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Farallon Islands Monthly Report

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

August 2021

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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: Olivia Boisen, Kristen Hayes, Joey Negreann, Theresa Rizza, Stella Solasz, Alex Soldo, Amanda Spears, Jim Tietz.

USFWS: Amy Agee, Alyssa Clevenstine, Gerry McChesney

August 14th: **“Nido del Mar”** (skipper Kevin McRae) brought out Kristen Hayes, Alex Soldo, and Jim Tietz. Crew members (Sarah, Ian, Aaron, and Kevin) toured the island and departed with Olivia Boisen, Theresa Rizza, and Amanda Spears.

August 24th: **“Pacific Pearl”** (skipper JJ and Andy Guilano) brought out FWS personnel Gerry McChesney, Alyssa Clevenstine, and Amy Agee. FWS maintenance staff, Lydia Woltjer and Tyrone Asencio, toured the island and then departed.

August 27th: **“So Good”** (skipper Harmon Shragge) brought out Joey Negreann. Palo intern, Kevin Garcia-Lopez, and crew member, Michael, toured the island.

August 30th: **“MV Drake”** (skipper Andy Guilano) brought out David Gill and Michael Guilbert of Bonny Doon Environmental Systems to service the septic system, as well as Steve Delgros and Robert Walsh of Apollo to scope out roof repair needs for the houses. Gerry McChesney, Alyssa

Clevenstine, and Amy Agee departed along with the contractors.

West End Island Visitors

No trips were made to West End this month.

COVID-19: In response to ongoing concerns over impacts of this global pandemic, certain precautionary measures have been employed to minimize the risk of COVID-19 infecting island personnel. We have been following a strict protocol that has allowed continued, safe operations on the island.

Weather/Ocean

Monthly weather is summarized in Figure 1. Light to moderate NW winds dominated this month, with occasional light winds from the S and SW. The island received only trace amounts of rain. The average midday air temperature this August was 15.99 ± 1.41 °C, which was 0.60 °C higher than the long-term average of 15.39 °C. The average sea surface temperature (SST) this August was 14.06 ± 0.66 °C, which was 0.25 °C above the long-term average of 13.81 °C.

