

New York State Bald Eagle Report 2008



New York Eagles Walk on Water ! Lou Buscher, NYSDEC.

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DEDICATION :



Rob Taylor, OPRHP and Scott VanArsdale, DEC
NY#77, 27 May 2005. Photo: P. Nye DEC

This year's annual New York State bald eagle report is dedicated to Rob Taylor, manager of Schodack Island State Park, who passed into Heaven late in 2008. A finer gentlemen, father, and bald eagle supporter, is not to be found.

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Lou Buscher

I. Wintering Bald Eagles

A. Surveys:

1. Statewide:

Surveys for wintering bald eagles were again carried out throughout New York State during the winter of 2007-2008. Our participation in the National Midwinter Bald Eagle Survey during January 2008 continued for the 30th consecutive year. As usual, our surveys were conducted by both DEC staff and numerous volunteers, both on the ground and in the air. Our National survey effort, conducted this year throughout the lower 48 United States between 2-16 January 2008, involved approximately 75 survey routes and about 100 DEC and public cooperators. Five separate helicopter surveys were conducted over our major winter eagle-concentration areas this year, covering areas in southwestern NY (Allegheny Reservoir and River area, Lake Erie shorelines and tributaries), all of Lake Champlain, the St. Lawrence River, and most of the lower Hudson River and Upper Delaware River watershed.

Those with particularly good memories, or those younger than 50, will recall that the 2007 winter survey was conducted during extremely mild conditions and extensive open water, continuing the mild trend set in 2006. As we entered the winter of 2008, the weather continued to be conflicted as we have come to expect of late. Early and through mid-December winter appeared to be setting in early, with sub-freezing temperatures and several significant snowstorms, bringing smiles and great expectations from us skiers/snowboarders for a whopping-good winter to come. But, alas, 22 December in Albany saw 46°F and rain, reversing the early freeze of most lakes and the Hudson River we had witnessed. Although a couple of additional snowstorms and sub-zero temperatures occurred in late December-early January, mild, above-freezing temps returned prior to our target survey dates of 9-10 January. Albany reached 62°F on 9 January and no longer had any ice on the Hudson River. Our southeast New York heli-survey on 10 January found nearly complete open water throughout the route, as did the heli-survey of the Allegheny Reservoir-River area in southwestern NY on the same day. Throughout this year's survey period, conditions were described as "mild or very mild", a trend I suspect we will see continue. Nationally, the Associated Press (14 March 2008) reported that according to the National Oceanic and Atmospheric Administration, for the meteorological winter (Dec, Jan, Feb), both the global and United States average temperatures were warmer than average, with New York State having it's wettest winter.

Regardless of the survey-period weather conditions, the onset of cold, snowy, winter conditions in early December both in New York and in regions to our north, undoubtedly caused our northern visitors to move south, resulting in very substantial numbers of wintering eagles recorded here in January. As further evidence of this, two of three of our satellite-tagged eagles breeding in Canada had moved south into New York by mid-December 2007.

While our January 2007 statewide count was the lowest in seven years, due to the early and prolonged mild weather, our 2008 statewide count jumped back up, and very significantly, into our record books, setting a new standard and shattering the 500 mark for the first time ever. Statewide in January 2008 573 total bald eagles were tallied, 339 adults and 234 immatures, compared to only 324 total bald eagles counted in 2007, 199 adults and 125 immatures (Table 1, Figure 1). Perhaps more appropriate, however, would be to compare this year's results with our previous winter-record of 442 total eagles (252 adults, 190 immatures) recorded in 2006. The 2008 results represent an increase of 30% in total eagles, a 35% increase in adults, and a 23% increase in immature birds over this previous record.

As usual, no attempt has been made to exclude suspected “resident” NY eagles from the overall winter-count; knowing that our resident eagle population continues to expand significantly (see “Breeding” section later in this report). Certainly our resident eagles continue to make up a considerable and growing percentage of this “wintering” number each year. The ratio of adults in the overall winter count this year, 59%, remains near the 10-year average of 55%.

Figure 1. Numbers of Bald Eagles Observed During Annual National Mid-Winter Bald Eagle Survey in NYS; 1979-2008.

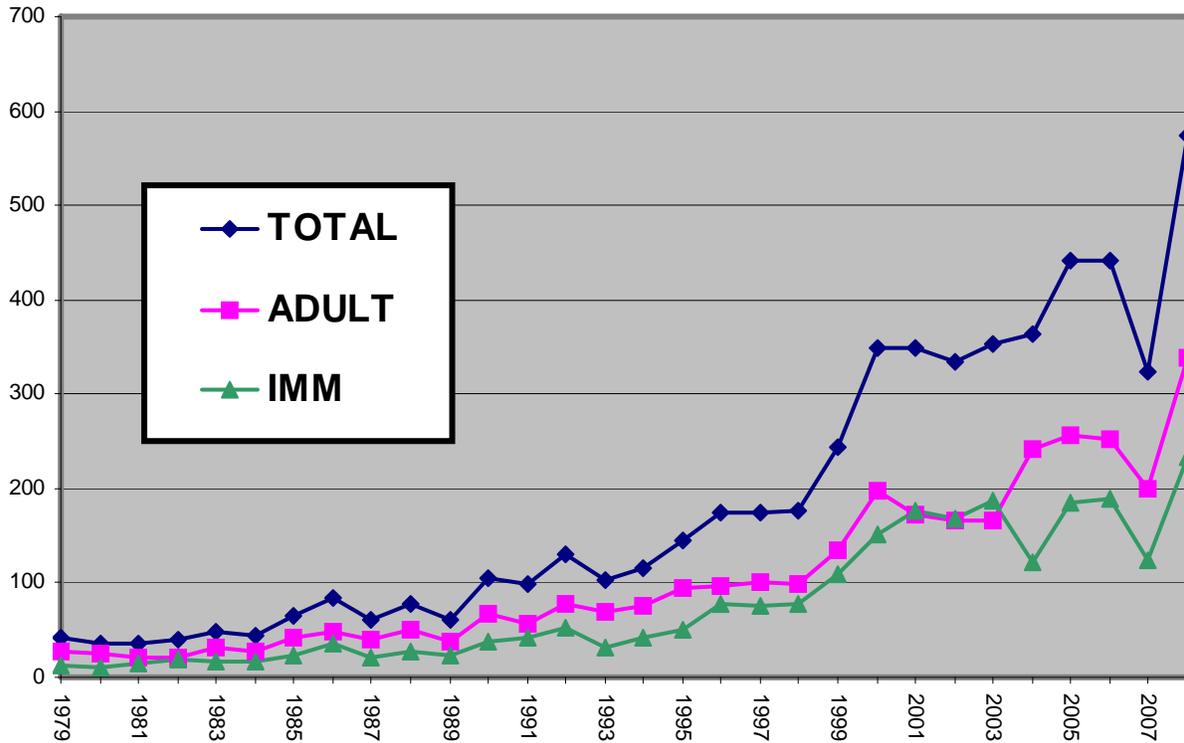


Table 1. Numbers of eagles observed in New York State during annual national mid-winter bald eagle surveys.

| Year | Survey Period | NUMBER OF INDIVIDUAL EAGLES OBSERVED | | | | | |
|------|---------------------------|--------------------------------------|-------|----------|---------------|-------|----------|
| | | BALD EAGLES | | | GOLDEN EAGLES | | |
| | | Total | Adult | Immature | Total | Adult | Immature |
| 1979 | January 13-27 | 41 | 28 | 13 | 0 | 0 | 0 |
| 1980 | January 2-20 | 36 | 25 | 11 | 0 | 0 | 0 |
| 1981 | January 2-16 | 35 | 20 | 15 | 0 | 0 | 0 |
| 1982 | January 2-16 | 40 | 21 | 19 | 0 | 0 | 0 |
| 1983 | January 2-16 | 49 | 32 | 17 | 0 | 0 | 0 |
| 1984 | January 2-16 | 44 | 27 | 17 | 1 | 1 | 0 |
| 1985 | January 2-16 | 65 | 42 | 23 | 0 | 0 | 0 |
| 1986 | January 2-16 | 84 | 48 | 36 | 2 | 1 | 1 |
| 1987 | January 1-15 ¹ | 60 | 39 | 21 | 0 | 0 | 0 |

| | | NUMBER OF INDIVIDUAL EAGLES OBSERVED | | | | | |
|------|---------------|--------------------------------------|-------|----------|----------------|-------|----------|
| | | BALD EAGLES | | | GOLDEN EAGLES | | |
| Year | Survey Period | Total | Adult | Immature | Total | Adult | Immature |
| 1988 | January 1-15 | 77 | 50 | 27 | 1 | 0 | 1 |
| 1989 | January 5-19 | 62 | 38 | 24 | 1 | 1 | 0 |
| 1990 | January 4-18 | 105 | 67 | 38 | 1 | 0 | 1 |
| 1991 | January 3-17 | 98 | 57 | 41 | 0 | 0 | 0 |
| 1992 | January 1-15 | 130 | 77 | 53 | 0 | 0 | 0 |
| 1993 | January 1-15 | 102 | 70 | 32 | 0 | 0 | 0 |
| 1994 | January 1-15 | 116 | 75 | 41 | 1 | 0 | 1 |
| 1995 | January 4-18 | 144 | 94 | 50 | 1 | 0 | 1 |
| 1996 | January 3-17 | 174 | 97 | 77 | 1 | 0 | 1 |
| 1997 | January 1-15* | 175 | 100 | 75 | 0 | 0 | 0 |
| 1998 | January 2-16 | 177 | 99 | 78 | 1 | 1 | 0 |
| 1999 | January 1-15 | 244 | 135 | 109 | 0 | 0 | 0 |
| 2000 | January 1-15 | 350 | 198 | 152 | 2 | 1 | 1 |
| 2001 | January 3-17 | 349 | 173 | 176 | 5 | 1 | 4 |
| 2002 | January 2-16 | 335 | 166 | 169 | 4 | 0 | 4 |
| 2003 | January 1-15 | 354 | 167 | 187 | 4 | 2 | 2 |
| 2004 | January 1-15 | 363 | 241 | 122 | 2 | 2 | 0 |
| 2005 | January 1-15 | 441 | 257 | 184 | 1 | 0 | 1 |
| 2006 | January 4-18 | 442 | 252 | 190 | 2 (unk age) | 0 | 0 |
| 2007 | January 3-17 | 324 | 199 | 125 | 1 | 1 | 0 |
| 2008 | January 2-16 | 573 | 339 | 234 | 0 | 0 | 0 |

Regional Wintering Eagle Survey results are discussed further below; survey graphs for each of the regions discussed follow at the end of this section.

2. Southeast NY (Overall):

This southeast survey route covers the Hudson River south from Albany to Croton Point, the Upper Delaware River from Port Jervis to Hancock NY, and major tributaries, reservoirs and lakes within this watershed, primarily in Sullivan and Delaware Counties.

