

# New York State Bald Eagle Report 2005

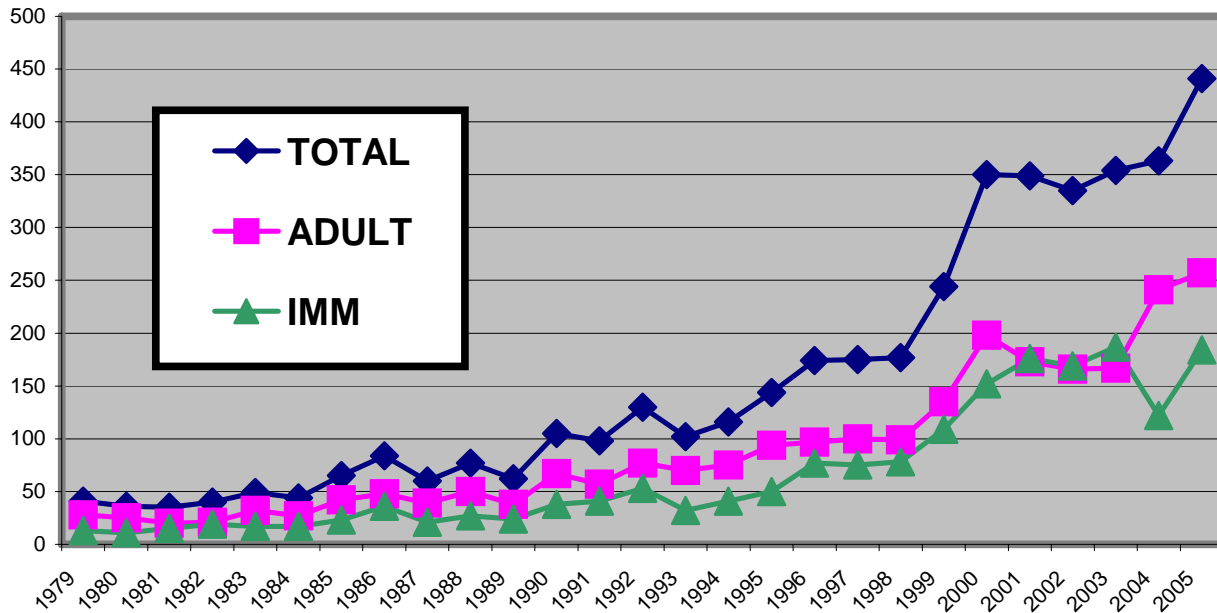


photo by: L. Buscher Jr.

P. Nye  
New York State Department of Environmental Conservation  
625 Broadway  
Albany, NY 12233-4754



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



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

		NUMBER OF INDIVIDUAL EAGLES OBSERVED					
		BALD EAGLES			GOLDEN EAGLES		
Year	Survey Period	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 <sup>1</sup>	60	39	21	0	0	0
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

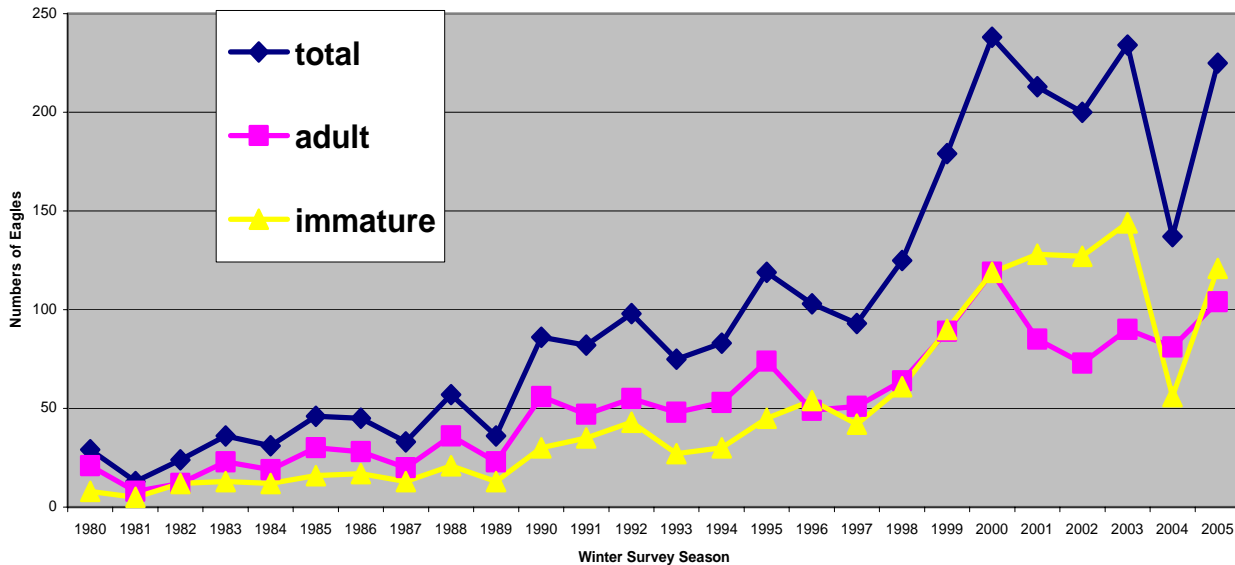
		NUMBER OF INDIVIDUAL EAGLES OBSERVED					
		BALD EAGLES			GOLDEN EAGLES		
Year	Survey Period	Total	Adult	Immature	Total	Adult	Immature
1992	January 1-15	130	77	53	0	0	0
1993	January 1-15	102	70	32	0	0	0
1994	January 1-15	116	75	41	1	0	1
1995	January 4-18	144	94	50	1	0	1
1996	January 3-17	174	97	77	1	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

As usual, the winter of 2004-05 differed depending on where you were in our state and what the date was. On 15 December for example, extreme western NY got hammered with 26" of snow, while most of the rest of the state, particularly our eastern and southeastern sections, enjoyed very mild temperatures and no snow until around the 20<sup>th</sup> of December when it suddenly dropped below zero and ice quickly began forming. This sub-freezing was short-lived, however, as days before Christmas brought above freezing temps and rain. Then again, during the last few days of the year, temperatures near zero iced up much of the Hudson River and local lakes. Once again though, January came in very mild with some rain and temps as high as 45 deg in Albany, leading up to the survey and re-opening most of the water. Overall along our survey routes, we recorded "less than normal or much less than normal" ice, with generally less than 10% ice cover along entire survey routes, meaning adequate amounts of open water were available to eagles throughout the region. As stated, overcast, foggy and snow-showery conditions made our aerial surveys and observations during mid-January difficult. Regional results are discussed further below.

### **Southeast NY:**

After a pretty steep drop in our southeast eagle numbers last year, as an overall percentage of our statewide winter-count, our Southeast NY helicopter surveys were back in the usual range this year, accounting for half (51%) of all the wintering eagles counted in New York, versus only 36% last winter. A total of 225 bald eagles were observed along our traditional SENY helicopter route, 104 adults and 121 immatures, compared to 2004 when only 137 eagles were observed in this region.

**Figure 2. Numbers of Bald Eagles Observed During the Mid-winter Survey, Southeast NY**



### Hudson River

Once again, aerial counts along the Hudson appear to significantly undercount eagles actually present there in winter. The 2005 helicopter survey tallied 21 bald eagles, 14 adults and 7 immatures, up somewhat from the 16 observed in 2004, but also well below those reported by ground observers both on the survey day and throughout the winter. I believe the most likely reason for this is the size of the area being covered and the inability to adequately cover both shorelines within the survey time allotted, especially in the very wide river sections below West Point, where, in severe winter, most of the eagles congregate. Fog, very overcast conditions, and precipitation (light snow) also not only affect visibility in this difficult area, but also affect the timing of eagles leaving their night roosts and heading onto the River. The Hudson is our first surveyed area on these flights, covered first thing in the morning, and many eagles (under conditions described above) may not have departed their night roosts yet and made it to the River. Our two largest night roosts for Hudson River eagles, together at times accounting for over 100 bald eagles at night, are located 2-4 miles from the River. For example, a roost survey conducted along the Hudson the night before the 2005 survey counted 33 eagles, 57% more than were recorded during the aerial survey immediately following the next morning.

