ADVANTAGES AND DISADVANTAGES OF A WINTERING CONGREGATION OF TRUMPETER SWANS ON THE MISSISSIPPI RIVER, MONTICELLO (WRIGHT COUNTY), MINNESOTA

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The Mississippi River at Monticello, Minnesota, is currently the primary wintering site for the Hennepin Parks restored population of Trumpeter Swans (*Cygnus buccinator*), as well as substantial numbers of swans released by the Minnesota Department of Natural Resources (MN DNR). Several miles of the river are kept open by a nuclear power plant. Residents living on the river regularly feed the swans and numerous other waterfowl and provide invaluable observations on individual swans and family groups.

Hennepin Parks began releasing swans in 1979, and, in the early years, there were substantial losses due to shooting, lead poisoning, and accidents, especially during attempted migrations. Late in the winter of 1986, two Hennepin Parks (HP) marked birds stopped briefly at Monticello. Since then, the number of swans spending the entire winter at Monticello has steadily grown (Compton 1996, Sheila Lawrence, pers. comm.). In the winter of 1992-93, 28 HP Trumpeters and 22 MN DNR Trumpeters wintered in Monticello. In the winter of 1993-94, numbers increased to 32 HP birds, 29 MN DNR birds, and many unmarked birds, for a minimum of 82 individuals. This wintering population reached 100 individual swans in December 1994. In December 1995, there were 163 swans, and, in December 1996, there were estimated to be 190-200 individuals (Sheila Lawrence, pers. comm.).

Below is a discussion of the advantages and disadvantages of this growing winter flock at Monticello. On the positive side, such a wintering congregation provides the following advantages:

- a way to monitor numbers of swans, survival of adults, and numbers of cygnets, since many of the breeding territories are unknown or difficult to access for breeding surveys.

- the opportunity to monitor problems such as ice on collars and to capture ill and injured birds. During the summer, weak, lead-poisoned waterfowl tend to die hidden and undiscovered in the wetlands.

- a setting where lone subadults and recently widowed swans can find a mate in time for the next breeding season.

- a reduction of hazards such as lead poisoning, power line collisions and hunting accidents. Survival is demonstrated by the number of returning birds and increasing numbers of unmarked birds, which suggests survival of cygnets. There has been less than five percent mortality per winter (Donna Compton and Sheila Lawrence, pers. comm.). Monticello as a wintering tradition maximizes the growth of the restored population by reducing mortality.

- an opportunity for the general public to see the Trumpeter Swan population and learn more about its management. Trumpeter Swans as watchable wildlife should generate interest and support of nongame wildlife programs. It could also provide an opportunity for the business community to capitalize on the birding attraction much like Bald Eagle (*Haliaeetus leucocephalus*) and Tundra Swan (*C. columbianus)* watching along the Mississippi River in southeastern Minnesota (Wabasha County) and Alma (Buffalo County), Wisconsin.

There are, however, obvious disadvantages to such a large flock, as follows. Staying north at this latitude during the winter months is historically unnatural. The artificial availability of open water and food discourages the swans from pioneering southward. However, several birds have wintered at Monticello over the years and have since gone south to winter in Oklahoma and Missouri. The birds are unnaturally dependent upon human provision of food such as shelled corn rather than surviving on the availability of natural aquatic vegetation. Winter feeding is controversial.

The survival of the birds at Monticello is directly related to the nuclear power plant remaining in operation throughout the winter. Occasional short-term freeze-ups have occurred due to temporary power plant shutdowns and ice jams caused by high water and bridge construction on the river. Several losses of birds have been attributed to sudden freeze-ups or blizzard conditions (Sheila Lawrence, pers. comm.). Wind chill conditions play a role in ice buildup on collars, causing potential hazards for the individual bird. Should there be a major shutdown at the power plant, there may be the potential for large

losses. Hennepin Parks does maintain several winter swan refuges to the southeast of Monticello in Hennepin County.

As is true of most wildlife populations, concentrating a majority of the individuals of a population means increased vulnerability to losses due to a disease outbreak. However, with winter conditions and the fast moving current of the river, the threat should be minimal at this location.

There is also the consideration of the cost of feeding of such large amounts of corn. However, so far, all food has been privately provided, although at great cost to several individuals.

There is the disadvantage of the potential of "taming" wild bred swans. It has been suggested that winter feeding could lead to training birds to seek handouts from humans which would lead to increased numbers of nuisance bird complaints. Sheila Lawrence has generally found that, in her observations of Monticello Trumpeters, the swans are overall very skittish. The birds appear only to accept her feeding when it is kept to the same routine. Even a minor change in Sheila's clothing can cause the birds to back off.

With the migration tradition to Monticello established, the Trumpeter Swan flock in Minnesota has grown steadily. It is becoming increasingly difficult to distinguish between HP and MN DNR birds due to the mixing of the flocks and the growing number of unmarked individuals. While there are disadvantages to maintaining birds in a northern location, so far, the advantages appear to outweigh the disadvantages. The birds are clearly taking advantage of a new habitat type created by man.

LITERATURE CITED

Compton, D. 1996. Interior Population status report, highlights and trends, December 1994. Pages 18-37 *in* M. H. Linck and D. C. Compton, eds. Proc. and Papers of the Fifteenth Trumpeter Swan Society Conf. The Trumpeter Swan Society, Minneapolis, MN.