How destructive or beneficial are forest fires to wildlife? Should we be trying to reduce or increase the amount of fire in forests? How are forest fires controlled, and why does this sometimes fail? What effect will climate change have? These and many other questions are answered in this richly illustrated book, written in non-technical language. The journey starts in the long geological history of fire, leading up to our present love–hate relationship with it. Exploring the physics of how a single flame burns, the journey continues through how whole forests burn and the anatomy of firestorms. The positive and negative ecological effects of fires are explored, from plants and wildlife to whole landscapes. The journey ends with how fires are controlled, and a look to the future. This book will be of interest to ecologists, biogeographers and anyone with an interest in forest fires and the role they play.

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Fire in the Forest

Peter A. Thomas and Rob McAlpine

with contributions from
Kelvin Hirsch and Peter Hobson
To our families who have stood with us during this project:

Caroline, Benjamin and Graeme (RSM); Judy, Matthew and Daniel (PAT).
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Preface

Year after year pictures in the media show towering flames threatening people's homes, livelihoods, and their very lives in places as diverse as North America, Europe and Australia -- why does this happen? Conflicting stories continually appear over whether fire is rapidly destroying the animals, habitats and plants we treasure in our forests, or whether fire is their salvation, the key to diversity and ecosystem rebirth -- where does the truth lie? With global warming predictions, do we face more and larger fires or will technology be able to tame this potentially savage enemy? This book delves into these and other questions, providing a factual account and perspective of how fire burns in the forest, what it does and how it might be controlled.

Where the published work of others is used, or where good sources of extra information are recommended, the authors and the date of the publication are given so that the source can be found in the references at the end of the book. This inevitably has resulted in a compromise; we've tried to keep this to a minimum to help the text flow but give sufficient references to help the reader who wishes to find out more. Our apologies if we fail you at any point.

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PAT is happy to record that some of the background for this book was researched while a Bullard Fellow at Harvard University, Massachusetts.
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