

**Behavior of satellite tagged Pacific halibut in the Bering Sea/Aleutian Islands region  
and its biological implications**

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Currently, it is assumed that eastern Pacific halibut (*Hippoglossus stenolepis*) belong to a single, fully mixed population extending from California through the Bering Sea, in which adult fish disperse randomly throughout their range during their lifetime. However, we hypothesize that Pacific halibut dispersal is more complex than currently assumed and is not spatially random. To test this hypothesis, we studied seasonal dispersal and behavior of Pacific halibut in the Bering Sea and Aleutian Islands. Pop-up Archival Transmitting tags attached to fish during the summer provided no evidence that Pacific halibut moved out of the Bering Sea and Aleutian Islands region into the Gulf of Alaska during the mid-winter spawning season, supporting the concept that this region may contain a separate spawning component of adult fish. There was evidence for geographically localized groups of Pacific halibut along the Aleutian Island chain. All of the fish tagged there displayed residency, with their movements possibly impeded by passes between islands. Mid-winter aggregation areas of Pacific halibut are assumed to be spawning grounds, of which two were previously unidentified and extend its presumed spawning range ~1000 km west and ~600 km north of the nearest documented spawning area. The summarized depth data transmitted via satellites was used to identify three general behaviour patterns including dispersal to the continental slope, continental shelf residency, and feeding site fidelity. This behavior information may be used to refine some assumptions of Pacific halibut biology and ecology.