

of Yellow Locust some twenty feet high. The ground below being almost barren of undergrowth it was not unlike the floor of a pinery. One side of the pit is bounded by the wooded bank of a stream, upon which were a few white pines and some hemlock. She was hunting the branches and leaf fronds for food, and kept very quiet, uttering only a soft low "seep, seep," when about to fly from one tree to another.

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WATERFOWL DIE FROM EATING SHOT

Wild ducks and other waterfowl sometimes die from lead poisoning resulting from swallowing stray shot which they pick out of the mud about shooting grounds. Many ducks that become sick from lead poisoning finally recover, but it is probable that the effect is permanently injurious not only to the individual but to the species. It has been ascertained by experiment that lead greatly impairs the virility of male domestic fowls. Females mated with them lay many infertile eggs, while in many of the eggs that are fertilized the embryo dies in the shell or the chick emerges weak and unable to withstand the hardships of early life. What effect lead poisoning has on female wild fowl has not been definitely ascertained, but, as the fact is well known that lead produces abortion in female mammals, there is a possibility that it exerts a bad effect on female waterfowl during the breeding season. Thus, the supply of waterfowl is likely to be decreased by lead poisoning not only by the number of birds that die directly from it but indirectly by impairment of reproduction.

These facts are set forth by the United States Department of Agriculture in Bulletin 793, "Lead Poisoning in Waterfowl," about to be published as a contribution from the Bureau of Biological Survey. Reports of waterfowl apparently sick from lead poisoning have been coming in for several years. The Biological Survey undertook an investigation at various shooting grounds to determine how common the taking of shot by waterfowl is, and a series of experiments to ascertain the effect of shot swallowed. It was found that at places where much shooting is regularly done from blinds, shot at the bottom of the shallow water are so numerous that one or more was found in practically every sieveful of mud or silt, and that they are swallowed by waterfowl whenever found as a result of this habit of swallowing small, hard objects to supply grit for the gizzard.

The experiments have shown that shot swallowed are gradually ground away in the gizzard and pass into the intestines, pro-

ducing a poisoning that results in progressive paralysis and, usually, death. Experiments with wild waterfowl captured when young and reared in captivity—to obviate the possibility of their having taken lead before the beginning of the experiments—have shown that six pellets of No. 6 shot constitute an amount of lead that is always fatal. Two or three shot were sufficient to cause death in several instances. In one experiment, two mallards were given one No. 6 shot each. One of them died in nine days and the other was able to throw off the poison.

The list of species known to have been poisoned by eating shot consists of mallard, pintail, and canvas-back ducks, the whistling swan, and the marbled godwit, but many other species, particularly of ducks and geese, are undoubtedly affected by it, according to the bulletin.

Unfortunately, nothing can be done at this time to protect waterfowl from lead poisoning except to call attention to the malady and to make known its cause and symptoms. The Department, however, desires statistics on the numbers and species of birds affected and asks that sportsmen and others report to the Bureau of Biological Survey all cases that come to their attention.

THE ANNUAL MEETING

Bear in mind that our next annual meeting will be held in St. Louis, Missouri, in conjunction with the meetings, of the American Association for the Advancement of Science. No program of these meetings has been issued, so that the dates of our meetings cannot be announced at this time. But it is probable that our meetings will be held on December 30 and 31. Announcement of the exact time and place of meeting will be made in ample time by circular letter. It is hoped that you will not wait for an invitation to prepare and read a paper at this meeting, but that you will send your title as soon as possible to the secretary, A. F. Ganier, 1023 Villa Street, Nashville, Tenn. Liberal coöperation will ensure a most profitable and interesting meeting.

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