Numerous ground observers and effort, particularly along the Lower Hudson, provide some important additional information on winter eagle use along this River. As was begun in February 2004, the New York-New Jersey Trail Conference under the able direction of Ed McGowan, once again organized Hudson River night roost surveys during 2005, conducting one in each of January, February and March (see table 2 below). The most significant Hudson River night roosts are known, and these coordinated roost-counts appear to be a very effective way to determine the annual number of bald eagles using the Hudson each winter. These and other observations gathered by Hudson River eagle watchers, confirm the significance of this habitat to wintering bald eagles.

Table 2. Additional ground observations of wintering bald eagles along the Lower Hudson River, New York, January-March 2005 (all numbers presented represent different birds, i.e. no overlapping counts):

<u>Date</u>	<u>Observer(s)</u>	<u>Area</u>	<u>total</u>	<u>Number of Bald Eagles Seen</u>		
				<u>adults</u>	<u>immatures</u>	<u>Unk</u>
1/09/05	NY-NJ TC	lower Hudson- roosts *	33	16	15	2
1/09/05	D. Traudt	mid-Hudson	29	19	10	
2/12/05	T.Lake-C.Letts	lower Hudson	32	18	14	
2/13/05	NY-NJ TC	lower Hudson- roosts *	148	48	41	59
3/6/05	NY-NJ TC	lower Hudson- roosts *	65	41	14	10

\*(multiple, simultaneous roost surveys)

While all of the above section relates to the Lower Hudson River, it must be acknowledged that the Upper Hudson River and tributaries (Hoosic, Battenkill, Sacandaga Rivers), from Albany, NY to Lake Luzerne, NY, also host wintering eagles each winter. For example, one day before our aerial surveys, on 9 January, 11 eagles (8 adults, 3 immatures) were observed in this region, while on the survey day, 10 January, 11 eagles were tallied (10 adults, 1 immature), meaning at least 13 individual eagles were in this region at the time.

### **Upper Delaware River:**

Over the length of the Upper Delaware River main-stem, from Port Jervis to Hancock, we recorded 114 eagles (52 adults, 62 immatures), compared to only 28 observed there last year, mirroring the greater numbers of eagles observed in Southeast NY this winter than last, and bringing numbers seen on the Delaware back up to similar counts in 2002 and 2000.

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

<u>Year</u>	<u>#Eagles</u>
2005	114
2004	28
2003	41
2002	109
2001	27
2000	145
1999	77
1998	28

Numbers of eagles along the Upper Delaware are connected to numbers seen within the nearby Mongaup River system (a tributary to the Delaware); low numbers in one usually result in high numbers in the other; strictly a food-related phenomenon. 75 eagles (30 adult, 45 immature) were observed along the Mongaup this year, down a bit from the record 86 observed there during 2004.

## St. Lawrence River:

The St. Lawrence River count conducted by Blanche Town tallied 31 eagles this year, 22 adults and 9 immatures, down a bit from last years near-record 45 eagles (27 adult, 18 immature), but nevertheless a very respectable number for this area looking at the long-term average.

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. **Number of bald eagles observed within major NYS wintering areas.**

	<u>2002</u>	<u>2003</u>	<u>2004</u>	<u>2005</u>
Upper Delaware River	109	41	28	114
Mongaup River	42	109	86	75
Hudson River	22	44	16	21
St. Lawrence River	19	17	45	31
All other areas*	117	103	181	200

\*(or non-duplicated counts from ground observers, even within aerially surveyed areas)

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.

As in past years, during the winter of 2004-2005, an amazing 63 individual bald eagles were identified via their unique colored and coded leg bands by our volunteer observer, Mr. Gene Weinstein. Included in this total were 54 eagles from New York State, mostly fledged young or wintering eagles previously captured and banded in New York, 6 bald eagles raised from nests in Massachusetts, and one fledgling each from Maine ('02 young), New Hampshire ('04 young), and New Jersey ('02 young) -- truly an amazing and important feat. Gene also takes photos of "his" birds: one of the more remarkable observations and photos was made on 12 Feb 2005, of eagle "Y89", a NYS eagle fledged from a nest at the Montezuma Refuge in central NYS in 2004. You can see in this photo, not only Y89's blue leg band, but also clearly the solar-powered radio transmitter placed on this eagle at the nest just before he fledged, so we could monitor his wanderings! Thanks, Gene!



Y89 photo by: G. Weinstein

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 “intercept” the crowds at the public Mongaup Bald Eagle Viewing Blind and at many other eagle viewing sites every weekend throughout the winter and aid 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.

### Winter Eagle Research/Tracking:

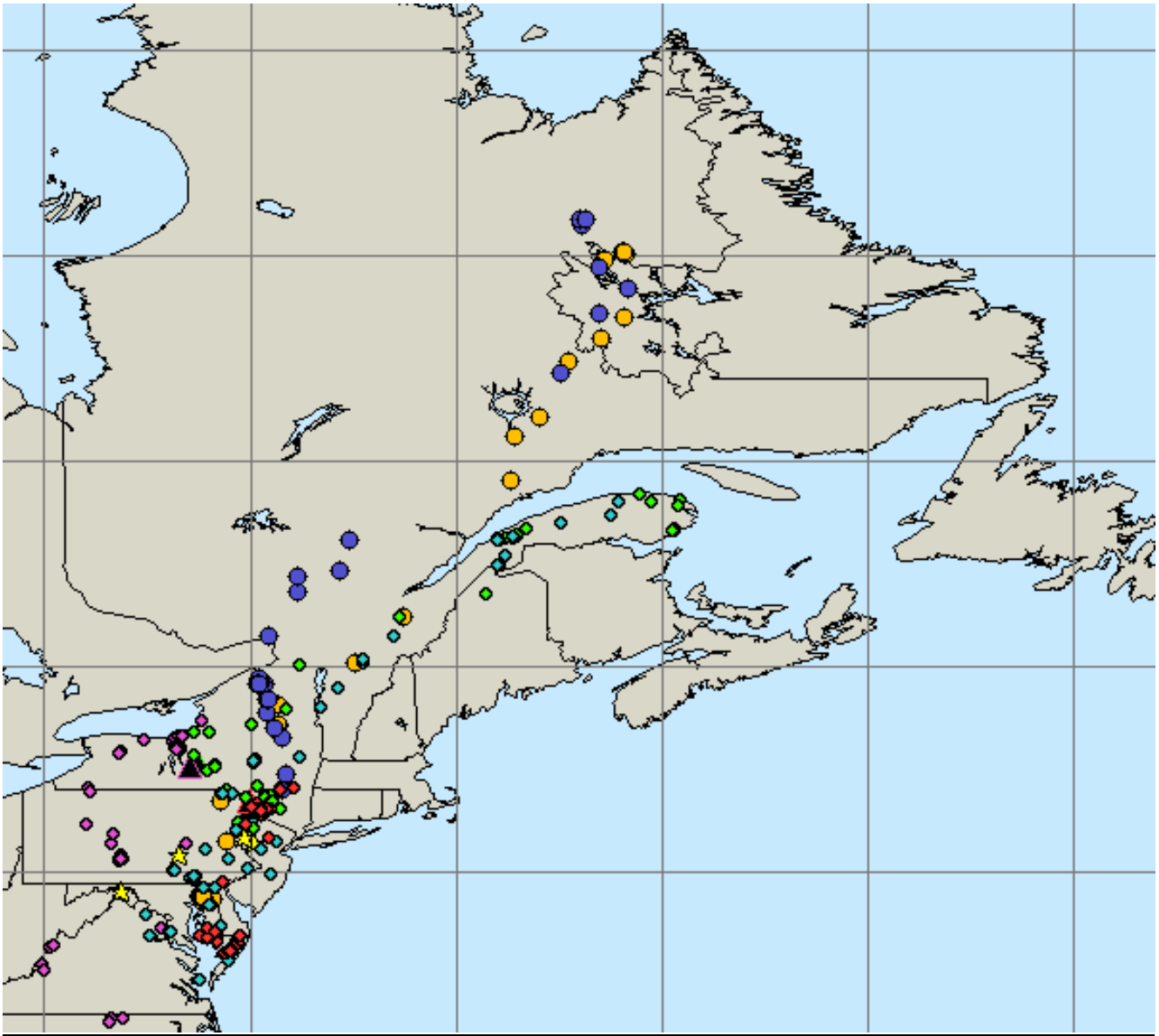
In addition to surveys, wintering eagles (both bald and golden) continued to be studied during the 2004-2005 winter season, especially regarding the tracking of NY winter migrants to their northern breeding grounds. Our study of eagles along the Upper Delaware River in cooperation with the National Park Service continues, in a multi-year effort to determine the essential habitats and behaviors of bald eagles there.

