

JANUARY WATERFOWL COUNTS, 2005-2007, AND SOME OBSERVATIONS ON LONG-TERM TRENDS

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The New York State Ornithological Association (formerly Federation of New York State Bird Clubs) has conducted a January Waterfowl Count (JWC or "Count") almost every year since 1955 (Rising 1955). Following a hiatus in 1968-1972 (Jones 1980), the count has been conducted for 35 consecutive years. I have helped compile the counts since 1997, but fell behind in publishing results in *The Kingbird*. To compensate for my late reporting, I have added some additional analysis of long-term trends observed over the past several decades.

METHODS

No formal, standardized protocol has been established for the JWC. Each January, regional coordinators ask local clubs and individual volunteers to visit lakes, rivers, shorelines, and other water bodies throughout New York State to count waterfowl (ducks, geese and swans) and associated water birds (e.g., loons, grebes, cormorants and coots). All counts were to be conducted during a 9-day period beginning on the second Saturday after New Year's Day, with a target date of the first Sunday in that period. Most counts are conducted during the first several days of the period, but in some cases additional time is needed to complete the counts. There are no other time constraints for completing the counts, since they are intended to be as complete as possible, while providing an enjoyable day in the field for all involved.

Counts are made during a single visit to each area, and include only birds actually seen and counted (or estimated for large flocks). Survey coverage is generally consistent from year to year, with most areas surveyed by the same participants from one year to the next. This provides a fair amount of consistency, but changing observers and occasional unsurveyed areas are always a concern. No attempt is made to estimate or account for birds in those areas. Weather conditions in January are highly variable, and count participants are simply advised to do the counts when weather conditions are favorable for bird observation. Leaders of each count report their results back to the regional compiler along with information on number of participants, amount of time spent doing the counts, and weather conditions. Regional compilers review and provide their data to the statewide coordinator as soon as possible. Results are

then tabulated and published in the *Kingbird*. Statewide and regional totals are also posted on the NYSOA website at:

<http://www.nybirds.org/ProjWaterfowl.htm>

COUNT DATES AND WEATHER CONDITIONS

Count dates were determined by the formula mentioned above. Weather data from National Weather Service stations in Buffalo, Watertown, Albany, and Islip were reviewed and combined with anecdotal reports from regional compilers to characterize weather conditions as they may have affected waterfowl abundance, distribution or observation.

The 2005 Count was held during January 15-23. January began with two solid weeks of balmy weather, with high temperatures reaching well above 50° in the days just prior to the count. However, winter arrived in full force at the start of the count period, as temperatures remained at or below freezing across the state for the duration. Low temperatures were in the single digits or lower for much of the count period, resulting in rapid freezing of waters that were open a week earlier. Lake effect snows accompanied the sharp change in temperatures, but elsewhere snowfall was relatively light. As a result of this weather pattern, most shallow inland waters froze over quickly, but some streams remained open with high water until later in the week, when larger bays and lakes also began to freeze over. Consequently, the count conditions are difficult to characterize, since the early mild weather allowed many birds to linger into January (but they were widely dispersed), but the sudden cold snap likely forced some birds south and concentrated others in remaining open waters.

The 2006 Count was held during January 14-22. As reported by Guthrie (2006), "the most compelling aspect of this winter's weather was the extraordinary warm weather that persisted throughout the state from the last week of December through January." He noted that January 2006 was the fifth warmest January since 1895. National Weather Service data showed high temperatures in the 40s and 50s on most days during the count period, with only one or two days when the temperature did not break the freezing mark everywhere in the state. The coldest days tended to be on the first weekend, accompanied by strong winds and mixed precipitation, which made for some unpleasant counting conditions. Overall, there was little snowfall or snow on the ground during the 2006 Count, and heavy rains and strong winds prevailed in the middle of the week. The mild weather resulted in lots of open water, including flooding of open fields, allowing many waterfowl to remain in New York, but with fewer birds concentrated at the usual open water locations.

