BALD EAGLE SUMMARY REPORT

NEW YORK NESTING TERRITORIES

1, 3, and 4

1989

Michael L. Allen
Sr. Wildlife Technician
Division of Fish & Wildlife
Region 8
Avon, New York

INTRODUCTION

Observations at New York bald eagle nest sites #1, #3, and #4 in Livingston, Genesee, and Seneca Counties respectively, continued during the 1989 breeding season.

The Region # 8 Wildlife staff, (New York State Department of Environmental Conservation) has primary responsibility for undertaking these observations, in as much as all three territories are located within Regional boundaries. (See Figure #1)

As in 1988, the majority of staff time spent, occurred at territory # 4 (Montezuma National Wildlife Refuge). This was due to the unusual situation of three adult eagles tending this nest it was felt that more detailed documentation of this site would be desirable. (See 1988 Bald Eagle Nest Site Summary Report, New York Territories #1, #3, and #4, by Michael L. Allen) As has been the experience in the recent past, the 1989 nest season was not without setback.

The following report is a summary of information gathered from all three sites.

TERRITORY # 1 - Livingston County - (See Figures #1 & #2)

At the beginning of the nesting season, the resident pair of eagles at this site, consisted of a New York male, hacked in 1977, in Seneca County, (Montezuma NWR), and a banded female of unknown origin. The male had been resident since March of 1981, and the female since April of 1984. In 1989, the pair was documented to have returned to the territory during the third week of February, which is consistent with historic data collected from this site. However, the onset of incubation was identified as March 8 or 9, which is ahead of any previous record. All activity through March 19, appeared normal, but on March 20, at approximately 14:30 hours, the two adults were nowhere to be found. Perched above the nest at that time was what was ultimately identified as a four year old sub-adult eagle that had been released from the Albany County hack site in 1985. The origin of this bird was determined by the presence of a right wing, yellow patagial tag with a red auxiliary slash.

The failure of this nest attempt was very disappointing, although the possibilities for the cause of that failure have proven to be very interesting.

On March 22, a research team visited the site with the hope of obtaining information that might shed light on the disappearance of the resident pair, and what part, if any, the sub-adult played in this abandonment.

There are several possibilities as to the actual cause of nest abandonment. Upon approach to the site, the same sub-adult eagle flew from its perch above the nest. The presence of this bird, and its apparent affinity to the nest raises additional possibilities as to the cause of nest abandonment. This will be addressed at the end of the text for Territory # 1. When the research team arrived at the site, they discovered that a small sapling had fallen over and lodged against the nest tree, above the metal predator guard that had been installed the previous year. Raccoon (Procyon lotor) tracks were present in the area and it is conceivable that the fallen sapling provided this known predator of eagle eggs, with access to the nest. Due to snow cover at the site, a total evaluation and collection of egg shell fragments, was not possible. Some fragments were discovered in the nest, but it was not determined how many eggs had been present.

Over the next two and one half weeks, observations in the area of this nest, revealed no sign of either of the resident adult eagles. During this same time period, the 1985 sub-adult was seen on almost every visit to the site, usually at, or at least very near the nest. On April 9, the male of the resident pair was observed at the nest for the first time since both birds disappeared on March 20. The sub-adult bird was also present, and apparent pair bonding activity between the two birds was observed. Although copulation was attempted on several occasions, and both birds were observed adding material to the nest, no true nest attempt resulted.

CONCLUSIONS & RECOMMENDATIONS (Territory # 1)

On April 18, an anonymous report was received through the Division of Law Enforcement, regarding the discovery of an eagle carcass on the west side of Hemlock Lake, within a few hundred yards of the nest site. The author and observer Ray McHarge, along with Ray's dog, extensively searched the area for six hours on the following day but found nothing. It is unknown who the caller was, and the exact location of the alleged discovery was somewhat vague, so the search pattern was expanded substantially so as to cover the area completely. McHargue and the dog returned to the area a day or two later and searched for three more hours, but were unsuccessful in locating anything new.

There are a number of possibilities for the exact cause for the nesting failure at this site, and the subsequent abandonment by the resident eagles.