Although our 2008 survey totals for this area easily eclipsed last year's nine-year low of only 113 eagles, they fell just-short of the record counts for this region recorded in 2000, this year tallying 229 total bald eagles, 113 adults and 116 immatures (table 2, figure 2). Our record count for this region in 2000 recorded just a few more eagles, 238 total eagles (119 adults, 119 immatures).

As in recent years, we continue to believe that a significant number of the birds observed along this route are NY resident eagles, as many were adults associated with known nests, and perched on or near their nests during the flyover, with one major exception. While flying up the west-branch of the Delaware River immediately below the Cannonsville Reservoir Dam (Delaware County), we encountered more eagles than I have ever personally witnessed in one place in New York State. The deep gorge encompassing the outflow from the Cannonsville Dam as well as the web of power lines emanating from the hydro plant at this location, make flying immediately below the Dam difficult, even (especially?) for a helicopter. One significant benefit from such hydro-plants, however, especially in this region of southeast New York where introduced alewives (*Alosa pseudoharengus*) are cyclically abundant in the reservoirs, is the frequent (but not reliable) provision of tens of thousands of entrained alewives, an easy, high-energy, and sought-after prey for piscivores, especially young eagles. On our 10 January fly-over of this small stretch of river, so many eagles, primarily immature birds, rose into the air as we passed, that even our mechanical counters had trouble keeping up. The 50 eagles that we counted there that day were surely an underestimate. A later check with DEC Fisheries staff from our Region 4 office confirmed that 2008 was a “bumper year” for alewives, recovering from low water levels several years prior.

Table 2. Combined (aerial and ground) January winter eagle surveys, Southeast Region of NYS.

| SE NY Winter Bald Eagle Surveys | | | |
|--|--------------|--------------|-----------------|
| | total | adult | immature |
| 1980 | 29 | 21 | 8 |
| 1981 | 13 | 8 | 5 |
| 1982 | 24 | 12 | 12 |
| 1983 | 36 | 23 | 13 |
| 1984 | 31 | 19 | 12 |
| 1985 | 46 | 30 | 16 |
| 1986 | 45 | 28 | 17 |
| 1987 | 33 | 20 | 13 |
| 1988 | 57 | 36 | 21 |
| 1989 | 36 | 23 | 13 |
| 1990 | 86 | 56 | 30 |
| 1991 | 82 | 47 | 35 |
| 1992 | 98 | 55 | 43 |
| 1993 | 75 | 48 | 27 |
| 1994 | 83 | 53 | 30 |
| 1995 | 119 | 74 | 45 |
| 1996 | 103 | 49 | 54 |
| 1997 | 93 | 51 | 42 |
| 1998 | 125 | 64 | 61 |
| 1999 | 179 | 89 | 90 |
| 2000 | 238 | 119 | 119 |
| 2001 | 213 | 85 | 128 |
| 2002 | 200 | 73 | 127 |
| 2003 | 234 | 90 | 144 |
| 2004 | 137 | 81 | 56 |
| 2005 | 225 | 104 | 121 |
| 2006 | 219 | 101 | 118 |
| 2007 | 113 | 65 | 48 |
| 2008 | 229 | 113 | 116 |

3. Upper Delaware River:

Over the length of the main-stem of the Upper Delaware River from Port Jervis to Hancock, we recorded 32 eagles this year, 20 adults and 12 immatures, up from only 23 eagles (16 adults, 7 immatures) seen last year, but still significantly lower than the long-term average along the River of 55 eagles. However, as we well know, food is king, and an abundance of prey at some other location in this region will shift eagles accordingly, this year, as just described, to the Cannonsville Reservoir outlet. As usual, we also annually report on numbers of eagles observed along the Lackawaxen River, a major tributary to the Delaware (in PA), often a significant source of alewives provided by an upstream reservoir/hydro-plant (Wallenpaupak) which can attract eagles from the Delaware, thereby reducing the count along the main-stem. During 2008, on the same day of NY's aerial survey of the Delaware, long-time surveyors Voni and Joe Strasser counted 14 eagles, 10 adults and 4 immatures, compared to only 6 observed along the Lackawaxen in 2007. As usual, the numbers presented in table 3 and figure 3 below represent non-overlapping ground and aerial counts combined. In addition to our usual winter surveys in this area, the identification of essential habitats for bald eagles along the Delaware River continues; see "Winter Eagle Research: Capture – Tracking" later in this report.

Table 3. Number of wintering bald eagles counted annually during January along the main-stem of the Delaware River, NY-PA.

| Year | total | adult | immature |
|-------------|--------------|--------------|-----------------|
| 1990 | 35 | 20 | 15 |
| 1991 | 35 | 21 | 14 |
| 1992 | 41 | 24 | 17 |
| 1993 | 20 | 12 | 8 |
| 1994 | 40 | 24 | 16 |
| 1995 | 83 | 52 | 31 |
| 1996 | 30 | 20 | 10 |
| 1997 | 31 | 16 | 15 |
| 1998 | 28 | 22 | 6 |
| 1999 | 77 | 41 | 36 |
| 2000 | 145 | 79 | 66 |
| 2001 | 27 | 17 | 10 |
| 2002 | 109 | 37 | 72 |
| 2003 | 41 | 15 | 26 |
| 2004 | 28 | 16 | 12 |
| 2005 | 114 | 52 | 62 |
| 2006 | 93 | 31 | 62 |
| 2007 | 23 | 16 | 7 |
| 2008 | 32 | 20 | 12 |

4. Mongaup River System:

Following years of repairs to the Swinging Bridge Dam and attendant de-watering throughout this hydraulic system, these Sullivan County reservoirs were finally refilled during 2007 and hydro-electric operations resumed. Refilling of reservoirs and resumption of power-production does not, however, equate to immediate resumption of eagle-use/activity within the Mongaup system, as significant deleterious effects have undoubtedly occurred to the resident fish populations within these reservoirs, which could take many years to recover. It remains to be seen if and when this area will ever return to its former status as a major wintering eagle stronghold. During the 2008 survey, 55 eagles were observed within the Mongaup system (24ad, 31imm), nearly identical numbers to those recorded in this area during the 2007 survey (55, 21ad, 34imm)(figure 4).

5. Hudson River (lower):

Our aerial survey of the lower Hudson River on 10 January this year found numbers of eagles considerably higher than in the past several years. Forty-two eagles were spotted from the helicopter, and when combined with non-overlapping ground counts conducted at the same time, our daily tally jumped to 68 total eagles (36 adults, 32 immatures), clearly indicating that northern migrants had indeed descended into the area by early January, as compared to the previous two years (figure 5). This number represents a considerable number of eagles along this stretch of approximately 100 miles of River. More significantly, however, may be the number of eagles counted during evening roost counts within a much smaller area of the lower Hudson, centered within a 20-25 mile stretch of River between Fishkill and Croton Point.

Annually since 2004, Dr. Edwin McGowan of the NYS Office of Parks, Recreation and Historic Preservation has organized coordinated, simultaneous roost surveys along the Lower Hudson at our major, known winter eagle roosts in this area. The reason we have come to expect the greatest numbers of wintering eagles in this area, is that during a “typical” (i.e. cold and iced-over) winter, the most open water is to be found here. In addition, and not insignificantly, five major power plants are also found in this zone, which provide considerable amounts of forage for eagles in the form of entrained fish, making it a highly attractive wintering habitat for eagles. However, it should be noted that even well before any of these power-plants existed, large numbers of eagles were recorded in this same zone as far back as the late 1800’s and early 1900’s, indicating it has served as prime bald eagle wintering habitat for a long time.

Two separate roost surveys were coordinated this winter by Dr. McGowan and Mellisa Gillmer and their crew, revealing significant numbers of eagles using the area this winter:

Number of bald eagles observed during simultaneous night roost surveys along the lower Hudson River, New York, 2008:

| Date | # of Sites | Total | Adults | Immatures | Unk. age |
|-------------|------------|-------|--------|-----------|----------|
| 6 Jan 2008 | 7 | 75 | | | 75 |
| 11 Feb 2008 | 7 | 118 | 61 | 55 | 2 |
| | | | | | |

We have found that these periodic night-roost surveys are perhaps the most accurate indicator of the number of eagles in the lower Hudson area during the winter, and strongly recommend they continue.

Hudson River (Upper):

As reported here in past years, the Upper Hudson River and associated tributaries (Hoosic, Battenkill, Sacandaga Rivers), from Albany, NY to Lake Luzerne, NY, also host wintering eagles each winter. During the 2008 mid-winter survey, a record 22 eagles were observed in this area, 14 adults and 8 immatures. This compares with 10 eagles spotted in 2007 (8 ad, 2 imm), 10 in 2006 and 11 in 2005. The eastern-most section of the Mohawk River might also be considered part of this Upper Hudson survey area, as it empties into the Hudson about nine miles north of Albany, but has never been included in our Upper Hudson numbers. Cohoes Falls, located along the Mohawk River approximately one-mile west of the Hudson annually attracts a few eagles, likely due to a power-plant located there. During 2008, considerable fish-entrainment is suspected as from one to two dozen eagles were being regularly reported here from late December 2007 through about mid-January 2008, with a single high count of 23 eagles, 9 adults and 14 immatures.

6. St. Lawrence River:

The St. Lawrence River aerial count was again conducted by Blanche Town of our Region 6 office, but due to weather complications didn't occur until the final survey date on 16 January. Nevertheless, the helicopter crew tallied a near-record 54 eagles, 28 adults and 26 immatures. This compares to only 16 eagles spotted during the 2007 survey (figure 6).

7. Lake Champlain:

As mentioned in last year's report, over the past 10-15 years, we have regularly received reports of eagles wintering along Lake Champlain, but in low numbers, usually well less than a dozen. These reports and numbers began to change just a few years ago, prompting us in 2006 to initiate helicopter surveys over the length of this 100 mile-long lake separating Vermont and New York (table 4). During this year's third annual aerial survey, a record 84 bald eagles were observed along the lake (64 adults, 20 immatures), confirming this growing wintering population/area (figure 7). Plans are to continue these aerial surveys.

Our observations continue to confirm the importance of these wintering areas, not only to resident New York State bald eagles, but to numerous eagles from eastern Canada (as confirmed by our extensive migration tracking studies). These studies have not only elucidated the migratory timing and pathways of these eagles, but perhaps most importantly, they have demonstrated the long-term fidelity of these eagles to these particular wintering grounds. On a landscape scale, these critical wintering habitats are highly specialized and few, requiring concerted attention and conservation by landowners and resource managers in order to ensure their availability into the future.

The table below indicates how our winter numbers within our major areas have changed over the past few years. It remains clear that New York State provides consistent over-wintering habitat for one of the largest bald eagle populations in the northeast United States.

