**Farallon Island NWR**

**Monthly Report**

**July 2016**

Biologists: Pete Warzybok & Ryan Berger

**Island Visitors**

Point Blue crew this month included: Carlo Acuña, Ryan Berger, Emma Chiaroni, Sarah Guitart, Bradley Wilkinson, Claire Wallis and Pete Warzybok.

USFWS crew included: Gerry McChesney, Jack Rabe and Jonathan Shore

**July 03:** “**Salty Lady”** (skipper Jared) departed with Point Blue’s Brad Wilkinson and USFWS’s Gerry McChesney.

**July 09: “Starbuck”** (skipper John Wade) brought out Ryan Berger and Brad Wilkinson. Emma Chiaroni and Pete Warzybok departed the island. Five people toured the island.

**July 16: “Salty Lady”** (skipper Jared) departed with USFWS’s Jack Rabe.

**July 23: “Mary Emma”** (skipper Ken Fouts) brought out Pete Warzybok. Three people toured the island. Carlo Acuña departed the island.

**July 23: “Salty Lady”** (skipper Jared) brought out SFSU’s vegetation mapping crew which included Quentin Clarke, Sarah Fiori, Rob Thoms and Jeff Blumenthal.

**July 29: “Outer Limits”** (skipper Jim Robertson) brought out USFWS’s team spinach which included Jonathan Shore, Jack Rabe, Earle Cummings, John Herndon and Rob Doster. Bonny Doon Environmental contractors (David Gill and 3 others) were on the island for 5 hours to service the island’s septic system. Departing the island was the SFSU vegetation mapping crew: Quentin Clarke, Sarah Fiori, Rob Thoms and Jeff Blumenthal.

**West End Island Visitors**

No trips to West End were conducted in June

**Weather/Ocean**

The month of July saw generally variable light to moderate winds, overcast skies and persistent fog. There was a total of 0.06 inches of precipitation recorded this month, mostly as condensed fog. Mean noon day air temperature was 13.88°C, with a standard deviation of 1.0°C. The highest air temperature was 16.0° C recorded at 1500 hours on the 31st. Mean sea surface temperature was 12.40°C, with a standard deviation of 0.74°C, a high of 14.0°C on the 31st and a low of 11.17°C on the 16th. This mean sea surface temperature is 0.05°C below the long term (45 year) mean for July.

**Oiled & Entangled Things**

**Common Murre** – One oiled murre seen on July 4 at Upper Upper study plot with about 10% of it body oiled, primarily on the breast. On July 10 one of the mates at site 381 in the Upper Shubrick study plot was seen with a small patch of oil on the back of its head and two small dots on the right cheek for a total of <5% of its body oiled.

**Brandt’s Cormorant** – One adult bird was seen in the Sea Lion Cove colony with monofilament fishing line tightly wrapped around its chest.

**Pelagic Cormorant** – On July 2 an adult bird was seen in Garbage Gulch that had oily film on entire body in which the feathers had lost their water proofing.

**California Sea Lions** – Four individuals with embedded entanglements around the neck were observed this month.

**Steller Sea Lions** – One adult male observed with embedded monofilament around the neck was observed this month.

**Breeding Birds**

**Ashy Storm-Petrel –** Storm-petrel breeding activity continued to advance throughout July with many followed sites hatching chicks. Mist-netting was conducted on two nights during July. On July 5 there were 68 new and 2 previously banded Ashy storm-petrels captured during a full netting session at the Carp Shop. On July 27 on Lighthouse Hill, there were 56 new and 4 previously banded Ashy storm-petrels along with 2 new Leach’s storm-petrels and a first island record Least storm-petrel! A single Fork-tailed storm-petrel was observed but was not captured in the net. A total of 14 wings and 1 whole bird were noted this month, all either predated by Western Gulls or unknown cause of death.

