SATELLITE RADIO TELEMETRY TRACKING OF BLACK SCOTERS CAUGHT IN THE RESTIGOUCHE RIVER, NEW BRUNSWICK, CANADA

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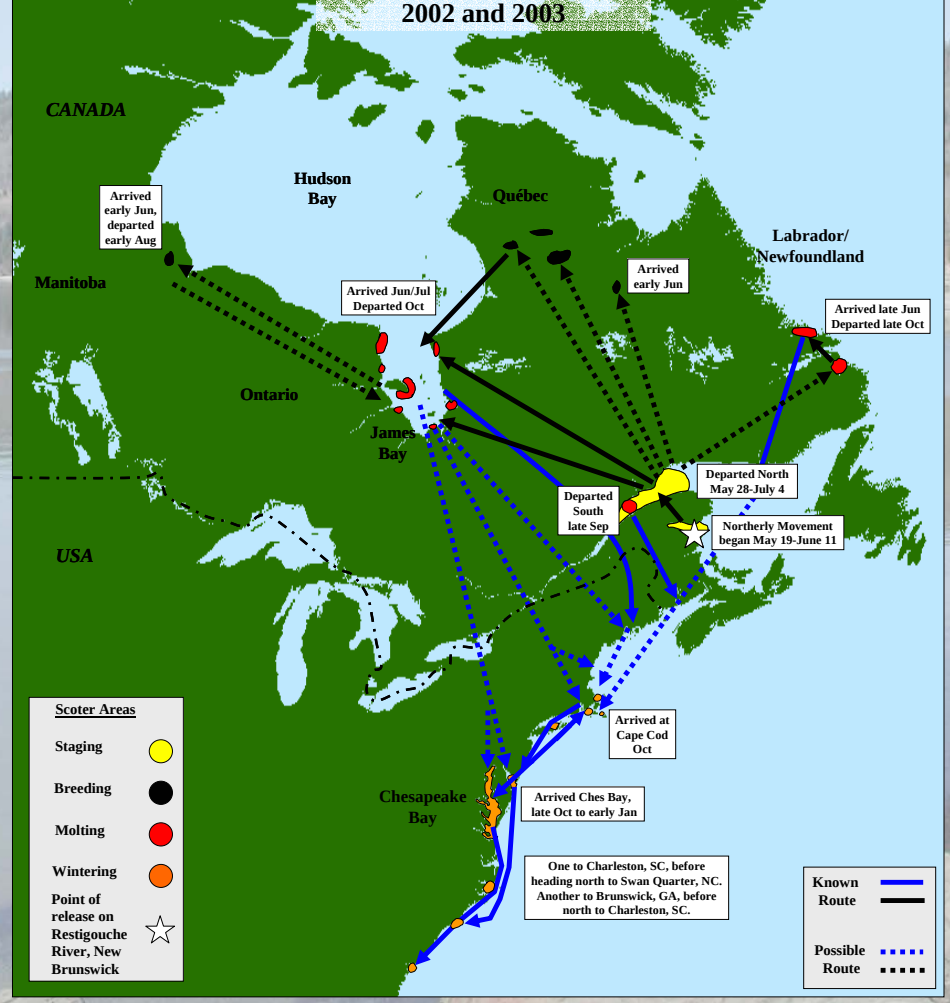
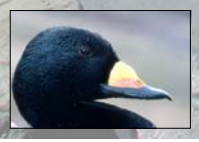
BACKGROUND

The location of the breeding and molting areas of some species of seaducks is uncertain and in need of further study. The migrational paths used by seaducks and the critical habitats used during migration, breeding, and molting are also uncertain. Satellite tracking of seaducks offers the potential to learn more about the critical habitats of seaducks that are difficult to determine by other techniques. The black scoter *(Melanitta nigra)* is of special concern among the seaducks, because it is both the least common of the three scoter species and the species least studied. The Continental Technical Team of the Sea Duck Joint Venture has recommended and funded research on this species to learn more about its movements and the delineation of its breeding and molting areas.

Additional funding has recently been obtained for the seaduck study to instrument black scoters in the Restigouche River, New Brunswick, Canada with satellite transmitters. This River is an important staging areas for northern migration of this species with population numbers approaching 100,000. Satellite tracking of black scoters instrumented during May 2002 and 2003, provided new information that will be beneficial towards delineating populations and establishing the affinities among staging, breeding, and molting grounds. These data will assist in future population monitoring and management of populations.

Delineating populations and establishing the affinities among staging, breeding, and molting grounds is imperative to assist in future population monitoring and management of the black scoter. When waterfowl managers have a better understanding of the populations of black scoters, then they can have a better understanding of the problems confronting this species.





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.

TECHNIQUES

A variety of techniques were tried and tested in the Restigouche River during April 2002. These included the use of a net gun, previously a success on Chesapeake Bay with catching surf scoters in 2001 and 2002, mist netting, and night lighting. All captured birds were transported to a local veterinary hospital where a USGS veterinarian implanted a 39g PTT 100 transmitter (Microwave Telemetry, Inc.), into the abdominal cavity of each duck. 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 for one day before being released onto the Restigouche River at the site of capture.

RESULTS

In Canada it was found that night lighting was the only technique, successful in catching the scoters. In early May 2002, 13 black scoters were caught, 11 male, 2 female, over a period of 2 consecutive nights. In mid-May 2003, 9 black scoters were caught, 6 male, 3 female. The weather conditions were ideal for catching the ducks, a high percent of cloud cover, precipitation, and calm water.

In addition, the scoters, numbering close to 100,000, were seen to be courting and feeding, and were subsequently not too concerned about the lights and boats. Following the surgery, the ducks were released and satellite tracking began. The data is posted weekly on the Patuxent website. The information from the ducks can subsequently be shared with other researchers throughout the world. The movements of the black scoters showed that they left the Restigouche River, with a major stop on the St. Lawrence River. The black scoters appeared to use northern parts of the boreal forests in Québec as breeding areas. In 2002, ten of the 11 male scoters eventually went to James Bay for the July molting period. Southerly migration involved leaving James Bay, and traveling to wintering areas including Long Island and Cape Cod/Martha's Vineyard. Nine of the scoters moved farther south, to Delaware and Chesapeake Bay. Two of these then moved south to the Carolinas with one of them going as far south as Brunswick, Georgia.