Sea Duck Joint Venture
Progress Report – September 2008

Project Title: Population delineation and wintering ecology of Surf Scoters in Southeast Alaska (SDJV Project # 108).

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Project Description:
Population delineation and wintering ecology of surf scoters have been studied in detail through much of their range. A conspicuous gap exists for Southeast Alaska, which is near the northern end of their winter distribution. Because Southeast Alaska is an important wintering habitat for a sizeable number of Pacific Surf Scoters, we will mark birds with satellite transmitters to quantify links among annual cycle stages, define management units, and conduct studies of wintering ecology that will be directly comparable to work at more southerly wintering sites, allowing a full consideration of latitudinal variation in wintering ecology of the species. This work will provide data to evaluate population dynamics and identify important habitats of this declining species.

Objectives:
Our research will address the following, specific questions:

1) What is foraging effort by wintering scoters in Southeast Alaska, does it vary by age and sex cohort, and how does it compare to other wintering sites?

2) How does survival vary across cohorts and wintering regions?

3) How does body mass compare to that in other wintering areas?

4) How far do individuals move during winter and what habitats do they use?

5) How do age and sex composition vary by habitat, and compare to other wintering regions?

6) What are the key migration routes, migration chronology, and affiliation to specific breeding and molting sites for scoters that winter in southeast Alaska?

7) What rate and scale of site fidelity do surf scoters show throughout the annual cycle, and how does this influence definition of management units?

Preliminary Results:
At this point in the project, we have conducted age and sex surveys in 2 locations in southeast Alaska, and have evaluated these locations in terms of their appropriateness for the detailed wintering ecology work that is scheduled for the fall. This report summarizes that work, and reports on planning and logistics in preparation for upcoming work.

Age and sex surveys were conducted in the Juneau area on March 17th and 18th, 2008, and in the Petersburg area on March 19th and 20th, 2008. The surveys followed the same protocols used in other areas (Strait of Georgia, BC, Puget Sound, WA, and Baja, Mexico) to allow direct comparisons among sites and across latitudes. Overall, 2244 individuals (1360 in the Juneau area and 884 near Petersburg) were observed and classified as either HY male, AHY male, or female. From these data, we have calculated ratios of HY:AHY males and males:females. In Juneau, these ratios were 0.07 and 1.28, respectively, and these were 0.02 and 2.17, respectively, near Petersburg. We resist the temptation to interpret these values, as they need to be analyzed in the context of data from other years and other locations, as well as with consideration of effects of habitat type. However, these data constitute important contributions to that larger data set and demonstrate that appropriate numbers of individuals can be surveyed and classified in southeast Alaska.

The collection of these survey data also allowed consideration of the 2 areas for concentration of the detailed winter ecology work and deployment of satellite transmitters that will be required to meet the remainder of the stated objectives. We have decided to use the Juneau area for this work, based on the following criteria. First, the number of accessible surf scoters was higher in Juneau. In addition, the surf scoters near Petersburg were primarily located in Wrangell Narrows in a single, loosely aggregated flock; previous experience with scoter captures has indicated that repeated targeting of the same flock results in quickly declining capture success. Near Juneau, there are several areas that hold flocks of scoters that can be targeted for captures. In addition, access to observation/telemetry points along the road system was better near Juneau. Also, several flocks of surf scoters were located just off the road system, but within easy access by boat. Finally, the agency support in the Juneau area is exceptional, and we have received offers and agreements of support from USFWS, USGS, and USFS, including bunkhouse space, vehicles, flights, equipment use, equipment storage, office space, etc. Taken together, these indicate that the winter ecology work will be best performed near Juneau.

Finally, we are making good progress on preparing for upcoming studies. MSc candidate, Corey VanStratt, is preparing a detailed literature review, proposal, and standard operating procedures. VHF and satellite radios have been ordered. Agency collaboration and coordination is being developed, as described above.

We are confident that the project will yield the important information needed and that the work will progress as described in the schedule in the original proposal.

Project Funding Sources (US$).

SDJV (USFWS) Contribution	Other U.S. federal contributions	U.S. non-federal contributions	Canadian federal contributions	Canadian non-federal contributions	Source of funding (name of agency or organization)
$53,170					SDJV
	$54,000				USGS
	$17,500				USFWS
	$ 6,000				USFS
				$38,000	SFU-CWE

Total Expenditures by Category (SDJV plus all partner contributions; US$).

ACTIVITY	BREEDING	MOLTING	MIGRATION	WINTERING	TOTAL
Banding (include only if this was a major element of study)					
Surveys (include only if this was a major element of study)					
Research				**$168,670**	