

Organic Evolution



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PREFACE

Organic evolution is an exciting and interesting stream of biology; from birth of human civilization, philosophers, scientists, and naturalists starts thinking about the form, diversity and origin of life and put forward many theories to explain origin and evolution of life forms. The theory of evolution is outstandingly the most important theory in biology, which helps in solving puzzles of origin of life, evolution of populations and speciation.

Many books are available on Organic Evolution both by Indian and Foreign authors for students with different backgrounds at the undergraduate and post graduate levels, however, these books cover one or few specialized areas rather than covering the broad spectrum of evolution. Consequently, the students have to depend on many books for updated information on evolution, so there is a long-felt need for a comprehensive book on evolution, with the latest information. Therefore keeping in mind the demand of updated information, we bring this comprehensive book for students.

The present book “Organic evolution”, with several novel features, is comprehensively written with latest advances in the subject and is divided in seven chapters. Chapter 1 of the book describes the environment of primitive earth and its importance for origin of first life form. Chapter 2 includes evolutionary theories and supporting evidences in favour of evolution. The role of population genetics in evolution of gene pools of population is the subject of Chapter 3. The concept of species and modes of speciation, origin of new species and required changes in genetic for speciation is discussed in Chapter 4. Chapter 5 provides the essential information needed to understand molecular evolution, and molecules as a reliable tool for molecular systematic and in reconstruction of phylogenies. Chapter 6 of the book describes vertebrate diversity and vertebrate evolution, primarily focusing on Primates and the evolution of *Homo sapiens*. Finally, Chapter 7 is about origin and radiation of Angiosperms. The language and contents of this book are made so simple and easy that even a lay man with a minimal knowledge of Life Sciences will be able to understand the essence of evolution.

This book has been designed mainly to provide the most fundamental and updated knowledge of the subject to undergraduate and postgraduate students in various streams of Life Sciences such as Botany, Zoology, Biotechnology, Microbiology, Biochemistry, Agriculture etc, of many Indian Universities. Besides this book will be beneficial to student's preparing for CSIR NET Life

Sciences, GATE Life Sciences, ICMR Life Sciences, IAS, IFS and other State Civil service examination.

Authors are thankful to Shri Pawan Kumar Sharma and Tanay Sharma of Scientific Publisher (India), Jodhpur for timely bringing out of this book in nice getup.

Authors invite the readers to understand and learn the very basics of evolution to maximum possible with ease and pleasure. As this book is intended to cater the needs of students learning evolution from many different disciplines, there is a lot of scope to improve the book in future.

We welcome useful suggestions and healthy criticism to improve the book.

Prof. B.L. Chaudhary
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