The first reports of Trumpeter Swans (Cygnus buccinator) in NYS were of wing-tagged birds at Dunkirk Harbor, Chautauqua Co., in the fall of 1988. Since that time sightings have increased and breeding has been confirmed in at least six locations. Most likely, these NY birds are derived from two sources: the Ontario reintroduction program for this species, and a private reserve in Clyde, Wayne Co., NY where unbanded fledglings have been allowed to roam freely since around 1990. Although less likely, swans from reintroduction programs in Ohio, Michigan, and Minnesota could also be a source for NYS birds. According to the DEC, tagged Trumpeter Swans in NYS are presumed to be from the Canadian reintroduction program north of Lake Ontario. Although most of these programs style themselves as “reintroduction” or “restoration” programs, and they are referred to in this manner below, the original breeding distribution of this species remains a contentious subject (Carroll and Swift 2000; Whan 2000; Rising 2001).

In NY, the first known breeding outside of captivity occurred in 1995 at two sites, Perch River WMA in Jefferson Co., and in Arcadia Township, Wayne Co. They continue to breed at Perch River WMA and in various locations in Wayne Co. where there are a number of active nest sites (details follow). A more recent nesting site at Morristown, St. Lawrence Co., may have been established by the progeny of the Perch River population. Efforts to find documentation on the fate of young Trumpeter Swans from Perch River have been unsuccessful.

Trumpeter Swans are uncommon but are found annually in spring and fall in the bays and ponds along the Lake Ontario and Lake Erie shorelines; at the Northern Montezuma Wetland Complex; on inland ponds south of Lake Ontario and north of the NYS Thruway; and south of the St. Lawrence River. Figure 1 shows the approximate locations of confirmed nest sites and the overall area where Trumpeter Swans have been observed in spring, fall and winter seasons in western NYS.

Most birds found in winter are on the Lake Ontario or Lake Erie shorelines. As sightings have increased, about 20 to 30 birds are now reported annually in spring or fall, usually a mix of mostly unmarked and some tagged birds. In fall, Trumpeter Swans have gathered in Wayne Co. where the highest single count of 33 was recorded at a private reserve in the fall of 2005. Another high count of 27 individuals was tallied in a single group on the 2006 Montezuma NWR CBC. For further details, see discussion on Wayne Co.
Figure 1. Distribution of Trumpeter Swans (Cygnus buccinator) in New York through 2007.
WAYNE COUNTY NESTING RECORDS

To date, there are at least four confirmed breeding locations for Trumpeter Swan in Wayne Co. The initial nesters were birds introduced at the Savannah Dhu, a 5000-acre private reserve at 2500 Noble Rd. in Clyde, NY, in 1990; one or possibly two pairs have been breeding there annually ever since. The original birds were pinioned but subsequent breeding pairs there are all free ranging. As an example of nesting success, single nests in 2005 and 2006 produced six cygnets each year.

The Savannah Dhu location has served as a most likely source for other Wayne Co. pairs. The longest known nesting site outside this private reserve is near the property of Don Colvin on Hogback Rd. just south of Rt. 31 in the township of Savannah, where one pair has successfully bred annually since 2002. This property contains a large pond, islands and a marsh, all visible from Hogback Rd. Six cygnets were hatched in 2007; four remained by the end of June.

Another pair has bred in a marshy area behind the home at 4427 Boynton Rd., Walworth, in 2004, 2005, and 2006 and has fledged cygnets successfully in both 2004 and 2005. A third pair outside of the reserve has bred in a marshy creek overflow north of Atlantic Ave. (NY Rt. 286) just east of Town Line Rd. in the town of Walworth, from 2003 to 2007. They produced cygnets in at least one year, 2005 (R. Spahn; NYSARC, in review). None of these nesting swans has been observed with any wing tags or bands. These three confirmed breeding sites are documented in the NYS Breeding Bird Atlas (in press) and are all believed to pertain to progeny of the birds from the Savannah Dhu reserve. There are almost certainly other active nest sites in Wayne and the surrounding county that are not documented.