A total of 13 bald eagles were captured this winter, 11 immatures and 2 adults; both adults were outfitted with satellite radio transmitters. Adult male P04, captured March '05 on the Mongaup, migrated to and appeared to have nested in far northern Quebec, near where our '04 capture reported last year, V98, summered; must be a lot of good eagle habitat up there, as many of our bald and golden eagles hail from this region.

You can follow V98 and other, previously captured NY wintering eagles satellite-radio equipped in previous years (and whose satellite transmitters are still active) at [www.learner.org/jnorth](http://www.learner.org/jnorth) ; (search the archives).



Peter Nye w/ adult male bald eagle P04 captured along the Mongaup River 07 March 2005  
photo by Kathy Michell



Spring 2005 New York bald eagle migration map from Journey North:  
Blue dots = P04, orange dots = V98



Sullivan County NY; NY nest # 48, 18 May 2005. photo by Peter Nye

## **Breeding**

Intensive searches for and confirmation of new breeding pairs, and monitoring of known breeding pairs of bald eagles continued during 2005 throughout New York State, with the critical help of numerous DEC personnel and volunteer nest-watchers all around New York. As usual, an attempt was made to verify every report of adult eagles during the nesting season to locate or confirm any new nests, and to visit every known New York bald eagle nesting location, to:

- inspect the integrity of nests
- assess protection/management needs of the site
- collect blood samples from select locations
- obtain a GPS (global position system) location
- determine site conditions
- predator-proof the nest tree

- identify and collect prey items
- interact with landowners and garner their support
- inspect any eaglets for disease, parasites or deformities
- band the young
- determine annual productivity
- collect addled eggs

Our resident breeding bald eagle population continued its growth in 2005, with the number of occupied pairs again climbing 10% over 2004 to 92: it seems we are fast closing in on that non-significant yet still magical benchmark of 100 nesting pairs. Other breeding stats for 2005 increased as well, with 86 of these 92 pairs actually laying egg(s), and a total of 112 young fledged, just over the 2004 record number of 111. While down a little bit from 2004, our young-per-occupied-nest value of 1.22 is still in the very respectable range, population growth-wise. Overall, 68 % of all of our nesting eagles successfully fledged young this year, down a bit from the 79 % witnessed in 2004, but again, still very respectable. As reported here previously, an increasing trend, especially in certain regions of New York, is toward more interactions between sexually mature bald eagles, often leading to breeding disruptions. This trend was evident again here during 2005, and can be expected to continue to be at work and even increase as our population continues to grow and stretch toward capacity in some areas. For example in some dense breeding areas such as Southeast Alaska, it is not uncommon to document overall nest success percentage of 50 % or less.

Ultimately, resources upon which breeding eagles depend are finite, disruptive intraspecific interactions increase with the population, and human disturbance/activity becomes a greater issue, will work to limit successful breeding of eagles in our state and region. And here, I feel compelled to specifically elaborate on the first item just mentioned, “resources upon which eagles depend”. Most important of these resources, of course, is **habitat**, the mere availability of a place for eagles to exist. In this context, mere numbers become relatively meaningless; where are these numbers located, and what is the status of these habitats? Are they “secure”? Will they still be available and useful to eagles in 50, 40, or even 20 years? This is the key question and challenge we face as we gloat over our current, wonderful “numbers” yet think ahead to the long-term conservation of this species for our children and theirs. Given the current, absolutely staggering trend of development and alteration of our “wild” areas, we have our work cut out for us, and not just in terms of bald eagles. Think fresh water for a moment, just for one example, not to mention that upon which eagles depend, fish. Anybody been keeping track of the demise of our ocean-life??

Ok, back to the numbers.

See Table 2, Figures 2 for the stats. Nest visits were made to all of the occupied sites (92), plus numerous other inactive and suspected breeding sites. Most of the sites were inspected/climbed and data gathered as described above. Ninety-eight of the 112 eaglets fledged in NY this year were banded during these annual nest checks; 9 nests containing 14 young could not be visited either because of timing (nearly or actually fledged young), lack of landowner permission, or because the tree was un-climbable. Prey remains were identified from all nests climbed, and 14 eggs were collected from 14 nests during visits; 7 of these 14 nest were failures, while the other 7 contained and fledged young. One other failed nest was known to have two unhatched eggs that were not collected. No blood samples were collected from any eaglets this year. Twenty of our 63 successful nests this year contained one young, 37 contained two young, and 6 held three young (only 3 such in 2004)(Figure 3).

While this year’s increase in numbers of breeding pairs and young fledged statewide is welcome news, it is always informative and hopefully useful to examine our (eagles’) failures. We tracked a total of 106 nesting sites in New York in 2005, places where eagles have nested at least once. Of these, 14 were listed as “inactive”, mostly because the pairs were no longer present at these sites, or in a few cases, because the pair had moved out of New York and into Pennsylvania (along the Delaware River), and thus could not be counted as

“New York” nests. Of course we are hopeful they will move back, and they often do. Six other nests were considered “occupied-failed”, meaning the breeding pair was present, decorated their nest, but did not lay eggs. This often happens to new or young breeding pairs in their first nesting attempt, due to sudden mate loss and/or replacement, due to nest substrate issues (tree or nest damage), or in cases where eagles get disrupted early in the breeding season before they can lay eggs, either due to other eagles or human disturbance. At one site in St. Lawrence County we listed as occupied-failed, upon climbing to the nest, there was extensive evidence of raccoon presence all around the nest tree as well as in the nest, which could have disrupted the early breeding attempt, or could have actually resulted in loss of egg(s) (eaten) that we were unaware of. Hopefully a predator guard placed on that newly discovered tree will eliminate this issue for 2006. A total of 23 additional nests were classified as “active-failed”, meaning the pairs laid egg(s) but failed to successfully raise young. Reasons behind these 23 include, to the best of our knowledge:

- unknown = 9
- human disturbance = 6
- other eagles interference = 4
- nest/substrate failure = 4

At least one of the “nest-substrate” failures was due to weather, when 30” of heavy, wet snow fell in early April in extreme western New York, causing the nest with eggs to fall out.

