

Although plants comprise more than 90% of all visible life, and land plants and algae collectively make up the most morphologically, physiologically, and ecologically diverse group of organisms on earth, books on evolution instead tend to focus on animals. But because plants grow and reproduce differently than animals, they have evolved differently, and generally accepted evolutionary views—as, for example, the standard models of speciation—often fail to hold when applied to them.

Tapping such wide-ranging topics as genetics, gene regulatory networks, phenotype mapping, and multicellularity, as well as paleobotany, *Plant Evolution* offers fresh insight into these differences. Karl J. Niklas incorporates data from more than a decade of new research in the flourishing field of molecular biology, conveying not only why the study of evolution is so important, but also why the study of plants is essential to our understanding of evolutionary processes. He shows us that investigating the intricacies of plant development, the diversification of early vascular land plants, and larger patterns in plant evolution is not just a botanical pursuit: it is vital to our comprehension of the history of all life on this green planet.

"In a true tour de force, Niklas assays the mechanisms and patterns of evolution, from molecules to ecosystems, using plants as examples. Must-reading for plant scientists, *Plant Evolution* will both delight and challenge everyone who peers into the heart of biology."—**Andrew Knoll, Harvard University**

"This is a work of scholarship and of imagination, offering great insight onto patterns of plant evolution and the underlying processes that drive those patterns. It will attract a wide range of biologists as researchers and as teachers, some coming to it as evolutionary biologists, some as botanists and paleobotanists, some as physiologists and geneticists. All will be attracted by the general review of the evolutionary forces affecting plants, by the cutting edge research it summarizes, and by the interesting ideas and totally new insights interleaved throughout—several of which are cutting edge in their own right."—**Bruce H. Tiffney, University of California, Santa Barbara**

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