The 2007 Count was held during January 13-21. For the third year in a row, the first half of January was unusually mild, with high temperatures mostly in

the 40s and 50s and almost no snowfall across the state. A record high of 71° was set in Albany on January 6, and even the St. Lawrence River was ice free. Temperatures dropped sharply during the first weekend of the count, and were lower but variable during the rest of the count period. Upstate, average temperatures were at or below freezing, with daytime highs in the high teens to upper 30s. Lows were in the teens and 20s in Buffalo, to below zero on several days in Watertown. Milder weather prevailed on Long Island, where highs close to 50° continued for several days into the count. Precipitation was highly variable, from light snow to freezing rain and showers, but no prolonged or heavy amounts recorded. Recorded wind speeds seemed generally lower than in previous years, but a few regions reported having to brave strong winds and mixed precipitation to complete the counts. As in the previous two years, waterfowl were able to remain well into January, but they were not concentrated in any numbers.

RESULTS

The January 2005 Count yielded a total of 287,713 birds (Table 1), 17% fewer than in 2004. This was the lowest total count since 1996, but was close to the long-term (1973-2007) average. The Am. Black Duck count (8,727) and total scaup counts (15,224) were both record lows, while the Black Scoter count (4,940) was a record high. Counts of many dabbling ducks and several other diving ducks such as Redhead and Bufflehead were below levels observed in recent years. This may have been due in part to many dabbling ducks being dispersed on countless areas of open water in the state this year. Lower diving duck numbers may have been due to birds remaining farther north or west of New York due to the mild weather. Notable exceptions were Canvasback, with the second highest count (17,989) since 1976, and Barrow's Goldeneye, a rare treat even though it equaled its previous high count of 8 birds.

The January 2006 Count yielded a total of 321,823 birds (Table 2), 12% more than in 2005 and about 10% above the long-term average. The Am. Black Duck (8,889) and total scaup (23,472) counts both increased slightly from 2005, but were the still the second lowest since 1973, whereas the Black Scoter count (3,746) declined slightly but was still the second highest to date. The Snow Goose (2,937) and Tundra Swan (1,773) counts were both new record highs. In general, counts of most other species were not unusually high or low compared to recent counts or long-term averages.

The January 2007 Count yielded an all-time high of 584,389 birds (Table 3), 82% higher than the year before, and nearly double the long-term average. Contributing to the overall record were new high counts for Snow Goose (107,683), Canada Goose (236,741), Hooded Merganser (2,448); the second highest count for Long-tailed Duck (12,040); and the third highest total count of

scoters (27,961). The total scaup count (54,702) rebounded from its recent low levels, including a record number reported as Lesser Scaup (7,778). On a smaller scale, even the Red-throated Loon (927), Double-crested Cormorant (401) and Trumpeter Swan counts (14) set new records. On the other hand, no Harlequin Ducks were reported for only the second time in the past 35 years, and the Am. Black Duck count (8,912) was essentially unchanged from the previous two years, remaining near its record low. Counts of most other duck species were near or above their long-term averages. For the most part, these counts suggest an extreme northward shift of wintering waterfowl in 2007. Although the mild weather in January 2007 was similar to the previous two years, it was preceded by an exceptionally warm and snow-free December 2006.

LONG-TERM TRENDS

Winter waterfowl counts are of limited value for year-to-year population monitoring because they are influenced to a great extent by weather conditions prior to and during the counts. However, inspection of long-term trends allows one to see underlying population changes that may be of interest. Following are some general overviews of trends for major species' groups. Long-term (1973-2007) averages are provided in Table 4, and the most-recent 10-year averages can be found at <http://www.nybirds.org/ProjWaterfowl.htm>. I hope to include some analysis of long-term trends for individual species and some analysis of regional trends in future reports. I invite others to do the same, using any of the data available at the NYSOA website.

Total Birds The total number of waterfowl counted statewide increased steadily from 1973-2007 (Fig. 1). Total counts have ranged from a low of 129,907 in 1978 to a high of 584,389 in 2007, a nearly four-fold difference. The long term average is now approximately 290,000 birds (Table 4), while the most recent 10-year average is approximately 380,000 birds.

