The 1961 Status of Some Bald Eagle Nest Sites in East-Central Florida.—In 1935 I selected a group of 24 nest sites of the Bald Eagle (*Haliaeetus leucocephalus*) to serve as the basis for a population index. Since 1935 I have returned at intervals of five years (except for one six-year interval) to visit each of these nest sites. The information secured during each of these visits has been used to establish a population index. These population indexes have been a part of each of a series of brief papers appearing in the *Auk* (for the most recent of these see *Auk,* 75: 96–98, 1958).

The present account is based on a ground search of each of these sites made 21, 22, and 23 December and on an air search carried out on 27 December 1961. The information secured during the 1961 searches is as complete as for any other year. Richard L. Cunningham accompanied me throughout the ground search and helped to make the 1961 ground search a thorough one. Mr. Cunningham is a member of the Research Department of the National Audubon Society and is currently engaged in a continent-wide study of the Bald Eagle. The 1961 air search was the most thorough of the three completed. Every site (except number 1) was covered by two, three, or four transects flown at low altitudes in a slow-flying biplane having open cockpits. Mr. Jack Salmela, who flew me over these sites, had a personal interest in conservation, a keen eye for eagle nests, and a thorough knowledge of most of the area we searched. I wish to thank Mr. Salmela for flying me over these nest sites and the Board of Commissioners of the Brevard Mosquito Control District for granting permission for this flight.

Again I will use the nest site numbers and the notations given in the 1954 report (*Auk,* 71: 306–309, 1954). These notations are: O—occupied sites, at which there was a nest judged to contain eggs or young; A—active sites, at which at least one adult was seen but at which there was not a nest judged to contain eggs or young; and U—unoccupied sites, at which no adult was seen. Below, each nest site is referred to by its number, which is followed by a notation indicating its 1961 status: 1, U; 2, U; 3, U; 4, U; 5, U; 6, U; 7, U; 8, O; 9, U; 10, U; 11, U; 12, U; 13, U; 14, A; 15, U; 16, O; 17, U; 18, O; 19, U; 20, U; 21, U; 22, U; 23, O; and 24, O. The per cent of occupied nests in 1961 was 21 as compared with 33 in 1956, 67 in 1951, 54 in 1946, 46 in 1940, and 83 in 1935.

The above data indicate that a pronounced population decline occurred in this sample population between 1935 and 1961, despite a temporary period of limited increase from 1940 to 1951. In these 26 years the number of occupied sites dropped from 20 to 5. An attempt to evaluate this prominent decline led to the consideration of an additional source of evidence not included in earlier reports. This was the number of eagles observed in the course of each of the ground searches. These data are given in Table 1. It may be noted in the table that in both 1956 and 1961 the ground

TABLE 1
GROUND SEARCHES OF 24 NEST SITES OF THE BALD EAGLE

Year of search	*Duration in days*	*No. eagles observed*	*% of 1935 total*	*% of 24 sites occupied*
1935	2	56	100	83
1940	2	24	43	46
1946	2	25	45	54
1951	2	31	55	67
1956	3	26	46	33
1961	3	8	14	21

searches were increased in duration from two days to three days without a corresponding increase in the number of eagles observed. These data on the number of eagles observed during ground searches indicate a greater decrease than that observed for the eagles using this group of nest sites.

Another consideration indicating that the population decrease was actually greater than shown by the information given above is the fact that within a radius of one and one-half km of three nest sites there were at least two pairs of eagles present during some visits. On subsequent visits to these three sites, if one of the two pairs remained, the site was considered to be occupied, without regard to which one of the pairs remained. In 1961 the area surrounding none of these three sites was occupied by more than one pair.

The data given in Table 1 indicate that the decrease in population has not occurred at a regular rate. Between 1935 and 1940 a very pronounced drop in population occurred. This was followed in 1946 and 1951 by an apparent and rather limited population increase. It may be significant that the eagle was given protection under a federal law in 1940. In 1956 the percentage of occupied nest sites dropped to only half of the 1951 figure, and the number of eagles observed dropped somewhat despite the fact that the 1956 visit lasted for three days rather than the two days characteristic of earlier visits. In 1961 both of the population indexes showed a continued and sharp decline. In the decade of 1951 to 1961 the population of eagles represented by this sample fell drastically; in 1961 there was only a third of the 1951 population.

During the years of this study in this area the populations of eagles and men have each changed sharply but in opposite directions. All but one of these 24 eagle nest sites are located in Brevard and Volusia counties. The U.S. Census figures for the populations of these two counties combined are as follows: 1930, 56,040; 1940, 69,852; 1950, 97,882; and 1960, 236,754. In 1961 the sample of the eagle population of this region represented by these 24 nest sites was 25 per cent of what it was in 1935, while in 1930 the human population was 24 per cent of that of 1960.

