Bird Study in High School Biology

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THERE is no subject which is more worth while in high school biology from the esthetic side or from the point of view of science and pure natural history than the study of birds. The living bird may be studied in its own habitat, free and happy and engaged in its natural activities. The field study of birds arouses interests which are abiding. Aside from the fact that bird study provides for a worthy use of leisure time in the open air, it also shows the relation of birds to man's welfare and stresses importance of protection and encouragement. It is important for everyone to know that with a sufficient bird population, the greater part of the loss of $1,049,500,000 each year, due to insects, could be saved to the people of this country.

Field work on birds should extend throughout the year along with observations on insects, trees, fungi, weeds and flowers. The study may assume the form of a survey of a suitable selected plot. In the country districts an ideal site could include the orchard and house lot. Location in the city is no excuse for omitting this essential part of the biology course. The nature of the work must be varied to meet the conditions. I have conducted field work from five different schools in Chicago, three of which were in the congested districts, and I have found plenty of suitable spots easily accessible. The limited scope of this paper will not permit a detailed outline of the different types of field work which may be carried on in any given plot. One main line of investigation might be to determine whether there are enough birds in the area to hold the insects in check. This study would lead to the problem of determining what special features attract the birds to nest on the plot. The question, "Why is the bird here?" calls for much clear observation. It is equally important to study the elements which account for a scarcity of bird life. The pupil must determine what necessities are absent. From these considerations it is only a step to the problem of determining what may be done to attract the birds to any given location.

Other lines of bird work that may be taken up relate to the destruction of weed seeds and the control of rodents. The problem will involve a study of bird migration and means of providing for the winter birds so that they may be attracted within easy range of observation.

The spring migration calls for a study over a wider field with the emphasis on identification and related details. The opportunities offered

for bird study in Chicago and its immediate environs is a source of wonder. We have the parks, open spaces along the boulevards, several wooded tracts and forest preserves along the river, all within the city limits. On the north side we have been allowed access to Rose Hill Cemetery, a veritable bird paradise during the spring migration. Here may be found pied-billed grebe, great blue heron, little blue heron, various species of ducks, loon, coot, thrushes, whippoorwill, barn swallow, chimney swift and a great list of others. Wild mallard ducks rear their young on the banks of the lagoons. In the back yards in the residence districts, where there is a considerable growth of shrubbery, may be found, especially during the migrating season, many different species. In our own back yard, we have had such visitors as chewink, different thrushes, white-throated sparrow, brown thrasher, several species of warblers, scarlet tanager, catbird, cedar waxwing, Bohemian waxwing and many others.

With all of those opportunities for study, I felt justified, while teaching that work in the Senn High School, in requiring every member of the classes to know at least twenty-five birds. Most of the pupils learned to know many more than that number. As I remember, the greatest number to the credit of any one pupil was 150 different species. The greatest number of different species for all members of the classes for any one season was 250. Of course there were mistakes, and some dishonesty, but experience in checking up reports enables a teacher to reduce dishonesty to a minimum which is almost negligible. Various contests add to the interest in this work. Trips are taken after school hours and before school hours by the different classes accompanied by the teacher, but after the work is well started, the best work is done by the pupils themselves, either individually alone, or in small groups. I remember one pupil who was severely reprimanded by his parents when he returned home from a bird trip on a Saturday evening as late as nine o'clock. By Sunday morning he had the enthusiasm of the whole family aroused to the extent that they consented to go with him for an all-day trip on Sunday. For this work the pupil should have a pair of field glasses (cheap ones will answer), a note book and a bird guide such as Reed's or Chapman's. Several laboratory copies of Chapman's "Birds of the Eastern United States" should be available.

I have seen no better treatment of general methods of bird study than that found in Hodge and Dawson's "Civic Biology." Hodge's "Nature Study and Life" is also suggestive. Hornady's "Our Vanishing Wild Life" is a good help to give a background for this and similar studies on conservation of our wild life.

In order to make any kind of a study of the economic relations of birds to man, we must know birds. Being able to identify birds, to name them, is not enough. The pupil should have some knowledge of scientific classification. The laboratory should have mounted bird

skins representing all of the orders of local importance and all of the common families of perching birds. The different external characters which are used in identification are characters which are adaptations to the environment, so that important biological principles are stressed in such a way as to make permanent impressions. An excellent aid in class work in connection with bird study is the stereopticon lantern. Slides made from photographs of the living birds are available, which offer studies in color, habits and habitats of birds which aid in preparing for the field work. Other slides which show diagrams giving a graphic representation of economic importance of the different species help in fixing the importance of this relation.

Most of the success or failure of bird study in the high school classes depends upon the teacher. He must develop an enthusiasm for the work that is contagious. He must realize the social importance of the information and training that bird study gives and attack the problem as a civic duty. The conservation of our wild bird life is a national, state and community problem and must depend upon each citizen knowing the different species and actually doing his part.

Photo by Auguste Matthieu

BROWN THRASHER