

HUMAN INFLUENCES ON GRAND ISLAND BIRD LIFE

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Grand Island — easily accessible, strategically located, is a focal point for birding in Western New York. Though other areas are being extensively worked, this particular area still produces 15% of the noteworthy records, this fact being ascertained from the *Buffalo Ornithological Society's* publication *The Prothonotary*. These reasons alone cause us to be interested in the human influences that have markedly affected it's birding potential.

It is remarkable that the island area produces such a large percentage of worthwhile records, for in the last five years, an increase in observers and the intensified study of other areas to the South has no doubt affected its proficiency. Previous to that, it produced approximately 30% of the noteworthy records in this area between the year 1935 and 1945.

Before we enter into some of the effects that have produced these results, it would be wise to describe the island itself. It's ideal location in the Niagara River, largest of the group of island there, is one of its predominant features. The building of bridges to the island has made it an integral link of communication between large cities of Buffalo and Niagara Falls. This fact alone has had tremendous effect upon the island's wild life and its future potential. Topographically, it is well suited for balanced bird life, having woods of varying sizes, fields, creeks, swampy and brushy areas; besides small settlements and villages. From tip to tip, it is a little over 8 miles in length, and an average width of $4\frac{1}{2}$ miles. It's 17,336 acres was once covered with 15,000 acres of prime forest. Most of the forest being White Oak, it was used for the building of boats.

It's population, not more than 600 some 20 years ago, has grown to 4000. The transition from a primeval forest, thence to an agricultural community and again changing to a residential township, is almost as interesting as its effects on the island's bird life. These effects, principally, were the depletion of the forests, its growth as rural land, then lastly, in recent years, the erection of both bridges and the resulting road network. It's growth as a residential area, though playing an important part, will have its greatest effect in the next quarter of a century.

The passing of the forests, subsequently produced large field areas, which in turn introduced many new field birds. Clearing of the land, presaged the growth of agriculture and both being caused by human agency, they therefore exerted a wide influence on birdlife. In the early days, the island supported Wild Turkeys; also it was extensive enough to contain three or more pairs of Bald Eagles and other large birds. They, of course, went with the forests. Unfortunately, there is little information available for this early period. At that time it was not so accessible and there were few who left behind any data related to it's bird life. Yet this change from the primeval, which ushered in the agricultural growth brought about a decided effect.

Therefore, we will deal with more recent times, particularly the past twenty-five years. It is to be noted that though a rural community at this time, the Island still was in a wild, relatively undisturbed state. At that

time the population of waterfowl, herons and rails, was higher in the Burnt Ship Creek area. In general, land birds were found in higher proportion, possible even seen in greater variety then. For instance, Purple Finches and Long-eared Owls were easier to find on a day's field trip; whereas, the Bobolink was more prevalent then, probably because of good hay fields. Although Shrikes move in during the winter season because of the availability of rodent and numerous hawthorne patches, they were seen in greater numbers then because of a more undisturbed habitat. This will be reflected more in the growth to a residential area.

This information is from the observations of two of our outstanding field students, Harold D. Mitchell and Clark S. Beardslee. I wish to picture the area then through their eyes. Great changes took place in the Buckhorn and Beaver Island areas, during those years. Both these sites were naturally suited for birdlife, being undisturbed, extensive, and with varying habitat within their confines conducive to good birding. Bald Eagles and Vultures were seen more often at Buckhorn—Burn Chip Creek area than now, and the land birds were found in higher numbers. Geese were also often seen in the fields adjacent to this area. In 1932, the government, in order to give men work, had them destroy great brush areas here, thus reducing cover and food, having a marked effect on its wild inhabitants. Later two camps were built here, one following the other, reducing the quality of this once fine natural habitat. Beaver Island suffered the same, when it was trimmed for a park site. This spot also has a beach area and in recent years, the bridge and roads have drawn large crowds to it in summer, thus reducing its effectiveness during that season.

At that time there were no bridges or good roads, and the island was reached only by ferry, with the result that bird students visited it less often than they do now. Thus the island maintained a rural population of only around five hundred, who are less detrimental to nature than an urban community. These facts, despite the agricultural aspect, still left the land more conducive to wildlife populations. Being less accessible then, the fewer bird reports turned in from Grand Island have often been misleading.

