**Farallon Island NWR**

**Monthly Report**

**June 2016**

Biologists: Pete Warzybok, Ryan Berger & Russ Bradley

**Island Visitors**

Point Blue crew this month included: Carlo Acuña, Ryan Berger, Russ Bradley, Lindsey Broadus, Emma Chiaroni, Sarah Guitart, Scott Shaffer, Dave Mazurkiewicz, Bradley Wilkinson, Claire Wallis and Pete Warzybok.

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

**June 11:** “**Bonkers”** (skipper Keith Sedwick) brought out Pete Warzybok, Carlo Acuña, Dave Mazurkiewicz, Jonathan Shore and Jack Rabe. Russ Bradley, Lindsey Broadus, Sarah Guitart and Scott Shaffer departed. Four people toured the island.

**June 25: “MiVida”** (skipper Tom Charron) brought out Sarah Guitart, Claire Wallis and Gerry McChesney. Ryan Berger, Dave Mazurkiewicz and Jonathan Shore departed. Three people toured the island.

**West End Island Visitors**

No trips to West End were conducted in June

**Weather/Ocean**

The month of June saw generally strong northwesterly winds, rough seas and fog. There was a total of 0.09 inches of rainfall recorded this month, mostly as condensed fog. Mean noon day air temperature was 14.50°C, with a standard deviation of 1.23°C. The highest air temperature was 17.0° C recorded at 1500 hours on the 16th. Mean sea surface temperature was 12.32°C, with a standard deviation of 0.84°C, a high of 14.56°C on the 9th and a low of 11.19°C on the 28th. This mean sea surface temperature is 0.87°C above the long term (45 year) mean for June. Sustained strong wind and likely strong upwelling during June resulted in an obvious plankton bloom. The water around the island rapidly changed from clear blue water to a productive muddy green color around the third week of the month.

**Oiled & Entangled Things**

**Common Murre** – One oiled murre seen at Shubrick Point with about 10% of it body oiled, primarily on the breast.

**Brandt’s Cormorant** – Two entangled cormorants were observed at the Sea Lion Cove colony with monofilament wrapped around their body and neck.

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

**Steller Sea Lions** – One adult male observed with an unknown material embedded around the neck.

**Breeding Birds**

**Ashy Storm-Petrel –** Storm-petrel breeding activity picked up throughout June with many sites laying eggs. The first chick of the season was observed in a crevice on Lighthouse Hill on June 23rd. Mist-netting was conducted on three nights during June. On June 1st there were 86 new and 3 previously banded Ashy storm-petrels captured during a full netting session at the Carp Shop. On June 2nd, there were 11 new and 3 previously banded Ashy storm-petrels captured during a half session on Lighthouse Hill. On June 8, there were 14 new and 3 previously banded Ashy storm-petrels captured during a half session on Lighthouse Hill. A single Fork-tailed storm-petrel was observed but was not captured in the net. A total of 17 wings were noted this month, all predated by Western Gulls.

**Leach’s Storm-Petrel** – None observed.

**Brandt’s Cormorant** – The breeding population was censused on June 6th resulting in an estimate of approximately 4,800 breeding cormorants. This was the lowest number since 2012. There was a small push of late breeding individuals comprised of mostly young birds setting up nests towards the middle of the month but most of those were abandoned by the end of the month. The first chicks were observed at both Sea Lion Cove and Corm Blind colonies on June 14th.

**Pelagic Cormorant –** Birds were regularly attending nest sites early in the month and the first eggs were confirmed at several sites on June 5th. The all island census was conducted on June 7th, resulting in an estimate of 308 breeding birds. However, by June 24th, adults were beginning to abandon nests and lose eggs and all nests on the island had been abandoned by the June 29th nest check.

**Double-crested Cormorant** – As with the other cormorant species, double-crested cormorants are not having a very productive season. The nest counts have slowly declined throughout June as several nests have been abandoned. The first chicks of the season were observed on June 20th.

