

Plant secondary metabolites (PSMs) such as terpenes and phenolic compounds are known to have numerous ecological roles, notably in defence against herbivores, pathogens and abiotic stresses, and in interactions with competitors and mutualists.

This book reviews recent developments in the field to provide a synthesis of the function, ecology and evolution of PSMs, revealing our increased awareness of their integrative role in connecting natural systems. It emphasises the multiple roles of secondary metabolites in mediating the interactions between organisms and their environment at a range of scales of ecological organisation, demonstrating how genes encoding for PSM biosynthetic enzymes can have effects from the cellular scale within individual plants all the way up to global environmental processes.

A range of recent methodological advances, including molecular, transgenic and metabolomic techniques, are illustrated and promising directions for future studies are identified, making this a valuable reference for researchers and graduate students in the field.

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