THE MONTICELLO SWANS

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I have lived on the Mississippi River in Monticello, Minnesota, since 1984. Our stretch of the Mississippi has been a winter home for hundreds of ducks and geese since the start up of a nuclear power plant in the 1960s. During the winter, the warm water discharge keeps the river open for several miles downstream. It is the largest area of open water in this region. The first year we lived here, the power plant was shut down in the fall and was not started up until February. The river completely froze over, and the waterfowl disappeared. Three days after the power plant was restarted, the ice was gone off the river, and the Mallards (*Anas platyrhynchos*) came back. Three weeks later, flocks of geese began returning from their migration, probably the first migration many of them were forced to take.

The following winter the ducks and geese never left. Because they were fun to watch, I started putting corn out for them. Besides the geese and Mallards, we also have mergansers, goldeneyes, and several eagles that winter here. Best of all from my standpoint, for the past 10 years, we have been graced with the presence of Trumpeter Swans (*Cygnus buccinator*), as well as an occasional Tundra Swan (*C. columbianus*).

In the spring of 1986, I saw my very first Trumpeters, an adult and a cygnet. They stayed around for a day. I had never seen such magnificent birds flying free before. I had only seen swans in the zoos and parks, and now they were practically in my backyard. Fifteen Trumpeter Swans wintered here in 1987-88. Of the original 15, at least two, and possibly three, are back this year. They have been coming to Monticello for 10 years. There are three, possibly four, generations of Trumpeters wintering at Monticello. I have had the privilege of watching them grow from that small flock of 15 in 1987 to over 200 this year (Figure 1).

Of the 105 different Trumpeter Swan bands I have kept track of during the past 10 years, 68 have been swans from Hennepin Parks, 35 were from the Minnesota Department of Natural Resources (MN DNR) and two were from Wisconsin Department of Natural Resources (Table 1). 209 cygnets have come to Monticello over the past 10 years (Table 2). One Hennepin Parks pair (54NA and 55NA) has brought 22 cygnets to winter here. MN 7 has brought 19 cygnets, and her daughter, MN 9, has also brought 19.

In the winter of 1994-95, the highest Trumpeter Swan count was 113, with an average of about 90 swans per day. In 1995-96, the high count was 168, with an average of 150 swans per day. This year, 1996-97, the highest count was 204, with an average of over 190 swans. This includes 50 banded swans, 54 cygnets, and over 100 unmarked swans wintering at Monticello.

Of all the Trumpeter Swans that have wintered at Monticello during 1987-97, there have been 15

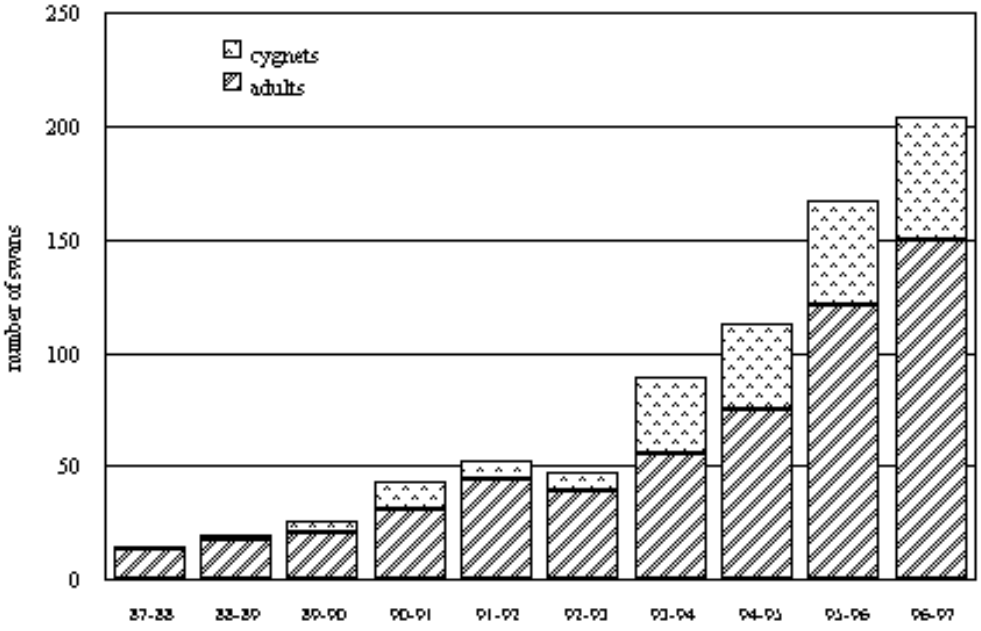

Figure 1. Number of Trumpeter Swans wintering at Monticello, Minnesota, 1987-97.

known mortalities (Table 3). Five died of lead poisoning, three died from collisions, two were missing after the river froze over, one died of stress, three died of unknown causes, and one swan died when he got his leg tangled in a rope that was tied to a cement block.