Geese Total counts of geese have increased dramatically over the past 35 years (Fig. 2) and are largely responsible for the higher total waterfowl counts in recent years. Total goose counts were typically below 25,000 in the 1970s (with a low count of 15,553 in 1977), and were generally between 100,000 and 200,000 since 1997 until a new high of 361,685 was reached in 2007. The long-term average for geese is now approximately 102,500 birds (35% of the total waterfowl count), while the most recent 10-year average is approximately 180,000 birds (47% of the total count). Not surprisingly, Canada Geese (including what are now classified as Cackling Geese) comprised about 85% of all geese counted. Atlantic Brant (15%) accounted for most of the remainder.

However, the record high count of Snow Geese in 2007 may signal the beginning of a trend towards more “white geese” (including Greater Snows, Lesser Snows, Blue phase and Ross’ geese) wintering in New York State.

Swans Total counts of swans have also increased over time (Fig. 3), but on a much smaller scale than for geese. Total swan counts have ranged from a low of 418 in 1978 to a high of 3,373 in 2006. The long term average for swans is now approximately 1,500 birds, while the most recent 10-year average is more than 2,300 birds. Mute Swans comprised more than 85% of the long-term average, but in the last ten years, Tundra Swans increased to about 25% of all swans counted, similar to the trend in white geese noted above.

Ducks Unlike geese and swans, total counts of ducks have remained relatively stable over the past 35 years, averaging approximately 180,000 birds (Fig. 4). Ducks accounted for more than 60% of all waterfowl counted since 1973, but that proportion has fallen to about 50% during the past 10 years. The relative numbers of dabbling ducks and diving ducks (including sea ducks and mergansers) has also been remarkably stable with dabblers accounting for about 31% of the short- and long-term average total duck counts, and diving ducks accounting for 69% (Fig. 5).

Other Waterbirds “Other waterbirds” includes a variety of species typically associated with waterfowl, including loons, grebes, cormorants and coots (gulls are not counted in this survey). Total counts have ranged from a low of 1,117 in 1981 to a high of 6,295 in 2007. The long term average is approximately 3,100 birds, while the most recent 10-year average was close to 4,400 birds. In general, the increase in total counts of birds in this group appears more abrupt than the gradual increase that occurred for geese and swans (Fig. 6).

FUTURE COUNTS

The JWC is a valuable long-term population monitoring program for waterfowl and other waterbirds wintering in New York State. The Department of Environmental Conservation (DEC) has discontinued aerial surveys of waterfowl wintering in New York, so they now rely on the JWC as the standard survey. It is important that member clubs and individuals maintain complete and consistent coverage of areas surveyed in the past to help ensure that results are comparable from year to year and over the long-term.

As this report went to press, the 2008 count had been completed during January 12-20, with a target date of Sunday, January 13. For those who like to plan ahead, the dates for future years will differ slightly from the formula we have been following in recent years. After consulting with the regional compilers, we have decided to schedule the counts to begin on the Saturday

prior to the Martin Luther King Jr. holiday, which is the 3rd Monday in January. This should make it easy to remember, and allow some observers an extra day to complete the counts if necessary. So, the dates for the next two counts are as follows:

2009 - January 17-25 (target date - Sunday, January 18)

2010 - January 16-24 (target date - Sunday, January 17)

For more information about the JWC, visit the NYSOA web site at:

<http://www.nybirds.org/ProjWaterfowl.htm>

LITERATURE CITED

- Guthrie, A. 2006. Highlights of the season - winter 2005-06. *Kingbird* 56:137-141.
- Jones, M. 1980. The New York State waterfowl count - a quarter century report. *Kingbird* 30:210-216.
- Rising, G. R. 1955. The January waterfowl count. *Kingbird* 5:34-36.

