INTRODUCTION

The ring-necked pheasant in Wisconsin has been studied almost continuously since the middle 1930's, primarily by persons in the Wisconsin Conservation Department and the University of Wisconsin. Areas of emphasis have included nesting and population studies, various aspects of physiology, behavior, and problems surrounding artificial propagation and stocking.

Regional and statewide pheasant population studies were begun in the Conservation Department in the early to mid-1940's for the purpose of providing a new dimension to our knowledge of population mechanisms. Previous population studies had largely been confined to study areas of limited size. In addition to the basic need for extending our knowledge of these mechanisms, the studies had the practical objectives of assessing the impact of land-use changes on pheasant populations and of observing the effects of hunting.

This report is centered around findings from these investigations. It explores the mechanisms and causes of population fluctuations, the environmental influences involved in the determination of pheasant densities, and the management implications arising from this knowledge.

While the target of our study has been pheasant population mechanisms in Wisconsin, it became evident early in the analyses and interpretations of our data that findings from this state had to be tested with information from other mid-continental states. Therefore various aspects of the entire body of pheasant knowledge were studied, particularly those relationships that transcend state lines and which become evident only when viewed in the entire perspective.

The mid-continental pheasant range is approximately triangular with angles situated roughly in Ohio, central Alberta, and the Texas panhandle. It is perforated or thinned at points by Lake Michigan, the dissected watersheds of several major rivers, the Wisconsin Driftless Area, and the sandhills of Nebraska and adjacent states. This range coincides fairly well with the mid-continental prairies, bordered on the north by the boreal forests, on the south and east by the deciduous forests of eastern and southern United States, and on the west by the Rocky Mountains. It is an area in North America distinct in its biota, physiography, soils, climate, and land use.

Within this mid-continental pheasant range, there seem to be regional differences in pheasant population ecology that are at least quantitative. But a number of principles also seem to hold throughout large portions of this range.

The first draft of this report was begun in 1956 and largely completed in 1958. Revisions were made in 1961 and 1962. Because of the time between the beginning of writing and completion, and because the research continued during this time, substantial amounts of data accrued in the interim. Where relationships derived from the initial tabulations seemed reasonably well established, we did not feel it necessary to add, nor did time allow the addition of, newly accrued data. Hence the reader will find some analyses based on data gathered up to 1956-57.

However, where results of early analyses were inconclusive, we included more up-to-date findings in an effort to give clearer answers. Data are also more up-to-date in new analyses or questions that occurred to us between first and final drafts. An attempt was made to stay abreast of the literature up to the second writing in 1961-62. During the final editing, a few additional references subsequent to 1962 were inserted.

Although there is a vast amount of material on the pheasant—perhaps more than on any other wild species—it is still insufficient to prove or disprove some of the points we raise in this report. Hence, many of the conclusions we draw must still be considered hypotheses to be proven, modified, or disproven by future, more intensive research.