

COPY

BALD EAGLE NEST SUMMARY REPORT

NEW YORK TERRITORIES

1, 3, and 4

1991

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Introduction

Observations at New York bald eagle nest sites #1, #3, and #4, in Livingston, Genesee, and Seneca Counties, continued during the 1991 breeding season.

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

Since 1988, the bulk of staff time spent making observations, has occurred at territory #4, on the Montezuma National Wildlife Refuge. This effort continued in 1991 in an attempt to gather additional information regarding the unusual occurrence of three resident nesting adults.

The following report is a summary of the information gathered at these three sites.

Territory #1 - Livingston County - (See Figures #1 and #2)

The current resident pair of eagles at Territory # 1, consists of a male hacked at the Montezuma National Wildlife Refuge (Seneca County) in 1977, and a female, hacked from the Alcove Reservoir site (Albany County) in 1985.

The 1991 breeding season at this territory began with some initial concern due to the relatively late arrival of the resident adults. Historically, the first observations of activity around this nest usually occur by the beginning of the third week in February. Later initiation has been documented, but only during harsh winters. In 1991, the first sighting of either adult did not come until 24 February. That observation was of the male, and only lasted for about thirty minutes. The entire observation consisted of the bird sitting on a branch surveying the surrounding area.

Overnight on March 3 and 4, an unusual combination of climatic factors formed to create a freezing rain storm that will long be remembered in the Western Finger Lakes and Northern New York areas. Heavy ice build up downed limbs, parts of trees, entire trees, and power lines from Seneca Lake, west into portions of Genesee, Wyoming, and Allegany Counties. Some areas were affected much more severely than others. The watershed adjacent to this nest was devastated. Whole trees were uprooted, both singly and in groups. Some areas surrounding the nest site looked as if mini clearcuts had been undertaken. The tulip poplar (Liriodendron tulipifera) that had supported the nest over the past two breeding seasons was a victim of the storm.

The first confirmed observation of the resident female came on 8 March. On this date both adults were actively adding material to the nest in a red oak (Quercus rubra) which had last been used in 1983. (See Figure #2) The absence of the female in the territory prior to this date is as of yet unexplained. It is possible that she is not holding to the customary tradition of inhabiting the area throughout the year, as the original female and her replacement did up until 1989. Further documentation will be necessary to verify this observation.

Normal breeding behavior continued through the remainder of March, with typical incubation activity first being observed on 3 April.

Since the eagles were using an established nest with a predator guard installed previously, it was assumed that there was no urgency to actually visit the site. On 2 April the restricted area signs surrounding this site were inspected and reestablished to insure that the eagles would be less likely to encounter disturbance from humans.

Incubation activity progressed normally and the first indication of hatching was visible on 7 May.

Due to the potential trauma caused by the loss of the 1990 nest, it was decided that no visit to the site would occur until the annual banding expedition was undertaken. This visit took place on 24 June. Although characteristic brooding and feeding behavior had been obvious since 7 May, no actual observations of any eaglet(s) had yet been made. This was due primarily to the location of the nest and the added precautions that had been taken to avoid any unnecessary disturbance at the site. It was unknown how many if any eaglets were present in the nest. Upon arrival it was apparent that a potential problem existed with the nest tree. The oak had grown sufficiently to split the predator guard that had been installed in 1983. A hasty investigation of the nest revealed a single eaglet present, however it appeared that this bird had suffered some type of injury to its left wing. There was no obvious cause for the injury (no open wound) but the eaglet appeared to be holding the wing loosely to the side. The immediate problem was what should be done at this point, and the solution was not arrived at easily. It was decided that because the bird was young and still growing, the possibility existed that the wing could heal on its own. Also, attempting to set a broken or dislocated wing on a bird this young is not always successful. In addition, and of critical concern, was the fact that this was the only eaglet present. Removing it, and leaving the nest empty, would undoubtedly compound the potential trauma already suffered by the adults, with the loss of their previously productive nest. After considering the options, the decision was made to leave the eaglet in the nest for the time being, with the hope that it would recover on its own. In the event a recovery did not occur, a later trip would be made to remove the eaglet to investigate what could be done. Also, the possibility might later exist that a second eaglet could be secured to replace the injured bird, allowing the adults to complete their breeding season successfully.

