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FISH AND WILDLIFE SERVICE

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The most extensive controlled experiments ever undertaken as to the effects of DDT on wildlife are now underway at the Patuxent, Maryland, National Wildlife Refuge, Dr. Ira N. Gabrielson, director of the Fish and Wildlife Service, reported today to Secretary of the Interior Harold L. Ickes.

The experiments at the Patuxent refuge are being conducted in cooperation with the Bureau of Entomology and Plant Quarantine of the Department of Agriculture as one of a group of experiments to determine possible deleterious effects of the use of DDT and to establish safe methods for its use.

At Patuxent, a 117 acre plot of woodland has been sprayed with a heavy concentration of DDT dissolved in a light oil. For many months biologists of the Fish and Wildlife Service aided by Civilian Public Service personnel have been making a careful inventory of the animal life of the area. An almost exact knowledge of the bird population of the area has been obtained, and there is substantial information as to the population of small mammals and fish. Thus it will be possible to check with considerable accuracy the effect of the use of DDT on the biology of the area. Similar inventories have been made on two control areas, one immediately adjacent to that which has been sprayed, and one at a distance of several miles.

Prior to the spraying operation, which was done from a plane, entomologists placed trays throughout the area on which insects killed by DDT will fall. From these samples the scientists will be able to determine the approximate percentage of various types of insects killed and the speed with which the DDT acts under the controlled conditions of the experiment. In succeeding weeks and months they will continue their checks in order to determine with what speed the insect population and its various components rebuilds itself.

Live boxes of many types of animals indigenous to the plot have also been placed in the sprayed area. These include salamanders, newts, frogs and tadpoles, and small mammals. Stretches of the Patuxent River which runs through the plot have been set off by nets and known numbers and kinds of fish have been placed in the protected section so that the effect of the powerful insecticide on aquatic life can be studied.

The experiments were begun at this time because the birds in the area are now nesting. Even seed-eating birds feed their young with insects. Ornithologists expect to be able to determine whether the birds will feed their young with insects killed by DDT and the effect of this feeding on the young birds. They will also find out whether the birds, deprived of their normally abundant source of insect food, will continue to maintain their nests and forage out of the area for food.

Because widespread use of DDT may have a decided effect on wildlife both directly and indirectly through its destruction of one of the integers in the biologic sum, the Fish and Wildlife Service is cooperating in a number of experiments designed to obtain more exact information as to its effects and use. Fish and Wildlife Service observers will be present this summer at large scale experiments in Pennsylvania and Maryland, and in the Province of Ontario, Canada. Additional laboratory experiments as to the effect of DDT on various species of animals are underway at the Wildlife Research Laboratory at Patuxent.

The effect of DDT on waterfowl is being studied particularly since DDT will have an important use in the control of mosquitoes in the marsh-lands frequented by ducks, geese, and other waterfowl. Fed in certain concentrations DDT has been fatal to some waterfowl in experiments already undertaken although the experiments indicate that the concentrations would have to be high to produce a fatal result. Fortunately DDT is not soluble in water and there are indications that it passes quickly through the bodies of animals subsisting on a vegetable diet. Studies are still underway as to the effect of the substance on animals subsisting primarily on a diet of animal origin. The presence of a greater amount of fat in such a diet might render the DDT assimilable.

Dr. A. L. Nelson, Assistant Chief of the Division of Wildlife Research of the Fish and Wildlife Service, is in charge of the DDT experiments at Patuxent.

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