

# WINTERING EAGLE POPULATIONS IN SOUTHERN NEW JERSEY

1980-1986

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## INTRODUCTION

In 1982 we published "A Six Year Study of Wintering Eagle Populations and Wintering Eagle Habitat in Southern New Jersey" (Sutton and Sutton, 1980-1981), which documented the status and distribution of the Bald Eagle (*Haliaeetus leucocephalus*) and the Golden Eagle (*Aquila chrysaetos*) in southern New Jersey counties from 1974 to 1980. That study recorded more eagles than were generally known to be present, yet far fewer than were known to be historically present during the period 1930 (Stone, 1937) through 1950 (McLaughlin, 1964).

This paper is a continuation of that study, an update that assesses the wintering eagle numbers in the major river systems of southern New Jersey for the six-year period 1980 through early 1986.

## TECHNIQUES

For this study, southern New Jersey is defined as that area which includes the Mullica River drainage basin complex south to Cape May County and west to the Cohansey River complex. Records were kept for the five major river and wetlands systems in this geographical area.

For a complete discussion of the methodology and limitations of this study, see Sutton and Sutton, 1980-1981. In summary, these specific areas were censused for eagles repeatedly through the period December 15 to March 1. An attempt was made to find and record all eagles present, including those which were only in New Jersey for perhaps a very short time. The numbers of eagles were based on multiple sightings, concurrent sightings, and particularly careful plumage descriptions (which included drawings and photographs). In addition, data was kept regarding important feeding and roosting areas.

The methodology was the same as that of the 1974 to 1980 study, allowing a direct comparison of the two six-year segments. In this way, hopefully, the changing status of New Jersey's eagles can be monitored.

## FINDINGS

The compilation of the six years of data on wintering eagle populations 1980 to 1986 is shown below (Table 1). The current six-year averages are included. These figures can be used for direct comparison with Sutton and Sutton, 1980-1981, and for a rough comparison with the projected historical wintering populations presented in that study. These figures can be used as a base line for ongoing comparisons, the assessment of the changing status of Delaware Valley eagle populations, and particularly documentation of critical eagle habitats.

WINTERING EAGLE POPULATIONS  
IN MAJOR SOUTH JERSEY RIVER SYSTEMS, 1980-1986

TABLE 1

AREA	1980-1981	1981-1982	1982-1983	1983-1984	1984-1985	1985-1986
COHANSEY RIVER STOW CREEK	NS	NS	1 BE i	4 BE 2a 2i	1 BE a	1 BE sa
DIVIDING CREEK MAURICE RIVER	3a 7 BE 2sa 2i 3 GE 1a 2i	6a 10 BE 3sa 1i	4 BE a	4a 8 BE 2sa 2i	3a 5 BE 2i	4a 8 BE 1sa 3i
DENNIS CREEK	3 BE i 2 GE i	1a 4 BE 3i	1a 2 BE 1i	1a 9 BE 1sa 7i 1a 5 GE 1sa 3i	1a 4 BE 3i	2a 7 BE 5i
TUCKAHOE RIVER EGG HARBOR RIVER	2 BE 1a 1i 1 GE i	1 BE i 3 GE 2a 1i	1a 2 BE 1i 1 GE i	1a 3 BE 2i 2 GE 1a 1sa	1 BE i	1 BE i 3 GE 2a 1sa
MULLICA RIVER PINELANDS COMPLEX	4 BE 2a 2i 4 GE 1a 1sa 1i/1u	6 BE 4a 2i 4 GE 2a 1sa 1i	3a 6 BE 3i 3 GE 1a 1sa 1i	2a 5 BE 3i 1 GE i	4a 7 BE 1sa 2i 2a 3 GE 1i	3a 5 BE 2i 1sa 3 GE 2i
TOTAL BALD EAGLES	16 8i	21 7i	15 6i	29 16i	18 8i	22 11i
TOTAL GOLDEN EAGLES	10 6i/1u	7 2i	5 3i	8 4i	3 1i	6 2i
TOTAL EAGLES	26	28	20	37	21	28

NS = Not Surveyed  
a = adults sa = subadult i = immature  
u = unidentified

6-year average for all areas combined: Bald Eagle = 20.2  
6-year average for all areas combined: Golden Eagles = 6.5  
6-year average for all areas combined: Total Eagles = 26.7

## DISCUSSION

This study for 1980 to 1986 revealed a slight increase in Golden Eagle wintering numbers when compared to the initial six-year segment, 1974-1980, and a substantial increase in Bald Eagle numbers.

The six-year average for Bald Eagles, 1974 to 1980, was 14.7 birds. From 1980 to 1986 the average was 20.2 birds. Golden Eagles averaged 5.1 birds from 1974 to 1980, and averaged 6.5 birds from 1980 to 1986. Total eagles (eagle sp.) in southern New Jersey averaged 26.7 birds, up approximately seven birds from the 1974-1980 average of 19.8 birds.