The goal of the trip to the nest was completed at this point with the banding of the eaglet. The specifics of that operation are as follows:

Date - 06/24/91

Sex - Suspected Female

USF&WS Band - 629-33345 on the right leg.

N.Y. Band - X-45 Blue with Silver Alphanumeric on the left leg.

Observations at the site continued with a plan to return to repair the predator guard, after the adults had a chance to recover from the disturbance caused by the banding expedition. This action was delayed because of other program activities.

Due to the difficulty in making observations caused by distance and foliage, a special trip was made to the nest on 9 July to check on the progress of the eaglet. It was at this time that the eaglet's remains were discovered near the base of the nest tree. An intensive inspection of the immediate area revealed very little to go on. Several pieces of pieces of talon and numerous feathers were located, but no evidence of the carcass, bands, etc. could be found. Further examination of the sheathing on the feathers that were collected appeared to indicate that the eaglet was probably lost soon after it was banded.

Conclusions - Territory # 1

There are at least two probable explanations to what actually happened to the eaglet after the banding trip of 24 June. It is possible that the eaglet fell, or was forced from the nest. Predation of the eaglet appeared to have taken place on the ground. The majority of the remains, were located within fifteen feet of the base of the tree, on the downhill side, while several additional piles of feathers were located as far as fifty feet away to the south east. No attempt was made to climb the nest at this point, which in retrospect was a mistake on the part of the author. Although it was possible to look onto the nest from the uphill side to the west, and no additional evidence was obvious, it may have been present. It is speculated that the initial intrusion at the nest was in all likelihood the result of a raccoon (Procyon lotor) climbing past the damaged section of the predator guard. This species is very common in the area, and scats were observed at the base of the nest tree. It is unknown, but probable that additional predation may have occurred from other species.

Unquestionably, additional errors were made prior to, and after the banding visit. First, realizing that this site had not been used in eight years, should have indicated that a potential for damage to predator guard might exist, and precautions could have been taken to address this possibility. Secondly, although the author continues to believe that the judgment to leave the eaglet in the nest was valid, delaying repairs to the predator guard was the single most important cause for the loss of the eaglet. As mentioned, although it is possible that the eaglet simply fell from the nest, it does not seem likely.

At this time there is no way to predict if the resident eagles will utilize this site during the 1992 breeding season. As of this writing, repairs to the guard have been effected which should preclude any possibility of a raccoon reaching the structure if it is used. Concentrated observations should be instituted at this site early during the 1992 season to monitor the progress of this pair.

Territory # 3 - Genesee County - (See Figures #1 and #3)

The resident pair of eagles on territory at this site consists of a male, hacked from the Oak Orchard WMA site (Genesee County) in 1982, and a female hacked from the Alcove Reservoir site (Albany County) in 1984.

In 1990, a volunteer observer was utilized for the first time at this site. The additional information gathered along with the data collected by the Staff of the Iroquois National Wildlife Refuge gave a much clearer picture of some of the day to day activities that had previously gone unobserved.

No volunteer observer was available during the 1991 breeding season, which resulted in the Refuge Staff again having to shoulder the burden of the daily observations. Due to other program responsibilities, in depth observations are impossible for them to undertake, but frequent short term recordings of routine nest activity again allowed for accurate and dependable calculation of the breeding cycle schedule.

The first sign of incubation at Territory # 3 came on or about 19 March. All general activity appeared to progress as expected, and the first indication of egg hatching came on 23 April.

Given the extensive distance between the site and the observation point, precise viewing of the nest is difficult to say the least. Particularly after "leaf out" and on warm sunny days. Occasional glimpses of a bird becomes somewhat normal as these conditions continue to intensify as the Spring progresses. Sightings of this type do however indicate that the cycle is progressing without complication.

The annual banding trip for this nest took place on 4 June, with the particular data as follows:

Sex - Unknown

USF&WS Band # - 629 33334 (Left Leg)

N Y Band # - X34 Right Leg-Blue w/ Silver Alphanumerics

The 1991 season marks the first successful nesting at this site, in which other than two eaglets were produced.