**Leach’s Storm-Petrel** – Two new LHSP were caught during netting at the end of the month.

**Brandt’s Cormorant** –Most nests that hatched chicks progressed in rearing to fledging status by the end of the month. The first official fledglings were noted at the Corm blind on July 14. Two chick banding sessions were conducted at SLC and CB on July 30 and 31, respectively. A total of 144 chicks were banded at SLC and 155 at CB for a total of 299 chicks banded.

**Pelagic Cormorant –** After abandoning nests in late June adult birds began attending nest sites in the middle of July. However, no new eggs were laid in July and adults were only seen roosting at nest sites.

**Double-crested Cormorant** – Many of the nests that hatched chicks were successful in fledging their chicks. The last census of the season was conducted on July 24 with a high count of 84 chicks.

**Western Gull** –There was relatively little loss of chicks after the initial banding period. First fledges were documented in all plots by the end of the month. Saturation banding of all non-followed chicks within study plots was conducted in the middle of the month. It appears that chicks that hatched and survived to early July were successful in fledging as evident in the large number of rafting and roosting fledglings seen in the mornings and evenings at month’s end.

**California Gulls –** Gull numbers continued to decline through July with counts concluding in the middle of the month. There were no successful fledglings this breeding season.

**Common Murre –** By the end of the month there was only one chick left in the Upper Shubrick and Corm Blin study plots. Productivity monitoring of the banded bird study at the Corm Blind sub-colonies ended on July 11 and on July 15 at Shubrick Point. Productivity was reduced this season compared to previous seasons with many chicks dying in the colony or predated by Western gulls. The final all-day diet watch of the season was conducted on July 2 with the last 2 hour diet watch concluding on July 13. Feeding rates continued to be noticeably slower than in the previous years. The diet has consisted of a mix of anchovy and rockfish.

**Pigeon Guillemot** – After a big push of egg laying in early June and chick hatching at the end of June there was considerable breeding failure documented on the July 1 breed check with many chicks found dead at nest sites. However, after this initial loss there was an upwelling event in early-mid July that provided significant productivity which allowed many sites to maintain productivity. The first chicks of the season were banded on July 26 with the first fledgling noted on the water on July 29. First official fledges from followed breeding sites was documented on the July 31 breed check.

**Cassin’s Auklet –** Cassin’s auklet had a surprisingly productive season when considering what was expected with the winter El Niño. This is especially so compared to other breeding seabirds this season. Nearly all sites had fledged chicks by the end of the month with only a handful of relays that hatched chicks late. There were very few sites that attempted a second brood this season. Diet sampling concluded in the middle of the month.

**Rhinoceros Auklet –** The first banded chicks of the season occurred on the July 14 breed check. The first confirmed fledges from followed sites occurred on July 25. Growing rates continued to slow through the end of July but it appears many chicks will fledge but perhaps not at maximum weights as seen in the past. Auklet netting for mark-recapture studies continued through July 20. Through the last 8 sessions, the diet consisted of mostly rockfish and anchovy. Bradley Wilkinson, working with Point Blue biologists, concluded his GPS logger study on July 13 as part of his master’s degree research. This continues a study that was initiated in 2014 to look at auklet foraging behavior and habitat use in the marine sanctuaries. Brad was able to recover roughly half of the 18 tags deployed and with each tag consisting of 3 foraging trips this data will be a great addition to understanding the local foraging ecology of this species.

**Tufted Puffin –** The late season puffin census was not completed in July and will be initiated the first part of August. However, many adults have been seen with a bill load of fish during the last week of July.

**Black Oystercatchers** – The breed study concluded on July 26 with only one successful fledging this season. After failing, many oystercatchers have been observed roosting in large numbers around the island. The low productivity documented this season is likely attributed to the California sea lion incursion in breeding areas.

**Canada Goose –** All 7 of the goslings officially fledged on July 5. By July 19 all geese had departed the island.

**Pinnipeds**

Persistent dense fog throughout most of July prevented pinniped censuses from being conducted on most days. Only one census was completed on July 21.