Regionally, southeastern New York continues to be the densest area of eagle nesting activity in the state. Three new nests were added again in extreme southwestern NYS in 2005, an area with much potential and I believe one where we will continue to see growth. Others were sporadically added to central, northern and eastern New York. As mentioned last year, northern New York, particularly the Adirondacks but also areas north of Albany, continue to be puzzling in their lack of nesting territories. Isolated, apparently suitable habitat appears to exist in this area, but either something is lacking (prey), or we are still in the process of filling in the better-quality habitats elsewhere (see attached map).

While DEC Region 4 once again had the greatest number of occupied pairs (27) in New York, Region 3 once again had the greatest number of total young fledged (35) (Table 3), as last year, about one-third of the total statewide production. Significant, to us, was that our only Albany County nest was finally productive again this year, fledging two young; this is only the 4<sup>th</sup> time in 16 breeding attempts this pair has been successful. Also of interest, our latest-ever incubation start date occurred this year, 24 April.

**Table 2. New York State Bald Eagle Breeding Summary 1993-2005**

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
Number Territorial <sup>1</sup> Pairs	20	24	25	29	35	40	45	51	65	70	75	84	92
Number Occupied <sup>2</sup> Pairs	20	23	25	29	35	40	45	51	62	70	75	84	92
Number Breeding <sup>3</sup> Pairs	16	18	23	26	28	35	43	43	56	60	68	79	86
Number Successful <sup>4</sup> Pairs	7	12	19	19	23	23	36	35	47	56	53	66	63
Percent of Occupied Pairs Successful	35	52	76	66	66	57	80	69	76	80	71	79	68
Number Young Produced (Fledged)	11	21	30	37	43	40	64	71	83	94	87	111	112
Young/Occupied Pair	0.55	0.87	1.20	1.24	1.14	0.97	1.40	1.35	1.34	1.34	1.16	1.32	1.22
Young/Breeding Pair	0.69	1.11	1.30	1.38	1.43	1.11	1.47	1.60	1.48	1.57	1.28	1.40	1.30
Young/Successful Pair	1.57	1.67	1.58	1.8	1.74	1.70	1.75	1.97	1.77	1.68	1.64	1.68	1.78

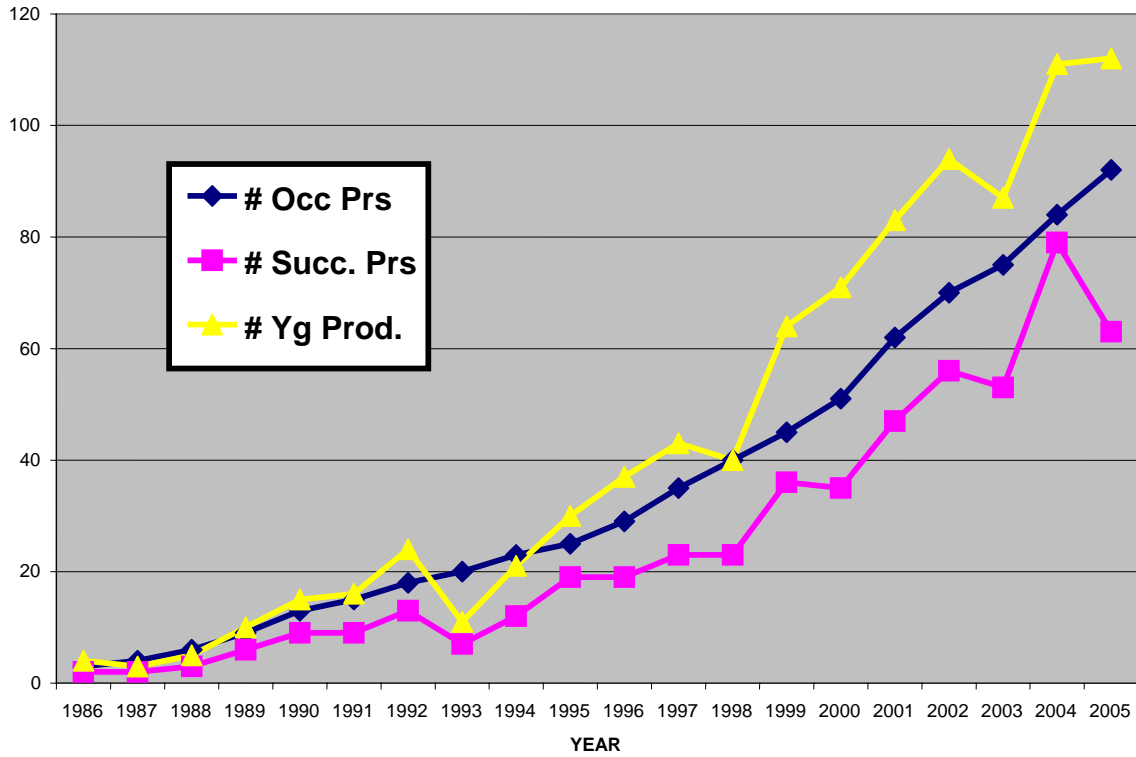
<sup>1</sup> A territorial pair is defined by the presence of two potential breeding birds within suitable nesting habitat during the breeding season where some sign of pair bonding or nesting is also evident (e.g. copulation, stick-carrying, attempt at nest-building, etc.).

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

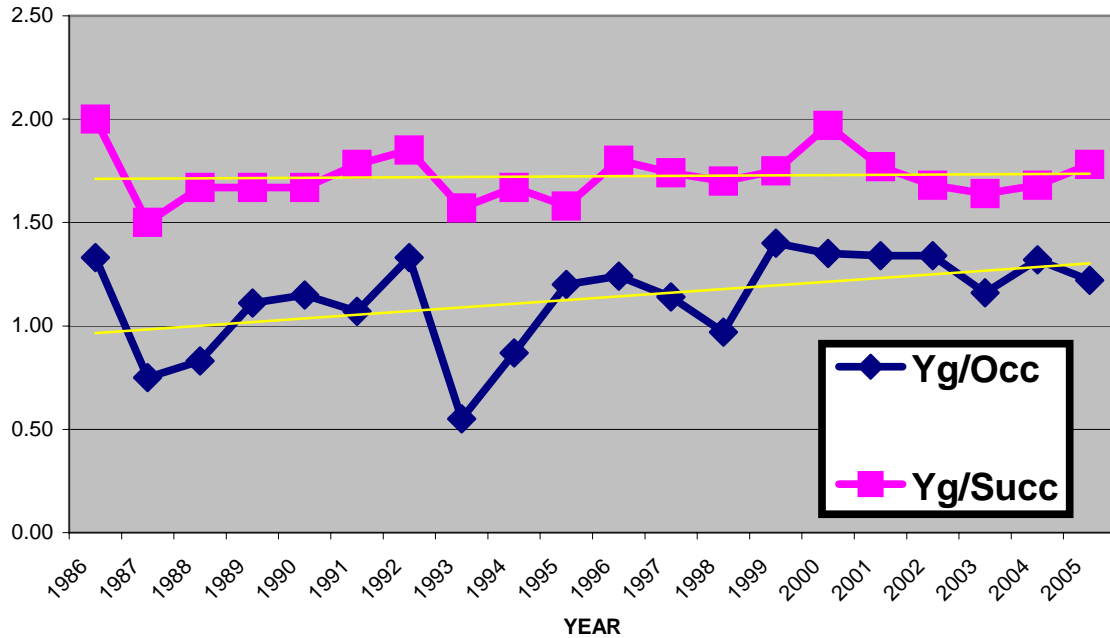
<sup>3</sup> A breeding pair is defined by a pair of birds within a nesting territory where evidence indicates that eggs were laid (such as eggs, young, incubation, or eggshell fragments). "Breeding pair" replaces the old term "active nest."

