

THE NESTING BALD EAGLES OF SOUTHEASTERN FLORIDA

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THIS paper is a summary of data gathered in visiting the nests of one hundred and eleven pairs of Bald Eagles. The purpose of the paper is two-fold: first, to record a count of eagle nests within certain definite areas; second, to present certain facts concerning nests and nesting habits. During the course of the field work upon which this paper is based, no attempt was made at an intensive study of individual nests. My chief aim was the taking of an eagle census. Such a census may well be taken in years to come. A comparison of such censuses will aid us in forming a definite concept of the numerical status of the Bald Eagle in Florida. All observations were made during the eight nesting seasons between December 1928, and December 1935. Thirty of the pairs of eagles had more than one nest, and the nests of a majority of the pairs were visited more than once. The nests were scattered throughout the east-central and southeastern portions of Florida, from the very southern tip of the State to Volusia County on the north and Lake County on the west. This is an area of approximately one hundred thousand square miles.

In the eighteen miles between Shiloh and New Smyrna in Volusia County there were twenty-two eagle nests during this period. All of these nests were west of the Indian River or Mosquito Lagoon and within five miles of one or the other. Twenty-one of these nests were visited in December 1935, and fourteen of them then had birds present. Here, there was an eagle nest to every two square miles, and a nest in use to every three square miles. In one small part of the above area there were concentrated seven eagle nests within eight square miles. However, only four of these were occupied in December of 1935.

Merritt's Island, lying between the Indian River and the Atlantic Ocean, and supporting fine pine timber over much of its surface, is ideal for the nesting of eagles. Dr. Ralph, an early ornithologist and oologist, found over one hundred occupied nests on this island and the nearby vicinity in 1886 and the two following years (A. H. Howell, 'Florida Bird Life'). Today the number of eagles in the region is much reduced. In that part of the island lying between the village of Merritt on the south and the Haulover Canal on the north, thirty-six eagle nests were found within the eight-year period covered by this paper. From the location of these nests it has been calculated that not more than twenty-four pairs of eagles built them. As the nests representing six of these twenty-four pairs never were in use during this period, the population of this portion of the island was eighteen pairs of eagles. Prior to 1935, the nests of only fifteen of these eighteen

pairs had been found. The nests of all of these fifteen pairs were visited in December of 1935 and only ten of them were found to be in use. Three new occupied nests were found in 1935, giving the island a population of thirteen pairs of eagles for that year. These three pairs of eagles are either pairs new to the island, representing an addition to its population, or they are old pairs in a new location. In all calculations it has been assumed that they are newcomers.

An accurate picture of the rate of decrease can be drawn for the past five years. In 1930 the occupied nests of thirteen pairs of eagles were visited on this island. Nine of these pairs were found again in 1935, but the remaining four could not be located. During this period the rate of decrease is over five per cent of the original stock each year. Figures for the entire portion of the State here dealt with give about the same rate of decrease for the past five years. Twenty-three occupied nests that were visited in 1930 were revisited in 1935. Seven of the twenty-three pairs could not be found. Again there was a decrease of five per cent of the original total each year. One pair out of every sixteen disappeared yearly.

These figures are not exact. They probably make the disappearance of the eagle appear slightly more rapid than it is. Eagles often change the location of their nests. Some of the pairs of eagles which have been listed as extinct may have moved to a new location which escaped detection. It is believed, however, that no significant number of new nest sites was overlooked. Observation shows that when a pair of eagles abandons one nest and builds another, the new one is usually within half a mile of the old one and is, therefore, easy to discover.

There are probably a number of causes for this decimation. Man is an important agent of destruction. The felling of the forests of large pines is a severe hazard to the eagle. Its nest immediately springs into dangerous prominence. The hunter and gun-bearing tourist see the nest where before it was hidden. Only once have I found the carcass of an eagle beneath its nest, but it is not uncommon to find empty shotgun shells beneath nests. Often hunters and trappers have told of killing eagles at their nests.

That future studies of the population of eagles on this same part of Merritt's Island may be conducted under like circumstances, it is necessary to describe the method used to locate the nests. All of the nests were found while traveling in an automobile. As almost all of this area is well traversed by roads, there were only a few suitable stands of pine timber that were not searched. The part of the island east of the Banana River and between False Cape and Cocoa Beach was not examined.

Another index to the population of eagles is the number of birds seen. On December 29, 1935, in southern and central Brevard County, twenty-three individuals of this species were seen. Six of these were immature

birds. Eleven occupied nests were visited on this day. The next day thirty-three eagles were seen, four of which were immature. Thirteen occupied nests were visited, at six of which both parents were present. The second day was spent in the northern tip of Brevard County and the southeastern part of Volusia County.

In working over the data on these nests a few observations and facts have come to my attention which may prove of interest:

The presence of both crows and vultures is tolerated within close proximity to the nest. Concurrently occupied eagle nests may be separated from one another by as little as a quarter of a mile. While the contents of a nest are being examined as many as five eagles may soar about overhead at the same time. The visiting eagles may join in protest calls.

The number of nests built by different pairs of eagles varies greatly. One pair of eagles built five nests in eight years. There was no obvious need for building these four additional nests. Often the nest abandoned was in excellent repair. Once the tree in which the nest was built died; instead of abandoning this nest, the eagles continued to use it for two years. Another pair of eagles used the same nest for seven consecutive years. When first found, this nest was in a live tree but during the last four years of its use the tree was dead. Both of the above nests were climbed to and examined each year.

The distance between the various nests of a particular pair is almost always less than a mile. Of twelve pairs that built two nests apiece, eight pairs had their second nest within a quarter of a mile of the first. All of the five nests built by one pair were within a fourth of a mile of a central point.

Nesting begins in October in Florida. One pair of eagles had two eggs on the thirtieth of that month. The latest date on which eggs were found was March 10, 1935. These eggs were fresh. Ninety-one nests with eggs were examined. The number of nests with an egg, or eggs, for each month of the nesting period follows: October, one nest with eggs; November, seventeen nests; December, fifty-nine nests; January, eleven nests; February, two nests; March, one nest. Sixty-five per cent of all the nests with eggs were found in December.

Of the ninety-one nests containing eggs, seventy-seven, or 85 per cent, contained two eggs. Only one nest held three eggs. The remaining thirteen nests held one egg. In six of the nests holding one egg, the egg was fresh, and probably another would have been laid later.

Pines are usually selected for nest trees. A total of one hundred and sixty-five nests was found. One hundred and fifty-five of these were in pine trees, one hundred and twenty in live pines, and thirty-five in dead pines. Seven nests were in cypress trees; six of these trees were dead.

Three nests were in mangrove trees, two of which were dead. About twenty-five per cent of the nests were in dead trees. In this vicinity eagles seldom build their nests in a dead tree, but they often continue to use a nest tree after it has died.

Sixty-five of these one hundred and eleven pairs of eagles built their nests within five miles of salt water. The pairs of eagles nesting near fresh water are much more widely separated and are decreasing in number more rapidly.

SUMMARY

The nests of one hundred and eleven pairs of Bald Eagles were visited in southeastern Florida during the eight nesting seasons between December 1928, and December 1935. The nest or nests of seventy of these pairs were visited more than once. Twenty-nine pairs had more than one nest. One pair had as many as five nests. A total of 165 nests built by these 111 pairs was found. The Bald Eagle is decreasing throughout the area investigated. The rate of decrease we find to have been five per cent of the original number yearly, or a loss each year of one pair out of each sixteen.

Mr. Donald J. Nicholson of Orlando, Florida, was of great assistance in gathering the data for this paper.

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