**Table 4. Annual Regional Summary:
Number of bald eagles observed* within major NYS wintering areas.**

| | <u>2002</u> | <u>2003</u> | <u>2004</u> | <u>2005</u> | <u>2006</u> | <u>2007</u> | <u>2008</u> |
|---------------------------------|-------------|-------------|-------------|-------------|-----------------|-----------------|-------------|
| Upper Delaware River (mainstem) | 109 | 41 | 28 | 114 | 93 | 23 | 32 |
| Mongaup River | 42 | 109 | 86 | 75 | 25 | 55 | 55 |
| Hudson River (lower) | 22 | 44 | 16 | 21 | 32 | 21 | 68 |
| Hudson River (upper) | | | | 11 | 10 | 10 | 22 |
| Mohawk River | - | - | - | - | - | - | 23 |
| St. Lawrence River | 19 | 17 | 45 | 31 | 42 | 16 | 54 |
| Lake Champlain | - | - | - | - | 44 ¹ | 73 | 84 |
| Allegheny River/Reservoir | - | - | - | - | 36 ¹ | 11 ² | 19 |
| All other areas* | 143 | 143 | 188 | 200 | 170 | 131 | 238 |
| Statewide Totals | 335 | 354 | 363 | 441 | 442 | 324 | 573 |

*numbers combine both aerial and non-duplicated counts from ground observers.

¹first time aerial survey conducted here (helicopter).

²six of these eagles not included in the total since observed outside the survey period.

Figure 2. Numbers of Bald Eagles Observed During Annual Mid-Winter Surveys: Southeast NY

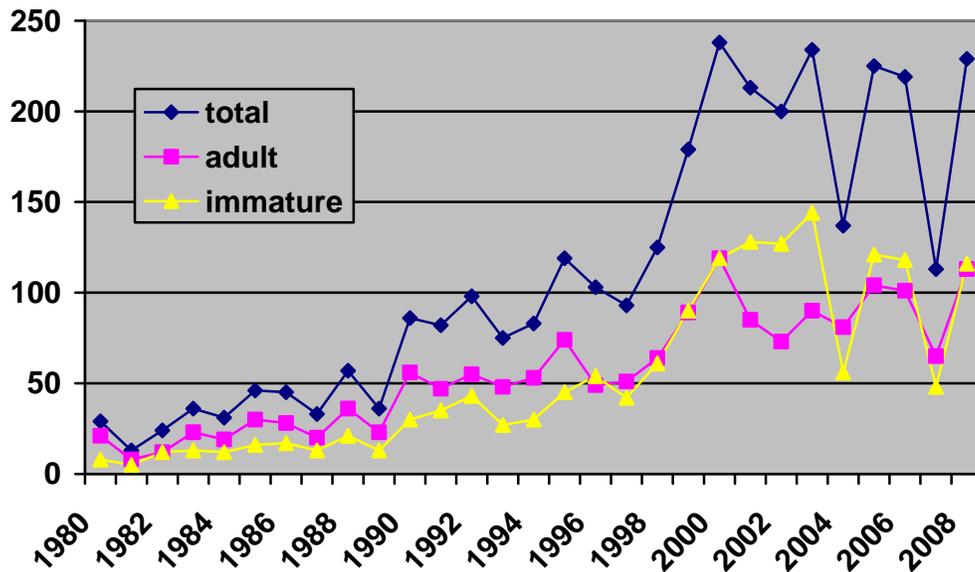
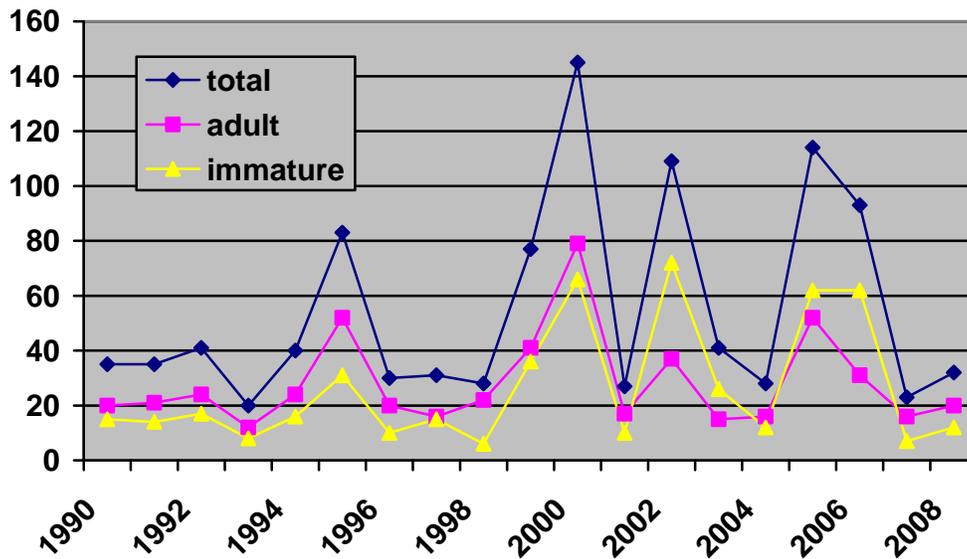
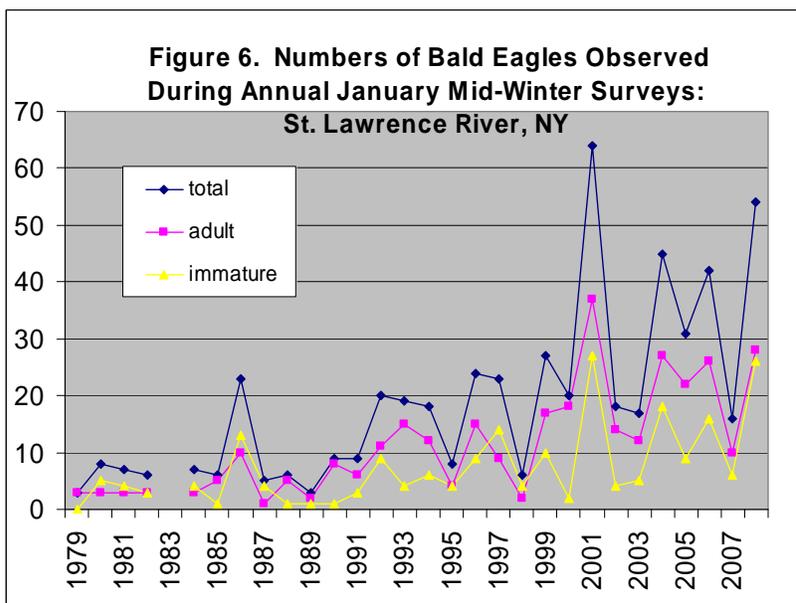
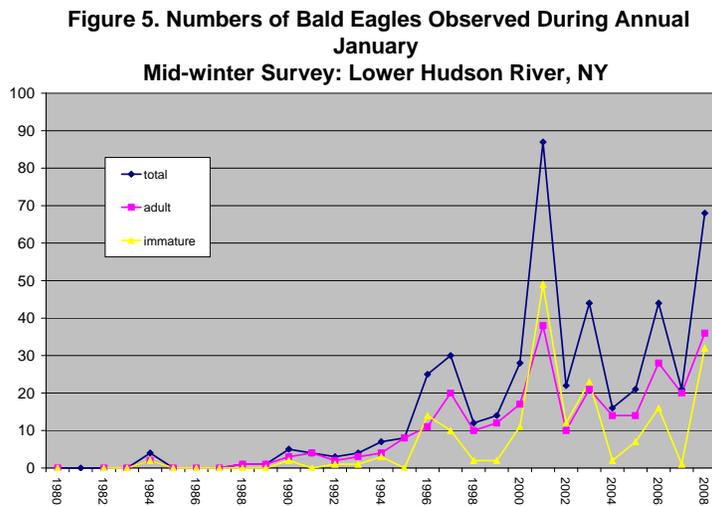
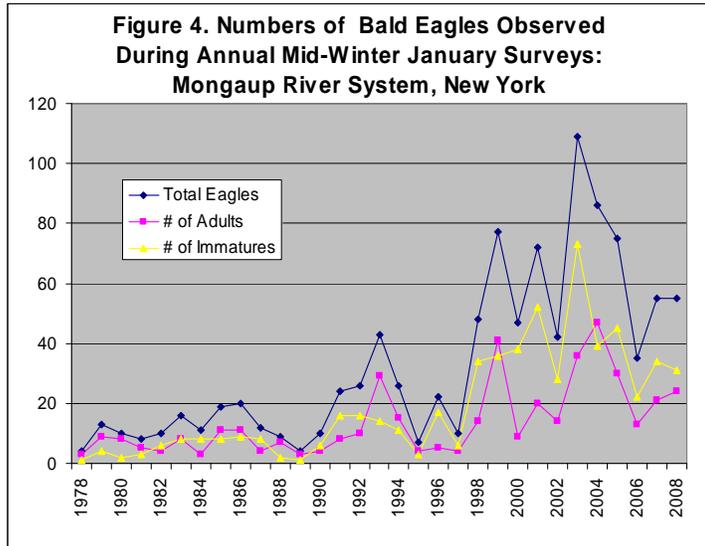
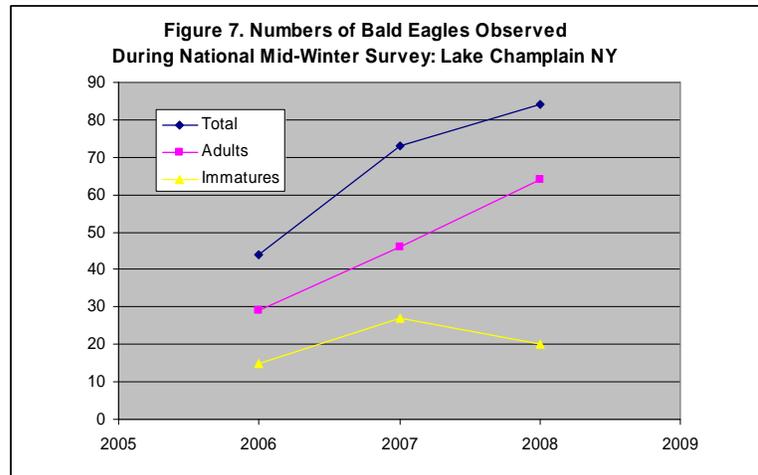


Figure 3. Numbers of Bald Eagles Observed During Annual Mid-Winter Surveys: Mainstem Upper Delaware River, NY







B. Winter Eagle Management

Continued special mention also needs to be made of human visitors to the important Mongaup/Delaware River region. In addition to eagles from all over the North Atlantic, thousands of humans descend on the area, in ever-growing numbers, to witness our national symbol. People-control is no small task, and we are extremely grateful for Lori McKean and her many Eagle Institute volunteers, who continue to plan, organize and “intercept” the crowds at the public Mongaup Bald Eagle Viewing Blind and at many other eagle viewing sites in the Southeast wintering area every weekend throughout the winter, aiding them in observing eagles safely and in a non-disturbing way. The “eagle etiquette” taught by these volunteers is invaluable, and necessary. Also to be recognized for maintaining crowd-control and ensuring that these eagles have an undisturbed winter-home while here, is Kathy Michell, our long-time DEC patrol person on the Mongaup. The need for and importance of these “human-directed” efforts cannot be emphasized enough; without such efforts, successful use of the area by eagles would be severely jeopardized by the simple crush of eagle-lovers.

