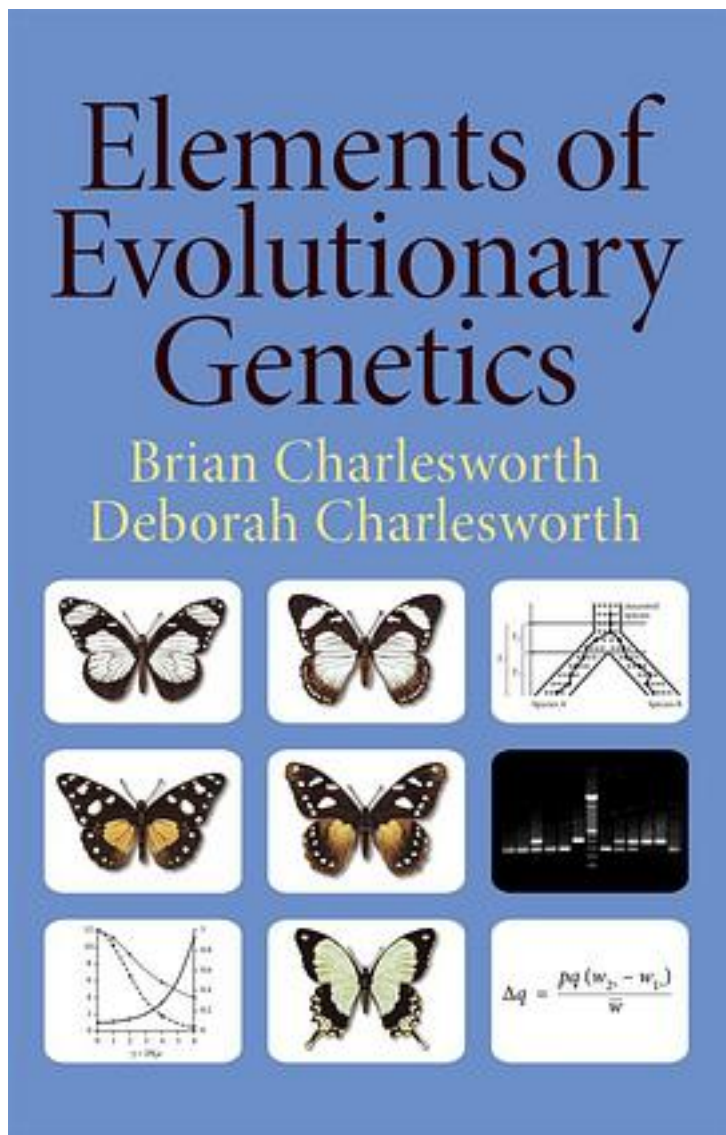


# Elements of Evolutionary Genetics



[Elements of Evolutionary Genetics\\_ 下载链接1](#)

著者:Brian Charlesworth

出版者:Roberts & Company Publishers

出版时间:2010-2

装帧:Hardcover

isbn:9780981519425

Evolutionary genetics considers the causes of evolutionary change and the nature of variability in evolution. The methods of evolutionary genetics are critically important for the analysis and interpretation of the massive datasets on DNA sequence variation and evolution that are becoming available, as well for our understanding of evolution in general. This book shows readers how models of the genetic processes involved in evolution are made (including natural selection, migration, mutation, and genetic drift in finite populations), and how the models are used to interpret classical and molecular genetic data. The material is intended for advanced level undergraduate courses in genetics and evolutionary biology, graduate students in evolutionary biology and human genetics, and researchers in related fields who wish to learn evolutionary genetics. The topics covered include genetic variation, DNA sequence variability and its measurement, the different types of natural selection and their effects (e.g. the maintenance of variation, directional selection, and adaptation), the interactions between selection and mutation or migration, the description and analysis of variation at multiple sites in the genome, genetic drift, and the effects of spatial structure. The final two chapters demonstrate how the theory illuminates our understanding of the evolution of breeding systems, sex ratios and life histories, and some aspects of genome evolution.

#### 作者介绍:

Brian and Deborah Charlesworth obtained PhDs in genetics at the University of Cambridge, and have subsequently worked at the Universities of Liverpool, Sussex, Chicago, and Edinburgh. They are the authors of *Evolution: A Very Short Introduction*, a book for the general public. Brian is a Fellow of the Royal Society and Honorary Fellow of the American Academy of Arts and Sciences, and Deborah is a Fellow of the Royal Society. Both currently work on questions in population genetics, molecular and genome evolution, and also on mating system evolution.

目录: 1. Variability and its measurement  
2. Basic selection theory and the maintenance of variation  
3. Directional selection and adaptation  
4. Migration, mutation and selection  
5. The evolutionary effects of finite population size: basic theory  
6. Molecular evolution and variation  
7. Genetic effects of spatial structure  
8. Multiple sites and loci  
9. The evolution of breeding systems, sex ratios and life histories  
10. Some Topics in Genome Evolution  
Mathematical and Statistical Appendix  
• • • • • ([收起](#))

[Elements of Evolutionary Genetics\\_ 下载链接1](#)

标签

群体遗传学

生物

进化

繁殖生态

演化遗传学

分子演化

Pop-genetics

## 评论

Charlesworth夫妇的最新力作，总结了最新群体遗传学的发展，很值得多读。

-----  
也许以后会当茶余饭后的闲书来看. 远远地欣赏下, 应该还是会很美.

-----  
[Elements of Evolutionary Genetics\\_下载链接1\\_](#)

## 书评

-----  
[Elements of Evolutionary Genetics\\_下载链接1\\_](#)