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

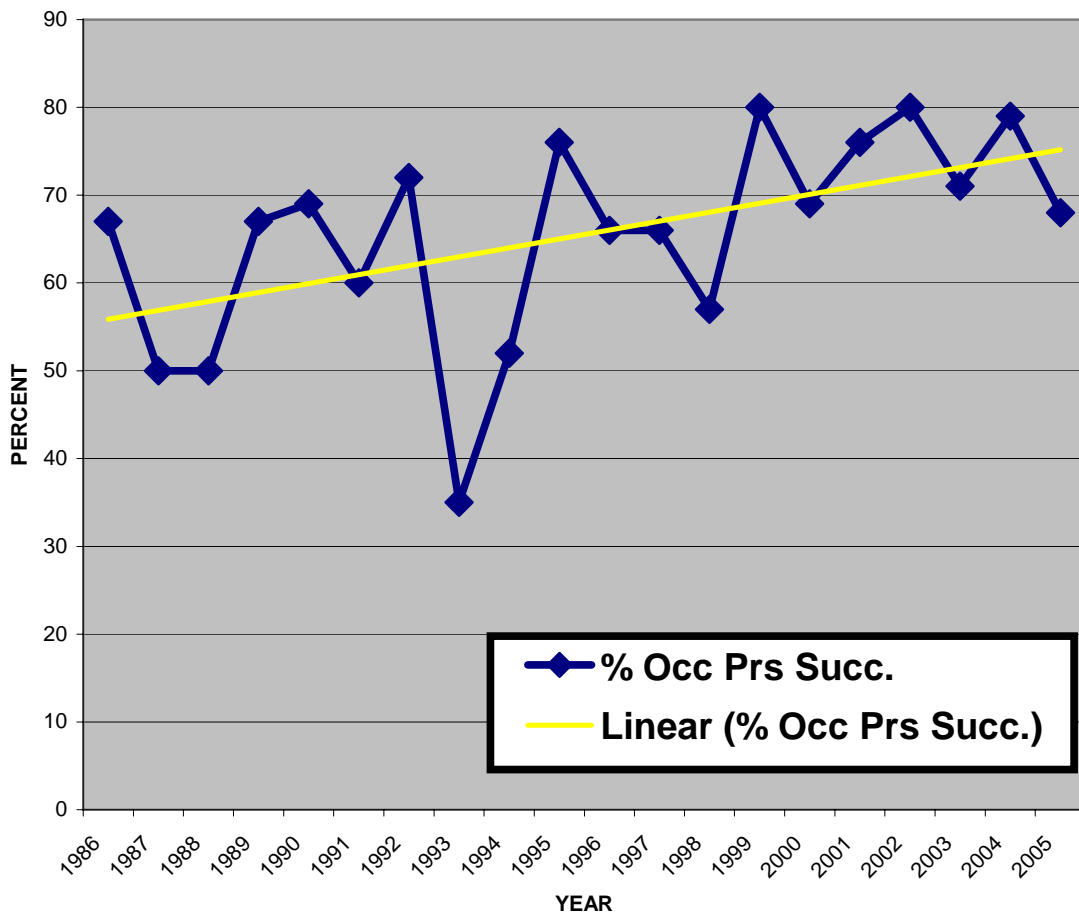
**NYS BAEA PRODUCTIVITY:  
ANNUAL # OCCUPIED AND SUCCESSFUL NESTS AND  
YOUNG FLEDGED**



