

Preface to the 2nd Edition

Our goal in writing this book was to describe how and why plant invasions occur. The book attempts to explain the ecological principles that are important in understanding the potential for a species to become invasive. We think students should understand the ecology of invasive plants and how this knowledge can be used to facilitate management. Ecology is central to our understanding of how and why plant species invade, and yet there are few books that make this connection. This is the niche we hope to fill.

The book was designed as a teaching text for advanced undergraduate students. No extensive ecological background is assumed, although some basic biology is required. At the beginning of each chapter, we have listed the concepts that will be addressed. These can be used as an overview of what is to come, and to assist the reader when reviewing the material. For the instructor, we have designed this book so that the material could be covered in a single-term course by covering approximately one chapter per week. We have tried to write the book and arrange the material so that it is presented in a clear, precise and concise manner, and to include only pertinent information. If we have done our job well, students should be able to read and understand all the information. We have used common names throughout the text, with Latin names given the first time that the species is mentioned in each chapter. We did this because common names are easier to remember when first learning about a species. A species list of common and Latin names is provided at the end of the book.

At the end of each chapter there will be questions that refer to an invasive plant species of your (the student's) choice (i.e. a case study). The plant can be an established invasive species, or perhaps a new species that may have potential to invade your local community. You will be asked to summarize information that is known about your plant species in relation to the material discussed in each chapter. There may be a lot or very little information available to you. The idea behind this is to apply the ecological principles you learn in the chapter to an invasive species of interest, and to give you practice researching a topic. Our hope is that, by the end of the book, you will have created a case history of your chosen plant.

We have made a number of changes to this second edition from the first, which was published by CABI in 2003 as *Weed Ecology in Natural and Agricultural Systems*. We have removed the chapters that focused solely on experimental methods and added chapters on the newer fields of landscape and molecular ecology. In addition we have updated the literature.

We thank our publisher CABI for their help and encouragement with this second edition. Of course we accept the responsibility for any errors that occur.

Finally, we thank our spouses, David Beattie, Tara Murphy and Josee Lapierre, who once again throughout the writing of this second edition heard way more about 'the book' than they ever wanted, but kept smiling and nodding their heads anyway. We dedicate this second edition to them.