C. Winter Eagle Research: Capture - Tracking:

In addition to surveys, wintering eagles (both bald and golden) continued to be captured, radio-tagged, and tracked for studies involving essential habitats, migratory behavior and nesting area identification during the 2007-2008 winter season. Our study of eagles along the Upper Delaware River in cooperation with the National Park Service continues, in a multi-year effort to determine the essential habitats and behaviors of bald eagles there. John Brennan, our full time field coordinator for the Delaware River study, as well as other staff and volunteers including Scott VanArsdale, Kathy Maloney, Kathy Michell and Scott Rando, play a vital role in this study.

For purposes of this study, the main-stem of the Delaware has been broken into six somewhat equal-length geographic segments with eagles recorded throughout the winter ‘07-‘08 study period. The greatest numbers of eagles along the Delaware continue to be observed in the more southerly portion of the River, especially within the Narrowsburg----> Barryville (NB) segment. Our January aerial survey confirmed this, but also documented nearly a dozen eagles in the Hancock -- -- > Lordville segment.

John and the Delaware River crew had their best year yet in terms of eagle captures along the River, with 14 eagles captured during 2008, 7 adults, 3 sub-adults (4 yrs old), and 4 immatures. Thirteen of

these were bald eagles, but one was an adult golden eagle, which was tracked during the summer of 2008 to its breeding ground in northern Labrador. Five of these eagles were caught during the winter period (Jan-Feb), 6 were captured during the summer (June-Aug), and 3 were captured in Sep-Oct. Seven eagles received satellite-transmitters and 7 received vhf radio units.

Five of these captured eagles were previously banded, all originating from New York State nests. Interestingly, 2 of 3 siblings from the same nest on the Upper Delaware were captured this year, both as full adults born in 2003. We believe at least one, and probably more, Upper Delaware River resident nesting adults were also captured this year.

As with the Delaware River fledglings and all previous Delaware River radio-tagged eagles, databases have been established on these eagles and are being maintained on locations for additional analysis of essential habitat use along the river.

These and other, previously captured and satellite tagged eagles continue to be tracked; satellite-tagged NY wintering and fledgling eagles can be followed at www.learner.org/jnorth (search the archives for previous years).



Sullivan County NY; NY nest #68, 24 April 2008. photo by Scott Rando.

II. Breeding

A. Surveys

1. Statewide

New York has been enjoying a long-term, consistent annual increase in our breeding bald eagle population of 10-15% per year, and 2008 did not disappoint us. Although spring and summer 2008 were one of the wettest on record, with numerous severe thunderstorms, wind and occasional hail, despite a few nest losses due to weather, we had another solid, record year. In 2008, we added 21 new pairs, increasing our total number of occupied pairs a healthy 17%, from 124 pairs to 145 pairs statewide (table 5, figure 8).

Our total number of breeding pairs (egg-layers) increased 16%, from 116 to 134 pairs, as did the number of successful pairs (those fledging young), also up 16% from 87 pairs to 104 pairs. The total number of young fledged did even better, rising 23% from 153 young in 2007 to 190 young stretching their wings into New York's skies in 2008. Can a 200+ young-year be far behind ??

Our productivity values were all solidly in the acceptable/healthy population range, with 1.3 young fledged per occupied pair and 72% of all pairs successful (figure 9).

Annual determination of the status of New York's breeding bald eagle population involves monitoring of existing pairs and follow-up observations on reported adults or new nests. This annual determination takes hundreds of hours of observation, in many cases by dedicated volunteers as well as DEC staff. The New York State Police Aviation Unit provides essential aerial survey support for this effort, often the only way to confirm exactly what is going on in remote areas or up in the nests, short of actually climbing to the nests. While we have tried to visit each and every nest in the past, given the sheer numbers of nests we now have and the limited staff and time, in 2008 our approach to monitoring changed of necessity. Early monitoring via volunteers, staff and aerial surveys were conducted as usual to determine early nesting activity (ie incubation), but final chick-counts (productivity) was determined by a combination of aerial survey, nest visits, and more often this year, late nesting period distant ground observations when young were approaching fledging age and hence easily visible on the nest.

Actual nest visits and climbing were restricted to new or remote territories. This resulted in less young actually being banded this year, but still provided accurate young-counts. If anything, increased reliance on late-season ground counts under-counts the actual number of young present, as, even at advanced ages, chicks can be "hidden" in the nest and not visible. We believe this was certainly the case in New York in 2008, and that our total young-count under-represents the actual number of young eagles fledged in New York this year.

On-the-ground visits to new nests are extremely important to assess the breeding territory for safety and/or potential disturbances which could affect the success of nesting attempts, as well as to meet landowners and explain eagle biology and needs, and to garner their cooperation.

Our nest visits accomplish these and other objectives each year:

- inspect the integrity of nests

- assess protection/management needs of the site
- obtain a GPS (global position system) location
- determine site conditions
- predator-proof the nest tree
- collect blood samples from select locations
- identify and collect prey items
- inspect any eaglets for disease, parasites or deformities
- band and/or radio-tag the young
- determine annual productivity
- collect addled eggs
- interact with landowners and garner their support

The effort to keep up with this ever-expanding breeding population, and to keep accurate records of each of their annual outcomes, is significant, and could not be done without a major cooperative effort involving a small, and extremely dedicated core group of volunteers and DEC staff, to whom the State of New York and it's citizens owe a huge voice of "thanks", for the time and effort expended on their behalf to ensure the continuing success and presence of our national symbol in our state. While some may question the effort invested, we believe the value in doing this work far outweighs the cost. As a "keystone" species representative of some of our most unique, complex and sensitive aquatic and upland ecosystems, as the eagle goes, so go a plethora of other species and some of what should be our most cherished habitats. Thus, conservation of the bald eagle, benefits us and our children in uncountable ways.

How many breeding pairs New York State can support remains an open question as we see our population continue to grow. We will know we are beginning to reach saturation when the number of breeding pairs begins to level off, when pairs are not successful in fledging young, when overall average productivity drops, when adult turnover rates increase, and when we see breeding pairs selecting obviously inferior nesting locations; all of this due to breeding pairs attempting to nest in secondary and tertiary quality nesting habitats, ones of inferior quality and more negative human influences.

Nest visits/surveys were made to all of the occupied sites (145), in addition to numerous other inactive and suspected breeding sites. Sixty-nine of the 105 successful sites were inspected/climbed and data gathered as described above. A record low of only 44% (84) of the 190 young fledged in New York this year were banded during annual nest checks, thanks to the dedicated and able help of Scott VanArsdale in Region 4. The remaining successful nests could not be banded either because of chick age (chicks too young or too old), lack of landowner permission, condition of the tree (un-climbable), or due to a lack of time for a banding visit. This latter category becomes larger each year, as our nesting population continues to increase. As mentioned, nest-tree visits are now focused on new territories (ones in need of a predator guard or gps'ing) or remote territories (ones not easily covered or observed to determine their status). Established territories where productivity can be easily determined from the ground are often simply counted if time is limited. As always, prey remains were identified from all nests climbed, and 10 eggs were collected from 8 nests during visits; 2 of these 8 nests were failures, 4 contained 1 young and 2 contained 2 young.

a. Contaminant Sampling

As usual shed adult feathers were collected from within and below nests again this year, as available, as were eggs. All feathers will be analyzed for Hg as well as additional genetic analyses to garner

information on parentage and gender. All collected eggs were measured and weighed, contents extracted for later analysis, and shells dried, weighed and measured for shell-thickness.

b. Nesting Failures and other Miscellaneous Breeding Information

Examining our 2008 nest failures, 11 of our 145 pairs were classified as “occupied-failed”, meaning the pair built/decorated a nest, but did not lay egg(s), and another 30 of 135 pairs who actually laid eggs were classified as “active-failed”, meaning they laid egg(s) or hatched young, but failed to successfully fledge young. Some of these failures were new pairs attempting to breed for their first time (12 of 21).

Unknown causes accounted for 29 nest failures, weather-nest-structure failure accounted for 6 failures, death/loss of one of the breeding adults was the cause in 1 failed attempt, intraspecific aggression (another eagle) in 1 case, and human disturbance suspected as reason for failure in 2 cases.

Twenty-four additional pairs were classified as “inactive”, meaning eagles previously occupied these territories but no longer do or could not be found this year. In all, we tracked 169 nesting territories throughout NY during 2008, up from 149 in 2007. Sixteen percent of our previously established pairs built/used new nests within their territories in 2008 (20% in 2007).

We know of two nests this year that initiated incubation around 20 February, both of which successfully fledged young: a date that appears to be consistent with our earliest egg-layers each year, generally occurring at our western-most nests. While many other pairs were known to also initiate incubation in late February, the vast majority of our nesting pairs lay eggs during March, and rarely the first week of April.

Concerning successful nests and productivity, a record 71% of all successful nests this year fledged two young (figure 10). Our productivity parameters of number of young per occupied pair and number of young per successful pair, were well above 1.0 yg/pair, indicative of a healthy and growing population (figure 11).

Table 5. New York State Bald Eagle Breeding Summary 1999-2008

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|--|------|------|------|------|------|------|------|------|------------------|------|
| Number Territorial ¹ Pairs | 45 | 51 | 65 | 70 | 75 | 84 | 92 | 110 | 124 ⁵ | 145 |
| Number Occupied ² Pairs | 45 | 51 | 62 | 70 | 75 | 84 | 92 | 110 | 124 ⁵ | 145 |
| Number Breeding ³ Pairs | 43 | 43 | 56 | 60 | 68 | 79 | 86 | 101 | 116 ⁵ | 135 |
| Number Successful ⁴ Pairs | 36 | 35 | 47 | 56 | 53 | 66 | 63 | 84 | 87 | 105 |
| Percent of Occupied Pairs Successful | 80 | 69 | 76 | 80 | 71 | 79 | 68 | 76 | 71 | 72 |
| Number Young Produced (Fledged) | 64 | 71 | 83 | 94 | 87 | 111 | 112 | 172 | 153 | 190 |
| Young/Occupied Pair | 1.40 | 1.35 | 1.34 | 1.34 | 1.16 | 1.32 | 1.22 | 1.56 | 1.24 | 1.31 |
| Young/Breeding Pair | 1.47 | 1.60 | 1.48 | 1.57 | 1.28 | 1.40 | 1.30 | 1.70 | 1.33 | 1.41 |
| Young/Successful Pair | 1.75 | 1.97 | 1.77 | 1.68 | 1.64 | 1.68 | 1.78 | 2.05 | 1.76 | 1.81 |

¹ A territorial pair is defined by the presence of two potential breeding birds within suitable nesting habitat during the breeding season where some sign of pair bonding or nesting is also evident (e.g. copulation, stick-carrying, attempt at nest-building, etc.).

² An occupied pair is defined by the presence of a recently decorated nest and two potential breeding birds during the breeding season.

³ A breeding pair is defined by a pair of birds within a nesting territory where evidence indicates that eggs were laid (such as eggs, young, incubation, or eggshell fragments). "Breeding pair" replaces the old term "active nest."