**California Sea Lion** – Overall numbers continued to be relatively low and similar to June. There were a total of 2,824 animals counted during pinniped census from the lighthouse including 200 pups.

**Steller Sea Lions** –Overall numbers were slightly lower than during June with 103 animals counted including 20 pups on the 21st. during pinniped census. The lower numbers were primarily the result of bulls departing the island and a lower count of immature animals hauling out.

**Northern Elephant Seal –** Numbers of elephant seals reached their annual low during July with only 6 animals observed during the census on the 21st. However, by the end of the month, some larger sub-adult males (SA2 and older) were beginning to return to the island to molt.

**Harbor Seal –** As usual overall numbers are heavily dependent upon tide and swell conditions (high tide or swell results in reduced haul out areas). There were 108 total harbor seals observed on the 21st, including a season high 7 pups.

**Northern Fur Seals** –Overall numbers continued to increase in July. There were a total of 803 animals observed during the census, including 338 pups. Photos of the colony were taken from the Safeboat on the 28th in an attempt to capture the population and pup production during the peak season despite the continued inability to conduct our regular censuses.

**Cetaceans**

As was the case last month, high winds and persistent fog prevented us from conducting standard surveys most days. There were only 6 one hour standardized whale watches conducted this month using the Apple iPad and Spotter App. Most observations are based on daily incidental observations.

**Gray Whale** – A single resident whale was present around the island and detected on most days during June. This was the only gray whale seen from the island in July.

**Humpback Whale** – There were 332 animals (up from 163 in June) observed during July on 30 days. The high count was 69 observed on the 19th. Many animals were seen breaching, pec and fluke slapping and feeding all month around the island. One hot spot for a few days appeared to be Hurst Shoal located ~1.5 miles south of the island.

**Blue Whale** – There were 24 animals (up from 14 in June) observed during July on 8 days. The high count was 5 observed on the 19th and 21st.

**Unidentified Whale** – A total of 1 unidentified whales was seen this month.

**Sharks**

No shark attacks noted

**Salamanders**

There were no surveys conducted this month but a few salamanders were observed incidentally during evening cricket survey at the end of the month.

**Owls**

No owls detected this month.

**Crickets**

Cricket surveys at North Landing, Gap, Corm Blind and Rabbit caves occurred on three consecutive nights from July 25-27. Few individuals were documented on the outside walls near the opening of caves. Most individuals during were documented inside caves. Overall numbers were relatively low when compared to sampling periods in Fall and Winter.

**Inverts and Intertidal**

Nothing of note this month.

**Plants**

It was a busy month for invasive plant control efforts on Southeast Farallon. Jack Rabe and Gerry McChesney from the USFWS continued spraying efforts around the island during the first half of the month and Jack continued to conduct plant phenology surveys to help determine the timing of flowering and seeding of invasive plants. From July 25 to July 29, Quentin Clarke, Sarah Fiori, Rob Thoms and Jeff Blumenthal were on this island to conduct invasive plant surveys that will help to determine the abundance and extent of these plants on the island and hopefully help to determine factors which influence their propagation. On July 29th, Team Spinach arrived (consisting of Jonathan Shore, Jack Rabe, Earle Cummings, John Herndon and Rob Doster) to continue invasive plant control efforts with a comprehensive island wide effort. Thanks to earlier efforts, there were fewer plants to spray and the team could focus effort on some of the areas which had been inaccessible earlier in the season, including Fertilizer Flat, Orca Cove, the east side of Lighthouse Hill and Shubrick Cove. Overall efforts targeted New Zealand spinach, plaintain, pigweed, malva, sow thistle and Aerharta. In addition, they raked up and collected spinach seeds to test the efficacy of removing them from the island to reduce the seed bank. This effort proved tedious but they were able to collect three 30 gallon trash bags full of seeds. Some of these will be brought back to the mainland for a propagation study.

**Violations**

There were no violations noted during July*.*

**Maintenance**

Island biologists conducted routine maintenance checks on the PV system and generators weekly**.** Monthly changes of water filters, crane greasing and outboard motor operation were also conducted. The 25hp motor on the boat at NL would not start and needs to be inspected.

