Sea Duck Joint Venture
Annual Project Summary for Endorsed Projects
FY 2003 – (October 1, 2003 to Sept 30, 2003)

Project Title: No. 6: Identifying migration routes and wintering areas of common and king eiders breeding in Nunavut, Canada and Greenland.

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Project Description: Common and King Eider ducks are heavily hunted in north eastern Canada and west Greenland. In Greenland alone, more than 90 000 eiders are killed annually; a level of harvest that may not be sustainable. Recent evidence suggests that many eiders breeding in arctic Canada migrate to Greenland to winter, but details of their migration and wintering areas are unknown. A key requirement to assess the sustainability of the harvest in Greenland, is to identify affinities between eider breeding populations in both Canada and Greenland and their wintering grounds. In response, an international research team (Greenland, Canada, Denmark) initiated a satellite telemetry study in 2001 to generate information on the wintering affinities of these Common and King eider populations. Transmitters were implanted in Canada and Greenland in 2001, in Greenland only in 2002, and in both Canada and Greenland in 2003.

Objectives: The objective of this project, was to identify eider breeding populations in Canada and Greenland that migrate to winter in south west Greenland. This information will help determine the relative contribution of various King and Common eider duck populations to the winter harvest that occurs in Greenland. This information is required to determine the sustainability of the harvest, and also to assess whether certain sub-populations are at greater risk of population decline. Specifically, this project will, 1) determine the migration routes of Common and King eider ducks leaving Nunavut in fall (birds implanted in Canada), 2) determine the migration routes of Common and King Eider ducks returning to arctic Canada in spring (birds implanted in Greenland), 3) Locate the staging, moulting, and wintering areas of Common and King eiders breeding in west Greenland and Canada.

Preliminary Results: Preliminary research results from this project have already been presented to the Department of Environment in Greenland which is responsible for establishing harvest regulations. When combined with ongoing demographic and modeling research done by this team, this satellite telemetry research in 2001 and 2003 confirmed that 75% of eiders implanted in Canada while breeding migrate to west Greenland. This supports a similar finding based upon banding data alone. This has generated immediate efforts to legislate lower harvest levels of eiders in west Greenland in 2001. However, these efforts were met with strong political opposition from hunters and new harvest restrictions were subsequently reversed. This response emphasizes the need to establish credible scientific information to assess the sustainability of harvest, and the information generated by this satellite telemetry project is a key component of this.

Project Status: The field component of this project is complete. Ten transmitters were implanted into female common eider ducks in 2001 (no SDJV funding), and in the summer of 2003, the team implanted 16 transmitters into common eiders (9 females, 7 males) and 10 into king eiders (7 females, 3 males). Data is still being retrieved from these ducks and should continue to be throughout the winter of 2003-2004. After all transmitters have failed in the spring of 2004 and complete available data has been retrieved, the research team will prepare final reports for northern communities, the scientific community, and funding agencies. Several peer-reviewed manuscripts are planned and already underway. Real time locations of the ducks are available on the web site of the Danish Department of Environment – Polar Research Division, and overview maps are also available on the SDJV website.