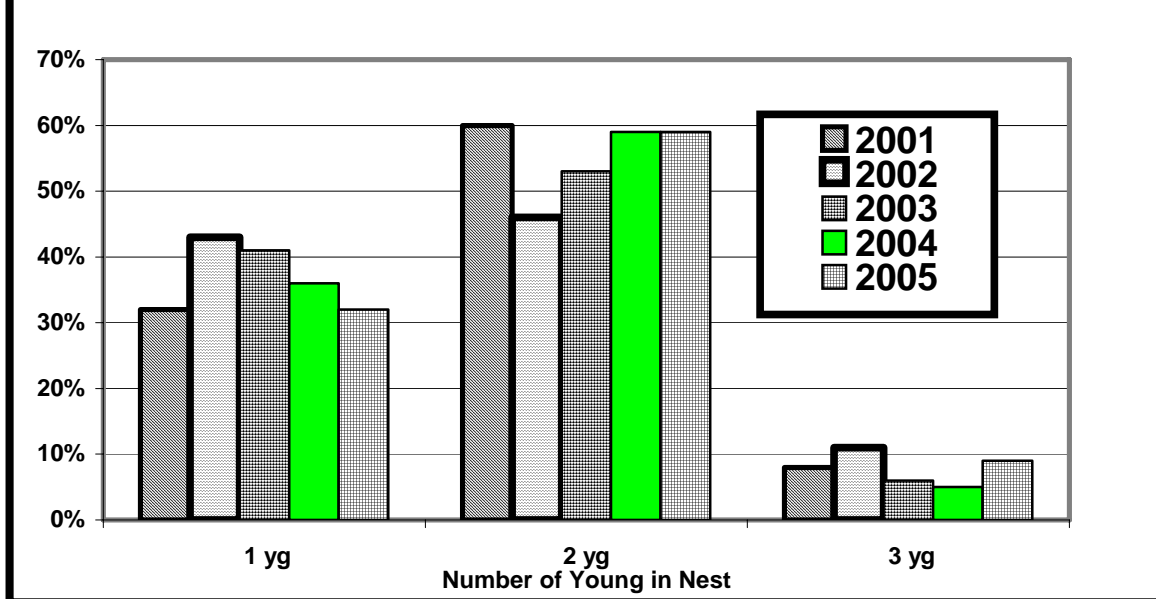
**Fig. 2b. NYS BAEA PRODUCTIVITY:  
YOUNG PER OCCUPIED AND SUCCESSFUL PAIR**



**Fig 2c. NYS BAEA PRODUCTIVITY:  
PERCENT OF ANNUAL BREEDING PAIRS SUCCESSFUL**



**Fig. 3. Percent of 1, 2, 3-young Baea Nests in New York Each Year**

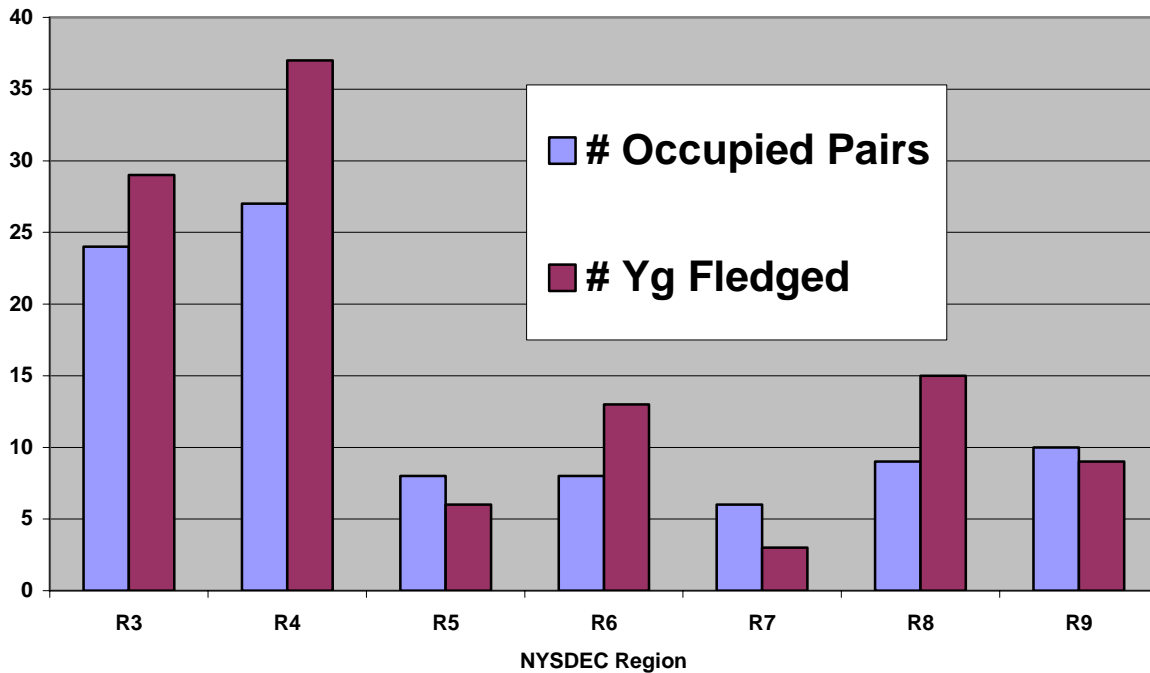


**DEC Regional Area Productivity Information:**

Table 3. Bald Eagle Productivity by NYSDEC Region, 2002-2003-2004-2005

DEC REGION	# TERR	#OCC	#BREED	#SUCC	#YG
1	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
3	19-21-23-24	19-21-23-24	18-20-23-21	18-17-20-16	29-30-35-29
4	21-24-27-27	21-24-27-27	18-21-24-27	17-13-17-22	31-22-29-37
5	7-6-8-8	7-6-8-8	5-5-7-8	4-3-6-4	6-5-10-6
6	5-7-6-8	5-7-6-8	4-6-6-7	4-5-6-5	7-7-10-13
7	2-4-6-6	2-4-6-6	2-3-5-4	2-2-4-3	3-3-6-3
8	11-8-8-9	11-8-8-9	10-8-8-9	8-8-8-7	12-13-13-15
9	5-5-6-10	5-5-6-10	3-5-6-10	3-5-5-6	6-7-8-9
totals	70-75-84-92	70-75-84-92	60-68-79-86	56-53-66-63	94-87-111-112

**Number of Occupied Pairs of Bald Eagles and Young Fledged by NYSDEC Region, 2005.**



Hudson River, NY#76, 25 May 2005 P. Nye

***Hudson River***

The Hudson River (HR) breeding bald eagle population continued its expansion, increasing by another pair this year to 12 total pairs; the number of successful nests also climbed by one in 2005 to 10. The class of 2005 HR breeders were significantly more successful than in 2004, fledging 18 young this year, compared to 13 in 2004. Percent nesting success in 2005 was similar to that in 2004, maintaining an excellent level at 83%. Of those

eagles that bred along the HR in 2005, they produced a healthy 1.50 young per occupied pair, compared to 1.18 (still very respectable) in 2004. No HR eaglet blood was collected this year, but one unhatched egg was collected from a nest containing one eaglet. Two eggs were also observed in another HR nest that had failed, but were not collected. Only two of the HR occupied nests failed; both contained eggs, and both are believed to have failed due to human disturbance. Given the level of human activity along the HR, currently and projected, increased management attention will be necessary in order to ensure productive eagles.

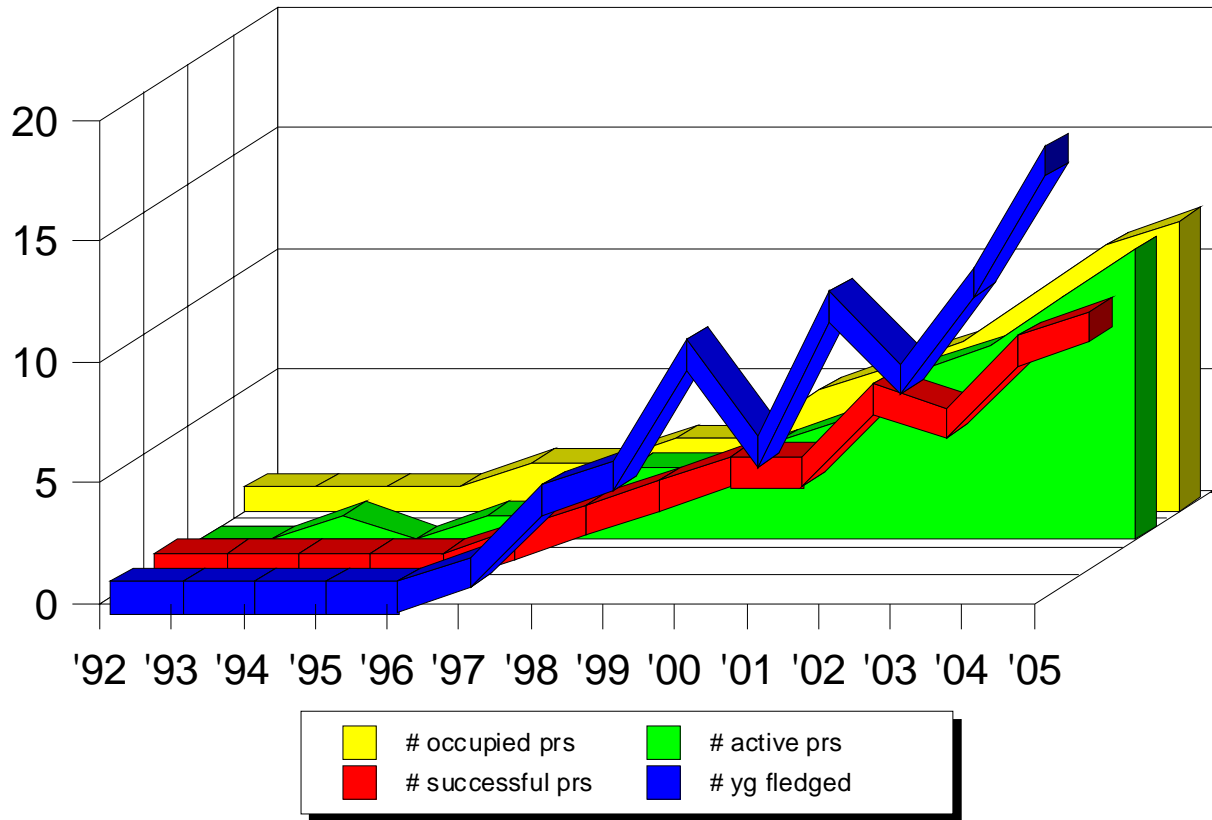
We added to last year's big news of eagles nesting on the Upper River above Troy for the first time in 2004, with the addition of another nesting pair along the upper Hudson this year. This new nest, #101, produced 2 young, and may have been a pair that moved to the upper Hudson from their 2004 nest along the nearby Mohawk River (the Mohawk nest site was inactive in 2005). Both of these upper Hudson nests were productive in 2005.

Breeding results since the first pair set up a nest on the river in 1992 are presented in the following two graphics:

**Annual Bald Eagle Breeding Success: Hudson River, New York**

<b>YEAR</b>	<b># Occupied Territories</b>	<b># Active Territories</b>	<b># Productive Territories</b>	<b># Young Fledged</b>	<b>Yg/ Occ</b>	<b>% Occ Succ</b>
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

