

2008 Mid Summer Mute Swan Survey Results
Atlantic Flyway Council Technical Section
Snow, Goose, Brant, and Swan Committee
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The 2008 Atlantic Flyway (AF) Mid-Summer Mute Swan Survey (MSMSS) was conducted by most AF states during the month of August. Data were received from 14 states and 4 provinces. Data were collected from a combination of aerial and ground surveys. Mute swans were counted by age class (hatch year, after hatch year) and broods were noted. Age class detection was modified in this year's survey to eliminate the detection of sub-adults because of the difficulty in identifying these birds during aerial surveys.

Results/Discussion:

A total of 10,541 mute swans were observed during the 2008 survey (Table 1). New York contained the highest number of swans with 2,624 swans statewide. Production was greatest in New York, Connecticut, and Ontario. Brood size ranged from 1.00 to 3.42, averaging 3.14. Flyway-wide mute swan population levels reached a low comparable to that last observed in 1993 (Table 2). Between 2005 and 2008 AF mute swan populations decreased by 27% and increased only 3% from the long term average (1986 – 2008). Factors likely contributing to the reduction in mute swan numbers across the flyway include, but are not limited to, changes in survey effort distribution from participating states/provinces, contribution in survey effort by AF states/provinces, density dependence factors, and on-going management efforts in individual states.

Recommendation:

Continuation of the survey should be predicated upon results of correlation analysis with other trend data from the Mid-Winter Survey (MWS), AF Northeast Plot Survey and may include analysis of U.S. Geological Survey Breeding Bird Survey and Christmas Bird Count. In addition, analytical consideration should be given to the survey as a result of existing restraints such as non-participating states as well as insufficient and inconsistent survey coverage.

Table 1. Atlantic Flyway Mid-Summer Mute Swan Survey Results, 2008.

State	Year	No. Adults	No. Broods	No. Cygnets	Total swans	cyg/brood
Connecticut	2008	787	71	225	1012	3.17
Delaware	2008	15	0	0	15	0.00
Florida*	2008	0	0	0	0	0.00
Georgia	2008	0	0	0	0	0.00
Labrador**	2008	0	0	0	0	0.00
Maine	2008	4	0	0	4	0.00
Maryland	2008	458	38	123	581	3.24
Massachusetts***	2008	1046	0	0	1046	0.00
New Brunswick	2008	0	0	0	0	0.00
New Hampshire	2008	12	0	6	18	0.00
New Jersey	2008	1134	54	119	1253	2.20
New York	2008	2311	106	313	2624	2.95
Newfoundland**	2008	0	0	0	0	0.00
North Carolina	2008	75	0	6	81	0.00
Nova Scotia	2008	0	0	0	0	0.00
Ontario	2008	2087	79	270	2357	3.42
Pennsylvania	2008	221	23	61	282	2.65
Prince Edward Island**	2008	0	0	0	0	0.00
Puerto Rico**	2008	0	0	0	0	0.00
Quebec	2008	0	0	0	0	0.00
Rhode Island	2008	823	10	33	856	3.30
South Carolina***	2008	30	0	0	30	0.00
Vermont	2008	0	0	0	0	0.00
Virginia	2008	332	0	41	373	0.00
West Virginia	2008	8	1	1	9	1.00
Totals		9343	382	1198	10541	3.14

* Did not conduct survey.

** Did not conduct survey; however, swans are unlikely.

*** Did not conduct survey. Estimate based on 2005 survey.

Table 2. Abundance of mute swans observed in the Atlantic Flyway during the Mid-Summer Survey, from 1986 – 2008.

<i>Region</i>	<i>1986</i>	<i>1989</i>	<i>1993</i>	<i>1996</i>	<i>1999</i>	<i>2002</i>	<i>2005</i>	<i>2008</i>
Ontario:								
Lower Great Lakes	615	811	1100	1200	NS	1373	2894	2357
New England:								
Maine	3	12	6	8	7	0	0	4
New Hampshire	19	0	49	30	31	42	23	18
Vermont	0	0	4	11	0	0	1	0
Massachusetts	585	565	660	917	986	947	1046	1046
Rhode Island	880	1044	1333	1206	1577	1367	1246	856
Connecticut	1452	1948	1707	1589	1609	1338	1043	1012
Subtotal:	2939	3569	3759	3761	4210	3694	3359	2936
Upper Mid-Atlantic:								
Delaware	21	1	21	9	27	18	17	15
New York	1815	1966	2069	1644	2429	2848	2146	2624
New Jersey	529	717	893	1019	1364	1602	1890	1253
Pennsylvania	63	122	139	253	242	348	307	282
Subtotal:	2428	2806	3122	2925	4062	4816	4360	4174
Chesapeake Bay:								
Maryland	264	611	2245	2717	3955	3624	2198	581
Virginia	60	145	231	419	488	563	725	373
Subtotal:	324	756	2476	3136	4443	4187	2923	954
Southeastern:								
West Virginia	0	0	2	6	9	17	20	9
North Carolina	0	6	29	5	18	14	59	81
South Carolina	3	0	3	0	0	27	30	30
Georgia	0	26	NS	NS	0	1	0	0
Florida	NS	46	NS	NS	NS	215	4	0
Subtotal:	3	78	34	11	27	274	113	120
Total:	6309	8020	10491	11033	12742	14344	13649	10541

Fig 1. Atlantic Flyway Mid-Summer Mute Swan Survey, 1986 – 2008.

