

Although research on photoperiodic time measurement originally integrated work on plants and animals, as the areas have become more specialized, there has been less interaction across the broader field of photoperiodism. As a result, researchers in each area often needlessly repeat work. However, over the past decade, research on daily and seasonal rhythms has led to remarkable progress in understanding the phenomenology and molecular and genetic mechanisms underlying circadian rhythms and clocks. This book, developed to further this type of cooperation, brings together leading researchers working on the photoperiodic timing of seasonal adaptations in plants, invertebrates, and vertebrates.

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"This new book will be an invaluable resource for scientists interested in the seasonal responses of organisms to their environment. For the first time in many years, comprehensive reviews of how plants, animals, and fungi determine and respond to the changing seasons have been brought together into one volume. The breadth and depth of these well-written reviews are impressive and should spark productive cross-disciplinary thinking in the field."

—Stacey Harmer, University of California–Davis

"While the title of this comprehensive and timely book may indicate a rather narrowly focused book, it is certainly not the case. This comprehensive review of how, in most cases, the circadian clock is involved in measuring day length and how this information is used to regulate adaptive seasonal changes in diverse cellular, metabolic, physiological, and behavior processes across the plant and animal kingdoms, will be of broad interest to all biologists interested in the evolution of life on earth and the mechanisms underlying gene-environment interactions."

—Fred W. Turek, Northwestern University

"An indispensable account of how plants and animals mark the passage of time and cope with seasonal variations in their environments. Molecular advances are highlighted, but not to the exclusion of the historical context that sets the stage for recent developments or the commonalities by which diverse organisms measure day length. This volume fills a large void and is destined to become the standard reference work on photoperiodism."

—Irving Zucker, University of California–Berkeley

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