

What are the genomic signatures of adaptations in DNA? How often does natural selection dictate changes to DNA? How does the ebb and flow in the abundance of individuals over time get marked onto chromosomes to record genetic history? Molecular population genetics seeks to answer such questions by explaining genetic variation and molecular evolution from micro-evolutionary principles. It provides a way to learn about how evolution works and how it shapes species by incorporating molecular details of DNA as the heritable material. It enables us to understand the logic of how mutations originate, change in abundance in populations, and become fixed as DNA sequence divergence between species.

With the revolutionary advances in genomic data acquisition, understanding molecular population genetics is now a fundamental requirement for today's life scientists. These concepts apply in analysis of personal genomics, genome-wide association studies, landscape and conservation genetics, forensics, molecular anthropology, and selection scans. This book provides an authoritative introduction to the fundamental theory and practice of molecular population genetics.

A Primer of Molecular Population Genetics is an accessible, introductory textbook aimed principally at students of various levels and abilities (from senior undergraduate to postgraduate) as well as practising scientists in the fields of population genetics, ecology, evolutionary biology, computational biology, bioinformatics, and biostatistics.

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