

## **WILDFOWL RESEARCH**

By Brian Stronach c 1969

"The wildlife of today is not ours to dispose of as we please. We have it in trust. We must account for it to those who come after".

Since these words were spoken the fate of diminishing wildlife population all over the world has continued to be a cause for concern. In Ireland in particular, our stocks of wildfowl have gradually dwindled, with increasing rapidity since the war. The cause of the decline is not fully understood and for some years now the Government has been anxious about it. In 1966 the Government recruited a Wildlife Biologist to investigate possible causes, in particular to study our main resident duck, the Mallard.

### **Lough Carra chosen**

After many surveys and much deliberation Lough Carra was chosen as the study area. Here there were more breeding pairs of Mallard than in any other area visited during the preliminary survey of Ireland. Not only does Lough Carra hold more breeding Mallard, but it acts as a winter roost for many other species of migrant duck. But duck and wild-fowl apart, one of the influencing factors in this choice of study area was the interest shown by the people in this part of Mayo, who realised that they had a conservation problem.

They were enthusiastic about the research project and were eager to make Lough Carra into a Wildfowl Refuge for birds under pressure from shooting during the winter months. It is imperative that the study area should be as undisturbed as possible for research to be carried out. The Minister of Lands passed an order making the lake a wildfowl refuge this August (1968?)

### **I will try, very simply, to describe the research work and why it is being done.**

To start with it is necessary to build up a collection of data, information about all aspects of the life of the wildfowl population, because there has not been any wildfowl research carried out -in this country. The first and most important aspect of the project is to find out just how many birds we have in the study area, in the region, and in the country as a whole.

### **Weekly counts**

In the study area a weekly count is made from a boat. The boat follows a set route, the same every time a count is made, and the count is operated always at the same time of day so that the figures are significant, showing a relationship between each set of figures throughout the survey. The regional count is done both by ground and air surveys. The aerial count is a monthly one and counts are made over the main Turloughs and large lakes in the West. Where possible a ground check is made to try and compare the results of the two types of census. On the national scale the count is done in conjunction with the Gun Clubs and-Ornithological Societies. Figures of the number of birds are forwarded to me. And a general assessment of the country is made...

### **Why, you will say, is it important to know how many birds we have got?**

The answer is logical. A farmer has to know how many sheep and cows he has before he can decide how many to sell off; a Forester must know how many trees there are in his forest before starting to fell. If

the farmer came to sell or the Forester to cut down, without this basic knowledge, the farmer might find himself short of stock for next year and the forests might fail to give a sustained yield over the succeeding years. The same way we must know how many wildfowl we have in the country, an assessment made not just once, but over a few years, before deciding if we are depleting the flocks by over shooting, or destroying their habitat, by encroaching upon their natural haunts in various ways through our own increasingly urban and industrial society.

### **Can the stocks be maintained?**

So, it is necessary to find out on a national basis how many birds we have year by year in order to see how many birds can be shot. It is also very important to keep a check on the fluctuating population, in order to see when and where we get increases and decreases. The crucial point is can the wildfowl population be maintained at a certain level guaranteed to produce a sustained yield of duck year by year.

### **Movement of Birds**

The next, and a very important aspect of the research project, is to find out if there is any movement-of the birds and to plot these if possible. To do this a series of traps have been placed in the study area which is baited with grain to attract the duck. The birds caught in these traps are ringed and in some cases a coloured wing marker is placed on the wings before releasing; them. On many occasions the birds which have already been trapped re-enter the traps and so information as to movements etc. is gathered. The most important factor in the trapping programme is to get information from the duck-shooters who, having actually shot a ringed or wing-tagged bird are duty bound to report to me the data and place where the, bird was shot, so that all the data can be collected.

### **Birds from overseas**

It was thought that few mallard from overseas penetrated as far as the West of Ireland until a bird was captured in the traps which had been ringed as a young bird in England. Presumably this bird had bred on Lough Carra as it was in its post-nuptial moult. So part of the jig-saw puzzle has been fitted in and, after several years, a picture can be seen of the general movements of the birds.

But, and I must emphasise this, the shooting fraternity in particular must co-operate and send me the rings; tags and information I require, if the fruits of this work are to be realised..

### **Breeding**

Another part of the work which is of vital importance is to study the breeding success of the resident breeding population. Lough Carra is an ideal area for the study because the birds nest on the islands and are free from disturbance and most ground predators. The most effective method of doing this is by using a dog. Each nest is visited at least three times during its incubation period. In this way a check can be made (a) on the number of nests and (b) whether they have been robbed or successful.

### **Robbing of nests**

During this part of the research, in the spring and early summer, it was found that a large number of nests had been robbed by the Grey Crow, 95% of the robbing was carried out by this winged predator. Of the nests which were found 58.9% were robbed and 39.0% were successful. This leaves us with just over 10% unaccounted for. This unaccounted portion of the nests is due to the excessive growth of vegetation on the islands in midsummer making it impossible to refind the nests.

## **Hatched**

The total number of mallard nests found in the study area was 291. The average number of eggs per clutch was 10.2 so that one can assume that just over 1,000 ducklings hatched on Lough Carra. During this part of the research my dog was able to catch the incubating females on the nests and return them to me unharmed. These females were then wing-tagged and it was then possible to make individual observations on the broods. This, together with observations made on the broods caught in traps, showed that the average number of young birds which survived to the flying stage was only 2.5. So that from the successful nests one would expect only 280 young birds. This is a very poor harvest of birds from the number of nests found.

## **The main predator was the Grey Crow.**

To get a true picture of the predation rate, nothing was done to control this pest, except on one island. The results of this experiment were most interesting. Up till the time the birds were poisoned, 100% of the nests on the island were robbed. After the crows had been poisoned there was a 100% success rate among the nesting ducks. Next year an experiment will be carried out in order to try and eradicate all the Grey Crows on the lake to see what effect this will have on the breeding success of the birds. Rats on the islands will also be controlled.

## **Mortality rate**

There is a drastic mortality rate (from 10.2 - 2.5) of the young ducklings. It is not certain what is causing this, but from some observations from local observers it could be caused by many factors. The Greater Black-backed Gull, it seems causes a lot of trouble. Constant observation and time can only help us in this.

## **Behavior patterns**

The behavior pattern of the duck is also studied, and a food habit study is under way to try and estimate whether the birds show any preference for a particular type of food.

To do this, birds are shot (elsewhere than on Lough Carra) and part of the digestive system analysed. In order to get a large number of samples, Gun Clubs have been a great help in collecting the required digestive tracts. The findings from this part of the research could help us when we get to the stage of cultivating plants for which the birds show a preference, to give them more food which might lead to an increase in the overall population.

## **Hatchery at Creagh**

A small hatchery is operated at Creagh where eggs from wild birds are incubated and young ducklings are reared. Most of these birds are used for experimental purposes, but some of them will be used for a nucleus stock of breeding birds so that we can restock Bantams and Silkie (Chinese Bantams) which have proved to be the best broodies. Two incubators will also be operating next year.

## **Conclusion**

This then is the nature of the research and the reasons why it is being carried out. It is not a short term project and can only be completed over a period of years. Naturally the best results come from continuous observations and continuity of work especially in the very important study area of Lough Carra.