I observe swans every day from mid-November to mid-March. In the fall, I watch them reestablish their pecking order, which changes from year to year. What a show they put on, all that displaying and trumpeting. In February, when the courting rituals are at their peak, it's really wild around here for a couple days. The fights are mostly display, but occasionally they do have very aggressive encounters.

With the exception of one year, they have never shown any aggression towards me. In that year, a Wisconsin female would continually display to me, as if I were a family member of hers. Once in a while, some of the swans would accept her challenges and come after us. She kept getting me in trouble that year, but it was fun.

I have followed one female, MN 7, for 10 years. She is remarkable. MN 7 and her first mate, MN 8, were raised at the Minnesota Zoo and donated to the MN DNR for their restoration program. As the "visitors couple" at Tamarac National Wildlife Refuge, they were the only swans allowed to mingle with the p ublic. MN 7 and MN 8 were released in 1987 at the age of three. When they arrived at Monticello, they quickly became the "visitors couple" of our neighborhood. If you didn't have their corn out in time, they would come to the house looking for you. Everybody on the river knew them and had an interest in them. They made a great pair. She was a busybody and liked excitement, always instigating little battles even though she couldn't fight worth a darn. MN 8, on the other hand, was mellow and easygoing, but he defended her faithfully.

The third year, they returned to Monticello with a cygnet. They were such proud parents, parading up and down the shoreline, showing off their new addition. MN 8 was a wonderful father and never left his cygnet's side. MN 7, on the other hand, didn't let having a cygnet stop her from carrying on as usual. As fate would have it, that same winter, MN 8 died when he hit a bridge on a windy day. As a result, MN 7 lost her place in the pecking order and became withdrawn.

The next year, in 1990, MN 7 arrived with a new mate, MN 28, plus seven cygnets. How happy and excited she was. The way she carried on, you could tell she was saying, "We're going to be high in the pecking order this year. I am back on top." I later found out that she had six cygnets and adopted one. Knowing MN 7, she probably kidnapped the cygnet to help boost her status. MN 28 was big and strong and a very good fighter. This allowed MN 7 to have a great year to maintain her position of dominance in the flock. The next year, they brought three cygnets to Monticello, and she was still up in the pecking order.

The following two years were, in my observation, the hardest on MN 7, for she had lost her second mate, MN 28, to a power line collision in northern Minnesota where they nested. She showed up in Monticello alone. I was told in the fall of 1993 that she had a new mate and cygnets, but, once again, she came to Monticello alone. For those two years, she hung around with another widow, MN 129, and they were on the bottom of the pecking order. It was during these years that I would watch her start a disturbance, and, while the other swans were still carrying on, she'd use the diversion to go for the corn and eat as fast as she could before being chased away.

In the spring of 1994, she found her next mate at Monticello, an unmarked swan who was not willing to fight or defend her. They have had eight cygnets together, including five this year. Perhaps because of increased competition, or possibly because of her age plus her mate's unwillingness to fight, MN 7 has mellowed some. She is still feisty but knows her place. MN 7 will be 13-years old; she is on her fourth mate and has successfully reared 19 cygnets through the past 8 winters.

In 1990, the year after MN 8's death, a female with a MN DNR wing tag 9 showed up at Monticello. It appears that someone in the DNR also had a soft spot in their heart for MN 7 and MN 8, for they saved the MN 9 for their only cygnet. In 1993, MN 9 and her first mate, MN 170, brought five cygnets to Monticello. In 1994, she lost MN 170 and returned with MN 104 and three cygnets. MN 9 and MN 104 have been together for 3 years now and have had 14 cygnets together, including seven this year. They are a quiet couple and keep to themselves. MN 9 will be 8-years old; she is on her second mate and has brought 19 cygnets to winter at Monticello during the past 4 years. In my conversation with the swans, I've been heard to say to a cygnet belonging to MN 9, "You quit biting MN 7. Shame on you, that's your Grandma!"

Table 1a,b,c. Histories of individual marked swans wintering on the Mississippi River at Monticello, Minnesota, 1987-97.