Actually, the decline of agriculture has caused a decided effect in introducing new varieties of birdlife to the island. This can readily be seen in the movement of Winged Predators to the island and the increase of field species which appeared after the era of forest depletion. When the once cultivated lands, reverted to nature, they still were fertile enough to produce the plant life that is necessary to support a large field mouse population. Soon an increase in the nocturnal and diurnal predators was evident. Short Eared Owls can be seen here in numbers of 15-20 around dusk during Spring and Fall. They have even summered. Marsh Hawks can now be seen here in good numbers now that meadow and field mice are available for their support. They are a welcome control on the rodent population. There are more open areas now which are attractive to the Red-tailed Hawk. To some degree these birds have all acclimated themselves to human civilization and have thrived. This may be due to the islanders' realization that these predators have a wholesome effect on the island's wildlife. The Great Horned Owl seems to have maintained a stable number over the years and have adjusted themselves well in the woodlots, which are often almost

totally surrounded by field land. In 1948, Anderle and Gamble found 8 nests out of a possible 14 nesting sites. This is around 57% and no doubt has been a stable percentage. One thing of note that they have observed, is that the Great Horned Owl is just maintaining its numbers rather than increasing. They make these deductions from the breeding results. Although the nests had from 2 to 3 eggs, only one young reached maturity in most of the cases. There remains also the factor of a river barrier, which has kept down an influx of mammalian predators, allowing a greater food supply for the winged hunters.

Field birds would not be prevalent at all if the land had not been cleared, thus producing within time, the habitat in which they are found. Such birds as Upland Plovers, Meadowlarks, Prairie Horned Larks, Vesper and Savannah Sparrows have since established themselves. At present they still have the necessary open lands which support them. If the reversion of the tilled land had not occurred, and produced the natural habitat, these particular species would not enjoy the numbers we see there now. The Bobolink is one of the few which has been reduced in numbers. Dr. Axtell pointed out that this is chiefly due to the present scarcity of hay crops. Bluebirds which are found in the brush and field areas have increased here also. They will probably do so until the urban population grows and drives them out. A good deal of this information would not have come to light, if the erection of bridges to the island had not afforded us greater accessibility to the island.

This lastly has introduced to the island a new era, that of the growth of the island as a residential area. This would not have been possible without the bridges and the subsequent road arteries which opened all parts of the island to us. The next ten years will show us the effect that this will have, if the growth of the villages does not slack off. Of the residential aspect, we would prefer the estate rather than the settlement. The estates have even contributed in that they have trimmed their woodlots, but have not decimated them. This has left desirable habitat for the Red-headed Woodpecker. We cannot say the same for State Parks, particularly Beaver Island, where they have cut the woods down indiscriminately to secure fire wood. Without a doubt, this has caused the Woodpeckers to move from this area to that of the estates.

We must consider also the type of settlement. Sandy Beach at the north end is altogether different from Grandyle Village. So is their birdlife and its density. At Sandy Beach, the houses are individually characteristic and the people have left small wood lots, and brushy areas amongst the settlement. They have also planted shrubs and trees, of which the latter are chiefly coniferous. In these I have found owl pellets attesting that they give cover to these birds. Cardinals can be found in a small park area here. Short-eared Owls, Marsh Hawks, even Bald Eagles are seen flying about the perimeter of this settlement, while the Great Horned Owl nests in one of the woods close by. Land birds such as Jays, Chickadees, etc., are found in fair numbers in and around this suburban area. Unfortunately the opposite is the case in the Grandyle Village area. I have noticed the graphic change here after my sojourn in the Army. This particular section, previous

to my itinerary supported only a few houses. Meadowlarks and Bluebirds were fairly numerous in the field areas, while in the Fall season, large flocks of Horned Larks could be seen. It was usual to see some Buteo or Harrier flying about this area when descending the south bridge to the island proper. Now either they are not to be seen, or else their numbers have been drastically reduced. This form of communal residence could have an undesirable effect, if it were to spread. I would like to point out though, that it is well for us that they chose this site for the village rather than other sections which are even more favorable to birding.

There are a few encouraging aspects. The township has ordinances against the building of large manufacturing concerns and they intend to abide by this policy. The lack of railroad facilities also strengthen our hopes here. There is zoning for light industry, but none which would cause undesirable results. There once was a social contact between bird students and islanders which probably has produced results. With proper guidance this could be recultivated and nourished; thus standing us in good stead in the years to come. We could do considerable good if we could establish a small group of bird students there. These possibilities can have a good counter effect among the growing residential populace.

It is regrettable that the island is no longer primeval, but the effects of human influence have had favorable results. We are in possession of a reasonable picture of the future and the means whereby we may cause it yet to be bright as regards birding.

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