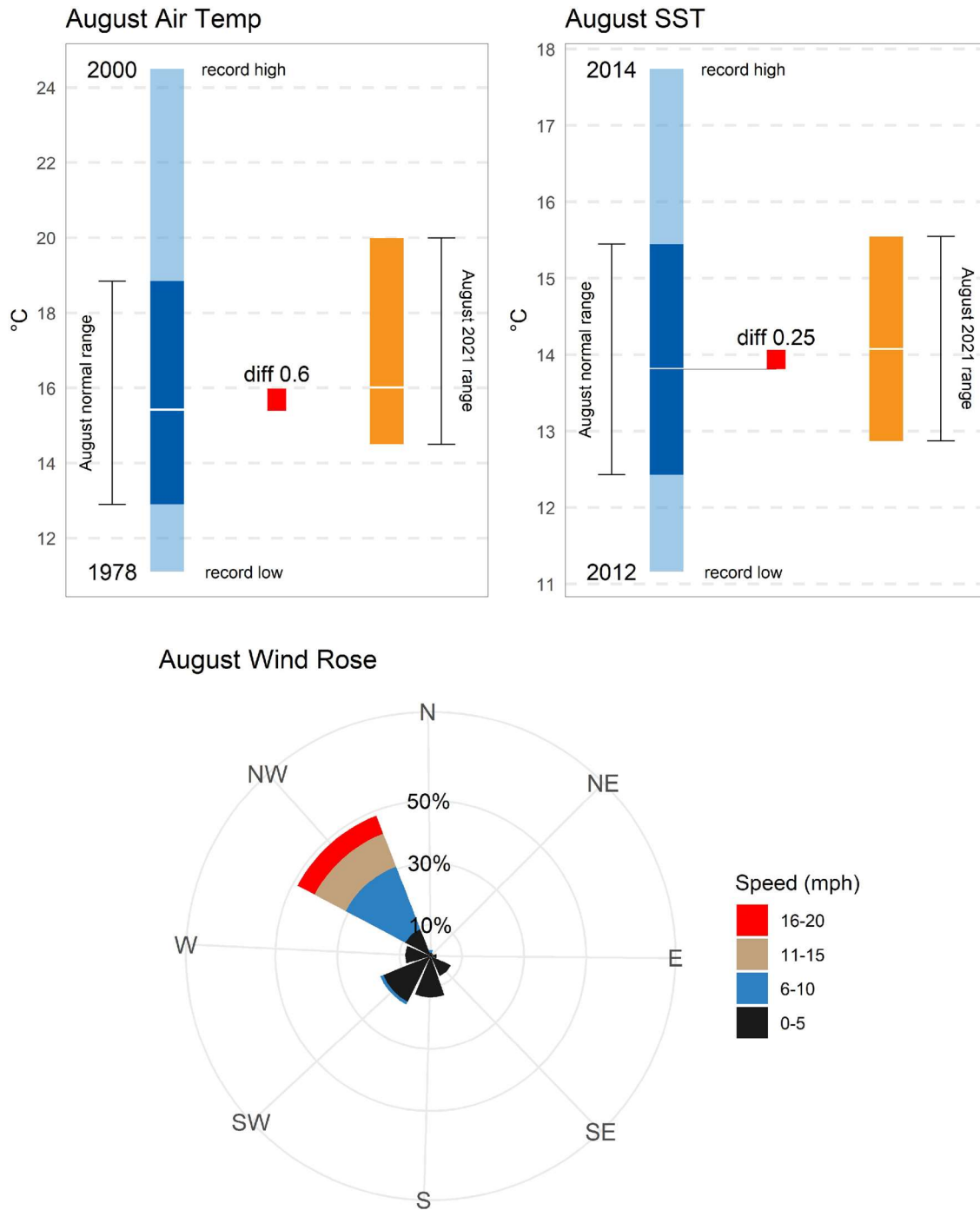


Figure 1. Noon air and sea surface temperature data summary. Light blue depicts the long-term (1971 – 2020) range of observations with years given for record highs and lows; dark blue shows the long-term range of averages for this month. Orange depicts the range of current (2021) observations. Differences 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

Three adult males, one subadult male, and ten immature *Zalophus* were observed with monofilament, nylon rope, or unknown material embedded in their necks and/or head. One adult Western Gull had a toy parachute man wrapped loosely around its leg. Three Cassin's Auklets perished from a noose mat that was left in the pipe rack behind the Powerhouse; the noose mat was thrown in the trash.

Feeding Flocks

August 8th: Two feeding flocks were observed in the afternoon within two miles of the island, with humpback whales and hundreds of gulls, pelicans, and *Zalophus* feeding on schooling fish and unknown prey.

August 23rd: One feeding flock ~10 miles east of the island consisted of 6 humpback whales and ~300 unknown birds feeding on unknown prey.

Breeding Birds

Storm-Petrels – Of the 63 nest crevices initially monitored this breeding season, 44 (70%) had some activity this year and 19 did not. All active nests located this year were occupied by ashy storm-petrels. By the end of August, 35 of the active ashy sites had chicks, two sites had adults still incubating eggs, two had cold eggs and likely failed, three had dead chicks, and two had no activity this month and were assumed to be failures.

One standard 3-hour mist netting session was conducted at the Carp Shop on August 8th, with 40 total birds captured, including: 39 new ashy storm-petrels and 1 recaptured ashy storm-petrel.

Social attraction sessions resumed at the Ashy Castle on August 2nd, and playback occurred throughout each night during the two-week window around the new moon. On August 30th, an adult ashy storm-petrel was observed brooding a newly hatched chick (eggshells still present) in the Ashy Castle at a followed site. The adult moved out of the nest site when the observer shined a red light at it. Playback was then tried around the castle, but there were no replies.

