
Preface

The initial outline of this book was sketched on a piece of paper while we were traveling in a bus in southern Italy in 2013. We were returning from a conference, and as the bus hurtled down yet another mountain pass with half-completed roadworks and precipitous drops below the hairpin bends, our ideas started to gain a different kind of momentum. John Thompson was sitting across the aisle from us and readily shared some of the practical experience he had gained from writing his well-known books on coevolution. His immediate enthusiasm for the concept of this book served as an important catalyst for the project at that nascent stage. By the time we arrived at the airport, the basic structure of the book had been formulated. But that was the easy part. . .

The hardest aspect of writing a scientific book is dealing with the ongoing explosion in knowledge. We quickly realized that it would be impossible to be encyclopedic in our coverage of the topic of mimicry—which is why there are very few summary tables in this book—and that it would be more useful to ourselves and to our readers if we could identify key concepts and then evaluate published studies in terms of their contributions to these concepts. This approach also makes more sense in the internet age where the traditional encyclopedia has largely been replaced with search engines, yet the role of a book as a story or “long argument” (to borrow from Darwin) remains as important as ever. Another motivation for writing this book was that the field of mimicry has often been characterized by adaptive storytelling; we wanted to take a more critical approach that emphasizes the importance of experimental evidence.

Mimicry can compete with any crime novel or television program in terms of the intrigue of the plot and the subterfuge of the main actors. Who could

conceive of a plant with a flower that traps its pollinators, tricks them into laying eggs, and then eventually starves them and their offspring to death? Yet such a plant, the long-tailed wild ginger, *Asarum caudatum*, is out there, waiting for its next victim, and it is only one of hundreds of plant species that similarly imprison their pollinators. And then there are the orchids that use chemical wizardry to trick male insects into copulating with their flowers. These species, and the plethora of other floral mimics, defy the conventional wisdom that pollination is the outcome of benign cooperative mutualisms between plants and animals.

Evolutionary biology addresses the “why” questions in nature, the story behind the story, as it were. The study of mimicry begins with discovering “how” species interact, along with the signals and senses and behavior that they use to do so, and then leads naturally to the search for ultimate causes. It is these questions, such as why many flowers lack rewards, why some pollination systems are so specialized, and why some lineages are so rich in species, that inspire us the most. This is a book about evolutionary concepts rather than the biology of particular species, but we have included many examples of some of the wonderful natural history that accompanies this subject. We thus hope that we can satisfy the intellectual curiosity of the reader as well as inspire a sense of awe and astonishment. In this regard, we are enormously grateful to the numerous photographers who willingly supplied images for this book. They are credited alongside each image.

This book has benefited from the inputs of dozens of people in the research community. We are thankful to the anonymous reviewers of the original book concept, as their comments helped to

shape the content and style of the book. We also benefited enormously from the constructive and detailed reviews of the individual chapters that were provided by the following people: Jon Ågren, Bruce Anderson, Hans Bänziger, Judie Bronstein, Karl Duffy, Lawrence Harder, Nina Hobbhahn, Jana Jersáková, Cris Kuhlemeier, Adrian Leuchtman, David Kikuchi, Timo van der Niet, Rod Peakall, Ryan Phillips, Rob Raguso, Graeme Ruxton, Philipp Schlüter, Adam Shuttleworth, and Johannes Späthe. Other people willingly provided advice on difficult concepts and in this regard we thank Stefan Dötterl, Allan Ellis, Craig Peter, Tobias Policha, Bitty Roy, Roger Seymour, and John Skelhorn. We are also very grateful to Kathryn Johnson for proof-reading the final text.

It has been a great pleasure to work with the team at Oxford University Press. Ian Sherman showed great enthusiasm for the project and Lucy Nash patiently guided the development of the book. Other staff will play a further role in production after

the writing of this preface, and we thank them in advance.

The process of book-writing extends after hours and over weekends and is not much fun for the rest of the family. In this regard, we are deeply grateful to Kathryn, Daniel and Amy Johnson, and Simone Berchtold Schiestl and Luis and Moritz Schiestl for their patience, understanding, and support.

Finally, this book is dedicated to the memory of Stefan Vogel and we would like to remind readers of some the diverse contributions that he made to our field. Vogel, who died in 2015, was one of the greatest pollination biologists of the twentieth century. He was a phenomenally talented field biologist and scientific illustrator and made a large number of original discoveries, such as the oil bee pollination system and floral mimicry of fungi. Vogel also pioneered the functional understanding and analysis of floral fragrance using chromatographic tools. His monographs and journal articles will inspire research on the topic of plant–pollinator interactions for generations to come.