**Western Gull** – Gull chicks have continued to hatch throughout June but most are disappearing or dying within a few days. Those that do survive to 15 days old or more, however, seem to be hanging on. The first chicks were banded on June 12th in H-plot. Scott Shaffer from SJSU has been working with Point Blue biologists for the last several seasons to track the movement of Western gulls using GPS data loggers and GLS light sensing data loggers. Scott was on the island for the first half of June to retrieve the GLS loggers that we deployed last summer in order to look at over-winter movement patterns as well as to conduct short term GPS tracking of gulls to examine their foraging behavior during the breeding season.

**California Gulls –** Gull numbers have been low and declining throughout the month. Although eggs were observed in a few sites in late May, by late June all nests were lost or abandoned and very few birds remained. Incursion of California sea lions into the gull breeding colonies likely contributed to both reduced breeding numbers and poor breeding success.

**Common Murre –** Murre chicks have been hatching throughout June with the first chicks being seen in the Upper Shubrick study plot on June 4th. Diet watches began on June 13th and have continued each day into early July. Feeding rates have been noticeably slower than in the previous few years and the diet has consisted of a mix of anchovy and rockfish. Productivity of the murre colony will also be reduced this season. Many chicks have died in the colony and several others have been predated by a pair of Western gulls that nests nearby. The first chick fledged on June 29th.

**Pigeon Guillemot** – Guillemots began laying in late May but the bulk of nests laid eggs at the beginning of June. The first chick hatched on June 16th while the majority of eggs were hatching during the last week of the month. Dietwatches began at Garbage Gulch on June 28th with the diet dominated by juvenile rockfish.

**Cassin’s Auklet –** Cassin’s auklet appear to be having a relatively good season, especially compared to other breeding seabirds. The first chick fledged on June 5th and by the end of the month, chicks at most followed sites were growing well and getting close to fledging. Diet sampling has continued to be conducted on a weekly basis and has been dominated by krill throughout the season. On the 24th, we deployed GLS light sensing data loggers on 33 birds breeding in our known-age nest boxes. These loggers will help us to determine what habitat is important for these birds when they are not at the colony.

**Rhinoceros Auklet –** The first chicks in study boxes were seen on June 5th and hatching continued throughout the month. Chicks have been growing relatively slowly but seem to be doing well. Auklet netting for mark-recapture studies and to collect diet information began on the 17th. Through the first 8 sessions, the diet has been a mix of small rockfish, anchovies and baracudina. Bradley Wilkinson, working with Point Blue biologists, began deploying GPS loggers on adult auklets that are provisioning chicks 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.

**Tufted Puffin –** The early season puffin census was completed on June 9th resulting in a total of 51 active nest sites. This is down from the 62 and 75 active sites detected during the early season census the previous two seasons. Persistent dense fog and strong winds made viewing difficult and may, in part, contribute to the lower number of puffins detected.

**Black Oystercatchers** – Oystercatcher have continued to be observed around the island at roost sites and breeding sites. The first chick of the season was observed on Fertilizer Flat on June 28th. Several nests appear to have failed due to disturbance from California sea lions and there are fewer active nest sites.

**Canada Goose –** Two pair of geese continue to attend the island with their almost fully grown chicks. All 4 adults and the 7 goslings are seen daily foraging on the marine terrace.

**Pinnipeds**

**California Sea Lion** –Overall numbers have been relatively low and steady throughout June. On average there were 2,785 animals counted during pinniped census from the lighthouse. The high count was 2,974 on the 8th. There was a high count of 265 pups observed on the 16th. Sea lion scat samples were collected on the 1st to examine their diet.

**Steller Sea Lions** –Overall numbers increased steadily throughout June with an average of 121 animals counted during pinniped census. The high count was 141 on the 30th including 29 pups observed. The first pups of the season were seen on the 8th.

**Northern Elephant Seal –** Numbers of elephant seals were low and declining throughout the June as molting animals departed the island. On average there were 42 animals counted during census. The high count was 61 on the 16th and by the survey on the 30th the first sub-adult males were returning to the island to molt.