⁴ A successful pair is defined as one which produces one or more young that reach fledgling age.

⁵ One additional pair is included in these totals (NY#83, Waddington), known to be active/breeding, but final outcome unknown, so all other calculations do not include this extra pair.

Figure 8.

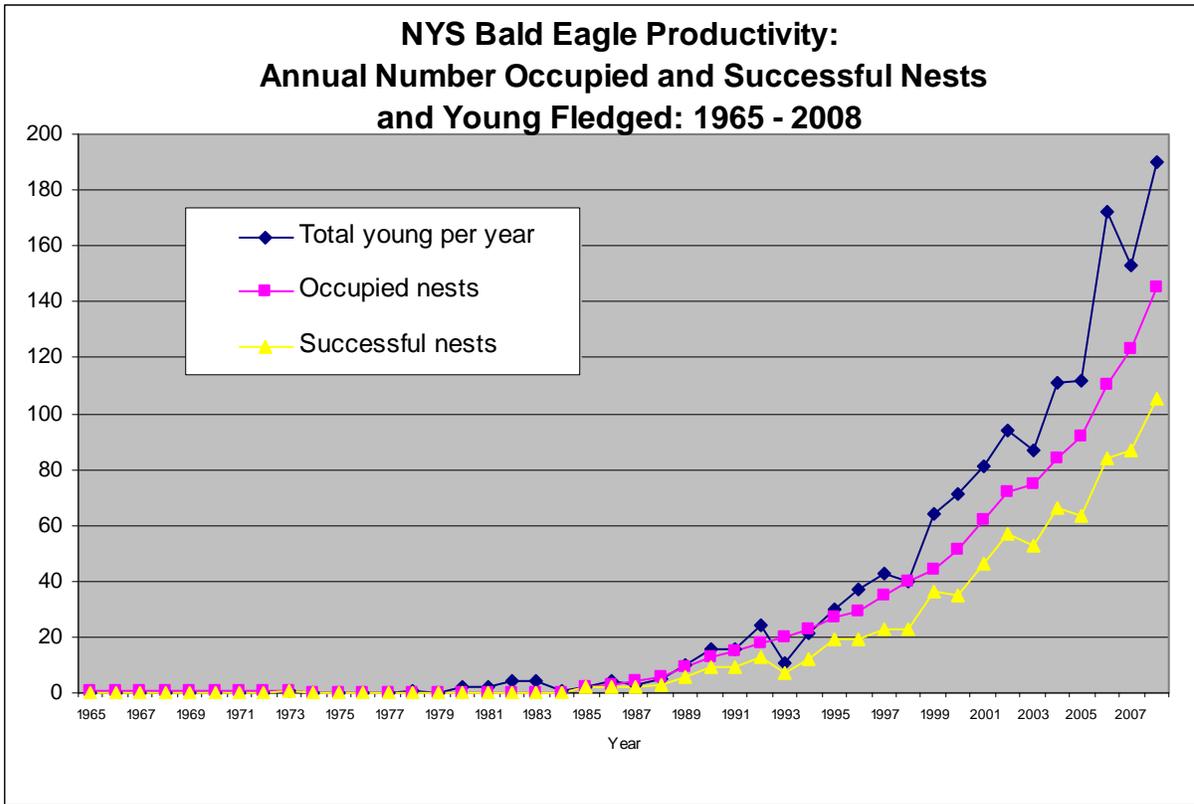


Figure 9.

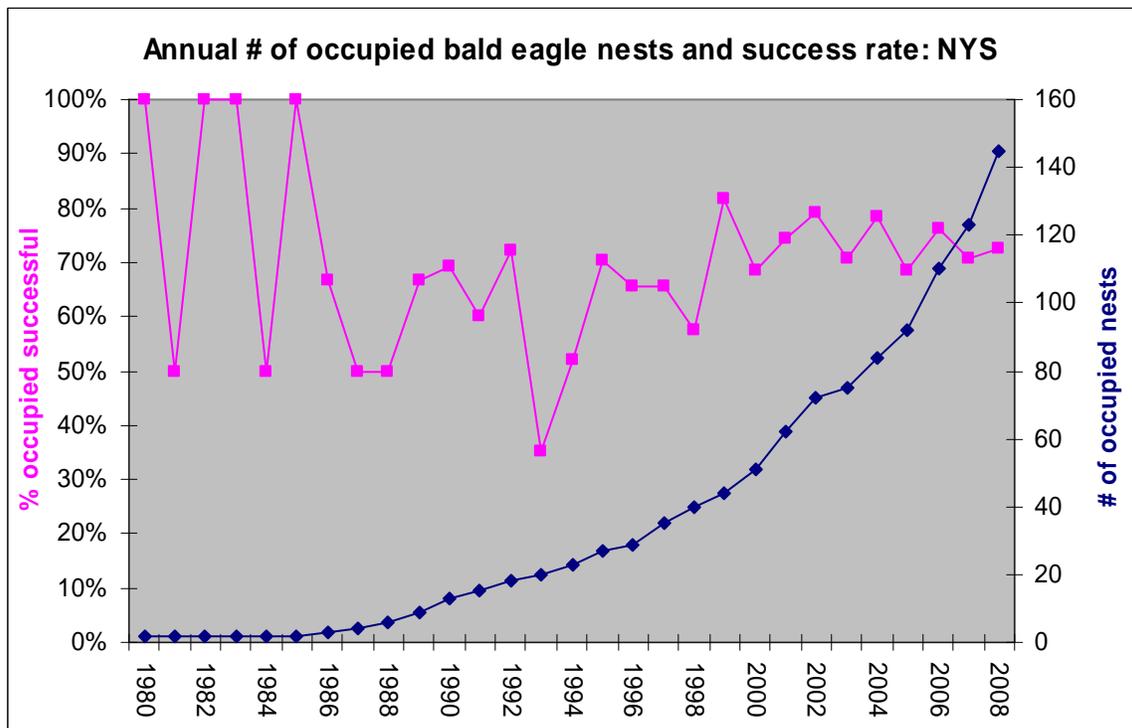


Figure 10.

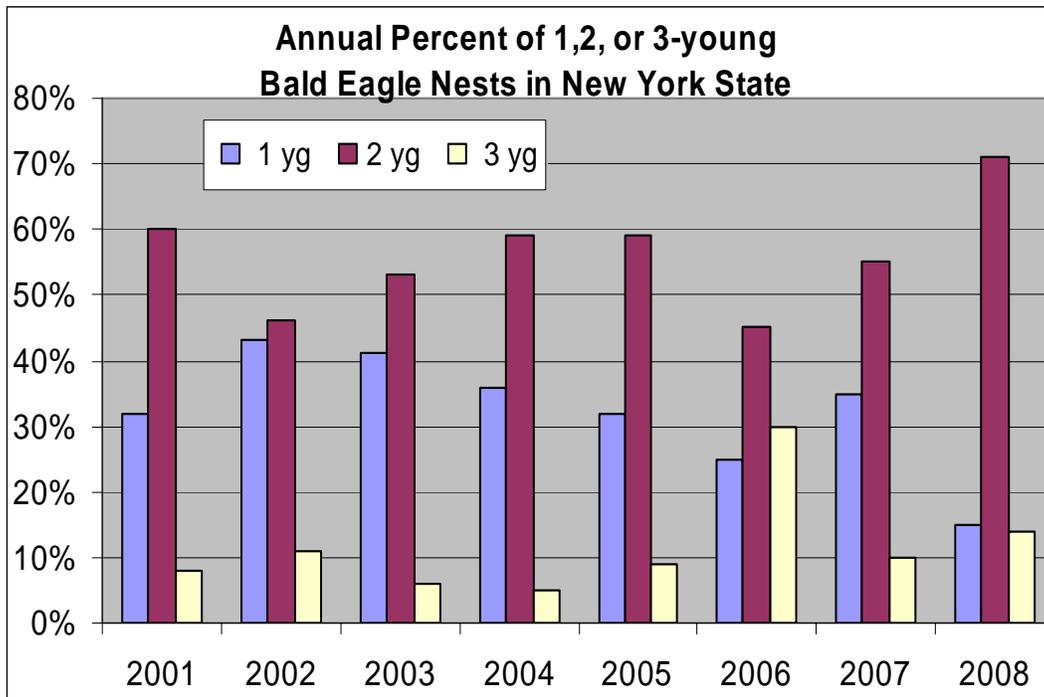
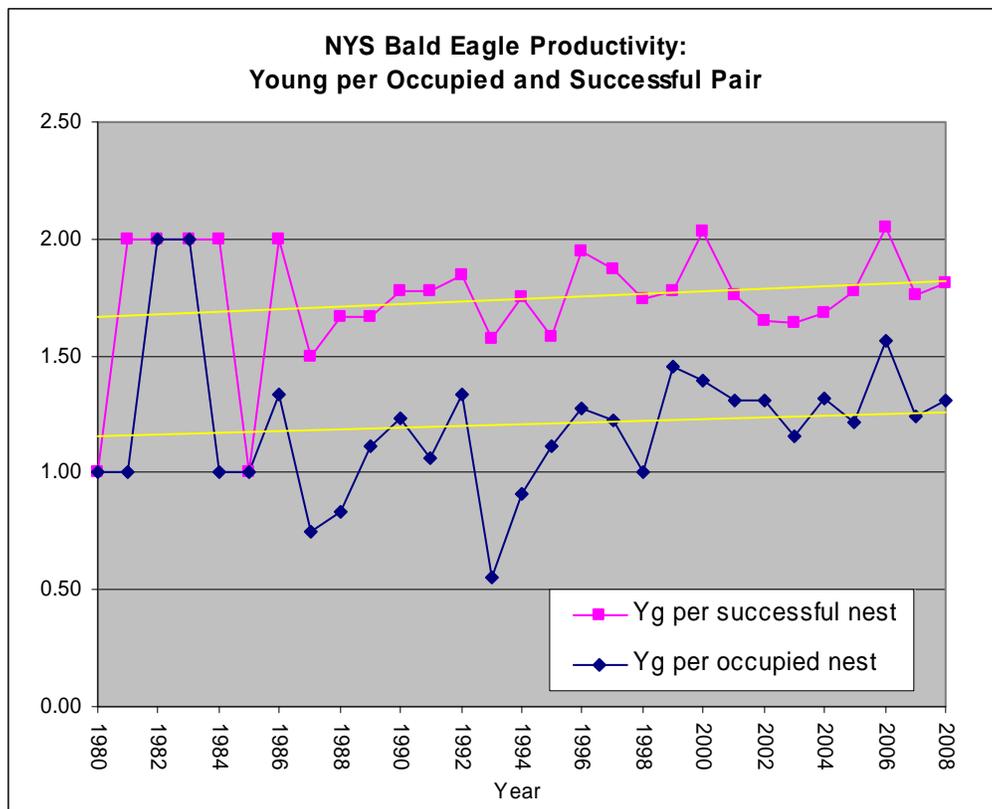


Figure 11.



