What's up with the Wusky?

Lower Columbia River Resident Dark Goose Program Evaluation

STEFANIE M. BERGH, BROOKE C. GEORGE, PATRICK J. MILLER Washington Department of Fish and Wildlife, 2108 Grand Blvd Vancouver, WA 98661

Introduction

SW Washington and NW Oregon are utilized as wintering grounds or stopover sites for six subspecies of Canada geese as well as home to one resident subspecies, the western Canada goose (*Branta candadensis moffitti*).

One of the migrating subspecies, the dusky Canada goose (*Branta candadensis occidentalis*), has strict harvest restrictions. These restrictions are complicated by a small population of resident geese related to the harvest-restricted dusky goose that nest in the region and do not migrate to the nesting grounds in Alaska.

These resident dark geese (RDG or locally called "wusky") were introduced to Willapa NWR through a Canada goose breeding flock expansion program in the 1950s-1970s.

In 1987 an RDG pair and brood were observed nesting on Miller Sands Island in the lower Columbia River and expansion of the flock in this area soon followed. Cases of hunting permit invalidations began to take place; a hunter's reported harvest seemed likely to be from the RDG flock, yet the subspecies was identified as dusky at the check station. Furthermore, concerns arose that RDG were mistakenly identified as dusky geese during monitoring surveys, thus impacting population estimates.

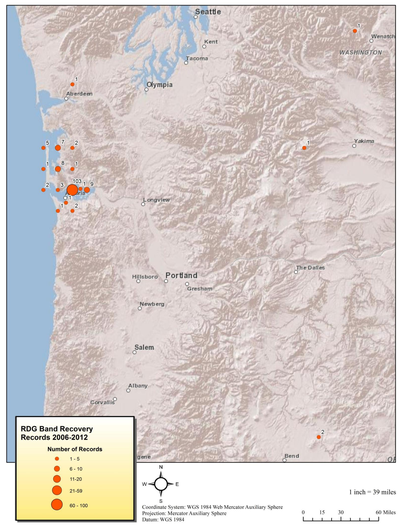
As a result of these concerns a more extensive management program with the goals of decreasing the RDG population and lessening misidentification was established in the mid-2000s. This evaluation focuses on the results of those efforts.

Methods

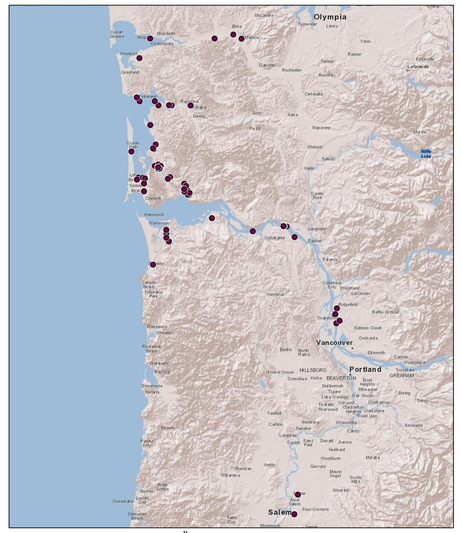
Leg banding, neck collaring, radio collaring, and nest searching efforts for RDG have occurred between 2006-2012. Those records, along with harvest reports and telemetry observations, were used to construct capture histories for survival estimation as well as an analysis of the spatial and temporal distribution of the RDG population.

Results

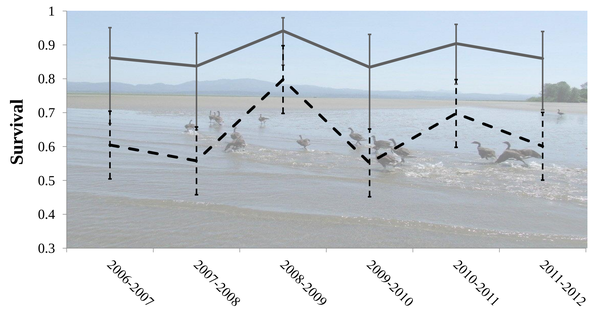
Over the six year period, 335 RDG received leg bands and 287 of those received neck collars. 118 of those leg bands were reported to ODFW/WDFW check stations or to the USGS banding lab.



Band Returns
Frequency and geographic distribution for leg band reports of RDG show a range of band recoveries mainly in southwest Washington.



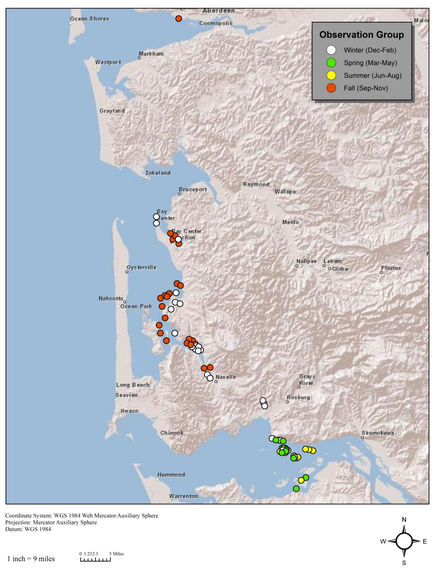
Flock Observations
Observations of RDG flocks from Salem, OR to the Chehalis River, WA during winter USFWS Canada goose and Mid-winter Waterfowl Inventory surveys, 2006 -2012.



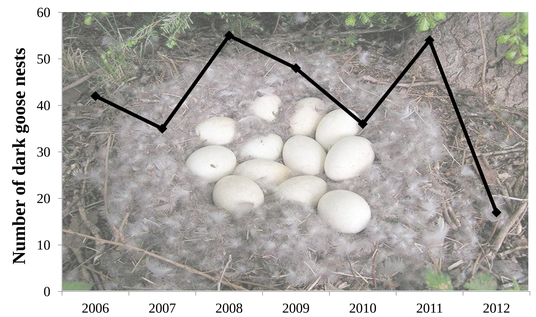
Survival Analysis
Estimates of survival (±95% CI) for RDG with neck collars (dashed line) and without neck collars (solid line) 2006-2012 shows lower survival for neck-collared geese.

Capture Methods
Capturing, banding, and collaring of RDG took place during the molt (early July) on Miller Sands Island in the lower Columbia River. A helicopter was used to coax geese into a portable drive trap.

Seasonal Movements
Telemetry observations of radio-collared RDG grouped to illustrate the seasonality of movements shows a small migration between Willapa Bay and islands in the lower Columbia River.



Nest Surveys
Number of RDG nests found on Miller Sands Island, where most of the known RDG nests in the lower Columbia River were located. The 2012 survey was compromised by incomplete data collection.



Our results will now be used to inform future management decisions and actions for the RDG population.

Thank You
Citizen volunteers who helped with nest searching and banding
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Shannon Knapp, WDFW Biometrician
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