A fork-tailed storm-petrel wing was found by the Carp Shop on August 6th. On August 7th, a small, dead ashy storm-petrel chick was recovered from Lighthouse Hill site 26 and frozen for later analysis. On the 22nd, two fresh ashy storm-petrel eggs were found at the same site, Lighthouse Hill 26, and on the 27th, an adult was found incubating one of those eggs (the other egg was not relocated).

Brandt's Cormorant – The last chicks at followed sites at the Sea Lion Cove colony fledged on the 28th, and at the Corm Blind colony on the 30th. On August 11th, 150 chicks were banded at the Corm Blind colony.

Many chicks remained in creches along the shoreline at the end of the month.

Pelagic Cormorant – Chicks at the remaining followed site fledged on August 13th.

Double-crested Cormorant – Breeding surveys were concluded on August 5th as many fully-feathered chicks were large and wandering about the colony.

Western Gull – Breed checks concluded in H-east plot on August 11th, when all remaining chicks were fully feathered and determined to have fledged. Many adults and fledged young have left their territories and began to roost on the Marine Terrace.

California Gulls – On August 5th, six fully feathered chicks remained in the West Marine Terrace colony, when surveys for the season were concluded. Influxes of migrants from the mainland were numerous early in the month, but declined during the second half of the month.

Common Murre – A few hundred adults were observed daily at offshore islet colonies (e.g., Saddle Rock) until mid-August, but by the end of the month they had dispersed for the season.

Pigeon Guillemot – There were 12 active nests at the start of August, which fledged 14 chicks from 11 sites. Seven of these nests were 2-chick nests, however, only three nests fledged both chicks. One of the 14 chicks that fledged below the Auklet Trail after being killed by a Peregrine Falcon. The last monitored chicks fledged between August 30th and September 1st. Several fledglings were observed in the water around the island mid-month, but numbers declined rapidly by the end of the month.

Rhinoceros Auklet – Of the remaining monitored nest boxes, five nests were active at the beginning of August, with four chicks fledging and one disappearing before it reached fledging age. Of the monitored burrows and crevices, six were active at the beginning of August, with four chicks fledging and two disappearing before fledging age. Breed checks at followed nests concluded on August 30th. Near the end of the month, a few partly-feathered chicks from non-monitored nests were found wandering the island. Very few adults or chicks were seen on the water around the island at the end of the month.

Tufted Puffin – The late season surveys, which began on July 22nd, concluded on Aug 6th. The combined early and late breeding surveys indicated that the number of nest sites likely active this year was 172, with an estimated breeding population of 344. Several birds were observed carrying fish into nesting areas this month. In late August, many puffins were observed prospecting for future nest sites, as is typical for this time of year.

Cassin's Auklet – There were 36 monitored nests still active with second broods or relays at the beginning of August: 23 from the Known-Age boxes and 13 from the PRBO boxes. Among the Known-Age boxes, 4 chicks fledged, 8 died or disappeared, 4 nest sites had cold eggs, and 7 were still active at the end of the month. Among the PRBO study boxes, 2 chicks fledged, 4 died, 2 nest boxes had cold eggs, and 5 remain active with chicks at various stages of development. In

addition to the monitored sites, 1 chick from an unfollowed site was banded this month to boost our sample size of potential future known-age recruits.

On August 19th, chicks appeared lethargic, possibly due to the high temperatures (18.0 °C at noon).

Black Oystercatchers* – Several adults and juveniles seen at high tide roosts during shorebird surveys.

**We no longer conduct dedicated monitoring of this species, and only incidental breeding behaviors and attempts are noted.*

Pinnipeds

California Sea Lion – On average there were 9,438 (std \pm 2827) individuals counted during the weekly pinniped census from the Lighthouse, with a high count of 13,429 individuals on the 5th, which was the highest count in Point Blue's history to that date. The high count for pups was 755 on the 5th.