One point worth mentioning was an occurrence of very high water in the Spring which caused localized flooding on the Refuge. Of particular interest was the fact that even the local muskrat (Ondatra zibethicus) population was forced to abandon their lodges, making them easy prey for many local predators, including the resident eagles. The remains of at least three muskrats were found in the nest, with portions of others located around the base of the nest tree.

Territory # 4 - Seneca County - (See Figures #1 and # 4)

The resident "trio" of eagles on territory at this nest, continues to consist of a male hacked from the Montezuma National Wildlife Refuge in 1978, marked with a white patagial with a secondary yellow dot on the right wing. This eagle is further identified as B06, which corresponds to the alphanumeric leg band that he had previously carried. The second male was hacked from the Oak Orchard Wildlife Management Area (Genesee County) in 1982, and carries a yellow, left wing patagial streamer. This male and the female of the trio are banded, but have yet to be identified as to individuals. In addition, the female carries no patagial streamer.

As has been the pattern since 1988, the majority of observations undertaken within the Region occurred at this site again in 1991. This is primarily due to the unusual situation of three adults attending one nest.

It appeared, that as early as 14 January, that the nest-ing effort for 1991 would again center around the snag located in the storage pool. Both B06 and the yellow tagged male were seen in the vicinity of the nest on that date. The following day, Refuge staff reported seeing three adults as well as two immature eagles in the same general area. Breeding activity began in earnest about 22 February.

All progressed "normally" over the next three weeks with the first indication of incubation coming on 15 March. By 17 March incubation was definitely in progress, with a projected hatch date of 20 April.

As is typical at this site, nothing is typical, and 1991 was to be no exception. Data collected from this nest since 1988 has revealed that the female has completed approximately 50% of all the observed incubation. The beginning of the incubation cycle characteristically in 1991 appeared to be following the same pattern. However, on 5 April an abrupt change occurred with the arrival of a fourth adult eagle in the area. To date, the origin of this eagle is unknown, but its persistence is unmistakable. Upon this bird's arrival, the female of the trio became acutely defensive of the territory. This, even though there were two other birds available to drive out the intruder. Figures #5 and #6 demonstrate graphically the reduction in time spent in actual incubation by the female. Also of interest is the fact that when interaction between the female and the fourth eagle did occur there was limited support from either male. Actually no interaction was witnessed between B06 and the fourth bird, as he was usually the individual that took over incubation while the female was attempting to drive out new arrival. The yellow tagged male's role during these confrontations was, on all occasions but one, that of an onlooker.

Observations of these skirmishes appeared to indicate that there was an invisible "barrier" in place near the nest, beyond which the new eagle was tolerated. If this bird approached that line or passed it, the all three resident birds became visibly agitated. However, it was the female that invariably gave chase. On numerous occasions two of the native birds would sit in the dead snags south of the nest and watch the alien as it was perched in the southern end of the pool.

Fortunately incubation progressed without additional complications, and the first evidence of a hatch came on 21 April. The first actual observation of an eaglet took place nine days later, on 30 April. For the second consecutive year, two eaglets were produced by the trio and were subsequently banded on 3 June. The details of the banding excursion are as follows:

- Eaglet # 1 - Suspected Male
 - USF&WS Band # 629-33332 Left Leg
 - New York Band # X32 Right Leg
 - Blue with Silver Alphanumeric
- Eaglet # 2 - Suspected Female
 - USF&WS Band # 629-33333 Right Leg
 - New York Band # X33 Left Leg
 - Blue with Silver Alphanumeric

One noteworthy event that occurred during the banding expedition dealt with the yellow tagged male. As the team approached the nest tree this bird took off carrying what appeared to be a muskrat carcass. As the group reached the base of the nest tree and made preparations for the climb, the younger male circled overhead voicing his disapproval, still carrying the carcass. Several comments were jokingly made about this bird preparing for a "bombing" run. As the author approached the halfway point in the climb up the snag, the carcass was released and hit the pool about twenty yards to the west of the group. It is doubtful that the bird had planned the attack, but it assuredly made everyone involved restless for a few minutes.