1. As was mentioned previously, the small sapling leaning on the nest tree above the predator guard, may have provided an avenue of access to the nest for a raccoon. Such a disturbance, may have been sufficient to cause the resident birds to completely abandon the area. Considering

other disturbance factors that have occurred at this site in the recent past, i.e: nest collapse in 1987, and possible human disruption in 1986, it is conceivable that the female could not tolerate this years' problem, and simply left.

2. In as much as the report of an eagle carcass was received, it must be considered that the female of the pair may have been lost. Although no carcass was located, even after extensive searches, does not rule out the possibility that the bird may have been there. Unfortunately there is no way to substantiate this at this point. Obviously this is the least desirable of the possible answers to what occurred, since it would mean the loss of a proven successful breeder.

3. The presence of the sub-adult on the nest less than one day after abandonment, presents the most interesting questions regarding the failure of this site in 1989.

It must be mentioned that observations at this nest after the failure, revealed this new bird to be substantially larger than the male. Observations from prior years, showed the resident female to be the larger of the two, but by no great degree. It is the opinion of the author that the new sub-adult female was as much as one half again as large as the male, and on several occasions it was apparent that the male was very cautious of the sub-adult approaching to closely. On at least two occasions when the new bird attempted to perch next to the male, he flew off in haste. Apparently as time passed, this concern diminished since copulation was attempted.

It seems to be to much of a coincidence, that a new bird would be willing, much less in place, to take over for a lost resident in less than twenty four hours of nest failure, unless this new bird had possibly played a part in the disruption. Given the observed size of the sub-adult, it is conceivable that this bird actually disrupted the ongoing nest attempt and caused the resident female to abandon the territory, or even incapacitated the established eagle, which may be a solution to why an eagle carcass was reported. It is obvious that not enough is known about this type of situation as it relates to bald eagles, and unfortunately since no one witnessed what actually happened, it is unlikely that a definite solution will ever be found. Had the reported carcass been located, many questions would probably have been answered. This territory will be watched with great interest during the 1990 breeding season to monitor the progress of this apparent new pair.

TERRITORY # 3 - Genesee County - (See Figures # 1 & # 3)

As has been the pattern since the discovery of this nest in 1986, limited detailed information for the course of the breeding season is available. Most of the information gathered was supplied by the staff of the Iroquois National Wildlife Refuge as time permitted. Although intensive observations were limited, the Refuge staff kept the Bureau personnel up to date as to the status and progress of the nesting attempt. Fortunately, with the problems that occurred at territory #1 and the intensive effort to monitor activity at territory #4, the nest attempt of the resident birds at the Iroquois site progressed without incident.

As had been the case in 1986 and 1988, two eaglets were produced at this site in 1989. On June 12, the research team visited the nest to band the young. Each eaglet was fitted with a standard USF&WS #9 rivet band on the left leg, and a blue anodized aluminum New York State rivet band, with yellow alphanumerics, on the right leg. The banding data for each bird is as follows:

Eaglet	USF&WS Band	New York Band
# 1	629-33304	X02
# 2	629-33305	X03

Both birds continued to develop normally, and fledged around the third week in July.

As far as can be determined the adults at this site were the same two eagles that successfully produced young in 1988.

TERRITORY # 4 - Seneca County - See Figures #1 & #4)

As has been mentioned previously, the majority of observation time spent by Bureau personnel occurred at site #4 on the Montezuma NWR. The fact that three adult eagles tend this site simultaneously, and that very little data exists in the literature regarding this phenomena, justifies the extra effort expended monitoring this nest.

The resident trio at site # 4 consists of a male hacked from the Montezuma release site in 1978. This bird bears a white patagial tag, with a yellow dot (auxiliary marker) on the right wing, and is known as B06, corresponding with the alphanumeric leg band he carried. The second male is a 1982 release from the Oak Orchard site (Genesee County), and carries a yellow patagial tag on the left wing. This bird and the female of the trio are both banded, but to date, have not been positively identified as individuals. In addition the female has no patagial tag.

