

SOUTH DAKOTA  
GEOLOGICAL AND NATURAL HISTORY SURVEY  
Vermillion  
Freeman Ward, State Geologist

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Circular No. 3  
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PROTECT THE BIRDS AND HELP WIN THE WAR

\$8,000,000 to \$15,000,000 worth of crops are destroyed in South Dakota every year by the ravages of insects.

The total damage done in the United States, -- as determined by the Bureau of Biological Survey, U. S. Department of Agriculture, -- is the enormous sum of \$1,104,869,300, which is equal to one third of the amount raised in the Third Liberty Loan. The loss would be \$444,000,000 greater but for the services rendered the farmer by the birds.

Since South Dakota is largely an agricultural state, the amount given above is certainly a conservative estimate.

With this tremendous loss each year is it not time that the people of South Dakota awoke to the fact that there is an important economic relation existing between crops, birds and insects.

In these times when a sack of flour, or feed for a steer or hog means so much, millions of dollars worth of food is being lost in the state simply because we are indifferent to or ignorant of the value of birds in reducing insect life.

Insects destroy crops. Birds are the natural enemies of insects. It is proved beyond a doubt that with the assistance of birds in keeping a check on injurious insects our products are increased many millions of dollars each year. And where birds are eliminated or reduced in numbers our crops loss is much greater.

The above statements are facts not theories. Why then absolutely ignore this most important use of birds! On the contrary, we could increase our crops many millions more by protecting the birds, by encouraging more birds to live in South Dakota and eat insects and raise more birds to eat more insects.

Before South Dakota was known to the white man the "balance of nature" was evenly adjusted in its relation between insects and birds. At that time the "Shore Birds", such as Plovers and Snipes, were numerous and were raising young by the thousands over the eastern half of the state. They were the great family of birds which devoured the insects predominatin at that time. It has been estimated that 85 per cent of the food of twenty species of snipes and plovers consists of injurious insects such as grasshoppers, crickets, wire worms, etc.

Today there are practically none of these birds nesting in the state, because their natural breeding haunts have been destroyed by the plow or the tramping of stock during intensive pasturing.

Also, by changing a wild prairie state into a grain producing state we have not only created new conditions that encourage the introduction of new species of insects, but have at the same time discouraged the breeding of their natural enemies. Hence the "balance of nature" has been disturbed.

But man has the power to readjust this "balance of nature" and so increase his crops if he will only awake to the situation.

The Grouse family, consisting of the Quail, Prairie Chicken and the Sharp-tailed Grouse, are the birds that will take the place of the Snipes and Plovers. The Quails and Prairie Chickens followed the settlers into the state and eagerly accepted the environments created by the settler. But owing to the rigid climate here and because they are non-migratory in their habits, at least as far as leaving the state is concerned, they do not

increase rapidly. They must be encouraged to breed in larger numbers. This can be done by artificial feeding and protection during storms. These birds also of a size and quality to make them eagerly sought after by hordes of hunters. This tends to extermination. Killing for pleasure or food must be very greatly curtailed if not stopped entirely.

There are a dozen different Hawks and a half dozen species of Owls in South Dakota. Three of the Hawks and one of the Owls occasionally destroy poultry, while the other 14 species never do so but feed continually on the larger insects, mice and gophers. It has been estimated that many of our Hawks and Owls are worth \$15.00 each, per year, to the farmers. A Snowy Owl was shot and winged so that it cannot fly and is kept in captivity at the University Museum. This individual is capable of eating a pocket gopher or a rat, or two or three mice every day. Another Snowy Owl contained 14 white-footed mice and 3 meadow mice (Univ. Colo. Bull. XIII, 4, page 17). On Sept. 25, 1915, a Swainson Hawk (common in the state) was sent into the Museum. On examining its crop and stomach the following were found, -- 13 large grasshoppers, 2 mice, one frog, being the meal for this hawk for one day.

Birds are also a great factor in destroying obnoxious weed seed. The Sparrows are the best representatives of seed eaters. The United States Biological Survey has found upon examination of stomachs of Sparrows that 65% of their food consists of weed seeds.

These are concrete examples, many others could be cited. And one can readily understand that the insects, mice and gophers devoured by such an individual could destroy more than \$15.00 worth of crops in one year in South Dakota.

Nearly all of our birds that are either resident or migratory in the state, are working day and night to check the insect and rodent pests. And if each one of the great majority of our birds devours insects or rodents, which in one year would destroy crops to the value of from \$1.00 to \$15.00, is not the subject worth while?

Our Bird Laws Disregarded. A law is either enforced by an officer or sustained by public sentiment. The action of our Game Wardens, in just instances, is mainly directed by public sentiment rather than by his "promise to enforce the law". A concrete case will serve to illustrate this, -- On Aug. 12, 1917, the writer saw two auto loads of men with guns, and aided by three dogs, scouring every ravine and thicket near the Missouri River in search of Sharp-tailed Grouse. At this time of the season the young birds are immature and incapable of protecting themselves, and in most cases an entire covey would be shot and none left for propagation next year. These hunters were from a County-seat town where an officer could have known of it. But no doubt in this particular locality public sentiment is indifferent to the flagrant violation of our bird laws.

This lamentable condition exists more or less over South Dakota. As a result, many species of our birds are being slaughtered to the point of extermination.

It is obvious that those interested in birds must show to the public that our birds are worth while and use every effort to change sentiment in favor of protecting them. This can be done in many ways.

The best way to acquire lasting results is to carry on an educational propaganda in the graded schools. All teachers should be urged to spend at least one hour a week in bird study with their students. Teach the scholars the economic value of birds, encourage them to know the names of the common species. We would suggest that the schools carry on this work through the National Association of Audobon Societies, 1974 Broadway, New York City.

Bird clubs should distribute literature on the subject; have their respective County papers publish short articles, and use every effort in carrying on an educational campaign to change public sentiment.

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If anyone realizes the economic value of birds it certainly is the County Farm Agent. These agents no doubt will be glad to cooperate in spreading this information among the farmers of the state.

We have mentioned nothing of the esthetic value of birds in a community and this is a phase of the subject that should not be disregarded, especially among our young people.

Just now we are "winning the war" and this Circular is sent out to the people of South Dakota as a war measure with the appeal "Protect the Birds and Help Win the War".

SUMMARY---

- Insects and rodents destroy crops.
- Birds destroy insects and rodents.
- Therefore do not destroy the birds.
- Protect the birds, encourage them.
- Tell your neighbor about the value of birds.
- Support the game laws and Game Wardens of the state.
- Help win the war.

--W.H. Over--

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Address all inquiries to the State Geologist