The remainder of the nest life phase of the season proved to be relatively uneventful, aside from an occasional uninvited appearance by the fourth adult bird. One eaglet fledged during the morning of 10 July. The second followed within two days.

The family unit, as well as the fourth adult remained in the vicinity of the nest throughout the summer, and at least one eaglet was continually observed through 16 October.

Conclusions - Territory # 4

As mentioned in previous summaries, the poor condition of the dead snag that holds the nest at this territory, continues to be of particular concern. Many of its counterparts on the storage pool, collapsed during the past year, and the certain fate of this individual tree is solely a matter of time. As addressed in the 1990 summary report, no additional steps are currently designed to lure the resident eagles away from this snag to a more secure location. This is due entirely to the risk involved as it relates to the potential for abandonment of the territory.

The question of the appearance of the fourth adult is one that will bear close attention. As has been described, this birds' persistence has been fascinating. As of 6 February 1992, this eagle continues to linger in the area. It has been observed on numerous occasions, perched in Great Blue Heron (Ardea herodias) nests and branches of the snags that remain in the southern portion of the storage pool. One of these nests seems to be a particular favorite of this bird, and appears to have had many sticks added to it in the recent past. Detailed observations during the upcoming season may give a clearer picture of what, if anything the outcome of the "additional" bird's presence near this site will be.

In that light, arrangements have been made for a student volunteer from a local college, to assist in the accumulation of data during the 1992 season. He appears to have a sincere interest in the project, lives close by, and is in need of sixty hours of work practicum to complete his studies. This along with the benefit of having a "fresh" set of eyes, should work to the benefit of the study.

For the second consecutive year, one of the eaglets fledged from this nest has been sighted elsewhere several months after dispersal. On 19 December, X33 was observed in Sullivan County N.Y. feeding on a white tailed deer (Odocoileus virginiana) carcass. This site (Rio Reservoir) falls in an area that holds the largest concentration of wintering bald eagles in the northeastern United States, and is approximately 150 air miles from this birds natal area.

With the late completion of this report, a potential inconvenience has been discovered while preparing for the 1992 breeding season. Initial observations of the resident trio has revealed the white patagial tag on B06 is nearly gone. All three birds have been observed together, and the tag on this male is very difficult to see most of the time if at all. Although it is not a critical problem, it will certainly make accurate identification of each bird much more difficult, which will detract from some of the data collected regarding incubation and brooding efforts by each eagle.