Steller Sea Lion – On average there were 86 (std \pm 16) individuals counted, with the high count of 101 on the 5th. The high count for pups was 27 on the 5th.

Northern Fur Seal – Numbers declined at the West End colony this month. On average there were 1,476 (std \pm 219) individuals counted, with the high count of 1,713 observed on the 12th. The high count for pups was 482 on the 5th.

Harbor Seal – On average there were 19 (std \pm 17) individuals counted, with a high count of 34 on the 26th.

Northern Elephant Seal – Numbers remained low this month, with an average count of 13 (std \pm 5) individuals. A high count of 20 individuals observed on the 26th. Nearly all of these were immatures.

Canada Goose

None were detected this month.

Cetaceans

Standard Survey – Ten one-hour standard whale watches were conducted this month from the Lighthouse using the Ocean Alert app. Daily high counts from standard watches combined with incidental observations are summarized in Figure 2. Gray whales declined from a high of 10 individuals at the beginning of the month to a low of 1 at the end of the month. The highest

count of the year for humpback whales occurred on August 1st, when 102 were counted. No other cetacean species were seen.

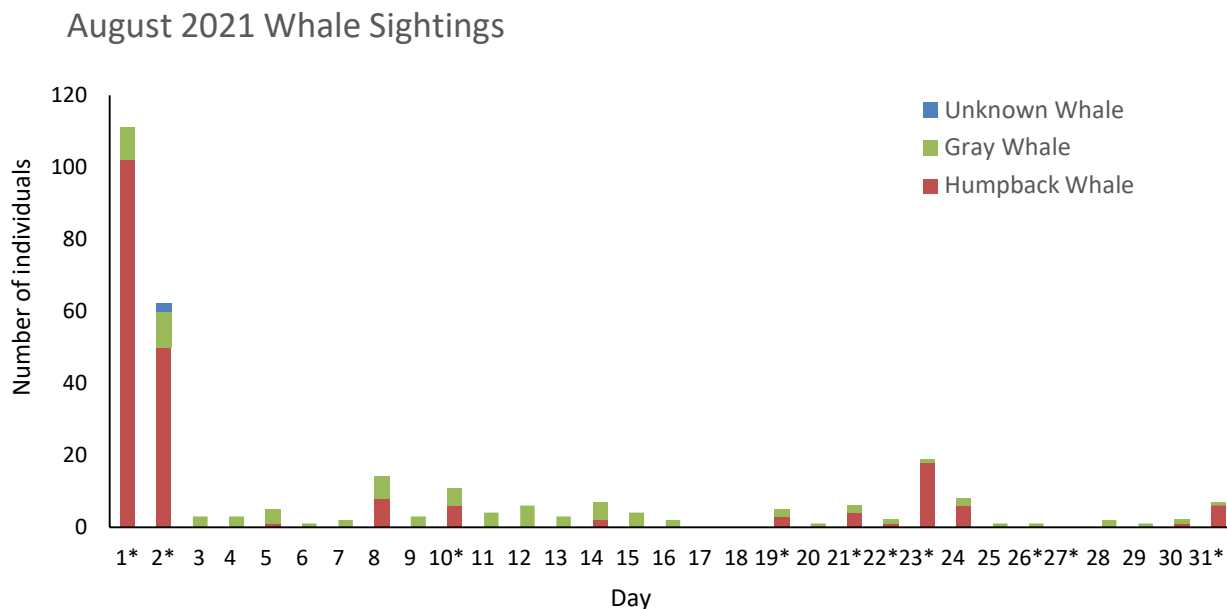


Figure 2. Daily high counts of cetaceans observed from Southeast Farallon Island for August 2021. Survey days are denoted with an asterisk.