In February of 1989, as expected, the resident trio returned to the artificial nest platform that was installed on the site in December of 1987. (See 1988 Bald Eagle Nest Site Summary)

Since this nest was discovered in 1987, little evidence has been observed to indicate that these eagles leave the immediate area for any length of time. This would include, even the coldest periods prior to the onset of the breeding season in December and January. This was probably a major factor in their abandonment of the original site during the 1988 breeding season. All three birds were seen in the area prior to the installation of the platform, and were probably alarmed by the extensive activity at the nest. Although undesirable, this was a calculated risk that was considered acceptable when compared to the potential danger of the original nest falling from its precarious location in a dead snag.

After the failed nest attempts of 1988, the trio returned to the platform, and were observed adding materials to that nest throughout the remainder of the summer. The increased affinity to the nest platform virtually guaranteed it's use during the 1989 season.

As mentioned, these birds have stayed in the general area throughout the year. Actual breeding activity for 1989 began during the last week of February with all three birds present. Detailed observations began on March 5, and were initially, somewhat disturbing. There appeared to be some hostile interaction between B06 and the yellow tagged male. This same type of problem was believed to have been a contributing factor to one of the unsuccessful nesting attempts of 1988.

Fortunately, whatever hostility existed between these two birds, appeared to be short lived and within a day all three had settled down to a basically uninterrupted breeding cycle.

The first indications of incubation, were observed on March 15. However, this may have been preliminary activity, since substantial breaks in incubation posture were witnessed on both March 15 and 17. After that date there were only a total of three minutes when the egg(s) were observed to be unattended. On March 24 a total of 630 minutes of observation time was spent, with only two minutes observed when the egg(s) was not covered.

An effort was made during the incubation period to document, how much time each bird spent actively incubating the egg(s). Data collected during the 1988 nest attempts, revealed that the female was in position 48.75% of the time, BO6 - 38.04% of the time, and the yellow tagged male 9.1% of the time. In addition the eggs were not attended 4.11% of the observed time. (total observation time = 2484 minutes = 41.4 hours). During the 1989 breeding attempt the female was witnessed in attendance 46.56% of the time, BO6 - 22.47% of the time, and the yellow tagged male 12.79% of the time. The egg(s) were observed to be unattended for 2.95% of all observed incubation time. It must be noted that of the 115 minutes that the egg(s) were observed to be unattended, 112 minutes were on March 15 and March 17, which leads the observer to believe that the early signs of incubation were only preliminary activities.

All specific incubation data for each individual eagle are listed in Figures #5 and #6.

In addition, one problem that was not anticipated prior to the onset of activities at this site in 1989, was the difficulty in making early morning observations on sunny days. The vantage point for viewing this nest lies to the west. The position of the rising sun on clear days, makes positive identification of individual birds virtually impossible, for as much as three hours in the morning. Consequently, of the 3894 minutes (64.9 hours) spent in observation during the incubation period, it was unknown which eagle was in position for 594 minutes or 15.25% of the time. One possible solution to this problem will be addressed at the end of the text for Territory # 4.

The first definite indication of a hatch was observed on April 25, when an obvious change in the posture of the attending birds was seen. On the following day, one adult was observed tearing at a fish carcass, and passing small bits of fish low into the nest. The first view of what turned out to be the only eaglet hatched, came on May 5.

The development of the eaglet progressed normally and the research team made a visit to the nest on June 12 to complete the banding. The data is as follows:

USF&WS Band	New York Band	(Blue with yellow alphanumerics)
629-33303	X01	

The eaglet fledged during the morning of July 15, and was seen repeatedly in the vicinity until mid November, when it apparently left the area.

CONCLUSIONS and RECOMMENDATIONS (Territory # 4)

The successful nesting of the resident eagles at this nest site, by far overshadows any information that can be gathered by observations made there. This, after all is why the restoration program in New York was started, in 1976. However, given the unique circumstances that exist at this territory, common sense dictates that every effort be made to monitor and document the activities of this trio while the opportunity is available. There is no way of knowing how long this situation will continue, and it would be unfortunate to miss an opportunity to add some previously unknown information to the life history of the bald eagle.