**Harbor Seal –** As usual overall numbers were highly variable this month and heavily dependent upon tide and swell conditions (high tide or swell results in reduced haul out areas).The average count for the month was 89 with a high count of 116 on the 30th.

**Northern Fur Seals** –Overall numbers increased rapidly during June with large numbers of fur seals hauling out and pupping on Indian Head, Jordan Channel and Weather Service Peninsula. By the end of the month, the fur seals had displaced almost all sea lions from Indian Head. The average count from standard lighthouse surveys was 248 animals. The high count was 487 on the 30th, including 142 pups.

**Cetaceans**

High winds and persistent fog prevented us from conducting standard surveys most days. There were only 4 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. The high count was 2 on the 15th.

**Humpback Whale** – There were 163 animals observed during June on 21 days. The high count was 42 observed on the 15th. There were several humpbacks observed lunge feeding approximately ¼ mile north of the island on June 5th.

**Blue Whale** – There were 14 animals observed during June on 7 days. The high count was 5 observed on the 15th.

**Minke Whale –** One minke was observed approximately 3 miles north of the island on the 7th.

**Unidentified Whale** – A total of 3 unidentified whales were seen this month.

**Sharks**

No shark attacks noted

**Salamanders**

There were no surveys conducted this month but a few salamanders were observed incidentally in nest boxes and camera sites or out foraging on wet evenings.

**Owls**

No owls detected this month.

**Crickets**

Nothing of note this month.

**Inverts and Intertidal**

Nothing of note this month.

**Plants**

Jonathan Shore, Gerry McChesney and Jake Rabe from the USFWS were on this island during much of June to get an early start on invasive plant control with the hopes of preventing seed deposition. Spraying and or pulling efforts were conducted on 15 days, targeting New Zealand Spinach, Malva, Pigweed, Sow Thistle, and Plaintain. Jack also began conducting plant phenology surveys to help assess the development of invasive plants, the timing of flowering and seeding and to help determine the most opportune times for performing vegetation control.

**Violations**

There were two fishing violations observed this month. On the 4th a small sportfishing boat called the Levenne Ann was fishing near east landing. No CF number was obtained, but they were close enough to shore that island biologist Ryan Berger was able to shout to them and advise them about the no take marine reserve. After the discussion, they departed the island to fish elsewhere. On the 5th, another small sportfishing boat was fishing ¼ mile south of the island for several hours. No CF numbers were obtained and the vessel did not respond to repeated hailing attempts.

**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. Jonathan Shore, from USFWS, was also on the island for two weeks in June and helped to complete several long-standing maintenance needs including: replacing a defective check valve on the gray water pump, replacing the flushing mechanism in the PRBO house toilet, installing a new on-demand water heater and vent pipe in the PRBO house, and installing a new pressure tank as part of the gray water system. The gray water system is now back to normal function and we are once again having hot showers in the PRBO house.

**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: ~98,300 gallons (7’3”)

Gravity Tank: empty

Settling Tank: empty

No water was pumped this month. Water use at PRBO house water meter was 6,879 gallons. The high water use was a result of a large crew (8 people for several weeks) and continuing to use fresh water for toilets until the 15th. The repairs to the gray water system should dramatically reduce usage going forward.

**Sightseeing Boats**

Kitty Kat was seen seven times this month and Salty Lady was present six times with between 30 and 50 happy nature enthusiasts on board. The New Eldorado 3 was here on the 5th with ~30 POB.

**Non-breeding birds**

Eared Grebe, Pink-footed Shearwater, Sooty Shearwater, **Brown Booby** (continuing birds)**,** Northern Gannet (sporadic attendance in the cormorant colony), Brown Pelican, Canada Goose (all breeders), Peregrine Falcon, Wandering Tattler, Whimbrel, Eurasian Collared Dove, Ringed Turtledove, Western Wood Pewee, Willow Flycatcher, Pacific-slope Flycatcher, Orange-crowned Warbler, Black-and-white Warbler, American Redstart, **Prothonotary Warbler,** Common Yellowthroat, Wilson’s Warbler, **Canada Warbler,** Lazuli Bunting, House Finch.