Sharks

We observed a feeding event in Mirounga Bay on August 19th; no blood or oil slick was noted, likely indicating a scavenging event. Additionally, three shark-bitten *Zalophus* were noted hauled out on the island in mid-August.

Salamanders

No salamander surveys were conducted this month.

Owls

No burrowing owls were detected this month.

Crickets

No cricket surveys were conducted this month.

Bats

Bat surveys began on August 17th, but none were detected this month.

Mice

The number of mice detected in and around the houses steadily increased this month. On August 19th, we noticed that the mice had broken into the Coast Guard house and had pooped on the stove. Alyssa Clevens mouse-proofed some of the house in late August.

Inverts & Intertidal

Four species of dragonfly were detected on the island in August: Green Darner, Blue-eyed Darner, Black Saddlebags, and Spot-winged Glider. A black widow was seen in the PRBO house on the 6th.

Plants

The FWS invasive plant control crew (AKA Team Spinach) treated the highly scattered New Zealand spinach (*Tetragonia tetragonoides*), *Malva* spp. and *Ehrharta* sp. from August 25th to the 28th. Likely due to a combination of widespread treatment in May and the severe drought, the invasive plant cover was the lowest it has been in years.

Violations

Two boats were documented fishing in violation of the State Marine Reserve on August 1st. Another boat entered the special closure area between Saddle Rock and the main island on the 12th, but no wildlife disturbance was observed.

Maintenance

Island biologists Spears and Tietz conducted routine weekly maintenance checks on the PV system and generators. Monthly changes of water filters and crane greasing were conducted. The water quality test for August came back negative for Coliforms and E. Coli. The crew conducted one NL training on the 20th and a training at EL on the 22nd. Kristen and Alex completed their safety training on the 31st.

Additional maintenance performed this month are as follows:

- Amanda replaced the pressure switch for the gray water pump.
- Stella and Jim scraped and shoveled sea lion excrement off of North Landing to make it useable again.
- Alyssa installed foam-filled tires on the pressure washer.
- Jim replaced the fill valve on the upstairs PRBO toilet.
- Alyssa, Amy and Gerry cleaned debris off the Helo Pad.
- Bonny Doon Environmental Systems serviced the septic system.

Maintenance Needs

- Gray water system plumbing is failing. Leaking check valve needs to be replaced (this is causing gray water pump to run every 30 seconds). Outdoor shutoff valves along the gray water lines are severely corroded and need to be replaced. The copper pipe at the base of the gray water shut-off valve has a temporary patch, but a more permanent fix is need.
- PV system charge controllers 3 and 4 are not functioning and need to be replaced.
- 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 are several locations in the PRBO house that show evidence of moisture penetration in the ceiling and/or walls. This includes a small leak in the closet next to the downstairs bathroom and recent water staining in the Walk-Through Room. Will continue to monitor but a professional roof inspection is recommended.
- 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 Speedwagon generator continues to occasionally encounter rotor lock shutdown faults. This is likely due to a bad starter solenoid.
- The rail cart axles are badly corroded and may need replacement soon.
- There is visible corrosion in the freshwater pipes between the 5- and 1-micron filters in the PRBO water closet and the kitchen sink. A full replacement of the PRBO freshwater pipes is long overdue.
- PRBO house fire hose station shutoff valve is leaking at a drop per second.
- Box housing fire hose for the Coast Guard house has been blown apart by strong winds this spring and needs to be rebuilt. The fire hose is currently in the boot room of the Coast Guard house.
- Two side-impact helmets necessary for crane operation safety are missing straps need to be replaced.
- A safety railing on the port side, near the stern, of the Safeboat is cracked and has completely detached at the connection point, causing the railing to rattle when the tag line is attached.

