

Preface

The idea of a fish book took root in the late 1940s when I became aware that there was no single up-to-date work available on the fishes of Wisconsin—a state renowned for its lakes, streams, and fishing. The need for a *Fishes of Wisconsin* became obvious when I began teaching ichthyology in the early 1960s and discovered that to properly identify the many species scattered in Wisconsin waters, I had to consult a number of reference books and texts, since there was no single work providing adequate keys and other identification information. Source books to which I had to make constant reference were *Fishes of the Great Lakes Region* by Hubbs and Lagler (1964), *Northern Fishes* by Eddy and Surber (1947), *Iowa Fish and Fishing* by Harlan and Speaker and keys by R. M. Bailey (1956), and *The Fishes of Illinois* by Forbes and Richardson (1920).

I began making fish collections in 1958, and in the early 1960s the program was greatly expanded with the help of teams of students. Each team, working in a designated area of the state, brought the collections of preserved fishes into the university laboratory at the University of Wisconsin–Stevens Point and with my help sorted, identified, and recorded them. The master sheets for these collections provided the bases of the distribution maps for the species. Many specimens from the collections contributed to the establishment of a division of fishes in the Museum of Natural History at the University of Wisconsin–Stevens Point. The thousands of specimens housed in the museum form the core of the present study.

After the completion of my *Inland Fishes of the Lake Michigan Drainage Basin* in early 1976, I began pulling together the species accounts for the *Fishes of Wisconsin*. A wealth of information was available in Wisconsin Department of Natural Resources research reports and technical bulletins, most of which dealt with sport species. I searched the literature to provide a basic life history for each species, including behavior and ecological requirements. I learned that for many nongame species very little is known. Unfortunately some of these are rare not

only in Wisconsin but throughout their ranges. The accounts for these species are often fragmentary, and they point up the need for careful investigation to ensure the continued existence of such species.

As I prepared the distribution maps, it became evident that an irretrievable loss had occurred in the fish resource. Some species were extirpated. The species composition of Lake Michigan had changed radically within a few decades: in some basins several species had been completely eliminated, and exotic fishes had established successful populations, especially in waters undergoing extensive man-related changes. The fish complex was changing rapidly in parts of the state—much too rapidly to predict a secure future for some species.

My concern resulted in the preparation of introductory sections of text dealing with the water resource as it affects the fishes; past and present changes in water quality and anticipated effects if present demands for water continue; our early handling of the fishery resource, the manipulation of the fishery resource today, and the future values of fishes. I have suggested changes in management which may help to restore an ailing fish resource. Remedial action may be costly to implement, but this cost will be insignificant compared with the cost to our children who must mourn the missing pieces and who must struggle to reassemble the ecological disruptions we leave behind.

My taxonomic keys have been tested in a number of fish laboratories, and criticisms and suggestions have been honored in the latest revisions. But because fish did not evolve into species all fitting neatly into the slots provided within an artificial key, the key may break down unexpectedly. I would appreciate hearing from readers regarding problems with the keys.

I am also aware that in the life history accounts new knowledge will replace or modify old knowledge. It is difficult to keep abreast of all publications, bits of unpublished research, and isolated but important pieces of information. I therefore welcome such information and encourage you to write to me at the Department of Biology, University of Wisconsin—Stevens Point. Your suggestions will ensure a better future edition.