CONSERVATION

Waterfowl inventory. The field investigations conducted by the various agencies working with waterfowl have been greatly expanded during the past year, giving promise for a healthier program for ducks. When it was realized, early in 1946, that waterfowl populations had severely declined, naturalists were disturbed by the confusion which prevailed. The setback followed the greatest wildlife management program in history, and evidences of the decline came while managers were most optimistic regarding the security of waterfowl. For more than a year the matter was thrown back and forth between groups which held, on the one hand, that the situation was a matter of small concern, and others which saw further and more serious troubles ahead if drastic measures were not taken to check the kill. This controversy received nationwide attention in the press, with neither side of the question supported by conclusive facts.

Fortunately, one first step taken to meet the situation was an expansion of the field investigations for the appraisal of waterfowl numbers. In 1946 the U. S. Fish and Wildlife Service sent 5 men and 2 aircraft to the Prairie Provinces of Canada, where their appraisals previously had been accomplished by 1 to 3 men in cars. Last year this Service crew numbered 7 men and 3 planes, while the leader of this party, Robert H. Smith, traveled on to the Arctic Coast where he spent a month running air transects over breeding areas between Point Barrow, Alaska and Bathurst Inlet, Northwest Territories. This appriasal work began when the breeding ducks settled on the prairies in late April and continued through August.

These Service biologists have developed for recording the resident breeding populations an objective method which is proving far more accurate than the previous examinations of the summering aggregations. In this spring work they are dealing with a relatively stable population, and one which, area by area, is small enough to be counted. Transects run by car, canoe or from aircraft give a highly accurate figure which can be compared year by year. Two Stinson L-5 aircraft—flying jeeps used during the war—cover the prairie marshes, while the Grumman Widgeon, an amphibian, is used in the Arctic. The spring survey, completed by July 1, provides part of the information upon which the autumn shooting regulations are set. During the remainder of the season the field crews study population shifts, rearing success and water conditions. An intensive breeding-ground banding program was carried out during July and August.

This Fish and Wildlife Service work is but one part of a highly cooperative venture. In Canada, the Dominion Wildlife Service and the Provincial governments have stepped up their own waterfowl programs, and the Service biologists work with these agencies. Moreover, the breeding grounds of the northern States, generally underrated as duck producers, have been carefully covered by a joint project between the State agencies and the Service. The Delta Waterfowl Research Station has been headquarters for the eastern prairie teams which have worked out many of their techniques there. Thus, there is developing a comprehensive picture of waterfowl production, and policy is now being guided by facts to an extent never before possible. The force of this new information has dispelled the controversy and is doing much to win the sympathy and interest of sportsmen, a matter of no small importance in drawing up a workable plan for waterfowl. The 1948 breeding ground inventory gave evidence of improved conditions and permitted anticipation of increased flights in most sections of the United States this fall.

For 10 years the Fish and Wildlife Service has released an annual figure representing their estimate of total waterfowl numbers. This, in recent years, was matched by other population estimates advertised by sportsman's groups, these sometimes being in wide contrast to the Service figures. The various agencies have agreed that total population figures lead to con-

fusion in the minds of many sportsmen, and, therefore, that only estimates of increase or decrease should be released. The annual figure, however, is of great importance in guiding policy, particularly in respect to species with numbers so small as to be endangered by any misunderstandings regarding the size of the population to be harvested. Consequently, the January inventory, like the summer appraisals, is receiving more attention, and has been improved by new techniques and more air observations which now reach deep into Mexico and Central America to cover the wintering aggregations there.

The possibilities of international cooperation for investigation of waterfowl were emphasized by Peter Scott, British naturalist and bird artist, who returned to England after a month in the United States and Canada where he visited many waterfowl refuges and marshes. He is now Director of The Severn Wildfowl Trust, established at Slimbridge, Gloucestershire in 1946, where studies of British waterfowl are being undertaken. Despite the vast differences between British and American wildfowling methods, Scott believes that conservation on both sides of the ocean would be advanced by closer associations between British and American biologists working with waterfowl. The 1948 report of the Severn station is now available, at the price of $1.00. Its 72 pages give details of the Station's program, a description of some decoys and a discussion of a trapping technique in which rockets are used to throw a net over feeding geese. There is also an excellent color plate of one of Scott's recent paintings.

ALBERT HOCHBAUM, Conservation Committee