



TRUMPETER SWAN POPULATION STATUS 2023

November 2023

Ohio Division of Wildlife employees have completed an annual trumpeter swan (*Cygnus buccinator*) survey since the species' reintroduction in 1996. The survey originally encompassed the initial release areas at Magee Marsh Wildlife Area, Killbuck Marsh Wildlife Area, Winous Point Marsh Conservancy, Pickerel Creek Wildlife Area, and The Wilds, and since 1998 has included additional wildlife areas and wetlands throughout the state. Research biologists primarily conduct the survey via helicopter. In addition, public reports made to the Wildlife Reporting Website (wildohio.gov), eBird (ebird.org), or by contact with the Ohio Division of Wildlife are verified by staff during the aerial survey or on the ground.

This year's aerial survey was completed in July in several counties in Districts 1-4 (Table 1). While the survey focuses on breeding pairs and cygnets, nonbreeding birds are also documented when seen.

The 2023 survey showed a 12.6% annual increase in the number of trumpeter swan pairs (152) and an 18.5% annual increase in cygnet production (307) (Figure 1, Table 1). Over the last five years, however, there has been an average 14.9% annual increase in pairs and an average 11.8% annual increase in cygnets. The average number of cygnets per nest was 2.02 this year, which is higher than last year but still below the average for the past five years (2.25). Approximately 284 nonbreeders, down from last year's total of 341, were observed gathering in flocks of 3-75 individuals in several locations, with the largest numbers observed in Ottawa and Lucas Counties.

The total population of trumpeter swans in Ohio for 2023 is estimated at 896 individuals, slightly up from 863 individuals (approx. 4%) in 2022.

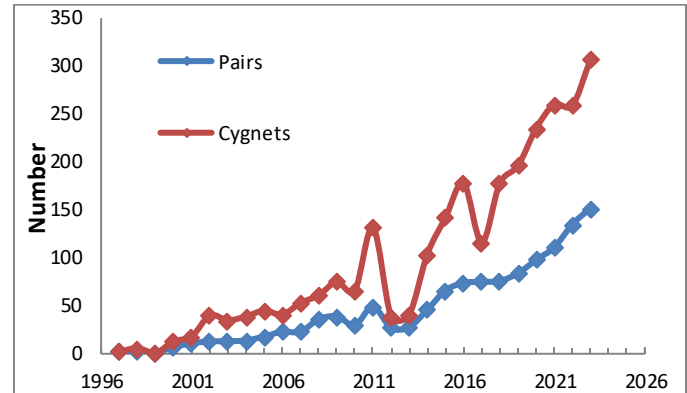


Figure 1. Trumpeter swan breeding population in Ohio, 1996-2023.

This year's survey suggests that despite the avian influenza outbreak of 2022, Ohio's trumpeter swan population is doing well. The breeding population, both pairs and cygnets, continues to increase (Figure 1). The lower number of nonbreeders, while concerning, is likely related to the highly pathogenic avian influenza (HPAI) confirmed in many waterfowl species throughout the state beginning in the spring of 2022, which likely caused a slight downturn in cygnet production for 2022. However, the continued increase in both breeding pairs and cygnet production suggests that the population is resilient and is recovering from the outbreak. The Ohio Division of Wildlife will continue to monitor the population to determine if there are any cascading long-term effects on the population from the disease.

The bulk of Ohio's trumpeter swan population continues to reside in District 2 (northwest Ohio), and this region showed the greatest increase in number of breeding pairs and cygnets in 2023 (Table 1, Figure 2a). Other regions showed mixed trends of slight declines, stable populations, or slight increases. (Table 1, Figure 2a, 2b).

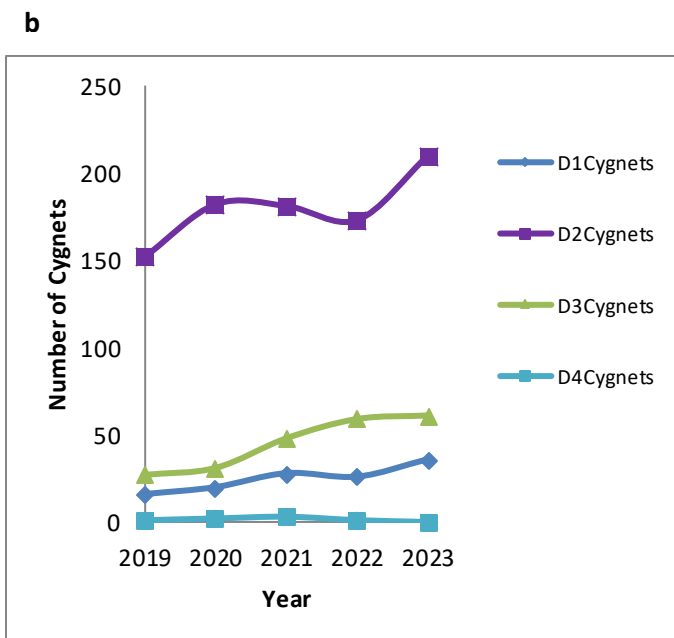
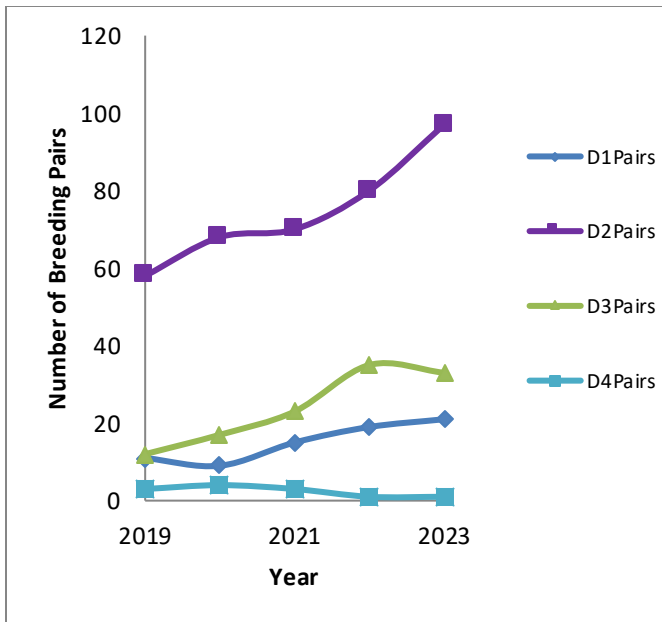