The public viewing station that was proposed and accepted under the Return a Gift to Wildlife program, should prove to be a great asset for monitoring activity this site. The basic proposal calls for the installation of a tiny video camera at the nest, with the picture being sent back to the Refuge visitor center, giving the general public an opportunity to see the nest life of the bald eagle on a daily basis. A major benefit from this proposal will be the ability of the researchers to video tape activities at this nest for review and documentation. This will be a great help in determining egg laying, and hatch dates as well as aiding in general observations at the site. The initial proposal called for the system to be installed and operational prior to the 1990 breeding season. Unfortunately some of the required equipment was delayed, and rather than risk unnecessary disturbance to the eagles, the project was postponed until the 1991 season.
It is anticipated that all aspects of the project should be in place, and operational during the early fall of 1990.

In addition, the ability to review video footage from this system should reduce the number of hours that will be required to be spent in, on site observations, allowing more time for monitoring of other regional nests that presently exist and those that develop in the future.

It is presently anticipated that there will again be intensive observations made at Territory # 4 during the 1990 breeding season.

One particular point of interest that must be addressed, was the collapse of the original nest tree. After substantial amounts of spring rain, the dead elm snag that had held the nest prior to the installation of the pole and platform, fell to the ground. The most interesting aspect of this, was that the tree did not fall quickly as expected, but fell gradually, with the entire event taking over twenty-four hours. This reinforced the necessity of the effort that was made to place the pole and platform in December of 1987. There is little doubt that the 1989 nest attempt would have ended in failure, had this radical step not been taken.

Figure # 1

General Location Map
Region 8 Bald Eagle Nest Sites
(Regional Boundary in Green)

