

## Tufted Puffin Technical Committee 2020 Annual Report

Submitted by Peter Hodum and Mark Hipfner

The Tufted Puffin Technical Committee was formed in 2017 with the following goals: (1) provide technical advice on Tufted Puffin status, distribution, and life history, (2) identify, facilitate, and prioritize research needs, (3) identify and assess population threats and potential conservation measures, (4) act as a liaison between research and management, and (5) 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 meetings, and several conference calls to prioritize research and conservation actions and develop collaborative partnerships.

The 2020 meeting in Portland had 17 committee members in attendance in person, and one member phoned in to the meeting. Participants provided updates on Tufted Puffin research activities, status assessments and recovery planning.

Much of the discussion centered on results of ongoing Tufted Puffin population monitoring programs in the eastern Pacific. Brie Drummond and Aaron Christ provided an update on monitoring efforts in the Alaska Maritime National Wildlife Refuge; Scott Pearson and Peter Hodum updated on monitoring efforts in Washington State; and Mark Hipfner presented results of Laurie Wilson's monitoring program in British Columbia. Peter also presented results of Martin Renner's at-sea program in Alaska. Scott presented results of a collaborative meta-analysis summarizing population trends for the California Current, Gulf of Alaska, and Bering Sea/Aleutian Island large marine ecosystems based on these and other regional monitoring programs. Results indicate the following trends: (1) nearly uniform and long-term declines in the California Current ecosystem, (2) declining trends in three of the four colonies/surveys in the Gulf of Alaska Ecosystem, with the fourth exhibiting a negative slope but no clear overall trend, and (3) positive trends in four of the five colonies in the Bering Sea/Aleutian Islands ecosystem complex, with the fifth exhibiting a negative slope but no clear overall trend.

Theresa Burg and Brendan Graham provided an update on their investigation of population genetic structure across the eastern Pacific (California to Alaska), based on microsatellites. This has been a primary focus of the Technical Committee since its inception. Their analyses seem to suggest the existence of considerable structure, perhaps attributable to isolation by distance. Theresa and Brendan informed the Committee that they tend to delve further into this, using genomic approaches.

In terms of status assessments, Shawn Stephenson provided an update to the Committee on the USFWS Species Status Assessment, and Peter and Scott summarized the Washington State Tufted Puffin Recovery Plan and Periodic Status Review. That latter document is available at:

<https://wdfw.wa.gov/sites/default/files/publications/02051/wdfw02051.pdf>

Since its inception, the Committee has identified gaining a better understanding of post-breeding movements and habitat usage patterns of Tufted Puffins as a priority objective. The Committee received updates on two programs helping to fill this information gap. Sarah Hudson and Nik Clyde presented results of GPS tagging efforts on Triangle Island, BC, which are being examined in relation to the boundaries of the Scott Islands marine National Wildlife Area (SI mNWA), designated in 2018 with the goal

of protecting important foraging habitats for seabirds. Peter then presented results of Kristen Gorman's GLS tagging study, which will provide information on migration ecology and winter habitat use.

On the whole, the 2020 meeting of the Tufted Puffin Technical Committee was both informative and productive. The Committee agreed to hold its next meeting in 2021.