

BIRD POPULATION CHANGES
IN A
CENTRAL NEW YORK COUNTY
SINCE 1870
by Allen H. Benton

Cayuga county is located in the Finger Lakes section of Central New York, containing one of the Finger Lakes, Owasco, entirely within its boundaries, and bordering on two others, Cayuga and Skaneateles. It extends about 60 miles, (95 kilometers) from Lake Ontario on the north to Tompkins county on the south, and varies in width from 8 miles (13 kilometers) at the north end to nearly 25 miles (40 kilometers) at the south end. (See Figure 1.)

The great variability of the topography is a prominent feature of Cayuga county, and this accounts in part for the remarkable diversity of its avifauna. On the Lake Ontario plain, at the north end of the county, the elevation is only 246 feet (75 meters) above sea level. A few miles to the south the drumlins reach their greatest abundance in the townships of Brutus and Mentz, and achieve elevations up to 600 feet (180 meters). The depressions between the drumlins often contain swamps or marshes of considerable extent. The central part of the county is a region of rolling terrain, with steep hills and gorges along the lake, rising to the south to an elevation of 1300 feet (400 meters) at the county line. The southeastern section has a more rugged character, being part of a dissected plateau. Elevations here reach up to 1880 feet (550 meters) and much of the land is rough and broken, so as to be unsuitable for mechanized cultivation. These peculiarities of topography are largely due to the activities of the Pleistocene glaciers, which formed the drumlins, dammed up valley outlets to form lakes, and deposited quantities of boulders, glacial till, and partially formed soil.

Due to the length of the county from north to south, its climate is rather variable. At Auburn, in the central part of the county, the mean yearly precipitation is 36.63 inches. The Lake Ontario plain has more sunshine, more snow, but somewhat less annual precipitation. The growing season varies from 180 days along Lake Ontario to about 160 days in the rugged southern section.

The original vegetation of the county was the Great Lakes mixed hardwood type, with beech, hemlock, yellow birch, and hard maple intermingled or adjacent to the oaks, hickories, and white pines. Extensive marshes furnished excellent conditions for waterfowl, while the rocky bluffs and gorges attracted those species which require an isolated habitat. The more temperate summer climate of the Lake Ontario plain caused it to be occupied by species which here reach nearly the northern limit of their range, while many northern species remained to nest in the cold swamps and gorges or on the high southeastern plateau.

History of Ornithological Study in Cayuga County

Although James DeKay's work on New York state birds was published in 1844 (1), and scattered observations had been made by many prior to that time, the history of ornithology in Cayuga county, insofar as detailed information is concerned, begins in 1870. At about this time a group of bird enthusiasts in the city of Auburn began a careful study of the birds of central New York, and several publications appeared as a result of their work. The first list of birds was compiled by H. G. Fowler, and was published in "Forest and Stream" in 1876 (2). The succeeding year saw the publication of an expanded and revised list called the Rathbun-Fowler list, in the Auburn Daily Advertiser, Frank Rathbun being the co-author (3). In April 1879 these two workers, aided by Samuel F. Rathbun and Frank S.

Wright, put together a pamphlet edited by Frank Rathbun, and entitled "A Revised List of Birds of Central New York" (4). This excellent list included 236 species, of which 109 were listed as breeders or summer residents. In 1882 fourteen species were added to this list in a supplement published in the "Ornithologist and Oologist" (5). This list and supplement form the basis for the conclusions of this paper in regard to bird populations at that time. Since these men were collectors as well as observers, there is no reason to doubt the accuracy of their records, many of which are supported by specimens in the Frank Wright collection, now part of the Cornell University collection.

In the 1880's a young resident of Meridian, in northern Cayuga county, E. G. Tabor, became interested in ornithology and oology, as well as the then young art of bird photography. His collection of nests and eggs from that region, taken over a period of fifty years, adds much to the knowledge of local breeding birds. His careful records of dates, locations, and condition of nests are a model which many professionals might well emulate. In 1948 Mr. Tabor, then 84, actively assisted in field work and gave freely of the information he had gathered so painstakingly for half a century. His only published notes were placed in the early issues of "Bird Lore", through his acquaintance with the late Dr. Frank Chapman. (6,7,8)

In 1910 two Cornell University zoologists, H. D. Reed and A. H. Wright, published a list of "Vertebrates of the Cayuga Lake Basin" (8). This list included 257 species of birds, and covered more than half of Cayuga county as well as neighboring counties. In this same year appeared the first volume of E. H. Eaton's "Birds of New York" (10), still the definitive work on the birds of the state. This work listed 252 species as occurring in Cayuga county, of which 120 were considered as summer residents or permanent residents and 111 were definitely stated to breed in the

county.

Up to 1948 no more recent lists were available, but several papers covering certain phases of bird life in the county appeared as bulletins of the New York State College of Forestry at Syracuse University. These include "Summer Birds of Central New York Marshes", by A. A. Saunders, (11) "A Popular Account of the Bird Life of the Finger Lakes Section of New York with Special Reference to the Summer Season", by C. J. Spiker, (12) AND "The Ecology and Economics of the Birds along the Northern Boundary of New York State", by A. S. Hyde (13).

In 1948 the author undertook a study of the breeding birds of Cayuga county. The final list includes 136 species definitely known to have bred within the county, and 13 others placed on a hypothetical list because of lack of definite records. (14)

Changes in Bird Populations

Great changes in bird populations have occurred in the last three-quarters century in central New York, some for the better, others for the worse. Taking the brighter side of the picture first, we shall consider some of the species which have been added to our list of breeding birds or which have become more common.