ACKNOWLEDGMENTS

I wish to thank all of the observers who have participated in the January Waterfowl Count during the past 35 years, especially for enduring harsh winter weather that is typical of this time of year. A special thanks to the following Regional Compilers who coordinated the efforts of all those volunteers during the past three years:

Reg.	Compiler	Reg.	Compiler
1	Bill Burch & Jim Landau	6	Jerry LeTendre
2	Greg Hartenstein	7	John M. C. Peterson
3	Eric Donohue	8	Bryan Swift
4	Gail Kirch	9	Michael Usai & Tracey Shimer
5	Marge Rusk	10	Ronald & Jean Bourque

Finally, I want to acknowledge the contributions of the late Walt Sabin, a co-worker and friend who coordinated and compiled the Federation of New York State Bird Clubs' January Waterfowl Count for 25 years, from 1976-2000. This report would not have been possible without his many years of dedication and service counting birds in New York State.

[illegible]

Harlequin Duck										6	6
Scoter, Surf	1									3,277	3,278
White-winged	313	646	1		181		1		1	1,355	2,498
Black					1		1			4,938	4,940
not to species		1								1,382	1,383
Long-tailed Duck	1,526	1,122			1,875	113			19	1,343	5,998
Bufflehead	2,107	149	234		207	224	199		238	1,735	5,093
Goldeneye, Common	856	2,315	780		1,830	2,319	2409	49	441	787	11,786
Barrow's						1	4			3	8
Merganser, Hooded	47	158	15	12	10	7	82	4	111	1,125	1,571
Common	1,598	351	42	130	1,724	1,004	1,044	100	2,253	841	9,087
Red-breasted	371	821	27		272	23	3		95	2,826	4,438
Ruddy Duck	3		2						161	3,046	3,212
Loon, Red-throated		3							5	103	111
Common		4	7	4	8		2		4	137	166
Grebe, Pied-billed	8		17		1					40	66
Horned	3	79	4		15		52		4	122	279
Red-necked		2			1				1		4
Eared			2								2
Cormorant, D.-crest.	54	3			22	1	1		8	70	159
Great									52	54	106
American Coot	34	164	619	24	1				22	159	1,023
UNIDENTIFIED	340	64	1,000		2	230			291	85	2,012
TOTAL OF ABOVE	38,109	24,803	61,433	2,541	25,392	8,166	5,532	4,037	27,161	90,539	287,713

Table 2. Regional totals for the 2006 January Waterfowl Count.

SPECIES	1	2	3	4	5	6	7	8	9	10	Total
Goose, White-fronted	0	0	0		0	0	0	0	0	1	1
Snow	0	1200	1501		6	0	1	1	7	221	2937
Canada	3,561	32,324	42,237	1,807	4,117	2,942	223	4,622	14,602	31,279	137,714
Brant	0	0	0		0	0	0	0	8	24,066	24,074
Swan, Mute	4	189	1	2	2	117	0	1	168	1108	1,592
Trumpeter	2	2	1		3	0	0	0	0	0	8
Tundra	170	511	750		4	335	0	0	0	3	1773
Wood Duck	0	0	1	4	0	0	0	3	1	16	25
Gadwall	39	154	28		3	19	2	0	65	965	1275
Wigeon, Eurasian	0	0	0		0	0	0	0	0	2	2
American	10	3	19		0	0	0	0	69	778	879
Am. Black Duck	239	118	351	183	104	378	74	176	796	6,470	8,889
Mallard	6328	5,013	4,135	491	1,692	1665	873	821	4,092	9,071	34,181
Mallard X Black	0	7	0		22	0	0	0	0	30	59
Blue-winged Teal	0	0	0		0	0	0	0	0	1	1
Northern Shoveler	0	0	1		2	0	0	0	2	525	530
Northern Pintail	1	5	0		1	1	0	0	11	86	105
Green-winged Teal	0	0	0		4	0	0	0	1	183	188
Canvasback	3,081	6	192		0	0	2	200	1231	996	5,708
Redhead	166	6,427	2,828	6	98	600	32	1	29	52	10,239
Ring-necked Duck	3	25	132	1	1	1	16	6	103	562	850
Tufted Duck	0	0	0		0	0	0	0	0	0	0
Scaup, Greater	8,245	2,330	128		393	1627	274	1	412	7,802	21,212
Lesser	425	138	125		0	5	250	0	14	764	1721
not to species	10	118	3		1	1	0	0	0	406	539
Eider, King	0	0	0		0	0	0	0	0	1	1
Common	0	0	0		0	0	0	0	0	2,698	2,698