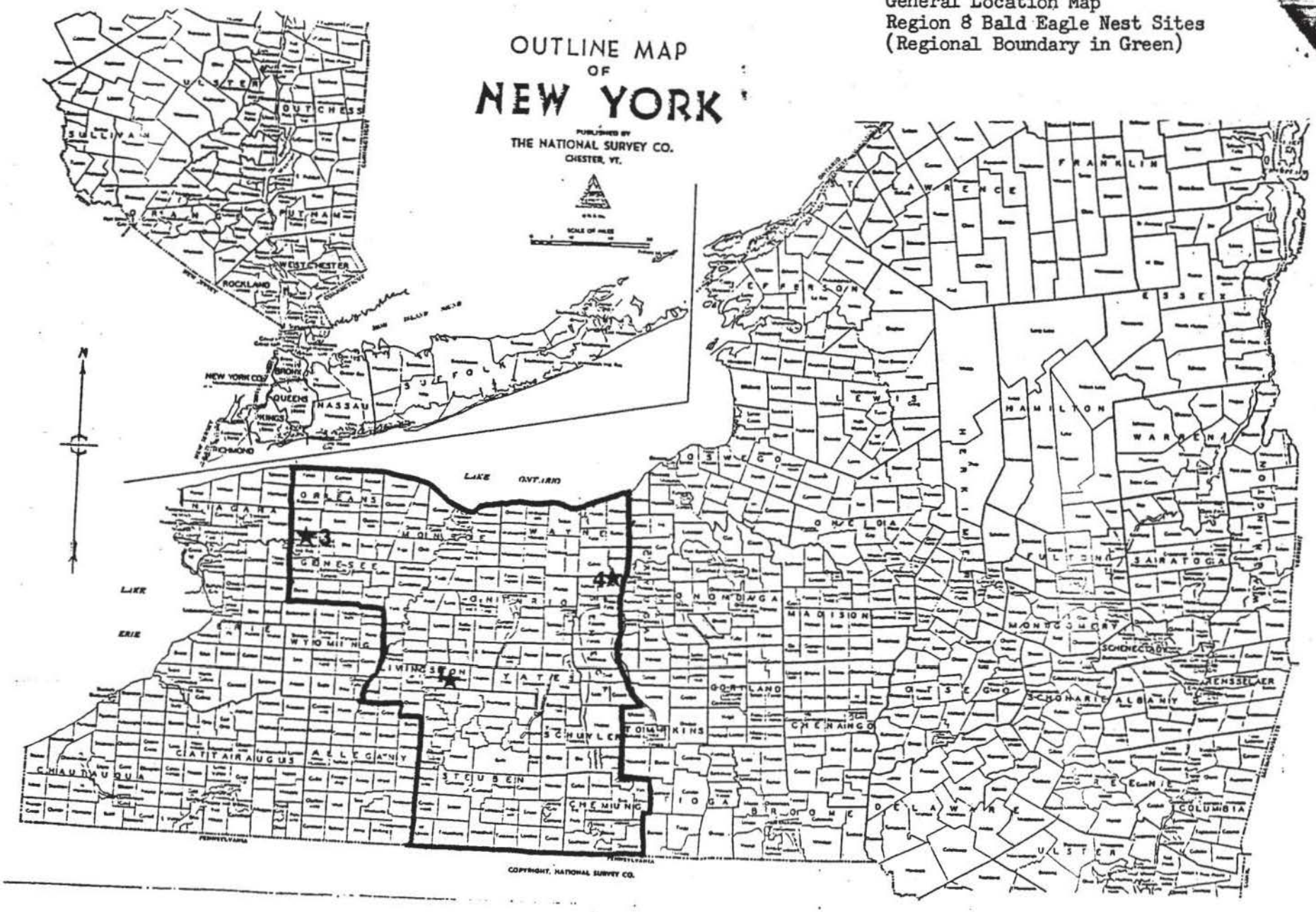

FIGURE # 5
INCUBATION ACTIVITY BY INDIVIDUAL EAGLE
TERRITORY # 4
MONTEZUMA NATIONAL WILDLIFE REFUGE
1989

DATE	TIME (MIN.)	BY UM	%	BY B06	%	BY YT	%	UNK	%	EGGS UNATTENDED	%
3-15	286	33	11.5	109	38.1	36	12.6	75	26.2	33	11.5
3-17	135	0	0	31	23	25	18.5	0	0	79	58.5
3-18	30	0	0	0	0	0	0	30	100	0	0
3-24	630	467	74.1	125	19.8	36	5.7	0	0	2	0.3
3-31	150	0	0	0	0	0	0	150	100	0	0
4-3	45	0	0	0	0	0	0	45	100	0	0
4-7	225	121	53.8	0	0	104	46.2	0	0	0	0
4-10	40	0	0	0	0	0	0	40	100	0	0
4-11	410	206	50.2	88	21.5	116	28.3	0	0	1	0.2
4-14	130	0	0	0	0	0	0	130	100	0	0
4-16	100	42	42	42	42	0	0	16	16	0	0
4-18	100	100	100	0	0	0	0	0	0	0	0
4-20	411	73	17.8	160	38.9	140	34.1	38	9.2	0	0
4-21	255	0	0	185	72.5	0	0	70	27.5	0	0
4-22	420	324	77.1	62	14.8	34	8.1	0	0	0	0
4-23	320	302	94.4	18	5.6	0	0	0	0	0	0
4-24	207	145	70.0	55	26.6	7	3.4	0	0	0	0
Total	3894	1813	46.6	875	22.5	498	12.8	594	15.3	115	3.0

Information listed above includes early dates of observed incubation posture, which were possibly preliminary activities.

UM = Unmarked adult female

B06 = 1978 Montezuma hacked male - white patagial tag, right wing.

YT = 1982 Oak Orchard hacked male - yellow patagial tag, left wing.

UNK = Bird in incubating position was unknown.

The author would like to express his sincere gratitude to the following people and agencies for their help and co-operation in assisting the Bureau of Wildlife to maintain the continuity of documentation of all territories within the region.

LaVerne and Mary Noble, especially for taking the extra time to watch the activity of the trio at Territory # 4 when the author was involved with other projects. Also for allowing him to continually use their driveway as an observation point.

Ray and Deb McHargue, basically for making all observations at Territory # 1, and for keeping the author up to date as the season progressed. Also, a special thanks to Ray for the effort in trying to locate the reported carcass. If she had been there, I'm sure we would have found her.

Don Root and the City of Rochester, Water Bureau for their interest and for allowing the Bureau to continue to monitor Territory # 1, to maintain the integrity of the site.

Don Tiller and the staff of the Iroquois National Wildlife Refuge for documenting the development and progress of the nesting season at Territory # 3.

Gene Hocutt and the staff of the Montezuma National Wildlife Refuge for there assistance and understanding in the monitoring effort at Territory # 4.

Bruce Penrod and the Regional Wildlife staff for their help when needed, and for covering for the author when he was making observations.