals counted during the weekly pinniped census from the lighthouse, with a high count of 5,463 individuals on the 19th. There was a high count of 679 pups on the 19th.

**Steller Sea Lions** –On average there were 196 (SD ± 52) individuals counted, with a high count of 237 on the 6th. There was a high count of ~~115~~ pups on the 19th.

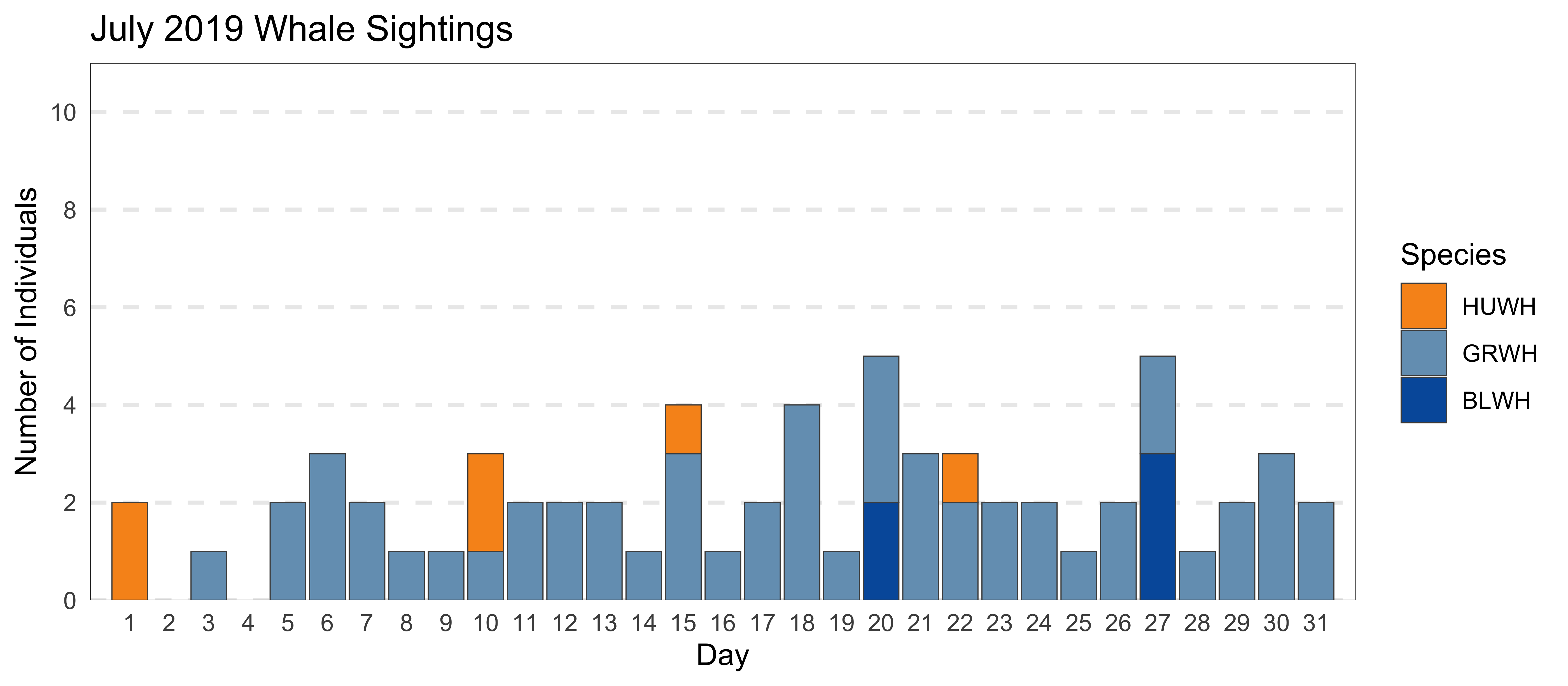
**Northern Elephant Seal** –There were between 3 and 6 individuals counted in July, mostly sub adult males.

**Harbor Seal –** Harbor seal numbers were variable, due to the variety of tide and swell conditions during the weekly census. On average there were 56 (SD ± 19 individuals counted, with a high count of 75 on the 26th.