Figure # 5 - Incubation Data 1991

TERRITORY #4

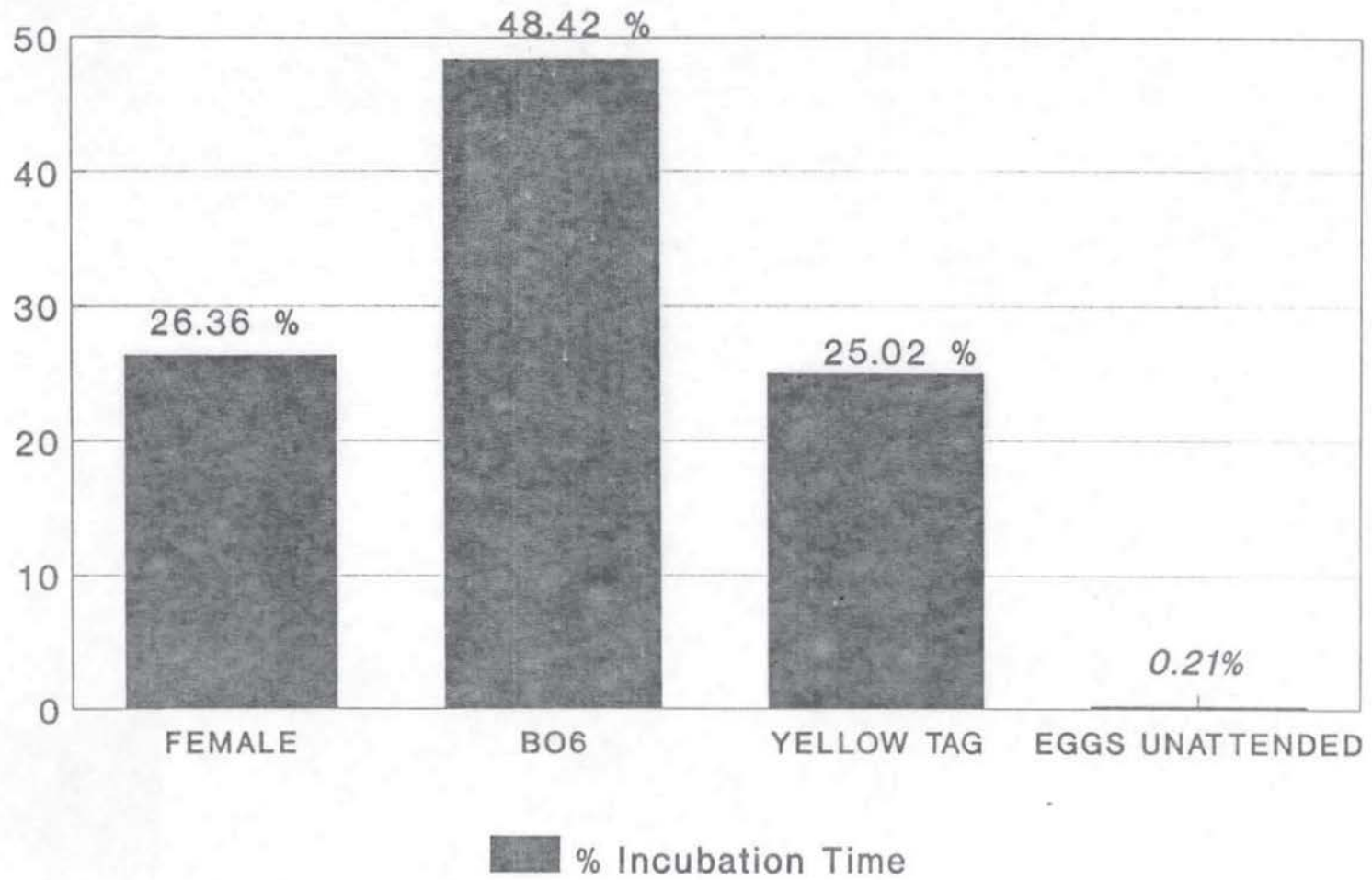
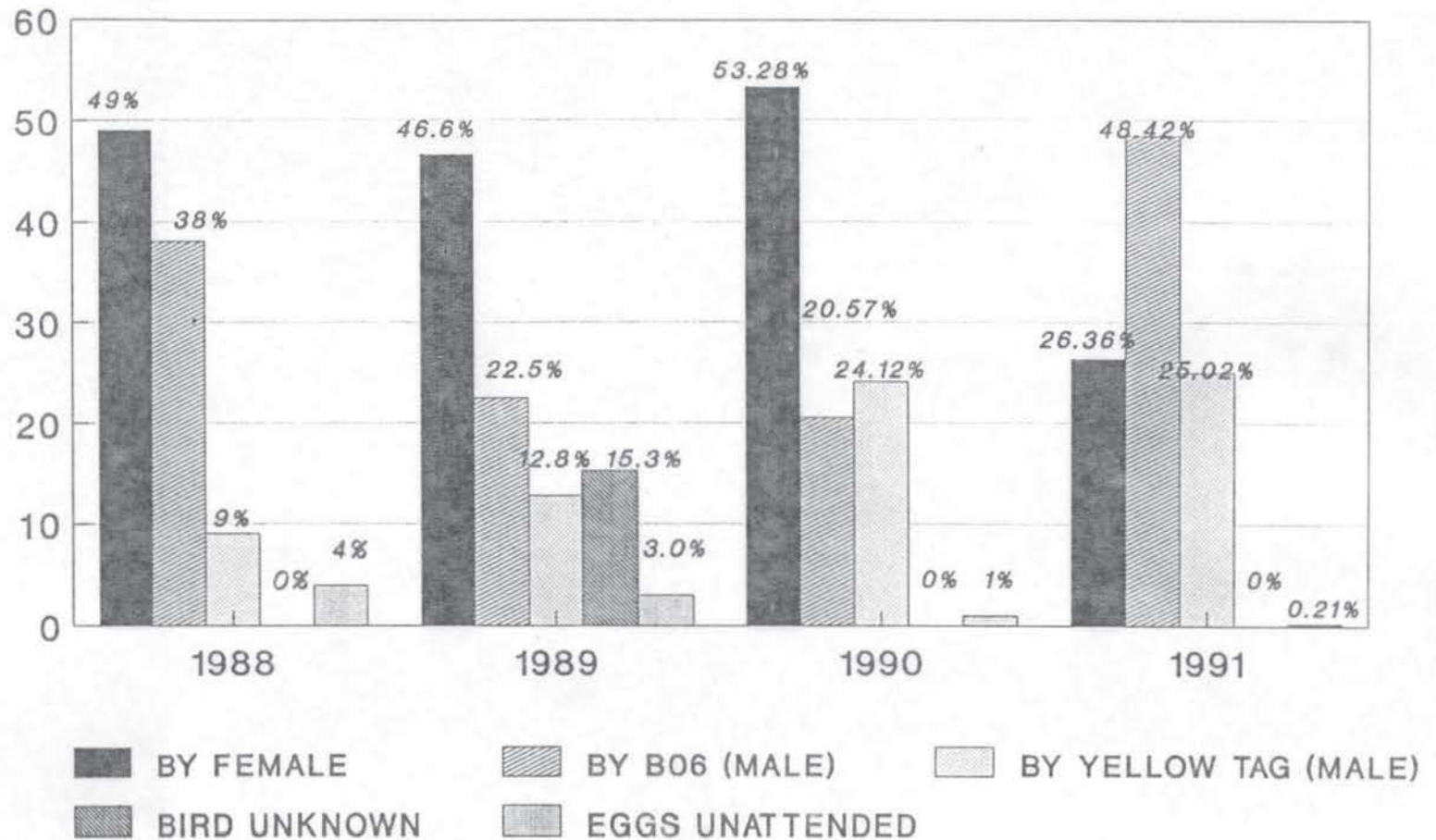


