

Tufted Puffin Technical Committee 2022 Annual Report

Submitted by Peter Hodum and Mark Hipfner

The Tufted Puffin (TUPU) is a seabird listed as *Special Concern* in California, as *Sensitive* in Oregon, as *Endangered* in Washington, and as *Imperiled* in British Columbia. The species has been in decline in Japan since the 1970s. The Pacific Seabird Group's Tufted Puffin Technical Committee was formed in 2017 with the following goals: (1) to provide technical advice on Tufted Puffin status, distribution, and life history, (2) to identify, facilitate, and prioritize research needs, (3) to identify and assess population threats and potential conservation measures, (4) to act as a liaison between research and management, and (5) to bring together and create partnerships of interested parties throughout the range of the species. Since its initiation, the Committee has held in-person meetings at the 2017 (Tacoma), 2019 (Kaua'i) and 2020 (Portland) PSG annual meetings and held virtual meetings via Zoom in 2021 and 2022. The Committee has also held several conference calls to prioritize research and conservation actions and develop collaborative partnerships. As of February 2023, the Committee had an international membership (United States, Canada, Japan) of 60 scientists representing governmental and non-governmental agencies, universities, and the general public.

The 2022 virtual meeting had 42 committee members in attendance on Zoom. Participants provided updates on Tufted Puffin research activities, status assessments and recovery planning.

After a brief welcome, introductions, and review of the proposed agenda, research updates were provided for seven different TUPU research/monitoring programs, as follows:

- Kristen Gorman provided an overview of the Middleton Island (AK) geolocator study, focused on overwintering distribution and movement and timing of migration,
- Theresa Burg provided an update on the ongoing North America rangewide genomics study, which is based on 580 samples from the western Aleutians down to OR.
- Peter Hodum, on behalf of Sarah Hudson and Mark Hipfner, presented on the 2nd season of GPS tracking on Triangle Island, BC.
- Scott Pearson gave an update on the population status assessment manuscript, which had been resubmitted recently. The analyses are based on 11 datasets to assess TUPU trends in 3 large marine ecosystems (Aleutian/Bering, Gulf of Alaska, and CA Current).
- Shawn Stephensen summarized ongoing OR research projects, including a survey of all known historical breeding colonies, 12 years of productivity monitoring at Haystack Rock, and 3 Oregon State University graduate student projects.
- Tom Good introduced a DNA metabarcoding project to determine diet using eDNA in WA.
- Peter Hodum provided an update on other WA research/monitoring projects, including diet using bill-load photography, long-term breeding season monitoring, and estimates of colony size for multiple breeding islands.
- John Piatt summarized 3 projects underway through the USGS Alaska Science Center: (1) stable isotope work with Keith Hobson using archived samples from AK to assess historic

diet, (2) the North Pacific Pelagic Seabird Database has been upgraded and is available for analyses and (3) early plans for an International Puffin Congress.

Following those updates, Don Lyons provided an update on the status of a new TUPU Conservation coordinator position, the focus of which will primarily be the California Current, at least initially. The position will be administered through National Audubon, in part to leverage communication and advocacy capacity. Roles and approaches are still being defined.

Lisanne Petracca recently concluded a post-doc at the University of Washington, funded by Heather Renner (US Fish and Wildlife Service), to develop a range-wide puffin population monitoring strategy, including for both large and small colonies.

The virtual meeting wrapped up with general discussion, with Nora Rojek mentioning a tracking project on Iktak in the eastern Aleutians and Dan Cushing explaining details about the long-term time-series of northern Gulf of Alaska at-sea surveys. Marc Romano highlighted the importance for systematic conservation planning for TUPUs, with particular attention on the need for a species conservation plan for OR. Washington has a recent recovery plan, but neither CA nor OR has one at present.

Since the virtual meeting in Feb. 2022, the committee has continued to send additional TUPU samples to Theresa Burg from underrepresented areas for the genomics study. In addition, a number of committee members have collected and shared samples with Katie Stoner for an SIA study of TUPU diet across their range (part of her dissertation research at Oregon State University).