2. DEC Regional Area and Other Interesting Productivity Information:

Regionally, southeastern New York (DEC Regions 3 & 4) continues to be the densest area of eagle nesting activity in the state, accounting for 53% of all the occupied territories and 57% of all the young fledged in the state in 2008 (53% and 57% in 2007; figure 12). New nesting pairs were somewhat evenly distributed this year, with the Hudson River picking up three and the greater Montezuma drainage up to Lake Ontario picking up four new pairs (figure 13). Region 8 took honors for the most new pairs in 2008, with six, while Region 3 got the gold star this year for the greatest number of occupied pairs and young fledged in the state (table 6). And, although Region 3 was also second highest in the state in terms of overall success of occupied pairs at 82%, Region 7 took top honors in this category with 89% of all their pairs successful this year. On the flip side, northern New York (regions 5 & 6) suffered the greatest percentage of failures of nesting pairs in 2008 with more than half of all occupied pairs failing this year. Region 5 had the worst nesting success, with 58% of all occupied nests failing, more than twice the statewide failure rate (28%) for 2008. One would have to suspect foul weather in this region as playing a major role in these failures.

Noteworthy new nests this year was a second nest on Lake Champlain (although Lake Champlain I was inactive and the new Lake Champlain II nest failed) and a new pair near the Lake Ontario shore (SE part of Lake) that fledged two young. This brings to three pairs/nests along the Lake Ontario shoreline, only two of which were active and successful this year. Regarding our first NYS pair on the St. Lawrence River, established and discussed in this report last year, we are happy to report that they moved to our prepared platform nest following the total collapse of their original nest and successfully fledged two young.

In other areas deserving mention, the Upper Delaware River picked up one new breeding pair, while the Hudson River saw it's nesting population increase by three pairs (see discussion following), all in the lower part of the River south of West Point.

Table 6. Bald Eagle Productivity by NYSDEC Region, 2002-2003-2004-2005-2006-2007-2008

| <u>DEC REGION</u> | <u>#OCC</u> | <u>#SUCC</u> | <u>#YG</u> |
|-------------------|-------------------------|----------------------|---------------------------|
| 1 | 0-0-0-0-0-0-0 | 0-0-0-0-0-0-0 | 0-0-0-0-0-0-0 |
| 2 | 0-0-0-0-0-0-0 | 0-0-0-0-0-0-0 | 0-0-0-0-0-0-0 |
| 3 | 19-21-23-24-30-33-40 | 18-17-20-16-25-23-33 | 29-30-35-29-53-43-58 |
| 4 | 21-24-27-27-34-34-37 | 17-13-17-22-25-23-28 | 31-22-29-37-60-44-50 |
| 5 | 7-6-8-8-7-9-12 | 4-3-6-4-3-7-5 | 6-5-10-6-3-11-10 |
| 6 | 5-7-6-8-8-7-9 | 4-5-6-5-5-5-4 | 7-7-10-13-9-7-7 |
| 7 | 2-4-6-6-6-8-9 | 2-2-4-3-3-5-8 | 3-3-6-3-6-8-17 |
| 8 | 11-8-8-9-13-17-23 | 8-8-8-7-12-13-15 | 12-13-13-15-22-22-27 |
| 9 | 5-5-6-10-12-16-15 | 3-5-5-6-11-9-12 | 6-7-8-9-19-18-21 |
| totals | 70-75-84-92-110-124-145 | 56-53-66-63-84-105 | 94-87-111-112-172-153-190 |

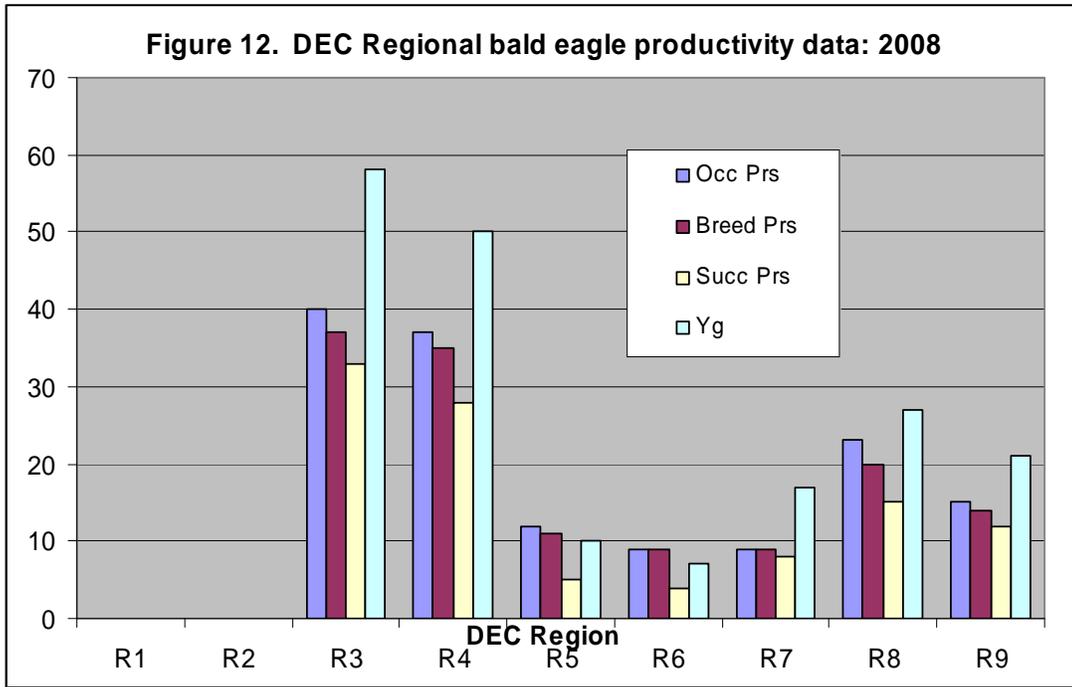
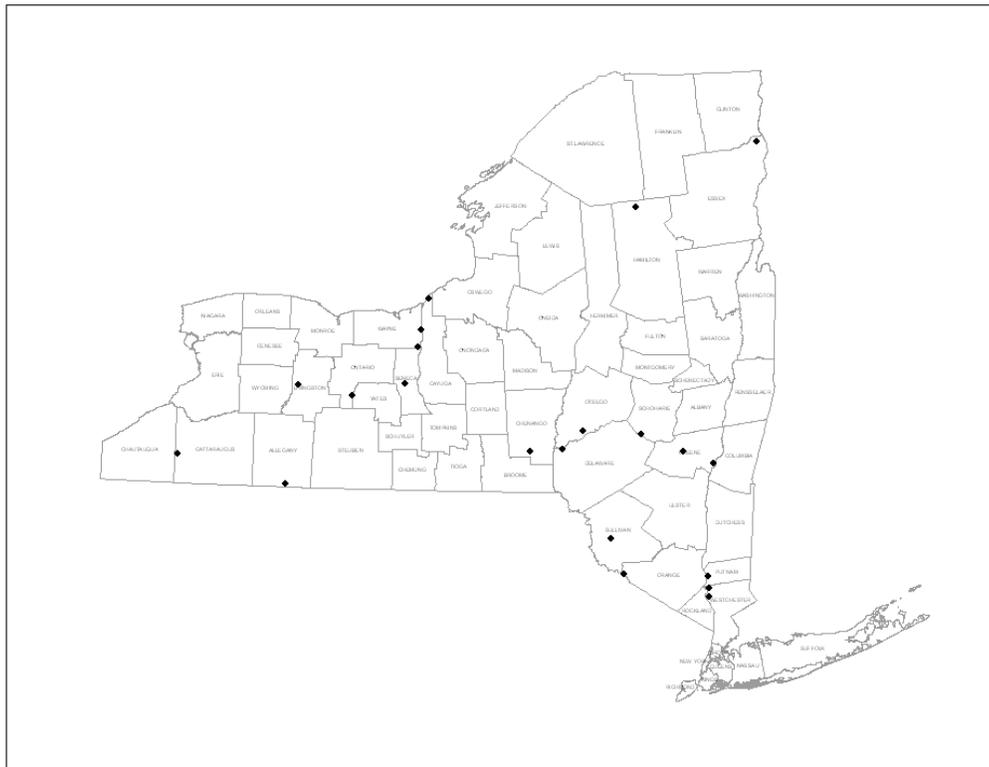


Figure 13.

2008 New Bald Eagle Territories



a. Hudson River

Our Hudson River (HR) breeding bald eagle population expanded significantly again in 2008, adding 4 new pairs, a 24% increase over the record number of pairs in 2007, three on the lower river and one mid-river.(table 7, figure 14). The total number of young fledged was also a record, with 31 new eagles plying the powder-blue skies over the Hudson this year. Four out of five of all pairs nested successfully, fledging nearly 1.5 young per occupied pair. Only four of the 21 occupied pairs failed this year, one new pair, two established pairs due to nest damage/collapse, and one more established pair due to unknown causes but perhaps due to the loss of one of the breeding pair. We still have two breeding pairs on the Upper River above Albany, both of which were successful, fledging 4 young.

Table 7. Annual Bald Eagle Breeding Success: Hudson River, New York

| YEAR | # Occupied Territories | # Active Territories | # Successful Territories | # Young Fledged | Yg/ Occ | % Occ Succ |
|------|------------------------|----------------------|--------------------------|-----------------|---------|------------|
| 1992 | 1 | 0 | 0 | 0 | 0.00 | 0 |
| 1993 | 1 | 0 | 0 | 0 | 0.00 | 0 |
| 1994 | 1 | 1 | 0 | 0 | 0.00 | 0 |
| 1995 | 1 | 0 | 0 | 0 | 0.00 | 0 |
| 1996 | 2 | 1 | 0 | 0 | 0.00 | 0 |
| 1997 | 2 | 1 | 1 | 1 | 0.50 | 50 |
| 1998 | 3 | 3 | 2 | 4 | 1.33 | 67 |
| 1999 | 3 | 3 | 3 | 5 | 1.67 | 100 |
| 2000 | 5 | 4 | 4 | 10 | 2.00 | 80 |
| 2001 | 6 | 5 | 4 | 6 | 1.00 | 100 |
| 2002 | 7 | 7 | 7 | 12 | 1.71 | 100 |
| 2003 | 9 | 8 | 6 | 9 | 1.00 | 67 |
| 2004 | 11 | 10 | 9 | 13 | 1.18 | 82 |
| 2005 | 12 | 12 | 10 | 18 | 1.50 | 83 |
| 2006 | 16 | 16 | 13 | 30 | 1.87 | 81 |
| 2007 | 17 | 16 | 11 | 19 | 1.12 | 65 |
| 2008 | 21 | 20 | 17 | 31 | 1.48 | 81 |

b. Delaware River

Bald eagle breeding pairs along the NY side of the Delaware rose again this year, but only by a single pair, now with eight occupied pairs, the highest number yet recorded along the New York side of the River. All but one of these pairs actually bred (laid eggs), and all seven of these breeders were successful in fledging 12 young, making for a very respectable 1.50 young per occupied pair (table 8, figure 15). As mentioned earlier in this report we continue to be involved in a cooperative study with the National Park Service monitoring both wintering and breeding eagles along the Upper Delaware River. Thus, although our focus has been on NYS eagles, along the main-stem of the Delaware, which

provides the border between NY and Pennsylvania (PA), we again monitored all breeding eagles in 2008, regardless of which side of the river they were on.