WAYNE COUNTY NON-BREEDING RECORDS

The largest single group of Trumpeter Swans recorded in NYS occurred in 2005 at the Savannah Dhu reserve, where 33 were seen in late fall (B. Lainhart, pers. comm.). During the Montezuma NWR Christmas Bird Count on 31 December 2006, a single group of 27 Trumpeter Swans was counted on Armatage Rd. and Vanderbilt Marsh (adjacent to each other). This group was a mix of adults and immatures; none of these carefully identified birds were wing-tagged (W. Gillette, R. Spahn, pers. comm.). Other Trumpeter Swans were reported on this CBC as well.

According to the most recent information from the Montezuma NWR and the Northern Montezuma Wildlife Management Area, there has not been any confirmed breeding at these locations, but both are near the main source of swans in Wayne Co., the Savannah Dhu reserve (L. Ziemba, pers. comm.), and could host future nesting sites. Frequently, young swans will remain into early winter in the area of the Savannah River on the Northern Montezuma WMA. In
2006, seven were seen daily in this area for some time after the CBC mentioned above.

### REINTRODUCTION PROGRAMS IN THE NORTHEAST AND MIDWEST

#### Ontario

The Ontario reintroduction program was initiated by Harry Lumsden in 1982. The first free-ranging pair of Trumpeter Swans to successfully breed raised young in 1993 at Wye Marsh, about 80 miles north of Toronto. This location continues to host a concentration of the swans. The total Ontario population was estimated to be 406 at the end of 2002. As of late 2006, a total of 835 Trumpeter Swans had been released in the province. The population in the field reached 552 in southern Ontario, about 40 in eastern Ontario and a few in northern Ontario. Although a few are still being released, the Ontario program’s focus has shifted to managing the existing wild-breeding swans (K. Ross, Canadian Wildlife Service, pers. comm.).

At Wye Marsh, swans are fed a mixture of corn and duck grower pellets twice daily, both to provide a reliable source of food, and so that volunteers can more easily record swan tag numbers. The feeding program continues to the present time.

#### Michigan

The Michigan Department of Natural Resources (DNR) reintroduction program began in 1986 as part of the North American Restoration Plan. Released swans in Michigan are fitted with yellow collars with black lettering. The largest concentration of this species is found in the Upper Peninsula around Seney NWR, where 230 birds were counted in 2005. The total state census for that fall was 728 Trumpeter Swans and included 188 cygnets. The Little River Band of the Ottawa Indians released six Trumpeter Swans on the Sleeping Bear National Lakeshore during the summer of 2007. This release is expected to be the last in Michigan (J. Johnson, pers. comm.).

The Michigan program is conducting a statewide Trumpeter Swan census every 10 years, with the next scheduled to occur in 2010. Data collected so far indicate a growth rate in the state’s swan population of 18% per year, although an increase in juvenile mortality in recent years may slow down that growth rate. Bald Eagles are reportedly a major predator of young swans in Michigan.

#### Minnesota

The Hennepin Park reintroduction program began in 1966, where the flock had increased to 100 birds by the 1980s. During the winter of 1988-89 20% of the flock died from lead poisoning.
The Minnesota DNR began a statewide reintroduction program in 1982. The first free-flying swans to produce young did so in 1988. As of 2004, the Minnesota flock consisted of approximately 2000 swans. Most of these birds remain in Minnesota throughout the year, although some move to Iowa or other adjacent states. Of the Minnesota flock, approximately 100 pairs were considered “wild” in 2004, producing an estimated 250 cygnets.

Birds released by the Minnesota DNR are marked with orange wing tags with black lettering. Swans released in Minnesota dispersed to the Kenora District of Ontario, where they were discovered nesting in 1989.

**Wisconsin**

The Wisconsin DNR reintroduction program began in 1987. In 1989, swans from Minnesota’s Hennepin Park nested in Wisconsin, raising two young and producing the state’s first record of nesting free-flying birds in recent history. Currently, there are about 36 nesting pairs in central and northern Wisconsin.

