

Preface

This book the evolutionary origins of eukaryotic cells is part of a thirty book series that collectively surveys all of the major themes in biology. Rather than just present information as a collection of facts, the reader is treated more like a scientist, which means the data behind the major themes are presented. Reading any of the thirty books by Campbell and Paradise provides readers with biological context and comprehensive perspective so that readers can learn important information from a single book with the potential to see how the major themes span all size scales: molecular, cellular, organismal, population and ecologic systems. The major themes of biology encapsulate the entire discipline: information, evolution, cells, homeostasis and emergent properties.

In the twentieth century, biology was taught with a heavy emphasis on long lists of terms and many specific details. All of these details were presented in a way that obscured a more comprehensive understanding. In this book, readers will learn how eukaryotes evolved, how they stuff all their DNA into the tiny nucleus, the origins of chloroplasts and mitochondria as well as one way that multicellular organisms evolved, as well as some of the supporting evidence behind our understanding. The historic and more recent experiments and data will be explored. Instead of believing or simply accepting information, readers of this book will learn about the science behind the origins of eukaryotes the same way professional scientists do—with experimentation and data analysis. In short, data are put back into the teaching of biological sciences.

Readers of this book who wish to see the textbook version of this content can go to www.bio.davidson.edu/icb where they will find pedagogically-designed and interactive *Integrating Concepts in Biology* for introductory biology college courses or a high school AP Biology course.