Along both sides of the main-stem of the Delaware in 2008, a total of 15 occupied pairs were recorded, the same overall number as in 2007, of which 13 were successful in fledging 26 young, considerably above the 19 young fledged in 2007 and the highest number of fledged young yet recorded along the river. Obviously the success rate of existing pairs was significantly higher this year (87%) compared to last year (60%). Eagles are pretty equally distributed on both sides of the river, with several pairs moving annually from one side/state to the other. Separate reports on the Delaware River study are being prepared and will be on file at the NYSDEC office in Albany. All tables and graphics in this report, however, continue to present only NYS data.

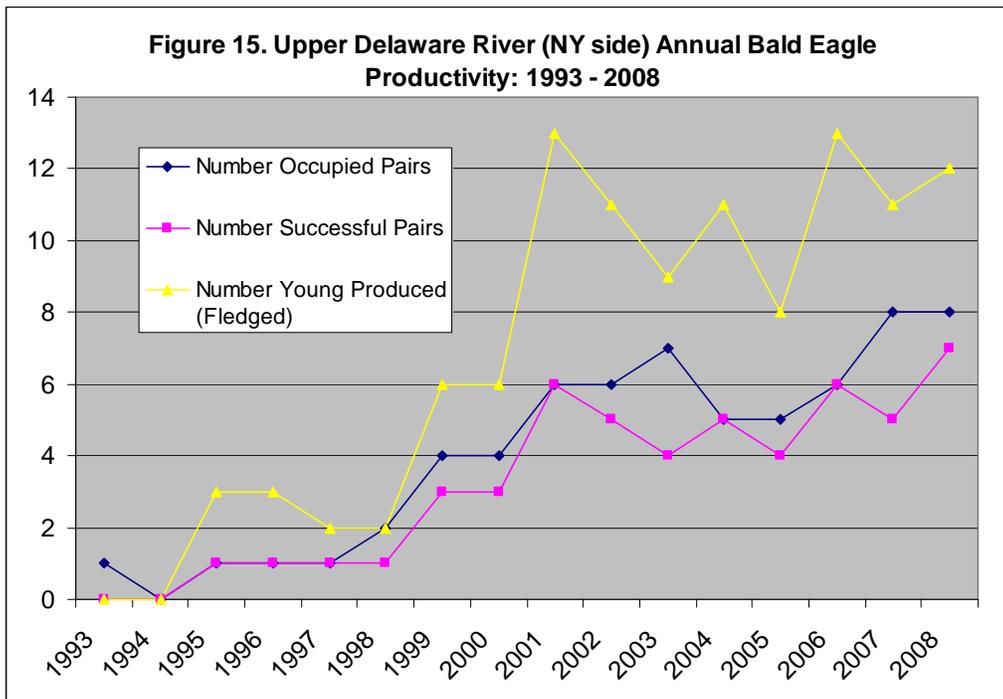
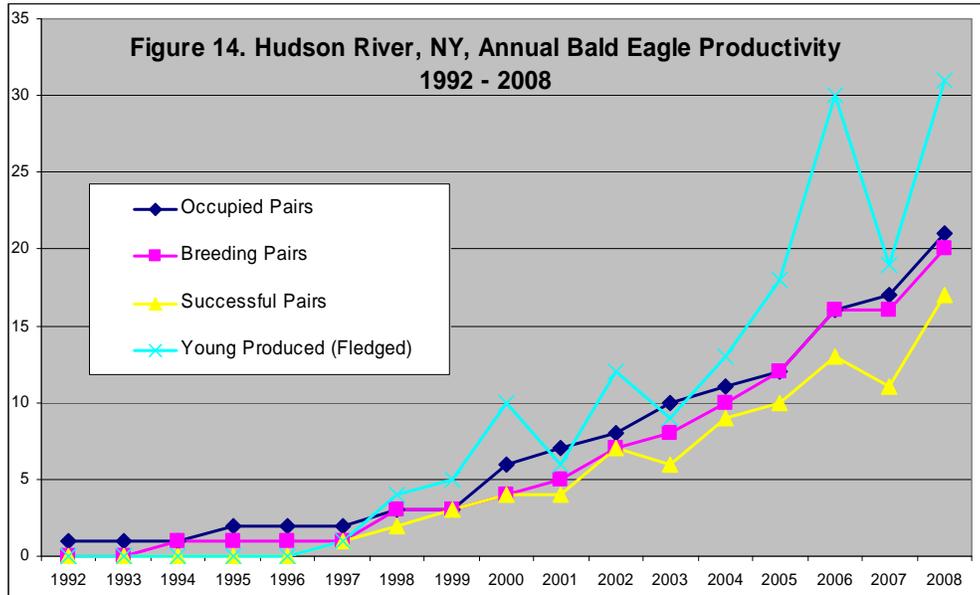
The data continue to suggest that the number of nesting pairs along the Delaware River may have plateaued since around 1999, although our surveys of the river indicate large sections of seemingly suitable breeding habitat remain. Given this, and the fact that this habitat lies within a significant year-round eagle concentration area, we expect more nests to accrue along the river over time. We have also witnessed increased intraspecific events within these nesting territories, another sign of increasing competition for nest sites. Only two breeding pairs (2 of 15, 13%) failed along the River in 2008, one on each side. A remarkable 5 of the 13 productive nests, 38%, fledged 3-young this year.

Development and habitat alteration (i.e. logging) continue to be major, long-term concerns along the Delaware River corridor, particularly in regard to loss of habitat. Our opportunities to protect and secure what remains of undisturbed shoreline and ridge-side habitats are fast disappearing. Significant, dedicated set-asides of remaining Delaware River habitats will be required to ensure perpetuation of sensitive wildlife and scenic beauty here for future generations.

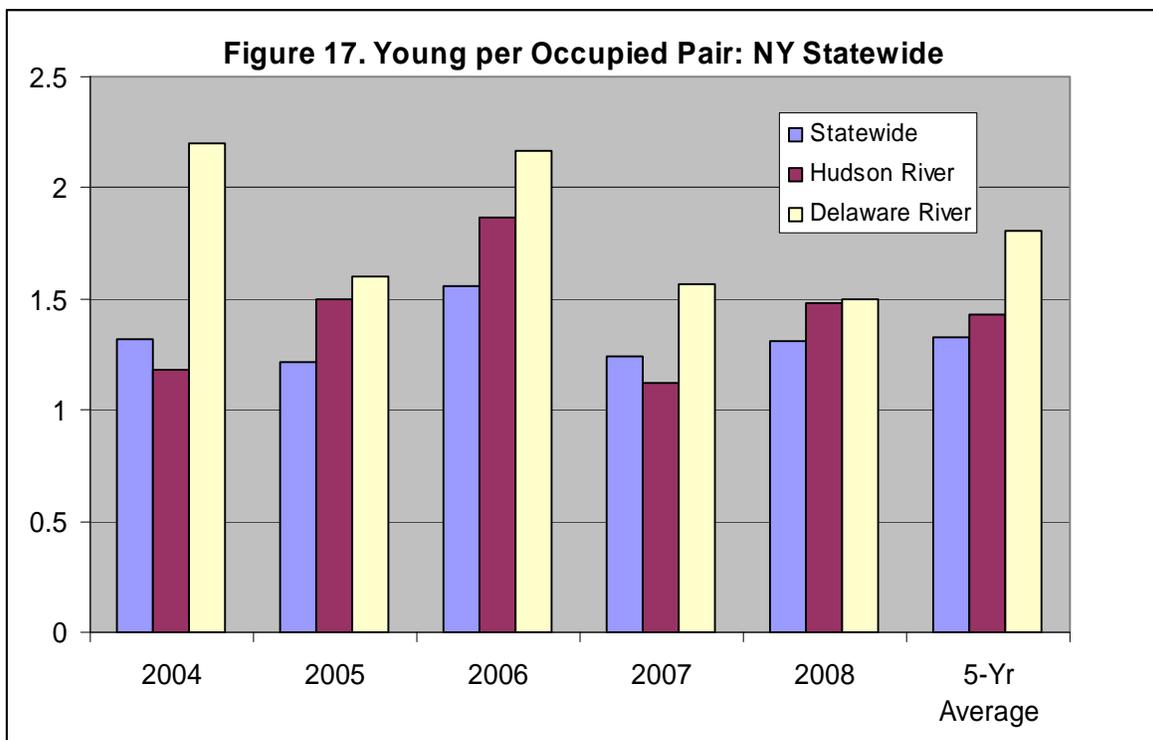
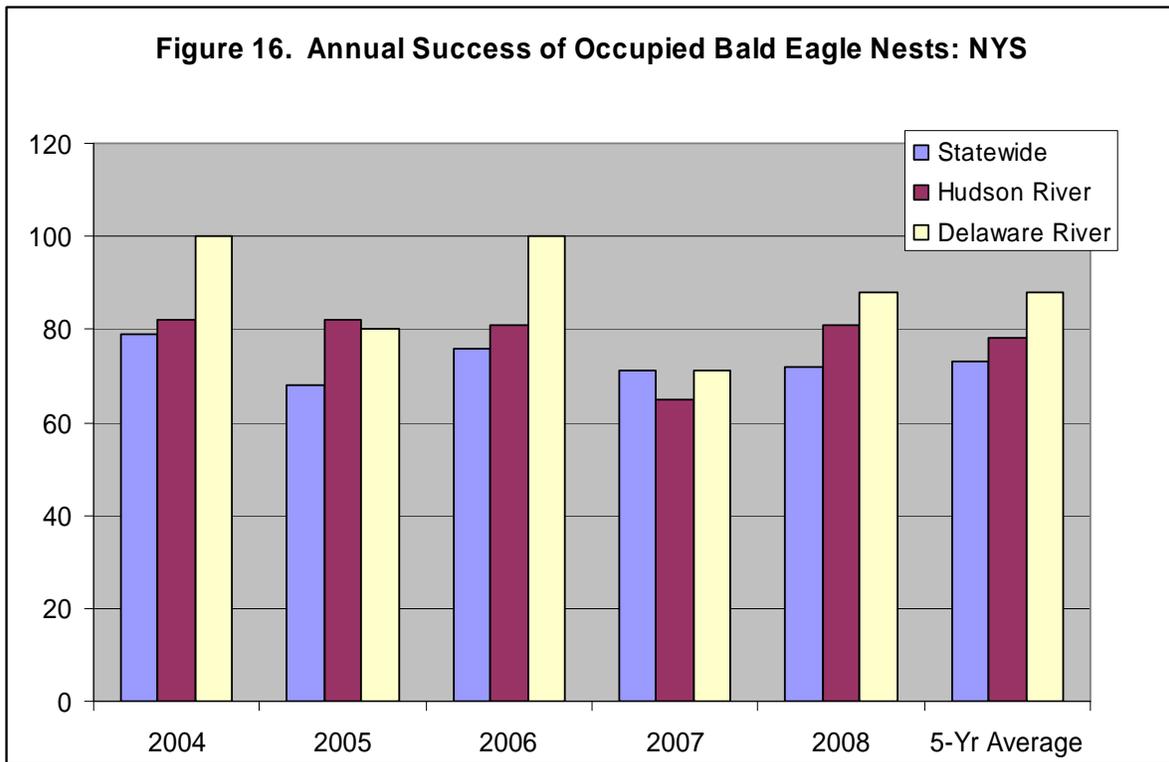
Table 8. Bald Eagle Productivity along the Delaware River (main-stem), NY