Swan	87-88	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	# of years
MN 7	x	x	x	x	x	x	x	x	x	x	10
MN 8	x	x	collision								3
11NC	x	cancer									1
MOTHER	x	lead									1
54NA	x	x	x	x	x	x	x	x	x	x	10
55NA	x	x	x	x	x	x	x	x	x	x	10
85NA	x										1
50NC	x	x	x	x	collision						4
15NC	x	x	x	x	x	shot					5
44NC	x	x	x	x	x	x	x	x			8
46NC	x	lead									1
48NC	x	lead									1
25NC		x	x	x	x	x	x				6
20NC		x		x	x	shot					3
53NC		x									1
05NC		x									1
MN 16		x	x	x	x	x	x	x	x	x	9
76NA			x	x	x	wing clip	x	x	x	x	7
51NC			x	x	x	shot					3
73NA			x	x							2
MN 9	cyg:7+8		x	x	x	x	x	x	x	x	8
69NC				x	x	x	x	x	x	shot	6
72NC				x	x						2
61NC				x	x	shot					2
56NC				x							1
67NC				x							1
MN 28				x	x	pwr line					2
MN 129				x	x	x	x	x	to Okla.		5
MN 119				x	x	pwr line					2
MN 104				x	x	x	x	x	x	x	7
MN 133				x	x	x	x				4
MN 143				x	x						2
WI 4KU				x	lead						1
85NC					x	x	x-missing			3	
82NC					x						1
62NC					x						1
MN 116					x	x	x	x	x	x	6
MN 118					x	x	x				3
MN 160					x	x	x	x	x	x	6
MN 30					x						1
MN 136					x						1
83 NC						x	x	refuge	missing		2
0A3						x	x	x	entangle		4
0A4						x	x	x	x	x	5
MN 159						x	x	x	missing		3
MN 162						x	x	x	x	x	5
WI25KN						x	wing clip				1
0A0							x	x	x	x	4
0A1							x	x	shot		2
MN 170							x				1
MN 180							x				1
MN 185							x	x	x	x	4
MN 178							x	x	x	x	4
MN 168							x	x	x		3
0A5								x	x	x	3

Table 1a,b,c. Histories of individual marked swans wintering on the Mississippi River at Monticello, Minnesota, 1987-97.

Swan	87-88	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	# of years
0A6								x	x	x	3
0A7								x	x	x	3
0A8								x	x	x	3
0A9								x	x	x	3
1A0								x			1
1A7								x	x	x	3
1A8								x			1
2A7								x	x	x	3
2A8								x	x	x	3
MN 186								x	x	x	3
MN 187								x	x	x	3
MN 191								x	x	x	3
MN 201								x	x		2
MN 213								x			1
MN 223								x			1
90NC								x	x		2
2A6								x	refuge	x	2
3A9									x	x	2
4A0									x-dead		1
92NC									x	x	2
2A2									x		1
2A4									x		1
0A2									x		1
2A3									x		1
3A4									x	x	2
154 Red									x	x	2
MN 166									x	x	2
MN 189									x	x	2
MN 192									x	x	2
MN 220									x	x	2
MN 206									x-dead		1
MN 224									x	dead	1
5A5									x		1
4A4									x	x	2
MN 240										x	1
7A1										x	1
7A2										x	1
6A7										x	1
3A0										x	1
5A2										x	1
4A8										x	1
4A9										x	1
6A9										x	1
6A1										x	1
6A3										x	1
7A0										x	1
7A3										x	1
7A4										x	1
7A7										x	1
7A8										x	1

collision = flew into bridge
lead = lead poisoning
missing = missing, lost in blizzard, or missing after river froze up
wing clip = wings clipped
pwr line = hit power line

Table 2. Number of cygnets seen with known pairs of Trumpeter Swans during the winter, from 1987 to 1997, at Monticello, Minnesota.

Swan Pair	87-88	88-89	89-90	90-91	91-92	92-93	93-94	94-95	95-96	96-97	total	# of years
54NA+55NA	1	2	2	2	1	1	3	3	2	5	22	10
MN7+MN8/MN28/unm	0	0	1	7	3	0	0	3	0	5	19	10
44NC+unk/25NC	0	0	2	0	2	2	2	3			11	8
15NC+umn		0	0	2	1						3	4
73NA+unm			0	1							1	2
MN129+unk				0	1	0	0	6			7	5
MN116+MN118					0	1	4	0	0	0	5	6
0A3+0A4						5	5	0	7	0	17	5
69NC+unm				0	0	0	4	4	0		8	6
83NC+85NC					0	0	4				4	3
MN9+MN170/MN104			0	0	0	0	5	5	2	7	19	8
MN162+unm						0	1	4	2	2	9	5
0A0+0A1/unm							0	1	2	0	3	4
90NC+unm								2	4		6	2
76NA+unm			0	0	0	clipped	0	0	3	2	5	7
2A7+unm								0	1	2	3	3
92NC+unm									4	6	10	2
MN168+MN159							0	0	4		4	3
MN185+unm							0	0	3	0	3	4
MN178+unm							0	0	0	3	3	4
MN192+unm									0	3	3	2
MN189+unm									0	1	1	2
MN166									0	2	2	2
unmarked swans							6	7	12	16	41	5
TOTAL	1	2	5	12	8	9	34	38	46	54	209	

0 = paired but with no cygnets
unm = unmarked
unk = mate unknown
/ = multiple mates

The river is always changing, and it has frozen over three times in the past 10 years, including this year. Variations in water level and cold temperatures affect these freeze-ups. Some have lasted up to 2 weeks, but there have always been areas of open water available to the birds. These conditions confuse the swans and are hard on them in various ways, but they do adapt. When possible, I will bring food to the swans to help sustain them during the freeze-ups. I have found that the swans tolerate extreme cold very well. From what I have observed, I would say that ice causes them the most distress, whether it's a river trying to freeze over or ice on their collars.

