

PREFACE

David Grimaldi and Michael Engel wrote in *Evolution of the insects* (Cambridge, 2005) that 'if ants, bees and termites alone were removed from the earth, terrestrial life would probably collapse'. This is a powerful statement, reflecting a sentiment that often is not appreciated by those who dislike 'bugs'. Nevertheless, it is the intent of this book to show how insects are an integral and important part of most ecosystems. In particular, the wild animals we cherish, and sometimes upon which we depend, would not exist without insects. This is not to say that insects are always beneficial, but they are more beneficial to wild animals than imagined by many. When Grimaldi and Engel penned the aforementioned statement about the importance of insects, they were mostly concerned about decomposition, nutrient cycling, and plant growth and reproduction. In the ensuing chapters, I will reinforce their statement with supporting information on the importance of insects to these ecological processes, but will also discuss additional functions such as conversion of plant biomass to more nutritious animal matter, feeding by vertebrate wildlife on insects, disease trans-

mission by insects from and to wildlife, and the roles of insects in environmental conservation. Indeed, without insects the world would be a far different place. As you read through this book, I am confident that you will gain a new perspective on insects, particularly as they relate to wildlife (wild vertebrate animals).

I prepared this book with the intent to increase awareness of the importance of arthropods to vertebrate wildlife. There is a rich literature surrounding this subject, but curiously there has never been an attempt to bring it all together. Similarly, although many introductory entomology texts have been published, they have all centered on insects, or on protection of plants, people and livestock from insect damage. Here I discuss insects from the perspective of wildlife. My hope is that wildlife managers and vertebrate-oriented biologists will find it more informative and relevant to read about entomology within the context of a broader ecology: the interrelationships of a plant resource base, herbivores and predators of all types, and the need to conserve and preserve natural resources – including insects.