| YEAR | # Occupied Territories | # Active Territories | # Productive Territories | # Young Fledged | Yg/Occ | % Occ Succ |
|------|------------------------|----------------------|--------------------------|-----------------|--------|------------|
| 1993 | 1 | 0 | 0 | 0 | 0.00 | 0 |
| 1994 | 1 | 0 | 0 | 0 | 0.00 | 0 |
| 1995 | 1 | 1 | 1 | 3 | 3.00 | 100 |
| 1996 | 1 | 1 | 1 | 3 | 3.00 | 100 |
| 1997 | 1 | 1 | 1 | 2 | 2.00 | 100 |
| 1998 | 2 | 1 | 1 | 2 | 1.00 | 50 |
| 1999 | 4 | 4 | 4 | 8 | 2.00 | 100 |
| 2000 | 4 | 4 | 3 | 6 | 1.50 | 75 |
| 2001 | 5 | 5 | 5 | 12 | 2.40 | 100 |
| 2002 | 5 | 5 | 4 | 9 | 1.80 | 80 |
| 2003 | 6 | 4 | 4 | 9 | 1.50 | 67 |
| 2004 | 5 | 5 | 5 | 11 | 2.20 | 100 |
| 2005 | 5 | 4 | 4 | 8 | 1.60 | 80 |
| 2006 | 6 | 6 | 6 | 13 | 2.17 | 100 |

| | | | | | | |
|-------------|---|---|---|----|------|----|
| 2007 | 7 | 6 | 5 | 11 | 1.57 | 71 |
| 2008 | 8 | 7 | 7 | 12 | 1.50 | 88 |



NYS Summary: Annual Bald Eagle Breeding Success:



B. Nestling Movement/Survival Study:

In 2004 we began radio-tagging fledgling bald eagles from New York State nests with solar-powered satellite transmitters (ptt's). We hope to answer many questions in this study, including survival, identification of home ranges, pattern of movements during their first dispersal and beyond, overwintering areas, differences between nest-mates and nearby nestlings from different nests in terms of their movements, gender-based differences, essential habitats used, and ultimately, information on nest site selection and establishment at sexual maturity. We are hopeful that these solar-powered units will last for up to 5-years or more.

Only one nestling bald eagle was outfitted with a ptt in 2008, from a nest in east central NYS (NY#10). However, two additional NY fledglings from 2007 nests (NY#30, NY#52) were captured in Maryland in January 2008 as part of an eagle study being conducted in the Chesapeake Bay region, and both were outfitted with satellite transmitters; both are currently being tracked.

C. Observations of banded eagles:

With the completion of work on the Swinging Bridge Reservoir Dam, we resumed observations of banded eagles at our usual site along the Mongaup River in Sullivan County this year. Gene Weinstein, our diligent volunteer in this endeavor, identified an amazing 77 individual eagles during the 2007-08 winter period, 7 from MA, 3 from VT, 3 from CT, 1 from ME, and 63 native New Yorkers from various years and nests. Among other notable 2008 observations was one made by Fred Linhart of our Region 4 office, of an adult golden eagle (A00) first captured 11 March 2003 in Delaware County. This small male was outfitted with a satellite transmitter which tracked him to his summering grounds in northern Quebec just west of the Labrador border for two years, 2003, 2004, before his transmitter died. Fred confirmed A00 in his original capture area along with his mate in late November 2008, alive and well.

D. Recoveries:

Each year, numerous eagles are recovered in NYS debilitated or dead. During the current reporting period, 1 January -31 December 2008, 21 bald eagles were recovered in New York State. Ten of these eagles were recovered alive, five of which were successfully rehabilitated and released with considerable help and personal attention from very caring folks such as our cooperating veterinarian Ed Becker, rehabilitators Bill and Stephanie Streeter, Cindy Page, Dr. William Saleen, Kathy Michell, and many other concerned folks who recovered, aided, and notified us, including many DEC regional staff and staff of New York City DEP, who went out of their way to recover and transport these birds.

| Year | 2003 | 2004 | 2005 | 2006 | 2007 | 2008 |
|----------------|------|------|------|------|------|------|
| No. Recoveries | 21 | 25 | 23 | 21 | 22 | 21 |

Total eagles recovered during 2008 = 21 bald eagles:

Recovery Data:

| | | | |
|-------------------------------------|------------------------------|---------------------------|----------|
| <u>Age @ recovery:</u> | <u>Condition @ recovery:</u> | <u>Month of recovery:</u> | |
| Nestlings = 3 | Alive/released = 5 | Jan = 4 | Sept = 4 |
| Juveniles = 5 | Alive/Died = 4 | Feb = 1 | Oct = 1 |
| Immatures = 7 | Alive/Captive = 1 | Mar = 0 | Nov = 1 |
| Sub-adults = 1 | Found Dead = 11 | Apr = 1 | Dec = 0 |
| Adults = 5 | | May = 1 | |
| | | June = 3 | |
| | | July = 4 | |
| | | Aug = 1 | |
| | <u>Sex:</u> | | |
| # of NYS Banded birds = 7 | male = 6 | | |
| # of other Banded birds = 2 (MA,ON) | female = 8 | | |
| no bands = 12 | unk = 7 | | |

2008 Causes of injury/death were as follows: (2007 numbers in parens)

| | |
|---------------------------------|-------------------------------|
| unknown = 8 (3) | fishing tackle = 1 (0) |
| train = 3 (2) | lead poisoned = 0 (0) |
| vehicle = 3 (8) | weak/emaciated = 2 (0) |
| shot = 0 (1) | fell from nest = 2 (4) |
| killed by another eagle = 0 (1) | plane strike = 0 (1) |
| electrocuted = 2 (0) | |
| disease (Botulism E) = 0 (2) | |

Noteworthy among these recoveries continues to be the number of eagles killed by high-speed trains and vehicles in New York. Eagles regularly scavenge along RR tracks and roadways, often resulting in collisions. Also continuing to be noteworthy are deaths or injuries attributed to other eagles, all of which typically occur in the early part of the breeding season, March or April, as nesting is initiated for the season. Lead poisoning and type E botulism continue to be of concern to NYS eagles.

And finally, while only one eagle was recovered this year dead as a result of fishing tackle, this tragic occurrence so saddens us, we had to make special note of it. While it is difficult to totally avoid snagging fishing line or losing tackle, the sheer amount of such monofilament and tackle in our waterways continues to be astounding. Finding fishing tackle and monofilament line, often yards of it, in eagles' nests, is more the norm than the exception. To date we have lost at least three nestlings and two adult eagles to fishing gear that we know of, and many more certainly succumb but are never found. The most unfortunate aspect of the bird displayed in the following two photos, is that this adult female was one of our resident breeders at our only eagle nest in Fulton County. Fortunately, she successfully fledged her three young just before her demise in mid-August. It remains to be seen if the remaining male will secure a new mate and whether this territory will be active in 2009.



ESU#1838; recovered 8/14/08, @ NY#129, Fulton Co. NY, drowned. photos courtesy DEC Wildlife Pathology Unit



The Future ?

In addition to lead and botulism concerns, alteration of the landscape required by bald eagles (and not surprisingly, a myriad of other plants and wildlife) continues to be the biggest single threat to this species. Logging, developments of all kinds, and increasing demands for public use of all kinds (i.e. boating, canoe/kayak trails, personal watercraft, ATV's, hiking trails, etc.) are increasing at a tremendous rate, not at all commensurate with protection of the landscape. If we are to maintain cherished resources such as bald eagles for future generations, we must aggressively identify and protect in perpetuity those areas most critical to them. Although overall numbers of eagles seem to be continuing to rise, we must assess where our eagles most essential habitats are, document the protective status of those habitats (are they currently protected?), and proceed to ensure that the most critical habitats are protected, in perpetuity, so that we can be assured we will have the all-important habitat-base required for our eagle population to sustain itself into the future.

Acknowledgements

Sincere thanks again are due the many, extremely dedicated regional DEC staff and volunteers who help keep track of New York's eagles, both summer and winter, each year. Without these folks tireless dedication and countless hours, most of this data-gathering would not be possible.

Special recognition again this year goes to DEC staff Glenn Hewitt (CO), Steve Joule (R3), Scott VanArsdale (R4), Joe Racette (R5), Blanche Town (R6), Bonnie Parton (R7), Mike Allen (R8), Ken Roblee and staff Dan Dougherty, Gary Klock, Bob Lichorat, and Greg Ecker (R9), and John Brennan (Delaware River) for their role in leg work, banding, monitoring and landowner contacts. Without their very capable help this year and vital ground observations, complete nest monitoring and information would not have been possible.

A very special thank you is also extended to many members of the New York State Police Aviation Division, for helicopter time, maintenance, and high-quality piloting, absolutely essential involvement to our full understanding of where and what is going on with NYS eagles. If we are to continue to gauge the health and status of our eagle population into the future, increased participation by these and more folks will be essential.

Recognition and special thanks are also due the following folks on our New York State Eagle Team, without whose enthusiasm, dedication, and time, all of these great results would not be possible!

HUGE thank-you's to our 2008 "crew":

- Lou Buscher
- Don Hamilton, National Park Service, Upper Delaware River
- Jeff Holbrook
- Michael John, Seneca Nation of Indians
- Tom Lake, Chris Letts NYSDEC
- Linda "stick" LaPan
- Kathy Maloney
- Kathy Michell
- Ed McGowan, PIPC
- Lori McKean The Eagle Institute
- Bill Moore
- Chris Nadareski, Mike Reid and Paul Oehrlein, NYC Dept. of Environmental Protection.
- Joe Racette NYSDEC Region 5

- Scott Rando
- Don Root, City of Rochester
- Stephanie and Bill Streeter and Jan !
- Rob Taylor, NYS Office of Parks, Recreation, and Historic Preservation
- Doug Traudt, Biological Survey
- Vicki Vosburgh
- Marybeth Warburton
- Gene Weinstein

Much more information on bald eagles and any updates to this report can be found on DEC's web site at: <http://www.dec.ny.gov/animals/9381.html>

Other web sites of interest, including United States Bald Eagle Management Guidelines, at: <http://www.fws.gov/migratorybirds/issues/BaldEagle/NationalBaldEagleManagementGuidelines.pdf>

More information on bald eagles is also available at: <http://www.fws.gov/migratorybirds/baldeagle.htm>