

Research Projects Catalog -- 2005

Site Id: 97

Title: **ESTIMATING MOVEMENT RATES OF PACIFIC COD (GADUS MACROCEPHALUS) IN THE BERING SEA AND THE GULF OF ALASKA USING MARK-RECAPTURE METHODS**

Location:

Purpose:

Abstract: We propose estimating movement rates for Pacific cod (~~Gadus macrocephalus~~) in the Bering Sea and the Gulf of Alaska, especially with regard to winter spawning season and spawning grounds. We will use four independent bodies of mark-recapture data and adapt an established statistical model for estimating movement parameters. Shimada and Kimura (1994) presented data from tags that had been released as part of standardized trawl surveys conducted by the Alaska Fisheries Science Center (AFSC). Many tags have been released as part of research cruises conducted by the Alaska Department of Fish and Game (ADFG), (Urban, D., unpublished data). The third set of tags was released during cruises for localized depletion studies conducted by the AFSC (Shi et al, in prep). The fourth data set is from archival tags released on a number research cruises (Nichol and Chilton, in press). In all four data sets the tags were recaptured through a variety of commercial fisheries. The proposed statistical model has been successfully used to estimate movement rates for other species (Hilborn, 1990; Anganuzzi et al, 1994) but will need to be adapted to allow for the disjointed character of the data sets, the data having come from seasons and geographic cells that were dictated by opportunity rather than by an optimal experimental design. The robustness of the estimates will be evaluated with regard to necessary underlying assumptions. Errors of the estimates will also be provided and research will be suggested for improving the precision and accuracy of the estimates.

Start: 06/01/2006

Finish: 05/30/2007

Contacts	<u>Name</u>	<u>Organization</u>	<u>Email Address</u>
	Munro, Peter	Alaska Fisheries Science Center	peter.munro@noaa.gov
	Urban, Dan	Alaska Department of Fish and Game	dan_urban@fishgame.state.ak.us

Geographic Coordinates:	<u>Point(s)</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Region(s)</u>	<u>North</u>	<u>East</u>	<u>South</u>	<u>West</u>
		57.8447	144.8876					