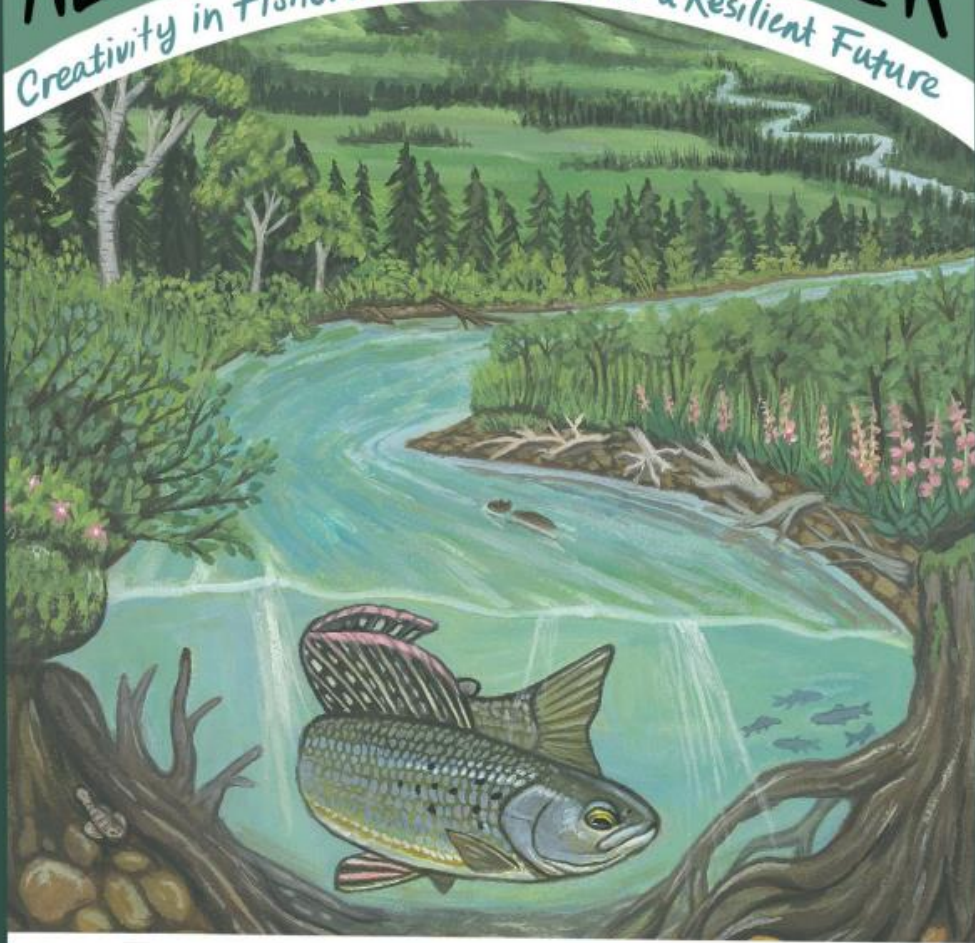


AMERICAN FISHERIES SOCIETY
ALASKA ≡ 2023 ≡ CHAPTER

Creativity in Fisheries: New Solutions for a Resilient Future



FAIRBANKS • TANANA DENÉ LANDS

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Insights into the ecology of Chinook Salmon in the North Pacific Ocean, gleaned from pop-up satellite tags

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Chinook salmon (*Oncorhynchus tshawytscha*) is an iconic species found throughout the North Pacific Ocean and supports many valuable fisheries. While in the ocean, relatively little is known about the ecology of this species, despite the fact that individuals frequently reside there for the majority of their lives. Beginning in 2013, we began a series of research projects in which we attached pop-up satellite archival tags (PSATs) to Chinook salmon to study the migration patterns, natural mortality, and habitat occupancy of the large immature ocean phase of this species. From 2013 to 2022, we tagged 183 Chinook salmon ranging from 57 to 101 cm FL (75.7 ± 7.7 cm FL; mean \pm SD), across a broad range of the Bering Sea and Gulf of Alaska. A total of 166 tags reported to satellites and four were recaptured in fisheries, providing over 8,000 days of data. In this presentation, we describe the movement patterns, occupied depth and temperatures, and the mechanisms and timing of natural mortality of tagged Chinook salmon. We also discuss the practical application of this information, including understanding the overlap between Chinook salmon, and U.S. Navy training exercises and groundfish fisheries.