Introduction of exotic species has resulted in the addition of two species to our avifauna. The European Starling is now abundant in Cayuga county, having multiplied and spread rapidly since its introduction to the country in the last decade of the 19th century. The Ring-necked Pheasant, which flourished from some years in central New York, recently underwent a serious decrease and would perhaps have been extirpated completely without the addition of

Thousands released by the Conservation Department and sportsmen's organizations. At this writing the species appears to be holding its own.

Several other species which were not noted in the Rathbun list have since become part of our avifauna by extension of their range. The Turkey Vulture, although without actual nesting records for the county, occurs in the drumlin district in considerable numbers from March to October. The Henslow's Sparrow, similarly without breeding records, is nonetheless fairly common in suitable habitat throughout the county. The Cardinal, now resident in the southwestern part of the county and occurring though not definitely resident in the towns of Ira, Cato, and Victory in the northern part of the county, is another addition from the south, and may soon be common throughout the county. The Louisiana Waterthrush, which was not included in Rathbun's list, may have been present then but not separated from the Northern Waterthrush by those observers. However, it would seem likely that their collecting would have turned up the species had it been present in any numbers. It is now common in some of the gorges, such as Fillmore Glen, but is rare or absent in the northern part of the county. The Rough-winged Swallow, which now breeds in the county, was likewise not noted by Rathbun as a breeding bird. This, too, could be due to its close resemblance to the more common Bank Swallow. However, Rathbun had one specimen of this species, so that he was evidently aware of the difference between the two species, and its occurrence now may be an indication of a real increase.

Nearly a dozen birds which Rathbun listed as migrants now are known to breed in the county. These include the Cliff Swallow, Hermit Thrush, Black and White Warbler, Nashville Warbler, Magnolia Warbler, Black-throated Blue Warbler, Black-throated Green Warbler, Mourning Warbler, Yellow-breasted Chat, Canada Warbler, and Slate-colored

Junco. It is probable that some of these were present as nesting birds when the Rathbun list was prepared, but they were not discovered. Certainly most of them are more common now than they were then.

Two species, which were considered rare in central New York in 1870, are now so common that they must have shown a definite increasing trend in the intervening years. Rathbun had but two specimens each of the Grasshopper Sparrow and the Golden-winged Warbler. Both are now common in the northern part of Cayuga county, and Grasshopper Sparrow occurs in hayfields and pastures throughout the county.

Unfortunately the list of those species which have disappeared or decreased is also a sizeable one. These avian casualties fall into two categories: 1) those which were never common, and whose special requirements were so rigid that changes in a few locations caused them to disappear; 2) those which were once common and wide-spread, but which have since disappeared because of increased hunting pressure, increased cultivation, adverse weather conditions, or for some other reason.

In the first group are included the Bald Eagle, Osprey, American Merganser, and Broad-winged Hawk, which once nested along the wooded shores of Lake Ontario. The woods are largely gone now, and the shores are dotted with summer cottages and resorts, so that these birds no longer nest there. The Acadian Flycatcher, Orchard Oriole, and Parula Warbler, once present in small numbers, are now apparently absent, although the reason for their decline is not obvious. The drainage of the Montezuma marshes for agricultural purposes, and similar operations on other extensive marshes, has resulted in the destruction of probably the only local breeding grounds of the Ruddy Duck, Hooded Merganser, and King Rail, and has drastically reduced the numbers of other marsh birds.

Several common birds of Rathbun's day are now almost, if not entirely, absent from Cayuga county as breeding birds. Some of these are or were game birds; the Wilson's Snipe, Upland Plover, Passenger Pigeon, and Bob-white. Others, notably the Red-headed Woodpecker, Red-bellied Woodpecker, and Purple Martin, have decreased for no apparent reason. The first is almost if not entirely gone, and the latter two are by no means common. The Migrant Shrike and Purple Finch, which still breed occasionally in suitable places, also fall into this group.

Bird life is dynamic rather than static. Further changes can be expected, some of them predictable. It is likely that another seventy-five years will see the addition to our avifauna of the Blue-gray Gnatcatcher and Prothonotary Warbler. Both are known to occur in neighboring counties and appear to be extending their range. The return of abandoned farm land to the natural succession will result in a temporary increase of brush-loving species such as the Brown Thrasher, Chat, Towhee, Catbird and others. This trend, in fact, is already noticeable in places where sub-marginal land was deserted during the depression of the 1930's. It is to be hoped that some marsh land, proving unprofitable, will be allowed to revert to its natural state, thus improving the lot of our rails and other marsh birds. Those species which are dependent on large tracts of woodlands for their existence are due for further decrease, as our few remaining forests are exploited. Unforeseen changes in weather, human population, or land use may cause other drastic changes which are not at present foreseeable. Future ornithologists need not fear, however, that there will be no work to be done. The recording of bird populations over long periods is a field sorely in need of more workers.

SUMMARY

The breeding birds of Cayuga county, New York, have been studied more or less consistently for more than seventy-five years. Important changes in bird populations have occurred during this period. At least fourteen species have disappeared or are present in very small numbers, while several more have suffered serious decreases. Twenty species are listed as having appeared or increased within the county since 1870.

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