

Preface

I often enjoy my lunch at a small café named Holly Berry's. It's one of those places where people quickly know your name, at least your first name, where congeniality and food are offered with equal gusto. I was talking to Jack, who most folks would describe as a cook until they taste his food, at which point he'd be better described as a chef. Jack asked me if I was writing a book while on sabbatical and I said that I was, one about the concept of the balance of nature. Jack allowed as to how he had not given a great deal of thought to the balance of nature but, in his line of work, he had thought often about the balance between soup and sandwich. Not just any soup goes well with just any sandwich. And opinions vary. Jack opined that the delicate balance between soup and sandwich is essentially judgmental. In the end it comes down to what tastes good to whoever is having the soup and sandwich. That day I had tomato basil soup and a grilled cheese with onions and tomato. Excellent balance.

The point here is that the concept of balance is, indeed, often in the eye of the beholder. That includes one of the most deep-seated assumptions about balance, that there is such a thing as the balance of nature. Such a realization is nontrivial.

 This is a book about ecology but it is not the usual kind of book about ecology. There are several themes that run through the narrative. One is an account of what ecology is today and something of how it got to be that way. I describe how ecology has emerged

and matured from observation and description of patterns in nature to become a more predictive and pragmatic science, albeit one that remains empirical and, as I will argue, essentially without paradigms. A second theme is how ecology has only recently shed some of its most burdensome philosophical baggage, the concept that there is a natural "balance of nature." And a third theme is why it is incumbent on citizens to seek some understanding of ecology, particularly as it contributes to understanding climate change, various conservation issues, and the complex matter of how to treat nature's biodiversity.

Ecology is a branch of evolutionary biology. This is because any form of biology is, in reality, a branch of evolutionary biology. Failure to have some understanding of how evolution works makes understanding biology, and, today, understanding what is happening in the world, very difficult. Ecologists study how Earth's ecosystems function. The relevancy of this information goes well beyond the ivory towers of academe and should be part of every educated citizen's understanding of his or her world.

This book is designed for a broad audience, particularly readers who intellectually thrive by seeing connections among various disciplines such as philosophy, history, and the sciences. Ecology has deep philosophical roots, especially in the study of natural history, and has enjoyed a vigorous growth in the previous century. Hopefully it will distinguish itself in the present century.

I have studied and taught ecology for nearly four decades and I am opinionated about it. That reality will be evident throughout this book. I tell my students that questions dealing with ecology will accompany their lives throughout the present century. The Earth's collective biodiversity is experiencing its sixth major extinction event since multicellular life first evolved. It is also passing through a period of rapid climate change, a change that is likely forced by anthropogenic actions. The natural world of the twenty-first century may bear little resemblance to that of recent centuries. We have entered the Anthropogenic era in which human influence is pervasive in all ecosystems.

My wish is that this book will help the reader to understand the connections between evolution, ecology, and other areas of human

thought and realize that "nothing endures but change." However, some changes are better than others, and the great virtue of being humans is that, at least in theory, we have a choice. Our destinies are largely under our control if we seize that control. Ecology is no longer the arcane study of natural history. Ecology, in the twenty-first century, may be the key to human destiny in the twenty-second century and beyond.