Figure 2. Changes in Ohio's trumpeter swan population from 2019-2023, by District (D1-D4) for a) total number of breeding pairs (successful and unsuccessful), and b) total number of cygnets

In 2010, the Ohio Swan Management Plan established a goal for delisting the trumpeter swan if the population reached 40 or more breeding pairs by 2020 OR for three consecutive years. With 40 or

more pairs successfully nesting every year since 2015, the population has now officially met that goal. In addition, documented breeding is required to occur in 15 counties for the Ohio Division of Wildlife to consider delisting the trumpeter swan. In 2023, breeding pairs were found in 26 counties, and of those, evidence of breeding success was found in 23 (Figure 3).

In 2020, Ohio joined a collaborative trumpeter swan movement ecology study that was initiated by the University of Minnesota. The Trumpeter Swan Society and several other agencies throughout the range of the Interior Population of the trumpeter swan have also participated. Ohio Division of Wildlife staff and partners from Winous Point Marsh Conservancy, Cleveland Metroparks Zoo, Columbus Zoo, and Akron Zoo collared 20 trumpeter swans in Ohio with GPS/GSM transmitters in the summers of 2020 and 2021. Three birds were still trackable as of October 21, 2023, and fates of all tagged swans are summarized in Table 2. Overall movements of trackable birds can still be viewed at <https://trumpeterswan.netlify.app/locations.html>. Most Ohio swans dispersed little and made only small movements between counties to ice-free areas during the harshest periods of winter. Large southward migrations were not documented during winter as they were in swans tagged in Manitoba, Minnesota, and Wisconsin (D. Wolfson, unpublished data).

Overall, Ohio's trumpeter swan population continues to show successful recovery, thanks to the Ohio Division of Wildlife and its conservation partners' work toward improved wetland habitat management, protection, and control of invasive species such as the mute swan (*Cygnus olor*), purple loosestrife (*Lythrum salicaria*), common reed (*Phragmites australis*), and flowering rush (*Butomus umbellatus*).

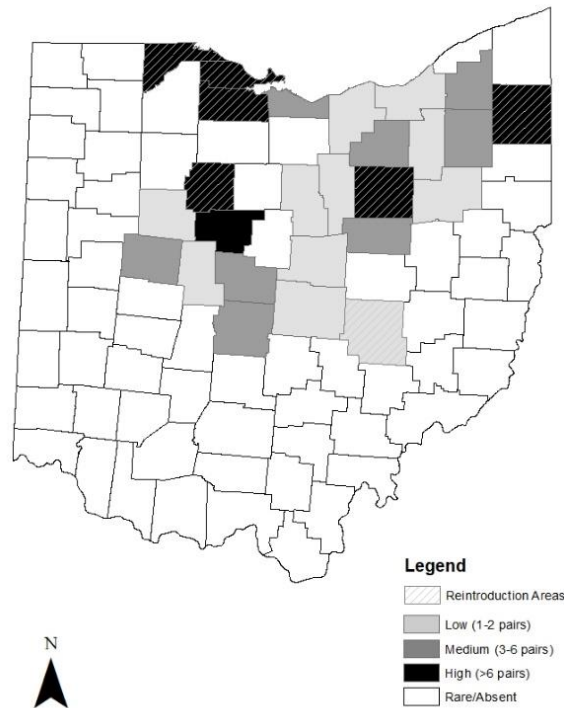


Figure 3. Distribution of Ohio's population of breeding trumpeter swans in 2023, including counties of original reintroduction sites (hashed marks)

Location	Breeding Pairs	Cygnets	Nonbreeders	Counties
District 1 (central Ohio)	21	36	3	7
District 2 (northwestern Ohio)	97	210	238	7
District 3 (northeastern Ohio)	33	61	43	11
District 4 (southeastern Ohio)	1	0	0	1
Totals	152	307	284	26

Table 1. Trumpeter swan populations by district, July 2023. The total population size is estimated at 896 swans. Total number of unsuccessful pairs (pairs without cygnets) = 65, successful pairs (pairs with cygnets) = 91. County numbers include those with breeding pairs, successful and unsuccessful. District 5 (southwestern Ohio) had no observations of breeding/non-breeding trumpeter swans.

Sex	Breeding Status	Total Captured	Still Trackable & Alive in Ohio	Known Dead	Likely Alive	Unknown
Female	Breeder	10	1	3	2	4
	Nonbreeder	5	1	3	0	1
Male	Breeder	3	0	1	1	1
	Nonbreeder	2	1	0	0	1
Total		20	3	7	3	7

Table 2. Fates of Ohio swans tracked with GPS/GSM transmitters (July 2020-Oct 2023)