

Sea Duck Joint Venture
Annual Project Summary for Endorsed Projects
FY 05 – (October 1, 2004 to Sept 30, 2005)
Reporting Deadline: October 1, 2005

Project Title: SDJV Project #14: Survival and recruitment of Common Eiders (*Somateria mollissima dresseri*) in the Gulf of Maine.

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Project Description: Banding efforts for common eiders have not been constant over time. Survival and recovery rates are only available for adult females and there is a need for information on the other age-sex classes. During the 1970s to mid- 1980s there was an effort to band female eiders on a few islands in Maine. Numbers of adult females banded per year ranged from 120 to 609. Since then, 0-50 birds have been banded each year. Kremetz et al. (1996) analyzed banding data for the Atlantic coast population of eiders and only had sufficient data for the years 1976-1986 for Maine. He found recovery rates were low and survival was high. Because these estimates are more than 15 years old, harvest has been increasing, and recruitment rate is likely declining, there is a need to obtain better estimates of survival and recovery rates for eiders.

We will select islands and archipelagos and attempt to capture a majority of the nesting females on each. Birds will be captured by hand nets and in drive traps set up along the perimeter of a nesting colony. Birds will be banded with standard USGS bands. Each year we will return to the same islands and band unmarked birds and record bands of previously banded birds (returns). In addition, we will attempt to capture pre-fledged ducklings and molting adults of all age/sex classes using drive traps, rocket nets, and night lighting techniques, near islands where nesting gulls are controlled and on other nesting islands. This is a joint study with USGS, Maine DIFW, and USFWS

Objectives: We propose a long-term banding effort (5-10 years) to determine survival, recruitment, and recovery rates of common eiders in the Atlantic coast population, especially Maine. We will use traditional band analysis methodologies as well as mark-recapture methods. In addition, we will compare recruitment to the population between islands where populations of nesting gulls are controlled and islands with nesting gulls.

Preliminary Results: This was the 4th full year of the study. Nesting phenology was about normal in southern Maine on the Flag Island site, but nesting was greatly reduced on the islands in the northern part of our study area. Although females were present around the islands, we found few nests and no evidence of additional attempts. Cold rainy weather and rough sea conditions during the month of May likely caused many females to not even attempt to nest.

Eagles are still killing nesting females on Green Island including several previously banded birds. We captured nesting females from colonies on 6 islands: Captures included 181 new birds banded (180 F, 1 M) and 52 returns. Most of the birds were from Flag Island (129 new birds). The flock of molting birds around

Petit Manan and Metinic were smaller than we had seen previously. Molting birds showed up around Petit Manan Island (our Primary drive trap site) about mid-August. A flock of 2-3,000 molting birds showed up around Petit Manan Island. We had excellent weather in August and captured 1,014 new birds. We had rough seas conditions in September and captured 152 new birds. Captures for the year totaled 1,337 new eiders and 138 returns and foreign retraps. Captures included 3 local birds, 930 AHY females, and 404 AHY males. Our total bandings for the past 4 seasons is 7,416 new birds banded, 638 returns of previously banded birds and 171 recoveries of dead birds.

On 9 September we conducted a 3-hour aerial survey with John Bidwell (USFWS) to check locations where previous surveys in 1981-83 documented concentrations of at least 500 eiders (ME IFW files). We covered about $\frac{3}{4}$ of the area surveyed in the past and recorded an estimated 87,600. Average flock size encountered was larger than those found in earlier surveys, with 23 flocks of 1,000 birds or more and 2 flocks numbering 10,000 and 15,000 birds. Previous surveys recorded 36,620 – 51,287 birds.

Project Status: Project is ongoing. We will continue the banding effort over the next several years.