Figure # 6 - INCUBATION DATA 1988 - 1991

TERRITORY # 4



The author wishes to thank the following individuals and groups for their help in monitoring nests and collecting data for the annual summation. Making accurate observations at one site is difficult in itself, without the help of some very interested and dedicated individuals, much of what we have been able to learn would have been lost. My sincere thanks to you all!

Ray and Debbie McHargue for their tireless observations at Territory # 1. Also for Dodger!

The City of Rochester for their continued support and cooperation in allowing the Bureau of Wildlife to maintain the continuity of activity at Territory # 1.

Don Root and the staff of the City Water Department for their efforts to make the Wildlife Staff aware of eagle activities on the watershed.

Don Tiller and the staff of the Iroquois National Wildlife Refuge for making all of the observations at Territory # 3. Also for keeping the author up to date on the status of this site.

Gene Hocutt and the staff of the Montezuma National Wildlife Refuge for monitoring Territory # 4 when the author was unable to be on site. Also for putting up with our "hare brained" schemes, and occasionally pulling the Dodge out of a snowdrift after the author had "parked" it there.

The Region 8 Bureau of Wildlife Staff for covering for the author while he was on a wild eagle chase.



Figure # 2

Approximate Locations of Nest Sites
Used Since 1973 At Territory # 1



by Authority under direction of the
S. Army 1942.
of Survey and Tennessee Valley Authority
c methods (Multiplex).

VA.
VA, 1942.
orth American datum.

ROAD CLASSIFICATION

Loose surface, graded
dry weather road,
Unimproved road.

U. S. Route



State Route

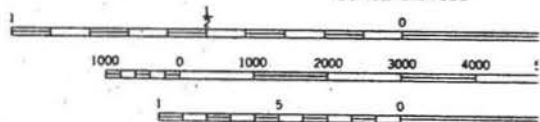


WAYLAND 21 245 4 MI.

BATH 33 MI.