It would appear that the eagles constituting this sample of the population are not adapting successfully to man and his culture. The precise factors resulting from this increase in human population that are responsible for the decline in eagle numbers are probably not all known. Important among these factors are certainly habitat destruction and human activities that interfere with eagles. Examples of habitat destruction that were observed in the course of these visits included the clearing of natural vegetation for the establishment of farms and housing and the cutting of timber for lumber. The extent to which one of these factors leading to habitat destruction has occurred in these two counties is shown in the change in farm acreage. In 1935 the combined farm acreage was 112,351; by 1954 it had increased to 675,489. Two human activities that adversely affect the eagle population are hunting and fishing.

Rapid as has been the destruction of original habitats in this area, there is some evidence that this is not the chief direct cause of the decline in this population of eagles. In 1961 each of the 24 nest sites was considered as to its apparent ecological suitability for occupation by eagles. Only four of these sites were judged to be no longer suitable. Furthermore, in the course of the air search numerous areas of pine timber that appeared to be excellent as sites for nests were observed and found to be unused. During this flight a number of nest sites occupied in other years were flown over, and while they appeared little changed from earlier years they were no longer occupied.

To summarize: a group of 24 nest sites visited in 1935 has been revisited at intervals of about five years since then to determine the per cent of these 24 nest sites that is occupied. The percentage of occupied nests for the years on which visits were made is: 1935, 83; 1940, 46; 1946, 54; 1951, 67; 1956, 33; and 1961, 21.—JOSEPH C. HOWELL, *Department of Zoology and Entomology, University of Tennessee, Knoxville, Tennessee.*

A Noteworthy Reverse Migration of Snow Geese in Central Ontario.—Just before sunset on 15 May 1962 my husband and I heard a loud cackling noise overhead. Through binoculars I saw a flock of about 85 Snow Geese, *Chen hyperborea,* flying southward. The next morning three more flocks of 73, 59, and 3 Snow Geese, respectively, performed the same maneuver, all disappearing over the southern horizon. This, therefore, was a sustained reverse migration that extended over parts of two days and may have involved more than the four flocks of 215 Snow Geese altogether that I happened to sight.

During the flight across the lake, while the birds were in full sight for a distance of about a kilometer, consistently similar behavior was observed in all but the last small flock. Suddenly, under increased cackling, the geese flying behind the leaders broke formation and veered eastward as if to change flight direction from south to north. This caused great commotion, which lasted a few seconds before the rebels once again closed ranks and resumed the flight southward. In the first large flock the conflict between the drives of the geese in the middle of the formation to fly northward and of the leaders to fly southward occurred twice while in sight, always with the same result.

The habitual migration route of the Snow Geese appears to lie much farther to the east over Quebec. It is interesting to note that previous to this particular occasion a spell of cold and freezing weather had occurred in the regions north and south of Pimisi Bay, while southern Ontario enjoyed an unseasonable heat wave. On 14 May the front of this warm air mass began moving north across the Pimisi Bay area, bringing with it a large "wave" of northward migrants. Twenty-four hours later the first sign was noted of the reverse migration of the Snow Geese.—LOUISE DE KIRILINE LAWRENCE, *Pimisi Bay, R.R. 1, Rutherglen, Ontario, Canada.*

Some Aberrant Characters of the Yellow-breasted Chat, *Icteria virens*.—Many ornithologists have thought that the Yellow-breasted Chat is not properly classified as a parulid. Recently, Eisenmann (*Auk,* 79: 265–267, 1962) pointed out differences between the Chat and other warblers in such characters as the jaw and hyoid musculature and in the electrophoretic patterns of egg-white proteins.

The Chat also differs in many other ways from other warblers for which there is information available. Its nest structure and eggs show little similarity to warblers (A. A. Allen, pers. comm.). It lacks natal down, a characteristic of very few nine-primaried oscines (Wetherbee, *Bull. A.M.N.H.,* 113: 339–436, 1957), and has a complete postjuvenal molt (Bent, *U.S. Natl. Mus. Bull.,* 203: 1–734, 1953), which also occurs in *Geothlypis trichas* (Stewart, *Auk,* 69: 50–59, 1952), but not in most other warblers. The male Chat in breeding condition has a black mouth lining, the female pink (Blake, *Bird-Banding,* 33: 43, 1962), a kind of sexual dichromatism not found in other warblers.

In addition, the Chat differs in behavior. The song is unlike that of warblers in being lower pitched, having more diverse phrases (often described as mimidlike),