

Pacific Seabird Group Aleutian Tern Technical Committee 2020 Annual Report

Assembled by Mike Goldstein and Susan Oehlers (U.S. Forest Service)
Co-Chairs

PLANNING

- With primary financial support from the National Fish and Wildlife Foundation, the Pacific Seabird Group Aleutian Tern Technical Committee convened the 3rd Aleutian Tern Conservation Planning meeting, April 6-8, 2020. Trent McDonald of Western Ecosystems, Inc. facilitated the Zoom-based meeting. The primary goal was to discuss how to refine analysis methods for integrating colony abundance parameters tested during the 2018-2019 field seasons into designs for future statewide Aleutian Tern colony surveys. The results and recommendations from this meeting will be incorporated into the next phase of planning, specifically a statewide sampling protocol to be pilot tested in a selected (TBD) region of Alaska during summer 2021. This will lay the groundwork to develop a final monitoring strategy, with the long-term goal to estimate populations and trends across Alaska.
- To assist with our long-term goal, the Alaska Maritime Refuge (Heather Renner, U.S. Fish and Wildlife Service) funded a temporary employee (Melissa Petschauer) to compile colony data for database entry.

IN THE FIELD (field work was not broadly conducted due to Covid-19 pandemic restrictions; funding was shifted towards other Aleutian tern work as feasible)

Surveys and observations

- Melissa Gabrielson and biological science technician Robert Masolini (U.S. Forest Service), with support from the National Fish and Wildlife Foundation, conducted ground surveys for ALTE on the west Copper River Delta based on areas used in prior years. Four colonies were monitored with direct surveys, remote cameras, and acoustic monitors, between May 15 and July 15. A total of 437 adult ALTE and 104 Arctic Terns (ARTE) were observed (these totals include multiple visits to each colony over the course of the breeding season). A total of 106 nests, 118 eggs, 11 nestlings, and 4 fledglings (3 ALTE, 1 ARTE) were documented.
- Robin Corcoran (U.S. Fish and Wildlife Service) and Jill Tengeres (graduate student, Oregon State University), with support from the National Fish and Wildlife Foundation, collected count data for terns at 39 known tern colony sites in the Kodiak Archipelago and searched for new colonies. Throughout the breeding season they regularly monitored six locations along the Kodiak road system that have a history of tern nesting. They also conducted a boat-based survey of remote colonies from 24 July – 5 August in an effort to visit all known Aleutian tern colonies in the Kodiak Archipelago. Based on these surveys, the adult breeding population in the archipelago was estimated at 449 Aleutian terns at

nine colonies, with evidence of nesting at seven of the nine sites. Aleutian Terns varied in the maximum number of individuals from 1-230 per colony. Arctic Terns varied in the maximum number of individuals from 1-160 per colony.

- Kara Hilwig (U.S. Fish and Wildlife Service) reported aerial sightings in the Dillingham/Togiak National Wildlife Refuge region on June 30
 - 6 terns (mixed ALTE/ARTE) observed on grassy tundra near lake flushed by passing airplane
 - approximately 30 terns (mixed ARTE/ALTE) observed on gravel beach in a flock before flushing
- Jaime Welfelt (U.S. Fish and Wildlife Service) and volunteer Richard Russell compiled observations for the King Salmon/Naknek area between May 2 and August 4
 - Russell estimated less than 10 ALTE pairs breeding at the Naknek beach colony.
 - Welfelt observed 1-2 ALTE vocalizing and flying over tundra with fish in early August.
- Susan Oehlers and biological technician Janelle Lopez (U.S. Forest Service), with support from the National Fish and Wildlife Foundation, conducted 3 direct counts of the Black Sand Spit colony
 - June 3: estimated 1,111 ALTE and 434 ARTE
 - June 16: estimated 693 ALTE and 84 ARTE
 - July 10: estimated 788 ALTE and 144 ARTE, plus 2 groups of terns on the outer beach, totaling approximately 850 ARTE.
- Lisa Spitler (U.S. Fish and Wildlife Service) compiled observations of ALTE on Adak Island on 3 sites from late May through mid-June
 - Early season activity (20-30 ALTE) was noted at one site, but no visible activity by June 13