Harlequin Duck	0	1	0	0	0	0	0	0	2	3
Scoter, Surf	0	0	0	0	0	0	0	0	4,185	4,185
White-winged	51	1182	0	2	0	2	1	0	420	1,658
Black	0	0	0	0	0	0	0	0	3,746	3,746
not to species	0	0	0	0	0	0	0	0	1,297	1,297
Long-tailed Duck	330	1,243	1	51	122	2	0	6	1,833	3,588
Bufflehead	1,078	84	149	5	55	79	88	0	315	2,547
Goldeneye, Common	2021	2,806	1098	10	1,292	1,910	5787	103	2204	1138
Barrow's	0	0	0	0	0	1	0	0	0	1
Merganser, Hooded	72	23	33	49	26	8	40	23	152	1,094
Common	440	237	197	213	940	1,108	844	570	2,282	110
Red-breasted	343	2802	0	118	9	1	0	50	3,673	6,996
Ruddy Duck	2	1	0	0	0	0	0	104	5,889	5,996
Loon, Red-throated	1	3	0	0	0	0	0	0	113	117
Common	0	10	7	1	0	3	0	4	497	522
Grebe, Pied-billed	11	2	16	0	0	2	0	2	27	60
Horned	0	91	10	5	0	14	0	6	365	491
Red-necked	0	1	0	0	0	0	0	0	1	2
Eared	0	0	1	0	0	0	0	0	0	1
Cormorant, D.-crested	96	3	9	39	2	0	0	3	125	277
Great	0	0	0	0	0	0	0	21	43	64
American Coot	8	300	941	28	2	0	2	0	108	485
UNIDENTIFIED	0	159	32	0	35	0	0	1	2287	2,514
TOTAL OF ABOVE	26,737	57,518	54,927	2,799	8,984	10,964	8,533	6,529	26,869	117,963
									321,823	

[illegible]

Harlequin Duck	0	0	0	0	0	0	0	0	0	0	0
Scoter, Surf	0	0	0	0	2	0	0	0	0	6,966	6,968
White-winged	164	1,853	2	0	53	0	1	0	0	1,865	3,938
Black	0	1	0	0	5	0	0	0	0	4,586	4,592
not to species	0	10	0	0	5	0	0	0	0	12,448	12,463
Long-tailed Duck	612	350	0	0	1,817	96	0	0	1	9,164	12,040
Bufflehead	3,161	121	160	3	231	301	213	0	164	4,065	8,419
Goldeneye, Common	2,169	2,705	981	17	2,862	2,435	2,140	174	96	1,320	14,899
Barrow's	0	1	0	0	0	0	0	0	0	1	2
Merganser, Hooded	403	36	118	51	96	3	44	6	277	1,414	2,448
Common	1,513	346	238	797	1,096	1,371	461	680	2,229	32	8,763
Red-breasted	743	1,490	12	0	298	76	2	3	86	4,058	6,768
Ruddy Duck	193	1	30	0	21	0	0	1	1,000	4,626	5,872
Loon, Red-throated	5	11	0	0	0	0	0	0	1	910	927
Common	1	9	8	3	25	13	9	0	0	290	358
Grebe, Pied-billed	13	2	17	2	7	1	0	0	7	43	92
Horned	6	25	2	0	8	4	2	0	12	177	236
Red-necked	0	3	0	0	0	0	1	0	1	5	10
Eared	0	0	0	0	0	0	0	0	0	1	1
Cormorant, D.-crested	136	20	0	0	37	6	2	0	45	155	401
Great	0	0	0	0	0	0	0	0	4	46	50
American Coot	1,202	1,208	544	3	1	0	6	5	499	752	4,220
UNIDENTIFIED	195	59	0	0	0	118	0	0	2,098	63	2,533
TOTAL OF ABOVE	35,344	39,066	183,842	12,362	34,256	82,050	5,207	7,786	25,316	159,160	584,389