I have frequently seen collars with 5 inches of ice encasing them. Sometimes, when a swan with a heavily ice-encrusted collar puts its head down, its collar slides all the way down its neck to its head. The weight of the iced collar holds the swan's head on the ground, causing the swan to flip over. Since its head does not have enough strength to lift the block of ice, the swan is forced to flop around and fight the collar until it somehow manages to get the collar back towards its chest area. Some swans drag their weighted heads into the water where the ice floats, thus allowing the collars to right themselves.

There are times when natural acts such as preening, tucking their heads in, walking, and even flying are impossible because of these iced collars. With iced collars, they will fly with their heads up instead of in the normal straight out position.

These instances occur during the bitterness of extreme wind chills. I don't believe that icing occurs only in Monticello. From my understanding, icing can happen wherever there is extreme cold accompanied with wind and, of course, water. I have seen large amounts of ice on the old yellow collars, but the newer green collars seem to be even worse. I ask that those responsible for collaring birds take this issue seriously. In this age of technology, there

should be a kinder way of marking these beautiful birds. These collared swans have been dealt a terrible injustice. I know they deserve better.

One day, as the ice piled up on the Mississippi River, the river froze, and a swan that was unable to fly because of a heavily iced collar took refuge in my neighbor's yard, along with 17 other swans. During the harsh night, with -70 ➢F wind chills, the swan was not able to tuck his head in for protection. He fled from where the ice had pulled out some of his chest feathers. The next day, we attempted to capture him. Sensing their vulnerability, the other swans took flight when they saw us. The swan with the iced collar did his best to follow, but the weight of the ice allowed him to escape only out onto the frozen river, where we dared not go. His only hope was to cross a treacherous field of ice to reach an open area of water a half-mile upriver. He was severely hindered in his ability to walk and to protect himself from the elements or from predators because of the block of ice that he carried around his neck.

Table 3. Winter population size and mortality in Trumpeter Swans wintering on the Mississippi River at Monticello, Minnesota, 1987-97.

Year	Adults	Cygnets	Total	# of	Cause of
87-88	14	1	15	1	lead
88-89	18	2	20	lead	collision
89-90	21	5	26	1	lead
90-91	31	13	44	3	
91-92	45	8	53	0	
92-93	39	9	48	2	freezeup
93-94	56	34	90	2	collision
94-95	75	38	113		1-stress
95-96	121	47	168	5	1-entangled 3-unknown
96-97	150	54	204	0	

I am happy to report that he did survive. When the river opened a week later, he returned. His collar was still heavy with ice, but the mass of ice was gone from his chest. I could identify him by his plastic leg band. What satisfaction it was to watch the last of the ice break free from his collar. The weight now gone, restricted no more, he instantly started dipping and preening; life was good once again. This swan survived, but how many others have not?

Although the swans have had to endure some harsh conditions, generally speaking, life is pretty good for them at Monticello. The swans that winter here appear to be thriving. I know that swan releases are part of the increase. It is the steady increase of unmarked swans which indicates to me that many of the cygnets are surviving and that some are having families of their own.

I have always done what I felt was best for the swans and have done whatever I could to help them. I know and understand the controversies concerning feeding swans at Monticello, and I will cooperate with whatever master plan both Hennepin Parks and the Minnesota DNR agree upon. However, at this time, I do not permit trapping on our property for the purpose of banding the swans. I would not feel right in betraying their trust. Anyway, I do not believe that the swans would fall for the trap. These are birds that panic when a pop can floats by. These are birds that cry out in alarm for hours if a corn bucket tips over. They are always alert and excitable. Any variation in their routine puts them on edge.

The Trumpeter Swan is an extraordinary bird. They have been part of the human experience since the beginning of time. They have their place in history, culture, and myth. They have the ability to inspire art and poetry. They sound like a trumpet and have wings like an angel's. We are blessed to have them among us.

I realize that few people have had the opportunity to follow a group of Trumpeters over a 10-year span. I feel very fortunate that I have been able to be a part of their lives. They have given me experiences which I will always cherish. I thank those responsible for the restoration efforts being made for these wonderful swans.