Habitat

- Robin Corcoran (U.S. Fish and Wildlife Service) and Jill Tengeres (graduate student, Oregon State University) et al., with support from the National Fish and Wildlife Foundation, collected vegetation data at 40 Aleutian tern nest sites on the Kodiak road system, along with a paired habitat point for each nest, continuing the project that began in 2017. Analyses of these data are ongoing.
- Robin Corcoran (U.S. Fish and Wildlife Service) and Jill Tengeres (graduate student, Oregon State University) continued a conservation program initiated in 2019 to reduce human disturbance by installing a rope fence around the tern colony on the Kalsin Spit. Aleutian and Arctic terns nested continued to experience higher than average nest and fledgling success at the head of Kalsin Bay.

Banding

- Jill Tengeres (graduate student, Oregon State University) banded 23 Aleutian tern chicks and six Arctic tern chicks at five colonies in the Kodiak Archipelago.

Acoustic Monitoring

- Jill Tengeres (graduate student, Oregon State University), Robin Corcoran (U.S. Fish and Wildlife Service), Melissa Gabrielson (U.S. Forest Service), Susan Oehlers and Janelle Lopez (U. S. Forest Service), Jenell Larsen Tempel (Alaska Department of Fish and Game), Dawn Magness (U.S. Fish and Wildlife Service), Kate Persons (community volunteer), Carol Gales (community volunteer), Peter Rob (community volunteer), et al.: with support from the National Fish and Wildlife Foundation, 27 Song Meter units were deployed at 13 Aleutian tern colonies from early May to the end of August, with 1 unit deployed in the Nome area from mid-July to end of August. Direct counts were conducted at monitoring sites throughout the breeding season for comparison with call rates. Acoustics data will be analyzed by Conservation Metrics, Inc.

Nest Monitoring

- Melissa Gabrielson and biological technician Robert Masolini (U.S. Forest Service), with support from the National Fish and Wildlife Foundation, deployed remote cameras to monitor nests at 4 colonies on the Copper River Delta. Of 106 nests documented, 19 were determined to hatch via camera footage or nest remains. Approximately 320,000 photos were collected over the breeding season.
- Susan Oehlers and biological science technician Janelle Lopez (U.S. Forest Service), with support from National Fish and Wildlife Foundation, deployed cameras on 48 nests. Thirty-five nests were predated during incubation, 9 nests successfully hatched chicks (3 of which were subsequently depredated), 3 nests were abandoned during incubation period, and 1 nest fate was unknown.
- Jill Tengeres (graduate student, Oregon State University) and Robin Corcoran (U.S. Fish and Wildlife Service), with support from National Fish and Wildlife Foundation, deployed trail cameras at 36 nest sites of Aleutian tern and two nest sites of Arctic tern to determine nest survival rates, causes of nest failure, and identify prey species provided to chicks. Fourteen camera monitored nests survived to the hatching stage (12 Aleutian and 2 Arctic tern). They documented 566 chick provisioning events from Aleutian tern hatched nests at two colonies.
 - Alaska Maritime Refuge contributed personnel time from Katie Stoner, Aspen Ellis, Zeke Smith, Erin Lefkowitz, and Eva Gruber towards video and still image analysis of Kodiak nest camera data.
 - Oregon State University students Kitrick Miller, John Wenigmann, Mara Soans, and Katherine Figaro are currently volunteering to help process Kodiak nest camera imagery.

Funding

- Alaska Maritime Refuge contributed Refuge funds into the FWS Aleutian Tern Conservation Fund, a cooperative agreement with National Fish and Wildlife Foundation to implement a future statewide survey.

- U.S. Forest Service and U.S. Fish and Wildlife Service provided funds to McDonald Data Sciences and Conservation Metrics for analysis of previously collected data.
- A subset of the PSG Aleutian Tern Technical Committee members applied and were approved for a National Fish and Wildlife Foundation Pacific Seabird Program award to implement a pilot statewide Aleutian Tern Survey in 2021