

PREFACE

This book could only have come to be produced because of the enormous growth in interest about amphibians and the increased intensity of scientific research into their biology and distribution that has occurred over the past two decades. Ironically, this recent surge in the study of amphibians has come about through our realization of a slowly unfolding tragedy. Amphibians are widely recognized now to be in global decline, and a great many species in Canada and the U.S. are endangered or threatened with extinction.

The idea for this book, an atlas of North American amphibians, arose following the publication of two books on the status of amphibians in North America, both of which were written, effectively, as regional reports to the global Declining Amphibian Populations Task Force that have been set up by the International Union for Conservation of Nature (IUCN). The first of these books, *Amphibians in Decline. Canadian Studies of a Global Problem*, was edited by David M. Green and appeared in 1997. Among its contents, this book included a species-by-species account of the known distributions and current status of all 45 frogs, toads and salamanders native to Canada. It was followed by a counterpart for the U.S. in 2005: *Amphibian Declines: The Conservation Status of United States Species*, edited by Michael J. Lannoo. This much larger volume also contained species distribution and status accounts, but in a more comprehensive fashion and with the addition of range maps for each of some 290 species of amphibians native to the U.S. Our initial ambition was to combine the reports and distribution records that went into these two volumes (one Canadian and one American), update the available information, and present a unified accounting of all the amphibians now known in North America north of Mexico.

However, we did not want simply to present range maps such as might be found in a standard field guide. The typical field guide map is intended to provide an impression of where a particular species might be encountered so that it might be more easily identified. A field guide map tends to consist of one or more colored or cross-hatched shapes drawn across a largely featureless outline map. These are sometimes termed "blob" maps because of the form of these shapes, which are intended to encompass all the observational and

museum records of a particular species. A good blob map takes into account the landforms and habitats where the species has been found and where it might be encountered and so the map becomes both a description and a prediction of the actual range of a species.

For our atlas, though, we wanted to show more precisely where animals have been found in relation to the topography of the North American continent. Consequently, we set out to plot dot maps against a shaded relief map of North America to demonstrate, in a way that cannot easily be done with a field guide map, how the topography of the continent can shape and direct the actual distributions of species.

The information in the species accounts in this book, with few exceptions, is derived directly from the extensive accounts included by Lannoo in *Amphibian Declines*. These were comprehensive summations of our knowledge about the species in the U.S. up to 2005, backed by references to the scientific literature and previously unpublished observations. All were written and reviewed by experts on each species and we have retained authors' names with their respective accounts in recognition of their contributions. We have rewritten and updated all of those original accounts and added information pertinent to Canada. We also wrote entirely new accounts for species that had not yet been recognized in 2005. Sources for this new information, as noted in the text, are listed in the Notes section at the back of the book. The species status designations we include are up-to-date according to published and on-line state, provincial, territorial and federal listings in Canada and the U.S. Bear in mind that the scientific names of many species have changed since 2005, although the standard, or common, names have generally remained more stable.

The photographs presented in this book are superb images of North American amphibians obtained from a network of our contacts across Canada and the U.S. In most cases, we obtained multiple images of each species and chose the best of them. Of the 297 species of amphibians mapped and discussed in this book, we are able to present photographs of all but the rarest of North American species: the Blanco Blind Salamander.

This book is intended for all people who are aware of and interested in nature, especially those who are interested in what our amphibians look like, where they live, and how they live. Professional biologists interested in other aspects of ecosystems, such as plants or insects, birds, and mammals may also find this book useful. Finally, professional herpetologists will find that this volume serves as a distribution update and photographic supplement to earlier books on North American amphibians.