- Metal mesh on several “windows” along the perimeter of the cistern have corroded open, allowing sediment, debris, and potentially birds to enter the cistern.
- Yamaha 9.9hp (kicker) will not idle and an air hose on the outboard motor is damaged and needs to be replaced.
- Post-installation testing of the freshwater flow meter revealed that the flow meter is unable to detect water usage at low flow faucets and shower, thus underestimating the amount of water used in the PRBO house. It is recommended that a more sensitive flow meter is installed.
- **Annual maintenance of the Honda 15 and Yamaha 25 at North Landing are overdue and need to be performed asap.**
- Air flow gaps on the gravity tank are open, no longer covered by mesh, and present a hazard to wildlife. The tank either needs to be disassembled or the gaps need to be covered with a permanent fix.
- The teeth on the slewing gear at North Landing have worn down so that the chain slips over the gear while slewing. The gear should be replaced.

Solar/Electric/Fuel/Water

PV System

Distilled water used:	0 gallons
Distilled water reserves:	30 gallons

Generator run times

Kohler 30REOZJC (Speedwagon):	4.2 hours	(713.4 on meter)
Kohler 40REOZK (Zeke):	20.5 hours	(644.1 on meter)
Kohler 15REOZK (PeeVee Herman):	27.0 hours	(106.3 on meter)
Webasto:	0 hours	

Power use

Facilities power use: Start = 93,571; End = 94,223; for total of 652 kWh

Fuel Reserves

Diesel used:	48.4 gallons
Diesel drums: 4.5@55gal	247 gallons
Kohler 15REOZK (PV) Tank:	3/4
Kohler 30REOZJC (Speedwagon) Tank:	Full
Kohler 40REOZK (Zeke) Tank:	Full
Webasto Tank:	3/4
Gasoline for boats (racing fuel):	22 gallons
6 gallon boat tank:	1/3
3 gallon boat tank:	Full

Water Reserves

Fresh water used this month: Start = 329,911; End 332,576 =;	for a total of 2,665 gal
Cistern:	4’8” or ~ 55,000 gallons
Settling Tank:	empty
Drinking water:	14 five-gallon jugs

Gray water used this month: Start = 20,857; End = 26,640; for a total of 5,783 gal

Sightseeing Boats

Two boats were recorded in August viewing the island and wildlife: the **Salty Lady** was seen 3 times with an average of 22 POB, and the **New Captain Pete** was seen twice with an average of 28 POB.

Non-breeding birds

Black-footed Albatross, Northern Fulmar, Pink-footed Shearwater, Sooty Shearwater, Nazca Booby, Northern Gannet, Brown Pelican, Great Egret, Snowy Egret, Peregrine Falcon, Semipalmated Plover, Greater Yellowlegs, Lesser Yellowlegs, Wandering Tattler, Spotted Sandpiper, Whimbrel, Ruddy Turnstone, Black Turnstone, Sanderling, Semipalmated Sandpiper, Western Sandpiper, Least Sandpiper, Baird's Sandpiper, Long-billed Dowitcher, Red-necked Phalarope, Red Phalarope, Heermann's Gull, Caspian Tern, Arctic Tern, Mourning Dove, Olive-sided Flycatcher, Western Wood-Pewee, Willow Flycatcher, Least Flycatcher, "Western" Flycatcher, Ash-throated Flycatcher, Western Kingbird, Cassin's Vireo, Warbling Vireo, Blue-gray Gnatcatcher, Northern Mockingbird, Cedar Waxwing, Tennessee Warbler, Orange-crowned Warbler, Nashville Warbler, Yellow Warbler, Black-throated Gray Warbler, Townsend's Warbler, Hermit Warbler, American Redstart, MacGillivray's Warbler, Wilson's Warbler, Western Tanager, Chipping Sparrow, Clay-colored Sparrow, Brewer's Sparrow, Savannah Sparrow, Lark Sparrow, Rose-breasted Grosbeak, Black-headed Grosbeak, Lazuli Bunting, Brown-headed Cowbird, Hooded Oriole, Bullock's Oriole, and Lesser Goldfinch.