

Sea Duck Joint Venture
Annual Project Summary for Endorsed Projects
FY 01 – (October 1, 2000 to Sept 30, 2001)

Project Title: No. 1(A) Seasonal distribution of white-winged scoters (*Melanitta fusca*) wintering in southeast Alaska: a satellite telemetry approach.

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Partners: U.S. Fish and Wildlife Service (USFWS), U.S. Geological Survey - Biological Resources Division (USGS-BRD), National Marine Fisheries Service (NMFS) - Auke Bay Laboratory and Sitka Raptor Center.

Project Description: Since 1977, numbers of all scoters (*M. Spp.*) breeding in Alaska and western Canada have declined. Causes of these declines are unknown. This study was intended to improve winter methodologies for the handling of surgically compromised birds and gather information to help identify causes for this decline.

We marked 15 white-winged scoters (8 females, 7 males) near Juneau, AK with internal satellite transmitters. Birds were captured in early February at 2 sites in nearshore marine waters using floating mist nets. Following surgery birds were held in indoor holding pools for 5-7 days to facilitate recovery and then released at the capture site. Movements were monitored for up to 9 months. We collected blood samples from 25 scoters to monitor levels of organochlorines and trace metals.

Objectives: The primary objectives of this study were to improve post-surgical survival and to identify 1) affiliations between wintering, breeding, and molting areas, 2) timing of movements, staging areas, and migratory pathways, 3) philopatry to wintering areas and important use areas that may require habitat protection, and 4) exposure to contaminants in marine waters. Information is intended to facilitate future telemetry studies, improve survey design, delineate populations, and focus research and management efforts.

Preliminary Results: Only 4 birds survived more than 30 days and only 2 more than 60 days. From these birds we obtained information during spring migration, through nesting, molting and back to winter areas (Fig. 1). Increased energetic demands in late-winter at northerly latitudes (58°N) combined with the abundance of predators in coastal habitats of southeast Alaska, primarily bald eagles (*Haliaeetus leucocephalus*) may be a primary factor affecting post-surgical survival. We are awaiting results of contaminant analysis.

White-winged Scoter Migration 2001

(Satellite Telemetry)

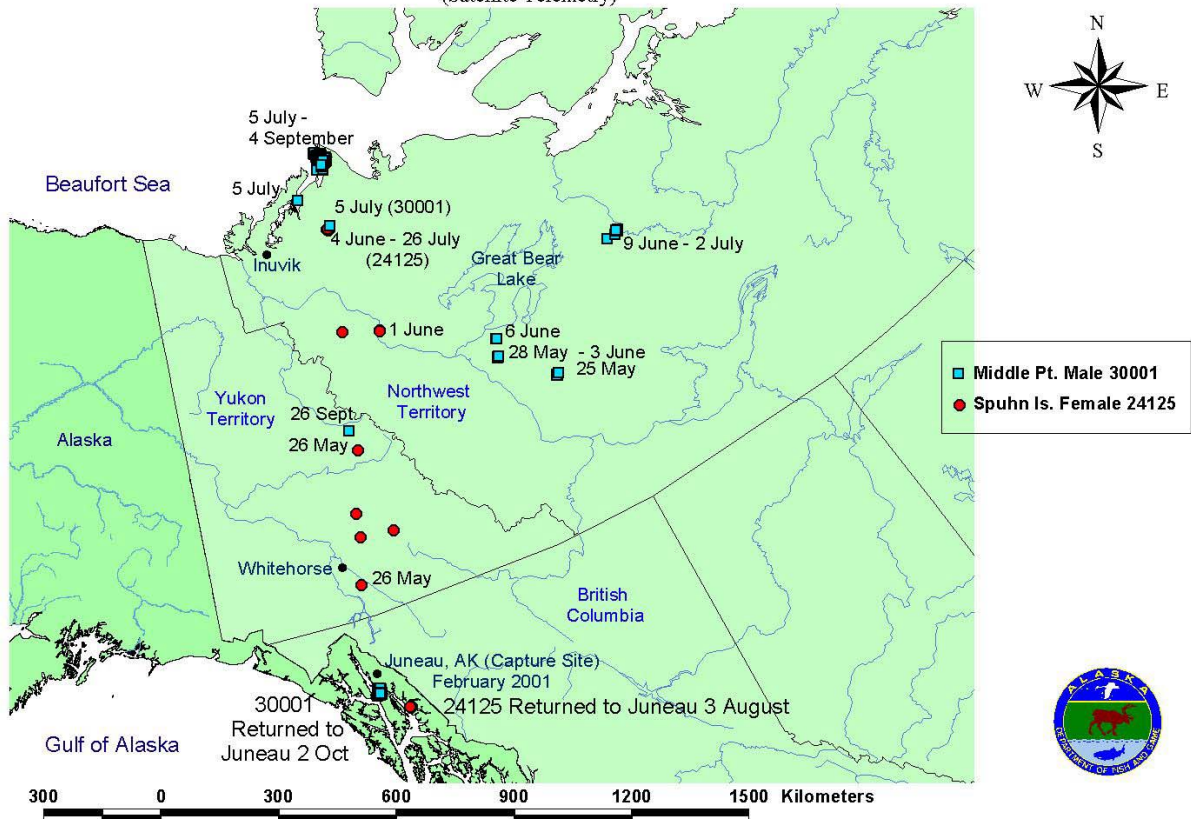


Figure 1. Movements of white-winged scoters marked in southeast Alaska with satellite transmitters in 2001.

Project Status: Most objectives were compromised by higher than expected mortality rates. We are awaiting the results of the contaminants analysis. In the future we will mark birds in summer in Interior Alaska to test seasonal differences in post-surgical survival rates to determine if we are experiencing seasonal or species effects. We will reevaluate the efficacy of deploying satellite transmitters on wintering areas.