(WAYLAND) 5469

SCALE 1:24000



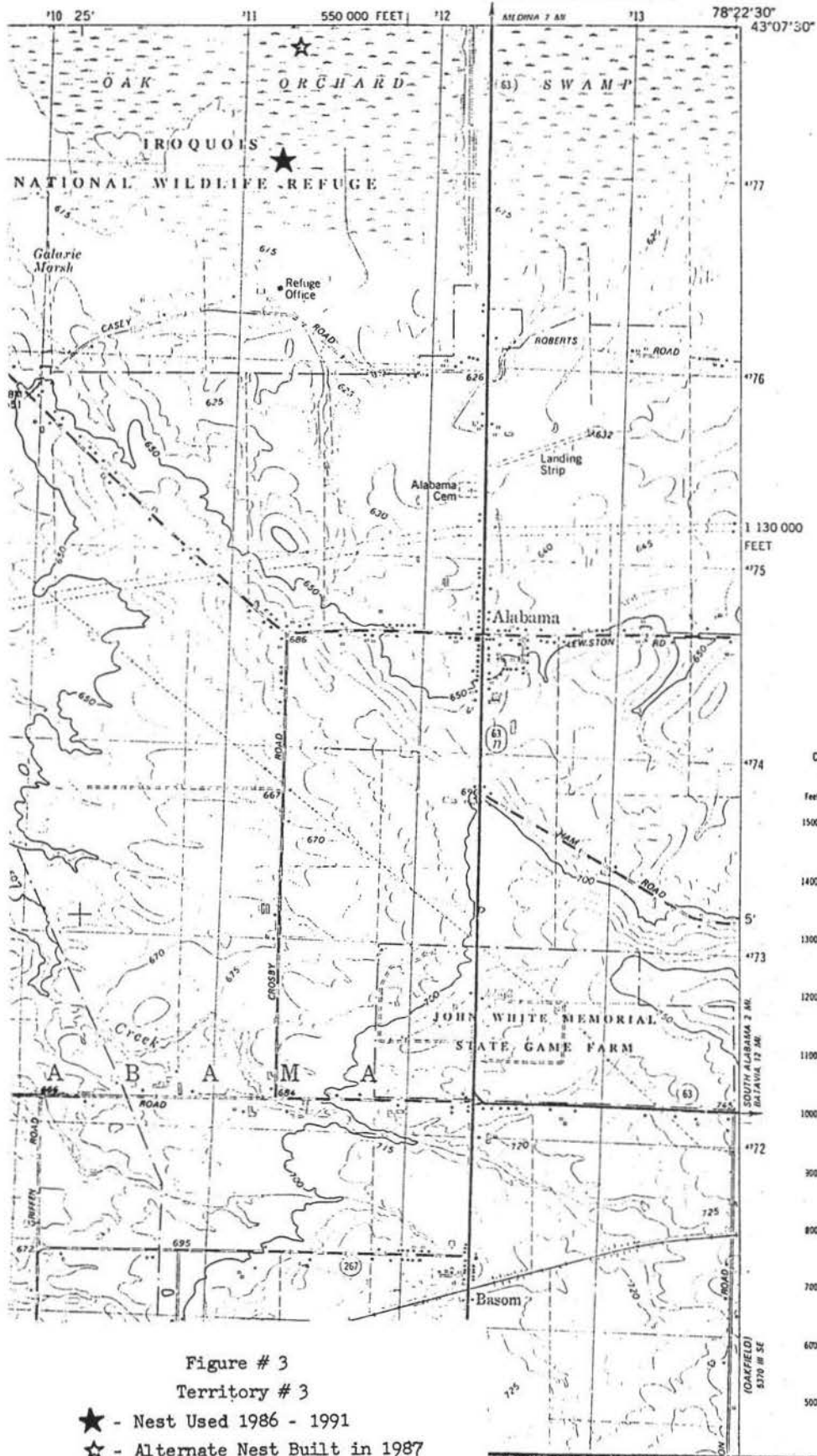
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