**Ohio**

The Ohio reintroduction program was started relatively recently. In 2005, 25 pairs were found; 10 out of 16 nests were successful. At the end of 2005, 105 Trumpeter Swans were counted in Ohio.

**Iowa**

The first free-flying swans to nest in Iowa were recorded in 1998. Most swans released in Iowa remain there during the winter, but some have dispersed to Oklahoma, Arkansas, and Minnesota. One released swan flew to Colorado for the winter, then to Minnesota the following summer (a distance of > 1300 miles). A male released in Iowa flew to Ontario, where it paired with a female; this pair nested along the north shore of Lake Ontario.

Iowa is the only state still releasing swans (J. Johnson, pers. comm.); these Iowa birds are fitted with green and red neck collars.

**Survival and mortality associated with reintroduction programs**

Trumpeter Swans, which form strong pair bonds, normally do not breed until their fourth year and introduced birds will “imprint” on the release area. Reintroduction programs in Ontario, Iowa, and elsewhere have reported higher-than-expected mortality, although precise mortality rates seem to be unavailable. Lead poisoning has been a cause of death of birds in Minnesota. After studies in Minnesota in the mid 1980s showed that high winter mortality for introduced Trumpeter Swans was caused by the lack of available winter grain, winter feeding was initiated. Surveys at Seney NWR in Michigan have reported high juvenile mortality rates caused by predation, averaging 80% in 2005. The predators included snapping turtles, mammals, and Bald Eagles. Predation levels of cygnets drop with higher water levels in ponds (Henslee 2005). Few swans other than released birds have been tagged, so it has not been possible to track individual birds to determine their fates after hatching.
There is no demographic information available on the Ontario population, making it difficult to evaluate whether this population could be self-sustaining. Anecdotal information from Ontario and elsewhere suggests that more swans are being produced and surviving to reproductive age than are dying, but this seems not to be well documented.

CONCLUSION

Trumpeter Swans that have been observed in NYS since the late 1980s appear to have come from two sources: the Ontario reintroduction program and the Savannah Dhu private game reserve in Wayne Co., NY. Largely circumstantial evidence suggests that swans nesting in Wayne, Jefferson, and St. Lawrence counties ultimately derived from the progeny of the swans at this game reserve. Populations of Trumpeter Swans introduced into Ontario and several Midwestern states all appear to be increasing steadily, and the number of breeding pairs in NY appears to be growing as well, albeit slowly. These trends suggest that a self-sustaining population may one day occur in NY, but it is too early to state this with any certainty, given the long lifespan of the species, poorly known demographic characteristics such as productivity and recruitment, and the degree of human assistance many introduced swans receive. Unfortunately, it may be many more years before questions about whether Trumpeter Swan populations in NY and elsewhere in northeastern North America can be reliably answered. Until such time, we believe it is premature to consider Trumpeter Swans as being established in NY, which is a requirement for adding the species to the official New York State checklist.

CHRONOLOGY OF TRUMPETER SWANS IN NEW YORK STATE

1988
First Trumpeter Swans from Ontario reintroduction program observed in New York, at Dunkirk Harbor, Chautauqua Co.

1990
Earliest documented year in which Trumpeter Swans were raised at Savannah Dhu, a private game reserve in Wayne Co. Original breeding adults pinioned, but young allowed to move freely.

1993
First breeding season observation of a free-flying Trumpeter Swan in NYS recorded in Wayne Co.
1995
First confirmed successful nesting of free-ranging Trumpeter Swans in NYS, with one pair raising two young (originally identified as Tundra Swans) at Perch River WMA in Jefferson Co., and another pair raising four young in Arcadia, Wayne Co.

1996
Pair at Perch River WMA, now confirmed as Trumpeter Swans, raise two young and have nested successfully every year since.

2004
Pair of swans with six young discovered in Morristown, St. Lawrence Co.

LITERATURE CITED