

Pacific Seabird Group Aleutian Tern Technical Committee 2022 Annual Report

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

IN THE FIELD

Surveys and observations

- **Robin Corcoran (USFWS Kodiak NWR)** monitored terns (collected count data) at 24 known nesting sites and searched for new colonies in the Kodiak Archipelago. Behavior consistent with nesting of Aleutian terns was observed at four of the 11 colonies where they previously nested. Nesting behavior was also documented at two colonies on the west side of Kodiak Island for the first time.
- **Susan Oehlers** (U.S. Forest Service) and **Christine Cieslak** (Student Conservation Association) surveyed the Black Sand Spit colony in the Yakutat area. In addition to direct counts associated with acoustic monitors and general colony observations/population estimates, 2 full colony modified direct counts were conducted:
 - June 8, estimated 337 ALTE (and 188 Arctic terns-ARTE)
 - June 22, estimated 317 ALTE (and 343 ARTE)
- A subset of committee members (representing **USFWS, USFS, ADF&G, OSU, Audubon, Tern Again Consulting**) in collaboration with **Trent McDonald** (McDonald Data Sciences) and support from National Fish and Wildlife Foundation developed and implemented a second season of pilot aerial survey work in Northeast Bristol Bay during the 2022 field season, with the goal to refine methods, including estimates of detectability, for implementing a statewide (AK) ALTE survey starting in 2023. Aerial surveys were conducted based out of King Salmon, AK, extending northwest to Goodnews Bay and southwest to Cold Bay. A total of 38 tern colonies were detected during aerial surveys. We used double-observer line transect surveys, integrated with distance sampling, to estimate abundance and detectability. A final report is expected January 2023. The results of these pilot efforts will serve as the basis for/further inform the final statewide sampling strategy.

Tracking

- A multi-agency team, with field team of **Tory Rhoades (ADF&G)** and **Tim Lawes (OSU and West Inc.)**, deployed satellite telemetry ("PTT") tags on 8 Aleutian Terns in colonies near Nome. All transmitters functioned into migration season.

Acoustic Monitoring

- **Robin Corcoran (USFWS Kodiak NWR)**. Seven song meters were deployed at the tern colony in Kalsin Bay. Sixteen surveys were conducted at the head of Kalsin Bay, which will support acoustic monitoring model development.
- **Susan Oehlers and Christine Cieslak (USFS)**. Six song meters were deployed at the Black Sand Spit tern colony. A total of 40 direct counts associated with songmeter sites were conducted over the course of the season.

- 2021 and 2022 acoustic data from Kodiak, Nome, and Yakutat are currently being analyzed by Conservation Metrics.

Conservation

- **Robin Corcoran (USFWS Kodiak NWR)** and staff (volunteers) continued a conservation program initiated in 2019 to reduce human disturbance by installing a rope fence around the tern colony on the Kalsin Spit. In 2019-2020, Aleutian and Arctic terns experienced higher than average nest and fledgling success at this colony compared to previous nesting seasons without the fence; however, that was not the case in 2021-2022. Nest predation rates were high on the Kalsin Spit just after initiation of egg laying in late May and a depredated Aleutian tern adult was found on 28 May 2022. Aleutian tern numbers at the site were very low in June, and no Aleutian tern or short-billed gull fledglings were seen despite numerous nesting attempts by both species.

MANUSCRIPTS

- **Nesvacil, Skinner, Pendleton, Oehlers, Mondragon, and Lyons** “Breeding Season Movements of Tagged Aleutian Terns (*Onychoprion aleuticus*): Implications for Population Assessment and Monitoring” (manuscript in prep)
- **Tengeres, J. E., K. Dugger, R. Corcoran, and D. E. Lyons** “Factors influencing daily nest survival rates of Aleutian terns in the Kodiak Archipelago, Alaska” (manuscript in prep)
- **Tengeres, J. E., R. Corcoran, and D. E. Lyons** “Foraging niche of pre-laying and juvenile Aleutian terns in the Kodiak Archipelago, Alaska” (manuscript in prep)

PRESENTATIONS AND OUTREACH

- **Kaler et al:** “Aleutian Tern Colony Survey: Bristol Bay Pilot Study Results.” Oral presentation. Alaska Bird Conference, 15-19 November 2021.
- **Kaler et al.:** “Developing a Statewide Aleutian Tern Colony Census: 2021 Bristol Bay Survey Result and Next Steps.” Oral presentation. Alaska Marine Science Symposium, January 24-27, 2022.
- **Kaler et al.:** “Partnering for Tern Conservation: Developing a Statewide Aleutian Tern Colony Census Protocol.” Oral presentation. Pacific Seabird Group, Feb. 23-25, 2022.
- **Miller et al:** “Aleutian Tern Nest Attendance Rates”. Poster. Pacific Seabird Group, Feb. 23-25, 2022.
- **Tengeres, J. E.** “The breeding ecology and foraging niche of Aleutian terns (*Onychoprion aleuticus*) in the Kodiak Archipelago, Alaska.” M.S. thesis defense, Oregon State University. Mar. 18, 2022.
- Committee member contributions (interviews) to Audubon article: <https://www.audubon.org/news/scientists-are-racing-understand-aleutian-terns-mysterious-decline>
- Committee member contributions (interviews) to KTOO article: <https://alaskabeacon.com/briefs/scientists-team-up-to-solve-mysteries-about-dwindling-aleutian-tern-population/>