[illegible]

Harlequin Duck	0	0	0	0	0	0	0	0	0	5	5
Scoter, Surf	0	1	0	0	0	0	0	0	0	3,172	3,173
White-winged	163	735	1	0	25	1	0	0	0	6,482	7,407
Black	1	2	0	0	1	0	0	0	0	1,016	1,020
not to species	0	26	0	0	0	9	0	0	0	2,357	2,392
Long-tailed Duck	1,857	775	9	0	238	123	1	0	23	1,622	4,648
Bufflehead	918	195	251	2	127	63	52	2	168	4,645	6,423
Goldeneye, Common	3,224	2,693	720	30	1,325	1,150	1,306	99	157	1,995	12,699
Barrow's	0	0	0	0	0	0	1	0	1	1	3
Merganser, Hooded	35	14	31	8	16	8	14	17	104	580	827
Common	4,169	665	283	128	1,464	1,813	632	223	1,405	110	10,892
Red-breasted	361	337	36	1	70	65	2	1	54	3,733	4,660
Ruddy Duck	7	1	2	0	3	1	0	0	159	2,147	2,320
Loon, Red-throated	0	1	0	0	0	0	1	0	3	76	81
Common	1	2	7	0	4	1	2	0	1	178	196
Grebe, Pied-billed	6	2	15	0	2	0	0	0	6	49	80
Horned	4	24	34	0	10	0	10	0	4	274	360
Red-necked	0	0	0	0	0	0	0	0	0	2	2
Eared	0	0	0	0	0	0	0	0	0	0	0
Cormorant, D.-crested	21	2	1	0	7	0	0	0	2	113	146
Great	0	0	0	0	0	0	0	0	14	151	165
American Coot	95	179	879	20	11	0	1	0	154	717	2,056
UNIDENTIFIED	203	261	212	2	4	45	4	55	158	324	1,268
TOTAL OF ABOVE	28,080	18,746	57,548	1,979	12,130	7,317	4,053	6,637	16,451	139,460	292,401

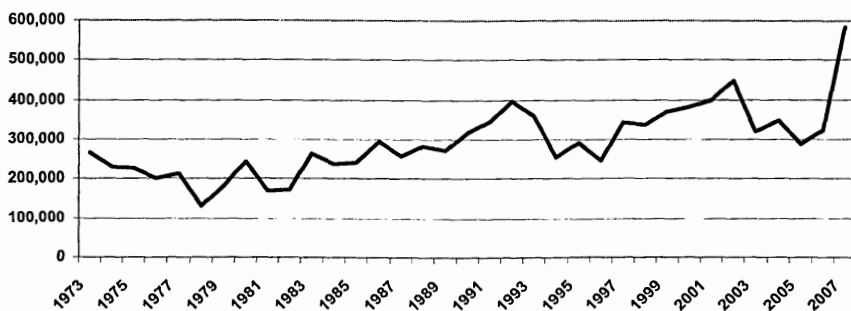


Figure 1. Total counts of waterfowl and associated waterbirds during January in New York State, 1973-2007.