# Annual Breeding Success of Hudson River NY Bald Eagles





NY#12, 19 May 2005, S. VanArsdale

### ***Delaware River***

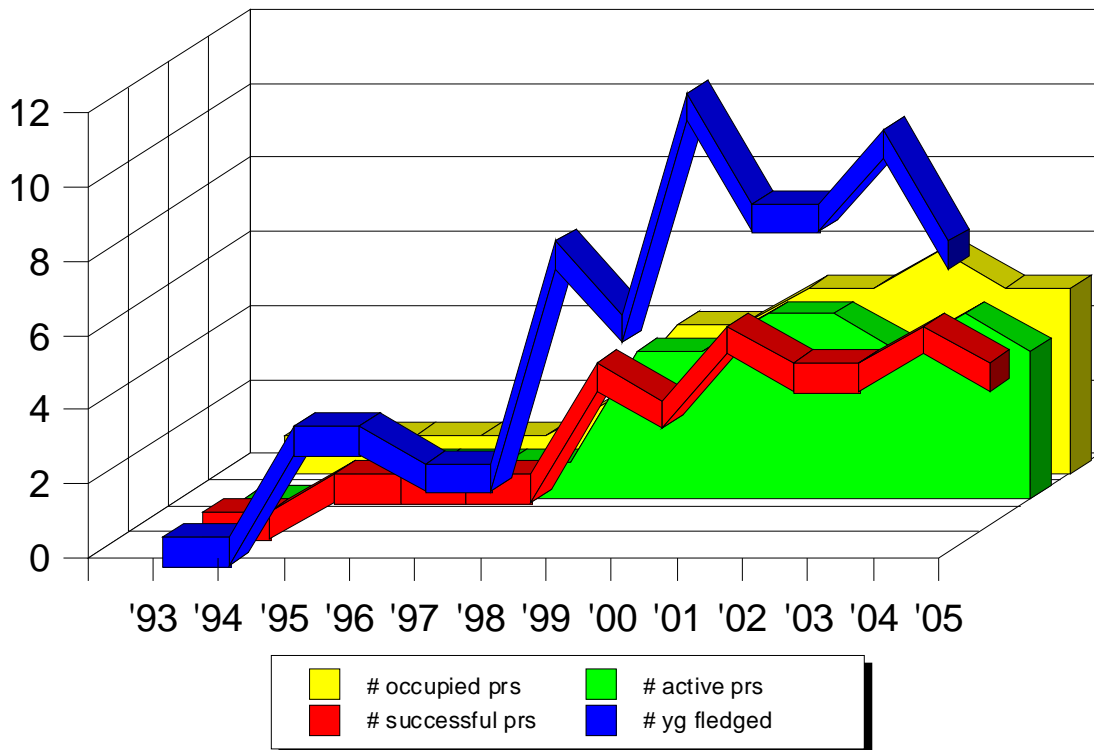
Five pairs of bald eagles again nested along the NY side of the Delaware this year, the same number as in 2004; 4 of which were successful (80%) in fledging 8 young. The data suggest that the number of nesting pairs and young produced along the Delaware have reached a plateau since 1999, however, these data do not take into consideration bald eagle nests accruing on the Pennsylvania side of the River, some of which are New York pairs that have moved across the border, for reasons including human disturbance and nest/substrate failure. Although our data are incomplete, at least 6 additional nests are known along the PA side of the Delaware, accounting for an additional (minimum) 8 young.

Development and logging along the Delaware River corridor (including upstream and the east and west branches of the river) continue to be a concern, particularly in regard to loss of habitat. Significant, dedicated set-asides of remaining Delaware corridor habitats will be required to ensure perpetuation of sensitive wildlife and scenic beauty for the next generation. We are also becoming aware of human disturbance issues at eagle breeding sites, the likely cause of at least one NY nesting pair moving to the PA side of the River. As with the Hudson, this is an issue that will have to be addressed if eagles are to be successful along the Delaware. As noted above (see “winter”), a joint study to determine the essential habitats for bald eagles along the Upper Delaware River was developed by New York DEC and the National Park Service (Upper Delaware) and is being co-funded by both agencies. Both breeding and wintering eagles are the focus of this effort, as is documentation of human disturbances.

# Delaware River (main stem), New York

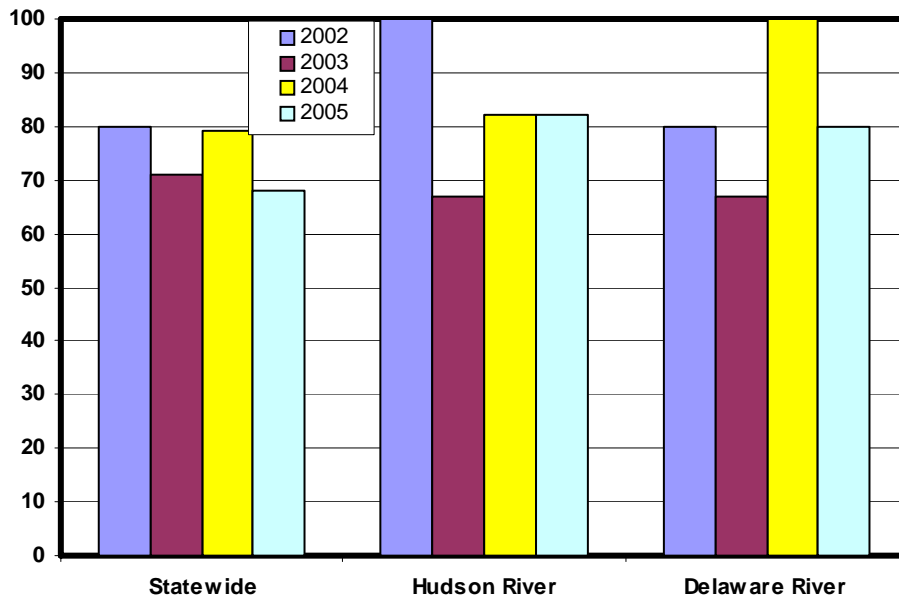
YEAR	# Occupied Territories	# Active Territories	# Productive Territories	# Young Fledged	Yg/Occ	% Occ Succ
1993	1	0	0	0	0.00	0
1994	1	0	0	0	0.00	0
1995	1	1	1	3	3.00	100
1996	1	1	1	3	3.00	100
1997	1	1	1	2	2.00	100
1998	2	1	1	2	1.00	50
1999	4	4	4	8	2.00	100
2000	4	4	3	6	1.50	75
2001	5	5	5	12	2.40	100
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

Annual Breeding Success of Delaware River (mainstem) NY Bald Eagles

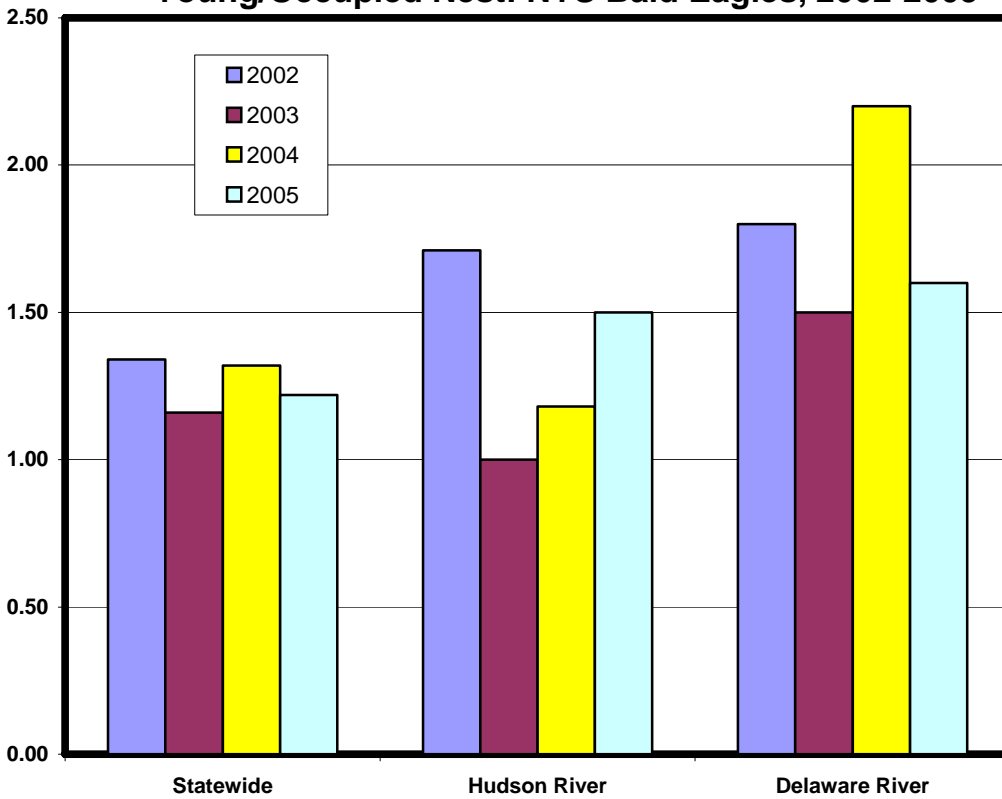


# NYS Summary: Annual Bald Eagle Breeding Success:

Overall %Nest Success: NYS Breeding Bald Eagles, 2002-2005.



