Climate change has shaped life in the past and will continue to do so in the future. Understanding the interactions between climate and biodiversity is a complex challenge to science. With contributions from 60 key researchers, this book examines the ongoing impact of climate change on the ecology and diversity of life on earth. It discusses the latest research within the fields of ecology and systematics, highlighting the increasing integration of their approaches and methods. Topics covered include the influence of climate change on evolutionary and ecological processes such as adaptation, migration, speciation and extinction, and the role of these processes in determining the diversity and biogeographic distribution of species and their populations. This book ultimately illustrates the necessity for global conservation actions to mitigate the effects of climate change in a world that is already undergoing a biodiversity crisis of unprecedented scale.

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The Systematics Association promotes all aspects of systematic biology by organising conferences and workshops on key themes in systematics, running annual lecture series, publishing books and a newsletter, and awarding grants in support of systematics research. Membership of the Association is open globally to professionals and amateurs with an interest in any branch of biology, including palaeobiology. Members are entitled to attend conferences at discounted rates, to apply for grants and to receive the newsletter and mailed information; they also receive a generous discount on the purchase of all volumes produced by the Association.

The first of the Systematics Association's publications, *The New Systematics* (1940), was a classic work edited by its then-president Sir Julian Huxley. Since then, more than 70 volumes have been published, often in rapidly expanding areas of science where a modern synthesis is required.

The Association encourages researchers to organise symposia that result in multi-authored volumes. In 1997 the Association organised the first of its international Biennial Conferences. This and subsequent Biennial Conferences, which are designed to provide for systematists of all kinds, included themed symposia that resulted in further publications. The Association also publishes volumes that are not specifically linked to meetings, and encourages new publications (including textbooks) in a broad range of systematics topics.

More information about the Systematics Association and its publications can be found at our website: www.systass.org.

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Preface

The 21 chapters of this book are based on the theme of a Special Conference of the Systematics Association and the Linnean Society of London, held at Trinity College Dublin (TCD), Ireland, in September 2008. During the three-day Climate Change and Systematics conference, there were stimulating presentations, posters and discussions covering a broad range of ecological and systematic research relating to climate change; these influenced the shape and content of this volume. Papers were contributed by a number of conference delegates and by others subsequently invited to broaden the book's scope or address particular theoretical issues.

Consideration of the book's theme began when Richard Bateman, the then President of the Systematics Association, invited John Parnell and the School of Natural Sciences, TCD, to host a conference on the topic and to base a Systematics Association volume around its conclusions. The ideas were refined in discussions with Alan Warren, the then Systematics Association Special Volumes series editor. We are grateful to both for their input and encouragement. Two anonymous book proposal reviewers provided valuable content guidance and many anonymous reviewers also helped to improve the chapter contributions. We are particularly grateful for the manuscript preparation input of Sandra Velthuis of Whitebarn Consulting, who has worked long and hard to proofread chapters and standardise their format, to Hugh Brazier, the excellent copy editor, and to the production team at Cambridge University Press, who have been highly supportive and professional. Finally we thank all 57 contributing authors to the book, many of whom also peer-reviewed other chapters. We encourage all readers to support the activities of the Systematics Association (www.systass.org).

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