Foreword

In 30 years of field work in Australian inland waters, one of my most memorable field trips was a three-week trip with Adelaide fish ecologist, the late Jim Puckridge, sampling the Coongie Lakes of central Australia. Heavy rains some months earlier had flooded these arid-zone waterways and I recall one clear windless morning out on the boat with Jim hauling in multi-mesh nets teeming with callop (golden perch) to measure and release. The nets had been set for only a few minutes and already we were bringing them in with hundreds of fish. Pelicans bobbed around the boat, my arms ached from the exertion and my mind reeled at the immense productivity of fish in this newly filled lake in an expanse of rolling sand dunes.

At night, Jim would sit under the impossibly bright stars of the Australian desert sky and, in his quiet articulate way, describe his theories of how these fish used clusters of floods to recruit, how they survived the long dry periods, and what the likely food webs were that supported the immense densities of fish and waterbirds when the inland waters flooded. Inspired but physically drained, I would squirm into my sleeping bag and dream of silver streams of fish, rolling red dunes and sheets of blue water under a vast cloudless sky…

That was nearly 20 years ago. We have learned a lot more about the ecology of Australia's freshwater fishes since then. Tantalising theories have been proposed for how the fishes of inland waters cope with the variable conditions typical of these habitats. Meanwhile, there have been exciting finds of new species in northern tropical streams and a greater appreciation of how various threats such as river regulation and climate change are altering fish communities across the country. Until now, most of this literature has been scattered across scientific papers, consultancy reports, researchers' note books and anglers' observations.

Fortunately, Paul Humphries and Keith Walker decided to bring together our current knowledge of the ecology of Australian fishes in this timely book. These two scientists are well qualified for this undertaking because, between them, they have studied the aquatic ecology of rivers, lakes and estuaries for some sixty years, including some research on freshwater and estuarine fishes from Western Australia to the Murray-Darling Basin and Tasmania. They also have considerable depth in scientific editing (for example, Paul has edited works in historical ecology as well as fish and river ecology, and Keith was the Asia-Pacific Editor of the successful journal 'River Research and Applications' for 20 years), both are actively involved in science communication and community liaison, and both are experienced teachers.

In this book, leading fish ecologists have written chapters on topics ranging from fish evolution and biogeography through to their habitats, movement, reproduction and assemblage structure, much of it work that has only been done in the last few years. To me, the book emphasises how we can apply these findings to protect our native fish species but also reveals how much more there is yet to learn. Keen anglers will enjoy this book which will greatly enrich their future fishing experiences. Freshwater ecologists will find this a valuable trove of information, an effective synthesis of our current understanding of fish ecology, and an excellent source of ideas and hypotheses to test. General readers will savour the readable style, copious pictures and fascinating insights into the lives of fish of Australia's inland waters.

And I bet Jim would have enjoyed it too.

Andrew Boulton
Adjunct Professor, School of Environmental and Rural Science, University of New England, New South Wales