

## WATERFOWL CONSERVATION IN THE DECADE FOLLOWING WORLD WAR II

*(A Contribution from the Wilson Ornithological Society Conservation Committee)*

During the decade following World War II, the pressures growing out of an increasing human population have added progressively to the difficulty of and need for waterfowl conservation. Moreover, the events taking place during these 10 years have contributed little to suggest that the waterfowl conservationist's road will be any less difficult in the future.

Waterfowl conservation during this period may be reviewed from three points of view: (1) administration, (2) management, and (3) research. As herein considered, administration embraces the political philosophy and financing of waterfowl management; management includes the manipulation of waterfowl populations and habitat; and research concerns the gathering of facts upon which to base the management program.

*Administration:* The formation of state conservation agencies into councils for each of the four North American flyways has been a significant development in waterfowl conservation. Each flyway council provides a means of formulating regulations tailored, within limits, to the needs of the individual flyway, and, to a lesser extent, to the needs of each state in the flyway.

As an adjunct to each council, the waterfowl biologists within each flyway may serve as a technical group which is available for consultation by the council. This technical group may also act as an agency through which the research activities of the flyway can be coordinated.

The flyway council system creates one potential danger to waterfowl conservation: It may tend to form a pressure group seeking unwarranted changes in hunting regulations. Members of the councils must endeavor to insure that the welfare of the waterfowl remains of primary concern.

Under new leadership, the U.S. Fish and Wildlife Service appears to be following a liberal attitude toward restrictions on waterfowl hunting. When the continental waterfowl population declined in 1953 and 1954, the Service not only adhered to the 1952 regulations on length of season and bag limit for the Mississippi Flyway, but, in 1953, increased the length of season 5 days for the Atlantic and Pacific flyways and, in 1954, added an additional 5 days on the Pacific Flyway. At the same time, the Service permitted California to conduct an experimental feeding program. The result: Hunters in Ohio and Maryland have clamored for similar privileges.

Whether the present liberal policy toward hunting regulations will affect waterfowl populations adversely remains to be seen. In 1953 and 1954 unusually mild weather prevailed over much of the United States during both hunting seasons, thereby tending to limit the kill of waterfowl. With favorable hunting weather, however, an excessive kill of the breeding stock may take place. Within the memory of living men, such unusually severe slaughters have taken place on at least two occasions. The possibilities appear especially dangerous in the Mississippi Flyway where a large portion of the waterfowl which winter there are relatively accessible to the hunter when concentrated. Thus, it seems apparent that the margin of safety guarding our waterfowl population under present administrative policies is paper-thin and that perhaps we are close to being guilty of gambling with the future of our waterfowl resource.

The philosophy of previous administrations of the U.S. Fish and Wildlife Service toward regulating the kill of waterfowl was voiced by Dr. Ira N. Gabrielson, former Director of the Service, in a talk on May 24, 1955, in Washington, D.C. He stated:

"Since the passage of the Migratory Bird Treaty Act, there is no question but what the administrative policy of the Biological Survey and by the U.S. Fish and Wildlife Service has generally given primary consideration for the welfare of the waterfowl resource. Since the welfare of the ducks and geese is the prime consideration, it is necessary to be somewhat *conservative* in making regulations."

Although the Wood Duck population in the Mississippi Flyway has steadily declined in recent years, the Mississippi Flyway Council recommended that the closed season in force in 1954 be changed to permit one in the bag and in possession in 1955. The U.S. Fish and Wildlife Service accepted the Council's recommendation. In view of the precarious status of this species in the Mississippi Flyway, this decision appeared inconsistent with the need for being conservative in making regulations.

The budget of the U.S. Fish and Wildlife Service in recent years has not been adequate. This has resulted in the use of duck stamp funds for purposes other than those intended when the Duck Stamp Act was passed by Congress. The Act was passed at the behest of sportsmen who had become aware of the need for obtaining and developing lands for waterfowl refuges. The funds have had to be used for activities of the Game Management Branch and the operation and maintenance of existing wildlife refuges to such an extent that only minor acreages have been purchased by the Service during the past 5 years. Larger proportions of these funds should be earmarked for the purchase of refuge lands in the future.