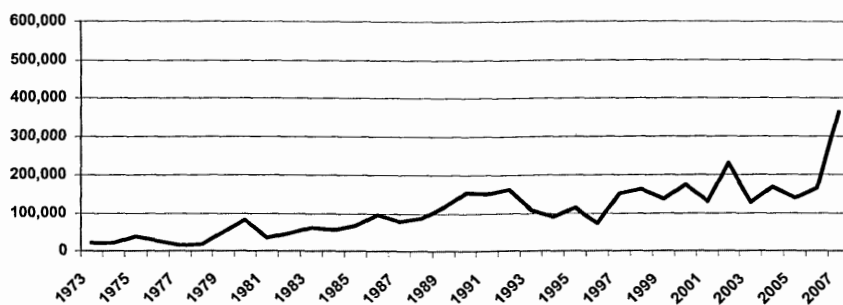


Figure 2. Total counts of geese during January in New York State, 1973-2007.

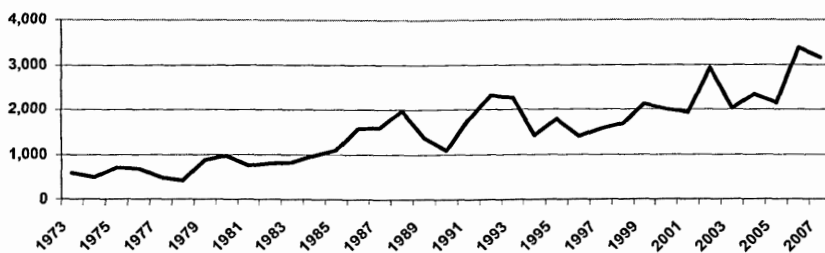


Figure 3. Total counts of swans during January in New York State, 1973-2007.

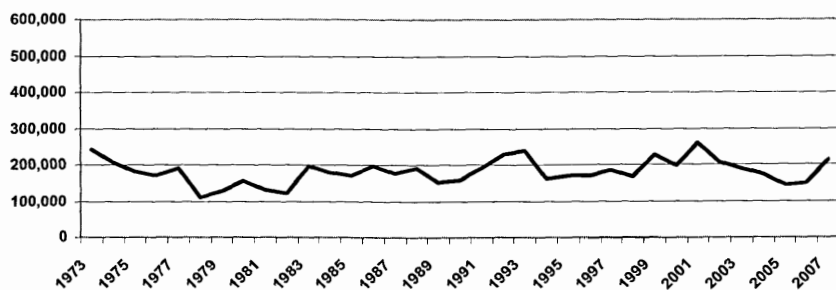


Figure 4. Total counts of all ducks during January in New York State, 1973-2007.

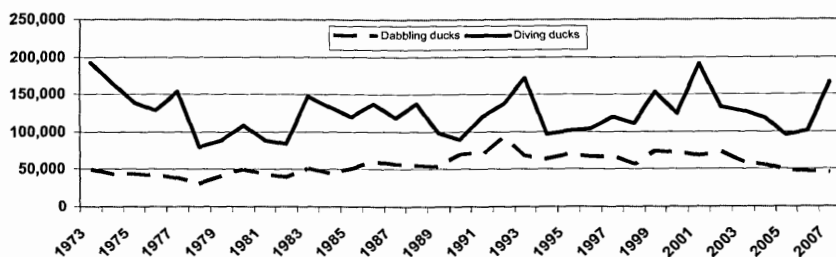


Figure 5. Total counts of dabbling ducks (dashed line) and diving ducks (solid line; includes sea ducks and mergansers) during January in New York State, 1973-2007.

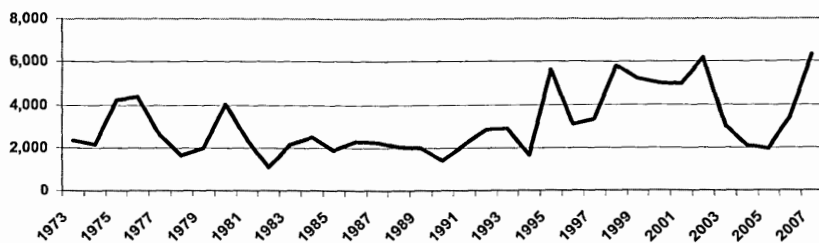


Figure 6. Total counts of other waterbirds (loons, grebes, cormorants and coots) during January in New York State, 1973-2007.