**Northern Fur Seals** – Fur seal numbers peaked by mid-July, reflecting peak pupping for this species. The mean weekly census from the Lighthouse was 1,253 (SD ± 138) individuals, with a high of 1,372 on the 19th. The expansion of individuals from the Indian Head colony continues, with many seen around Jordan Channel and on Weather Service Peninsula, Sand Flat, and X Channel. There was a high count of 539 pups on the 26th.

**Cetaceans**

**Standard Survey** – 10 one-hour standard whale watches were conducted from the Lighthouse using the Spotter App when conditions allowed. 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**

No surveys were conducted.

**Bats**

None were observed.

**Mice**

The presence of invasive house mice became increasingly more noticeable during the month of July, with several heard and seen trying to chew their way through narrow gaps in the baseboards and holes in the walls.

**Inverts and Intertidal**

The crew visited Jewel Cave on July 20th, and once again noticed an over-abundance of purple urchins. Miles touched his first anemone, congrats Miles.

**Oceanic Events**

Nothing to report.

**Plants**

A large swath of invasive *Rumex acetosella* was noted east of the Helopad.

**Violations**

Recreational fishing boat (CF 6754 TB) with 3 POB seen fishing within the no-take marine reserve and within the 300ft special closer zone off Fertilizer Flat on July 20th. They were seen catching at least 2 rockfish. Attempts to hail on VHF16 failed, so Mike went and yelled to them from North Landing. They departed shortly after. A second recreational fishing boat (CF 0592 RI) with 4 POB was seen fishing just off of East Landing also on July 20th. They were successfully hailed on VHF16, notified of the regulations, and agreed to re-position out of the marine reserve.

**Maintenance**

Island biologist Johns conducted routine weekly maintenance checks on the PV system and generators. Monthly changes of water filters, water testing, and crane greasing were conducted. In addition, the drainage systems for the new fridges in the PRBO house were modified to allow drip trays to be dumped. The built in drip trays could not be accessed and were spilling over onto the floors, which rotted the underlying wood and caused several floor tiles to delaminate. The damaged floor and tiles were subsequently repaired. We added a new water level gauge for the gray water tank, which can be seen from the kitchen window. New shelving was built for the seabird closet. The analog wind speed and direction station was once again restored and is currently operating in the PRBO house.

**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.
* 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.

**Solar/Electric**

**PV System**

Distilled water used: 11 gallons

Distilled water reserves: 33 gallons

**Generator run times**

Kohler 15ROZ (Buffy): 3.1 hours (1741.8 on meter)

Kohler 30REOZJC (Speedwagon): 0 hours (611.7 on meter)

Kohler 40REOZK (Zeke): 8.9 hours (323.8 on meter)

Kohler 15ROY61 (Peevey): 2.4 hours (3884.9 on meter)

Webasto: 0 hours

**Power use**

Facilities power use: Start = 78,365; End = 78,990; for total of 625 kWh

**Fuel Reserves**

Diesel used: 41 gallons

Diesel drums: 15 @55gal: 825 gallons

Kohler 15ROZ (Buffy) Tank: Full

Kohler 30REOZJC (Speedwagon) Tank: Full

Kohler 40REOZK (Zeke) Tank: Full

Kohler 15ROY61 (Peevey) Tank: Full

Webasto Tank: Full

Surplus gasoline for boat motors: 5 gallons

Safeboat tank: Full

Zodiac tank: Full

**Water Reserves**

Water used this month: Start = 263,783; End = 266,486; for a total of 2,703 gallons

Cistern: 7. 5’ or ~ 101,430 gallons

Gravity Tank: empty

Settling Tank: empty

**Sightseeing Boats**

The Salty Lady was seen on 4 occasions with an average of ~ 30 POB, Hulicat on 4 occasions with an average of ~ 20 POB.

**Non-breeding birds**

Black-footed Albatross, Pink-footed Shearwater, **Buller’s Shearwater**, Sooty Shearwater, Brown Booby, Brown Pelican, Canada Goose, Peregrine Falcon, Wandering Tattler, Black Turnstone, Caspian Tern, Eurasian Collared-dove, Barn Owl*,* Pacific-slope Flycatcher, Red-breasted Nuthatch, Red-winged Blackbird.