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Nota di contenuto	FORWARD-TIME POPULATION GENETICS SIMULATIONS: Methods, Implementation, and Applications; CONTENTS; PREFACE; ACKNOWLEDGMENTS; LIST OF EXAMPLES; 1 BASIC CONCEPTS AND MODELS; 1.1 Biological and Genetic Concepts; 1.1.1 Genome and Chromosomes; 1.1.2 Genes, Markers, Loci, and Alleles; 1.1.3 Recombination and Linkage; 1.1.4 Sex Chromosomes; 1.1.5 Mutation and Mutation Models; 1.2 Population and Evolutionary Genetics; 1.2.1 Population Variation and Mutation; 1.2.2 The Wright-Fisher Model and Random Mating; 1.2.3 The Hardy-Weinberg Equilibrium; 1.2.4 Genetic Drift and Effective Population Size 1.2.5 Natural Selection1.2.6 Linkage Equilibrium; 1.2.7 Population Structure and Migration; 1.2.8 Demographic History of Human Populations; 1.2.9 Coalescent and Backward-Time Simulations; 1.2.10 Forward-Time Simulations; 1.3 Statistical Genetics and Genetic Epidemiology; 1.3.1 Penetrance Models; 1.3.2 Simple and Complex Genetic Diseases; 1.3.3 Phenotypic, Allelic, and Locus Heterogeneity;

Sommario/riassunto	The only book available in the area of forward-time population genetics simulations-applicable to both biomedical and evolutionary studies The rapid increase of the power of personal computers has led to the use of serious forward-time simulation programs in genetic studies. Forward-Time Population Genetics Simulations presents both new and commonly used methods, and introduces simuPOP, a powerful and flexible new program that can be used to simulate arbitrary evolutionary processes with unique features like customized chromosome types, arbitrary nonrandom mating schemes, virtual subp