The increase in wintering eagle numbers is judged to be significant, and a real one, as comparable effort at complete censusing was put forth during each of the six-year segments. The increase in Bald Eagles is heartening and hopefully part of a nationwide recovery of Bald Eagle populations from the ravages of DDT and attests to the continued success of Bald Eagle hacking programs, both throughout the East (Brett, 1985) and in New Jersey (Jones, 1986). The increase in Golden Eagle numbers is less easily understood, particularly in light of low numbers of migrants on the coastal plain in recent years (Sutton, 1985). However, the Golden Eagle increase is slight and perhaps relatively insignificant, although the Golden Eagle cannot help but benefit as well from Bald Eagle public education and habitat protection programs.

Eagle numbers were up in four of the five separate geographical areas censused. The four-year average of 1.8 birds per winter recorded for the Cohansy River/Stow Creek area is up from the previous four-year average of 1.5 birds (1974-1980). (This area was not surveyed in the winters of 1974-1975 and 1975-1976, nor 1980-1981 and 1981-1982.) Significant was a pair of adult Bald Eagles near Alloway Creek in early 1984. This pair was observed building a nest, yet disappeared in late spring. This act, and at least one adult present the following year, led to hope of an eventual new nesting pair for New Jersey.

The Dividing Creek/Maurice River area continued to be an eagle stronghold in New Jersey, and the 1980-1986 average was 7.5, up slightly from the 7.0 birds per year recorded 1974-1980. The Bear Swamp continued to act as a major roost area for wintering eagles, as well as home for New Jersey's only breeding pair. The Maurice River was constantly noted as a feeding area, with some birds dispersing to the Manumuskin, Muskee, and Menantic Creeks areas to the east. Golden Eagles, continuing to be somewhat gregarious in New Jersey, were represented only by three birds during winter 1980-1981.

The Dennis Creek (Jake's Landing) area showed a highly significant increase in eagle use during the past six years. The 1974-1980 average of 2.3 eagles was low compared to the 1980-1986 average of 6.2 birds using the area during the course of the winter. Eagle use of this vast wetlands complex has been spectacular, and eagles can be seen virtually every day

in winter, either at Jake's Landing, East Creek, or Stipson's Island Road. A significant influx of birds occurred here during the winter of 1983-1984, when up to nine Bald Eagles and five Golden Eagles were present. A modern day maxima was achieved on December 11, 1983, when seven Bald Eagles and three Golden Eagles were seen between 9 a.m. and 11 a.m. near East Creek, south of Route 47. These birds remained all winter, and in fact "kettles" of up to six eagles were noted on a few occasions.

The Tuckahoe River/Egg Harbor area demonstrated a marked increase in eagle use as well. The 1974-1980 average of .83 birds/year was easily eclipsed by the current average of 3.3 birds/year. Golden Eagles and Bald Eagles seem to be in equal numbers here, with activity centered on the Corbin City Impoundments area. Of interest was what appeared to be a mated pair of adult Golden Eagles present in this vast river system toward the end of the study period in early 1986.

Finally, the Mullica River/Pineland Rivers complex was the only area in southern New Jersey which showed a decrease in eagle use. The 8.5 birds per year present from 1980-1986 was down, albeit only slightly, from the 8.7 birds averaged from 1974-1980. This exhibited decrease may not mean fewer birds, but less of a tendency to concentrate at Brigantine National Wildlife Refuge as in past years. Environmentalists have feared that the increasing housing growth in eastern Galloway Township, on the borders of Brigantine NWR, would have an impact on the refuge (and particularly on endangered species use), and currently over one thousand housing units have been constructed over the past six years here (Bennett, 1986). Indeed, there may be a tendency for eagles to avoid the changing Oceanville area; on December 7, 1985, seven eagles (four Bald, three Golden) were seen over the Mullica River, north of Leed's Point. Yet only one of these (a Bald Eagle) was seen over the refuge, and none hunted the refuge on this day as they normally do. While this is speculation, a careful watch must be kept on changing eagle use and habits in this area.

#### CONCLUSIONS

An increase was noted in the current number of eagles wintering in southern New Jersey. A substantial increase was noted for the Bald Eagle, with an average of 20.2 birds/year noted for the period 1980-1986, as compared to 14.7 birds/year for the period from 1974-1980. The maximum number of Bald Eagles present in one year was 29 in 1983-1984 and 30 in 1979-1980.

Golden Eagle numbers showed only a slight increase, 6.5 as compared to 5.1, and yet the ten individuals present in 1980-1981 is believed to be the highest published wintering population on the East Coast.

Specific eagle use areas have been noted and documented during this study. Maps of preferred perching, roosting, and hunting areas have been maintained and are available to those private and state agencies involved with the protection of the Bald Eagle in New Jersey.

In 1986, the key to eagle conservation in the Delaware Valley remains the preservation of the important habitats on which they are so dependent. With DDT known to be disappearing from the environment and a general, if slow, recovery of eagle populations nationwide, increased importance now must be placed on eagle habitat protection in New Jersey (including the subtleties of habitat change resulting from increased recreation use which inevitably follows housing encroachment). Even so, wintering eagle populations will never attain those known historically; nonetheless numerous Bald Eagles, and an occasional Golden Eagle, now are an important part of our winter coastal avifauna.

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