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## ORIGINAL AND PRESENT BREEDING RANGES OF CERTAIN GAME BIRDS IN THE UNITED STATES

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Information on the original as well as the present distribution of various game species is indispensable to the game technician who is working for the increase of wildlife on an area. Attempts to introduce or propagate game birds and mammals outside their natural ranges usually end in failure or expensive and doubtful success, although there are notable exceptions. Wildlife-management practices therefore should to a large extent have to do with species that occur or have occurred in the region. This leaflet is designed to summarize in convenient form information on the former and present distribution of certain game birds in the United States. for use by Federal, State, and private workers on game problems.

It is generally recognized that ranges are not stable, but are continually changing. The rapid spread of the English sparrow and the European starling after their introduction into the United States, the appearance of the ring-necked duck as a nesting bird in Maine, and the spread of the prairie chicken northwesterly are striking examples of recent extensions in range.

The extinction of the passenger pigeon and the heath hen and the great reduction in the breeding area of the trumpeter swan are extreme illustrations of reductions in range that have taken place.

In the case of waterfowl, the drainage of sloughs, ponds, and lakes for cultivation and mosquito control has eliminated many of the former breeding areas. Drought, partially the result of unwise drainage, has further reduced the ranges of many species, and as a direct result of lowered water levels botulism has taken its toll of the diminished waterfowl population. Market hunting, spring shooting, and other unsportsmanlike practices did not permit sufficient numbers of birds to return to the breeding grounds, and because of continued shooting over the same waters, lead poisoning became prevalent. In coastal areas oil pollution took a heavy toll, and in

the case of the brant, failure of the food supply played an unexpected part. Destruction of nesting sites and reduction in the number of birds returning to breed could have but one result -- reduction in range.

Fortunately there have been factors that have encouraged some species of waterfowl to nest beyond the limits of their former ranges. Large refuges established by the Federal Government and many other areas under State or private control have been the most notable factors, but irrigation projects and water-power impoundments also have provided new nesting sites. These additional habitats, however, are insignificant compared with the vast areas that have been destroyed.

Among upland game species, also, ranges have been reduced by settlement and cultivation. Market hunting and shooting for sport during an open season that extended into the breeding period or that opened before the young birds were fully grown eliminated species from some areas and reduced their numbers elsewhere. Also taking their toll of upland species were disease and inclement weather conditions.

Settlement and changes in agricultual practices, inimical to the interests of some upland game species, have enabled others to occupy new territory, the extension of the prairie chicken northwesterly being an example. Introduction of game birds into new localities also has resulted in an increased range for some species, although in most cases this practice has ended in failure.

Through the accompanying series of 37 maps (pp. 3-21), an attempt is made to picture the original breeding range or the area occupied by the birds before the disturbing hand of man was active to any great extent. To contrast original and current conditions, the present range also is given. In some cases this illustrates the success attained in preserving the "ancestral" range, but in too many instances it illustrates the depletion that has occurred in the ranks of wildlife.

Undoubtedly the maps are incomplete for some species, although no attempt has been made to show accidental or occasional records. To supplement known facts, with a view to making the information more generally available, additional data are requested from all field workers. Since many nonbreeding birds, especially ducks, are frequently seen during the breeding season in areas where it is known that they do not nest, all breeding records should be substantiated by reports on the location of a nest with eggs or on the observation of young incapable of flight. A definite locality and date should always be given, with any other pertinent data. Through this cooperation it is hoped that a more exact knowledge of the past and present distribution and population trends of our game birds may be obtained.











































































