SATELLITE RADIO TELEMETRY TRACKING OF SURF SCOTERS CAUGHT IN CHESAPEAKE BAY, MARYLAND

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BACKGROUND

The U.S. Fish and Wildlife Service, the Canadian Wildlife Service, and the Sea Duck Joint Venture have provided funding for an international seaduck program. This part of the study concerns the delineation of surf scoter (*Melanitta perspecillata*) populations and the specific habitats used by surf scoters for breeding and molting, of which little is known. The capture and satellite transmitter instrumentation of surf scoters will help researchers to more fully understand their migration and the areas used for breeding and molting. Ducks caught on Chesapeake Bay, Maryland, were tracked as they migrated north along the Atlantic coast. Management of the surf scoter population could be improved through increased knowledge of their movements and habitats, which are shared by Canada and the United States.

TECHNIQUES

Capture:

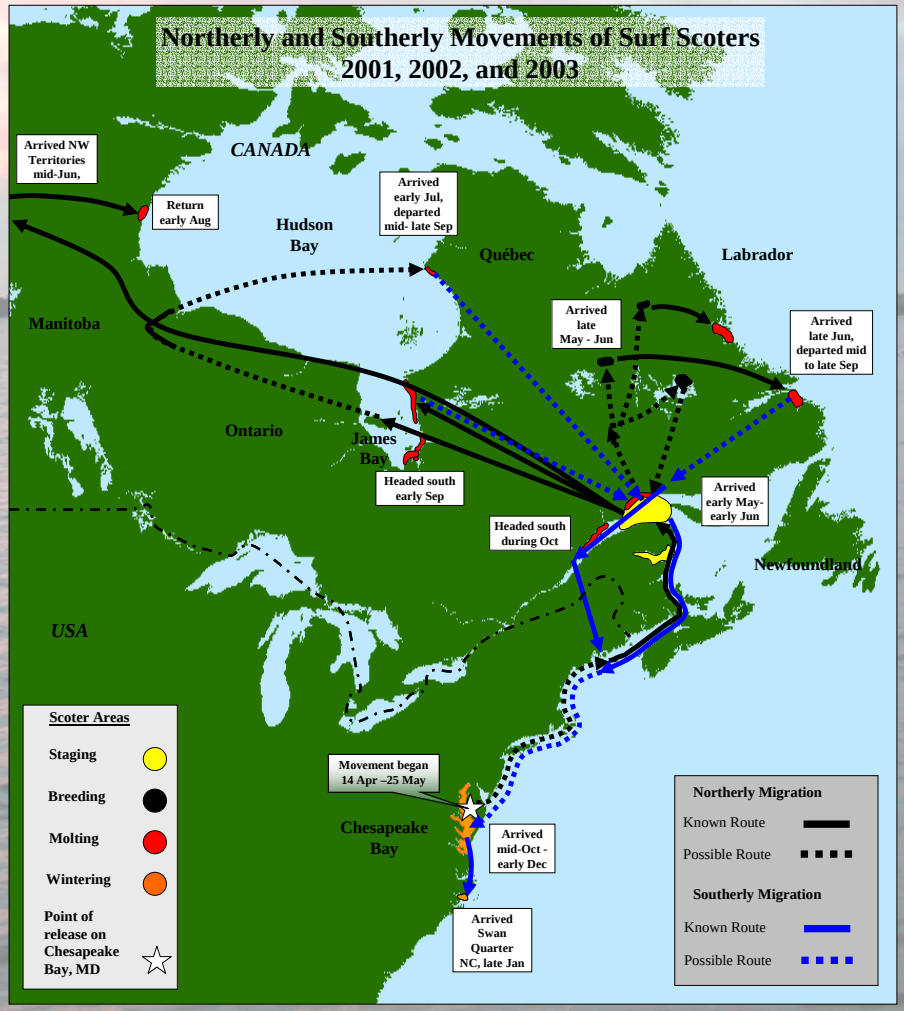
Different techniques were used in attempts to capture surf scoters during March and April of 2001, 2002 and 2003. These methods included mist netting, night lighting, and the use of a capture net gun. The latter device eventually proved to be the only successful technique in Chesapeake Bay. The ducks were captured by chasing them down in a high powered boat, and then shooting the capture net gun (Coda, Inc.). The technique worked best when the ducks were just taking off from the water, and when water conditions were calm.

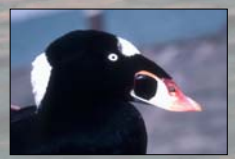
Implantation:

A USGS veterinarian implanted a 39g PTT 100 transmitter (Microwave Telemetry, Inc.) into each of the duck's abdominal cavity. The transmitter possessed an external (percutaneous) antennae, and with the use of a catheter, passed through the duck's back. Following the surgeries, ducks were held at the veterinary hospital until ready for release (around 2-5 days). The ducks were then released back onto Chesapeake Bay at the site of capture.

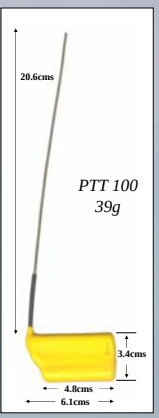
RESULTS

During the 2001 season the net gun was the most effective technique, and was used to capture five male surf scoters in late March / early April 2001 on Chesapeake Bay. In April 2002, another group of five male surf scoters were successfully captured and instrumented for satellite radio telemetry and in April 2003, 2 female surf scoters were also caught, instrumented and released.





The Atlantic Seaduck Project is a cooperative study between the United States Geological Survey, United States Fish and Wildlife Service, Canadian Wildlife Service, State Governments, Provincial Governments, and the Sea Duck Joint Venture.



Following surgery and release on Chesapeake Bay, the satellite tracking began immediately. The data are posted weekly on the USGS Patuxent website. The information from the ducks can be subsequently shared with other researchers throughout the world and also available for the public and students.

The movements of the surf scoters showed that they followed the Atlantic Coast during northward migration in the spring, with a major stop on the St. Lawrence River. Surf scoters appeared to use central parts of the boreal forests in Northern Québec as breeding areas and then moved to the Atlantic Coast, Hudson Bay and James Bay for the molting period in July. In 2003 one of the female surf scoters nested in the Northwest Territories, and this location was the farthest west that we have tracked one of the instrumented ducks. Southerly migration involved the surf scoters leaving the molting areas, returning to the St. Lawrence River, and then coming down the coast to Chesapeake Bay. In one case, a scoter traveled farther south to the Pamlico Sound, North Carolina. Many surf scoters that were instrumented in Chesapeake Bay returned to the Bay showing a strong traditional behavior that has been commonly exhibited with other ducks.