**Maintenance Needs**

* Repair liner in the Gravity tank
* The 30Kwh Kohler “Speedwagon” has a small but persistent coolant leak apparently emanating from the water pump. While the leak seems to have subsided in the last month, it should still be monitored carefully.
* The dumper jet battery appears to be losing its charge quickly despite regular recharges. The reason for the rapid discharging is not known. The batteries are fairly new so the issue may be with the charger not bringing them up to full capacity.
* Webasto heater is not functioning and needs a new fuel pump.
* Water supply lines have developed several leaks over the last few months and need to be replaced.
* Cistern is losing water at a rate ~250 gallons per month and needs to be inspected.
* Settling Tank appears to have a leak in it when water is above 5.1 feet
* Some of the wooden railing on Light House Hill still needs repair.
* Cart path rail line needs several major repairs.
* Clean water line going to upstairs bathroom in PRBO house needs to be cleared to increase water pressure.
* PRBO upstairs toilet needs to be fixed so it flushes properly. Likely cause is low water pressure and very old pipes.
* Drain line from PRBO kitchen sink needs to be replaced.
* Front door and frame to PRBO house are rotting at bottom corner and need to be repaired or replaced. The weather stripping for all doors needs to be replaced to keep out weather, flies, and mice.
* Refurbishment of North Landing platform

**Solar/Electric**

**PV System**

Weekly checks were conducted on Wednesdays. All PV checks went well but the system appears to going through water faster than normal and may be overcharging the batteries. After consulting with Mike McGoey, it was decided that the likely cause is a fault in the charge controller for Array 2. Array 2 was therefore temporarily disconnected in order to monitor the charging and help trouble shoot the issue. The remaining three arrays appear to be continuing to keep the batteries charged without the input from Array 2 and the system will be closely monitored.

**Generator run times**

White Kohler (Buffy): 4.2 hours

Black Kohler (Speedwagon): 12 hours

PV Kohler: 1.4 hours

Webasto: Not working

Power Used: Start of month = 53,393; end of month = 53,996 for a total of 603kwh

**Fuel Reserves**

Fuel Remaining:

Drums: 6 2/3 X 55g = ~365 gallons

PV Kohler Tank: Full

White Kohler Tank: Full

Black Kohler Tank: Full

Webasto Tank: 1/4 full

Diesel Fuel used in June: 12.1 gallons

**Water Reserves**

Cistern: ~96,600 gallons (7’2”)

Gravity Tank: empty

Settling Tank: empty

No water was pumped this month. Water use at PRBO house water meter was 2,085 gallons. This is roughly one third the amount of water used last month. The main difference was the switch back to using the gray water system for flushing toilets and a smaller crew on the island.

**Sightseeing Boats**

Kitty Kat was seen seven times this month and Salty Lady was present eight times with between 30 and 50 happy nature enthusiasts on board. The Huck Fin and the Sea Wolf were both seen fishing in the vicinity of the island (typically near Hurst Shoals or Middle Farallon) on several days this month.

**Non-breeding birds**

Common Loon, Western Grebe, Pink-footed Shearwater, Sooty Shearwater, **Least Storm-petrel** (1st island record), **Brown Booby** (continuing birds)**, Blue-footed Booby,** Northern Gannet (sporadic attendance in the cormorant colony), Brown Pelican, Canada Goose (all breeders), Surf Scoter, Peregrine Falcon, Western Willet, Wandering Tattler, Whimbrel, Black Turnstone, Western Sandpiper, Least Sandpiper, Red-necked Phalarope, Rock Pigeon, Eurasian Collared Dove, Nighthawk spp., Anna’s Hummingbird, Barn Swallow, House Wren, Orange-crowned Warbler, Common Yellowthroat, Green-tailed Towhee, Black-headed Grosbeak, Rose-breasted Grosbeak, House Finch.