Young/occupied Nest: NYS Bald Eagles, 2002-2005



## Other Noteworthy 2005 Events:

### *Nestling Movement/Survival Study*

In 2004 we began tagging fledgling bald eagles from New York State nests with solar-powered satellite transmitters. We hope to answer many questions in this study, including survival, identification of home ranges, pattern of movements during their first dispersal and beyond, over-wintering 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; so far, the results from them have been encouraging.

Four nestlings were outfitted with solar-PTTs in 2004, all from different but nearby nests, including two from separate nests from the Montezuma National Wildlife Refuge in central New York, and two from separate nests along the Upper Delaware River in southeastern New York, as part of the essential habitats identification project we are initiating there. Four more fledglings were similarly outfitted in 2005; siblings from a nest site south of Rochester, and single eaglets from two nests in eastern New York, one on the Upper Hudson River. As mentioned last year, one of the big challenges of radio-tagging nestling eagles is dealing with them when they are old enough to carry the backpack, at 9-10 weeks of age, an age where they know how to use their “weapons” and are not afraid to do so. Consider trying to “stuff” a 12-pound, 30” high, 6’ wing span eaglet baring eight 1.5” long talons, and strong as a 14 year old boy, with its transmitter, into a sack for a trip to the ground while hanging from the side of a 6’ wide, 5’ deep nest 105’ off the ground ! Special thanks this year for that task goes to ESU tech Mike Clark, who did yeoman’s duty in his first year climbing and handling.

Briefly, two of the four 2004 nestlings may have died (or hopefully maybe just their transmitter?). Sadly, Y89, pictured above in the “winter” section, may have been one that was lost. The two youngsters from the Delaware River remain alive and active, and both have revisited their “home territory” periodically. All four 2005 young seem to be doing well so far, despite their significant travels during their first year of life. Interestingly, but not surprisingly, all 8 nestlings “went their own way” upon departure from their nesting territories, with seemingly no pattern among them. Movements and fate of these eagles can be followed on the Journey North website at: [www.learner.org/jnorth](http://www.learner.org/jnorth), and hopefully soon, also on DEC’s web site at: <http://www.dec.state.ny.us/website/dfwmr/wildlife/endspec/eagle/index.html>.

NY#19, Y90, Montezuma Refuge.  
Solar-powered backpack Ptt with blistered vhf radio  
Photo by: P.Nye





a “not too happy” P88, Albany County, NY#10, 6/21/06 Michael Clark, NYSDEC

Thus far, we have seen some interesting and wide-ranging movements. Our young eaglets are “exploring” farther from their nests, earlier, than we usually expect. Some of the data from these eight young bald eagles from our 2004 and 2005 study follow:

<u>Eaglet #</u>	<u>Sex</u>	<u>Fledge Date</u>	<u>Nest Location</u>	<u>Primary 2005-06 Over-wintering location</u>
Y89	M	9 July 2004	Montezuma NWR NY# 4	deceased? last signal 8/31/05 Labrador, CA
Y90	F	27 June 2004	Montezuma NWR NY# 19	deceased? Last signal 10/31/05 SE shore Lake Ontario, NY
Y94	F	7 July 2004	U Delaware River NY#20	Chesapeake Bay
Y96	F	7 July 2004	U Delaware River NY#61	S.NY, Upper Delaware River
P88	M	7 July 2005	Albany County NY#10	W. CT
P89	F	7 July 2005	Livingston Co. NY#55	NW PA
P90	M	7 July 2005	Livingston Co. NY#55	PA-OH border
P91	M	7 July 2005	Upper Hudson River NY#101	VA-WVA border



DVM Ed Becker with U14, recovered 9/16/05 Chenango Co., NY (shot); released 10/24/05 Hudson River, NY  
Photo by: P. Nye

### **Recoveries:**

During the current reporting period, calendar 2005, 23 bald eagles and 1 golden eagle were recovered in New York State during the year (21 were recovered in 2003 and 25 in 2004); A record 6 eagles were recovered alive and 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, staff at Cornell Univ. Vet School, 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.

Total eagles recovered = 23 bald eagles, 1 golden eagle (in parentheses)

eagle stats:

Nestlings = 2

Immatures = 15 (1)

Sub-adults = 2

Adults = 4

# of NYS Banded birds = 6

Alive/released = 6

Alive/Died = 3

Found Dead = 14 (1)

Causes of injury/death were as follows:

unknown = 9

train = 5

vehicle = 4

shot = 2

killed by another eagle = 2

electrocuted = (1)

disease (Botulism E) = 1

Noteworthy among these recoveries continues to be the number of eagles killed by high-speed trains in New York, an issue we and the Fish and Wildlife Service are working on with the affected railroads. Also continuing to be noteworthy are the two deaths attributed to other eagles, something we will undoubtedly see more of as our population continues to expand. Lead poisoning, either by direct injection (shooting), or by secondary uptake (feeding on lead-laden game) continues to be a concern.



Railroad tracks along east side of Hudson River, NY, within prime bald eagle habitat  
Photo: P. Nye 4/25/06

## *Overall*

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 must go to the many extremely dedicated regional staff and volunteer nest watchers who help keep track of New York's eagles each year. Without their tireless dedication and countless hours, most of this data-gathering would not be possible.

Special recognition this year must continue to go to **Scott VanArsdale**, DEC Region 4, **Steve Joule**, DEC Region 3, and **Mike Clark**, central office, for their role in climbing, banding, and landowner contacts. Without their very capable help "in the trees" this year, complete nest monitoring would not have been possible. While

not climbing, **Kathy Michell**, **Blanche Town**, DEC Region 6, **Mike Allen**, DEC Region 8, and Region 9 staff including **Ken Roblee**, **Dan Dougherty**, **Bob Lichorat**, and **Greg Ecker** deserve much credit for their diligence in finding and protecting eagle nests in their regions. If we are to continue to gauge the health and status of our eagle population into the future, their increased participation 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!

- Kathy Maloney
- Don Hamilton, National Park Service, Upper Delaware River
- Marybeth Warburton
- Chuck Davis
- Doug Traudt, Biological Survey
- Gene Weinstein
- Tom Lake, Chris Letts NYSDEC
- Will Prinup, Seneca Nation
- Carl Lindsley
- NY State Police Aviation Unit
- Lori McKean, The Eagle Institute
- Christine Sousa and Joe Racette NYSDEC Region 5
- Chris Nadareski, Rob Stranges, Joe Kennedy and other staff of the NYC Dept. of Environmental Protection.
- Ed McGowan NY/NJ Trail Conference
- Linda LaPan
- Rob Taylor, NYS Office of Parks, Recreation, and Historic Preservation
- Lou Buscher
- Vicki Vosburgh

Also, we recognize and appreciate Seneca Meadows, Inc. for their monetary contribution toward our Montezuma Refuge fledgling-tracking study.

Your involvement is more important each year .... **THANK YOU!**

Prepared by: P. Nye  
NYSDEC  
625 Broadway  
Albany, NY 12233-4754  
518-402-8859