

The long-awaited revision of the industry standard on phylogenetics

Since the publication of the first edition of this landmark volume more than twenty-five years ago, phylogenetic systematics has taken its place as the dominant paradigm of systematic biology. It has profoundly influenced the way scientists study evolution, and has seen many theoretical and technical advances as the field has continued to grow. It goes almost without saying that the next twenty-five years of phylogenetic research will prove as fascinating as the first, with many exciting developments yet to come.

This new edition of *Phylogenetics* captures the very essence of this rapidly evolving discipline. Written for the practicing systematist and phylogeneticist, it addresses both the philosophical and technical issues of the field, as well as surveys general practices in taxonomy. Major sections of the book deal with the nature of species and higher taxa, homology and characters, trees and tree graphs, and biogeography—the purpose being to develop biologically relevant species, character, tree, and biogeographic concepts that can be applied fruitfully to phylogenetics.

The book then turns its focus to phylogenetic trees, including an in-depth guide to tree-building algorithms. Additional coverage includes:

- Parsimony and parsimony analysis
- Parametric phylogenetics including maximum likelihood and Bayesian approaches
- Phylogenetic classification
- Critiques of evolutionary taxonomy, phenetics, and transformed cladistics
- Specimen selection, field collecting, and curating
- Systematic publication and the rules of nomenclature

Providing a thorough synthesis of the field, this important update to *Phylogenetics* is essential for students and researchers in the areas of evolutionary biology, molecular evolution, genetics and evolutionary genetics, paleontology, physical anthropology, and zoology.

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