*Management:* One of the most pressing management problems is that of alleviating crop depredations by waterfowl in southern Saskatchewan and Alberta, and in California. Hazing by aircraft, scaring devices, permit shooting, and feeding have been used with some local success, but the affected areas have been so extensive that "only the surface has been scratched" by the control efforts.

The draining of pot-holes in western Minnesota and in North and South Dakota has abated as a result of a change in policy by the U.S. Soil Conservation Service, but this remains as a continuing threat to the most important waterfowl breeding ground in the United States.

Many of the river basin programs planned by the U.S. Corps of Engineers in the southern United States will drain tens of thousands of acres of overflow bottomland used by wintering Mallards and Wood Ducks. Conservationists should familiarize themselves with the recommendations of the Branch of River Basins of the U.S. Fish and Wildlife Service and then urge Congress to include these recommendations before approving any drainage project.

The state conservation agencies are to be commended for their extensive acquisition and development of waterfowl habitat during the past decade. Prior to World War II, only a few states maintained waterfowl refuges and public shooting grounds. Since the war, however, numerous states have acquired such areas for waterfowl. The acreage in state ownership now approaches that held by the U.S. Fish and Wildlife Service. Because of the large amount of waterfowl acreage being lost as a result of drainage, siltation, and industrial and real estate developments, it is hoped that state conservation agencies will continue an aggressive program of land acquisition for waterfowl.

*Research:* Two notable programs in waterfowl research were initiated by the U.S. Fish and Wildlife Service during the post-war years: (1) the extensive appraisal of waterfowl populations and of production of young on the breeding grounds and (2) large scale banding of adult and young waterfowl on the breeding grounds. These two programs have added valuable information to the knowledge of waterfowl and aided in their management in North America.

Intensive research on nesting waterfowl by members of the Delta Waterfowl Research Station, by Jerome Stoudt of the U.S. Fish and Wildlife Service at Redvers, Saskatchewan, and by biologists of Ducks Unlimited have supplemented the extensive breeding grounds surveys. In our opinion, however, there is a need for additional intensive research on nesting waterfowl.

An inventory of the wetlands of the United States has recently been completed by the Branch of River Basins of the U.S. Fish and Wildlife Service. This is an important contribution toward better land management for waterfowl because it points up the relative value of existing areas for waterfowl, and the areas most in need of acquisition. It is anticipated that the Branch of River Basins will continue to refine its wetland inventory data. It is hoped that eventually the waterfowl carrying capacity of every important water and marsh area will be evaluated.

Studies on two major diseases of waterfowl, botulism and lead poisoning, have produced some new and encouraging findings. Bell, Sciple, and Hubert (1955. *Jour. Wildl. Mgt.*, 19:352-357) have contributed importantly to our knowledge of avian botulism by developing their microenvironment concept and establishing that *Clostridium botulinum* type C grows and produces toxin in immature forms of insect carcasses in distilled water. Evidence from intensive investigations by personnel of the Section of Game Research, Illinois Natural History Survey, has been interpreted to indicate that lead poisoning is less important as a mortality factor among waterfowl than was formerly feared.

During the fall of 1954 waterfowl biologists in every state in the Mississippi Flyway made bi-weekly estimates of waterfowl populations in their state. Upon compilation, the data provided much needed information on the migration of the waterfowl in and through the flyway. Among many values to be gained from this information may be mentioned one—that of providing for open seasons at the most judicious times.

It is believed that further investigations on the precise nature of crop depredations by waterfowl and techniques for the control of such depredations are also among the foremost research needs.—FRANK C. BELLROSE AND THOMAS G. SCOTT



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### NEW LIFE MEMBER

Mrs. John William Conboy (Esther Cogswell) received her A.B. Degree from Franklin College and did graduate work at Indiana University and the University of Illinois. She teaches Biological Science in the public schools in South Bend, Indiana, and shares field birding and the making of nature movies as hobbies with her husband. She is also a Life Member of The American Ornithologists' Union.