10,000-FOOT GRID TICKS, NEW YORK PLANE COORDINATE SYSTEM, EA
1000-METER GRID TICKS, UNIVERSAL TRANSVERSE MERCATOR SYSTEM

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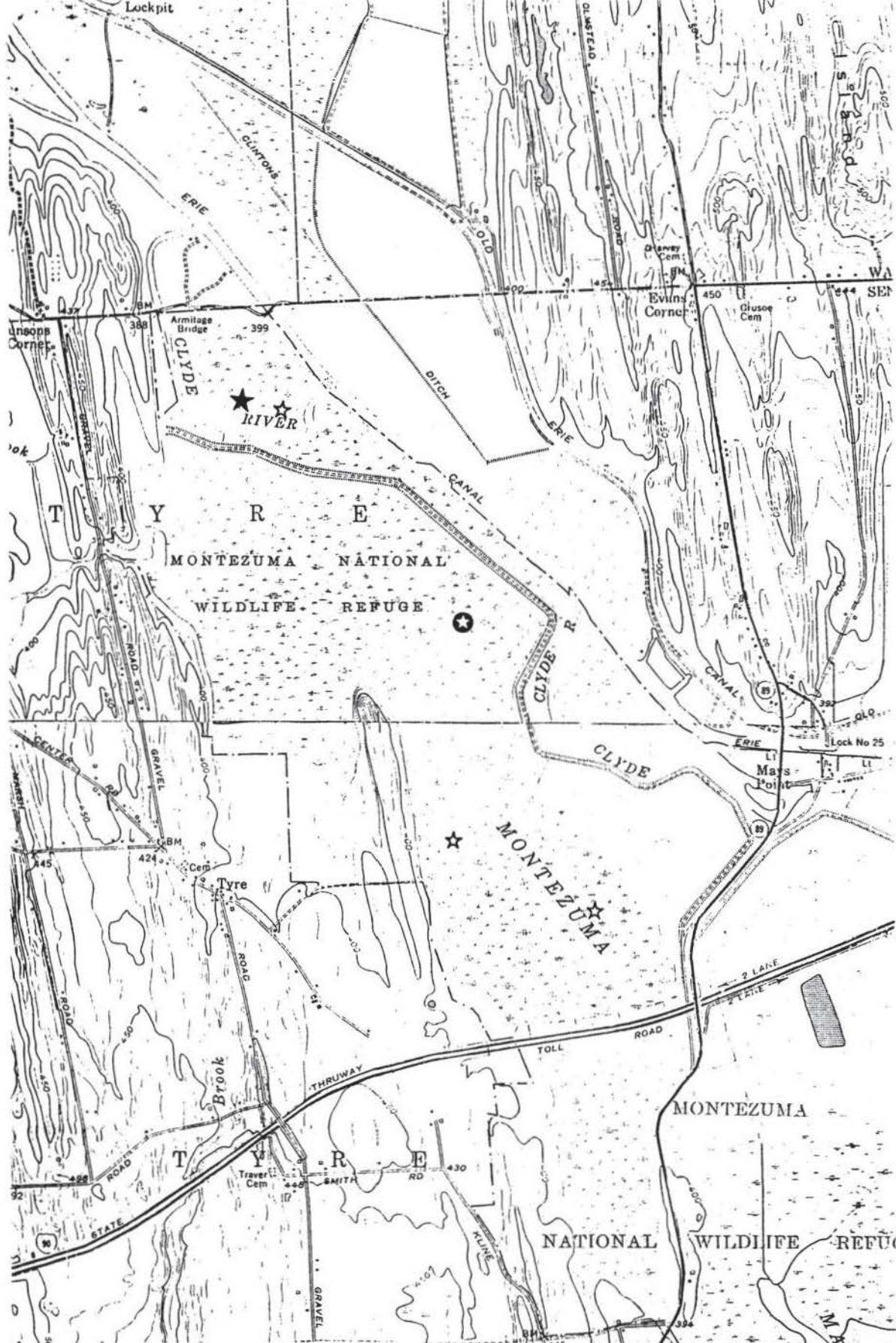


Figure # 4
Territory # 4

- ★ - Original Nest / Platform Location
- ☆ - Alternate Sites Used in 1988
- - Site Used in 1990 - 1991