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2.6.3 Stomatal regulation and water use2.7 Plant-to-plant interactions; 2.7.1 Plant competition: managed systems; 2.7.2 Plant competition: unmanaged systems; 2.7.3 How does CO2 alter plant-to-plant interactions?; 2.8 Plant communities and ecosystem responses to CO2; 2.8.1 Managed plant systems; 2.8.2 Water use in managed systems; 2.8.3 Unmanaged plant systems; 2.8.4 Water use in unmanaged plant systems; 2.8.5 Other trophic levels; 2.9 Global and evolutionary scales; 2.9.1 Rising CO2 as a selection factor; 2.9.2 Global impacts; 2.10 Uncertainties and limitations; References
3 Significance of temperature in plant life3.1 Two paradoxes; 3.1.1 Paradox 1; 3.1.2 Paradox 2; 3.2 Baseline responses of plant metabolism to temperature; 3.2.1 Photosynthesis; 3.2.2 Dark respiration; 3.3 Thermal acclimation of metabolism; 3.4 Growth response to temperature; 3.5 Temperature extremes and temperature thresholds; 3.6 The temperatures experienced by plants; 3.7 Temperature and plant development; 3.8 The challenge of testing plant responses to temperature; References; 4 Temperature and plant development: phenology and seasonality; 4.1 The origins of phenology
4.2 Recent changes in phenology4.3 Attribution of temporal changes; 4.3.1 Detection of phenological change; 4.3.2 Attribution of year-to-year changes in phenology to temperature and other factors; 4.3.3 Confounding factors; 4.4 Evidence from continuous phenological measures; 4.5 Possible consequences; References; 5 Responses of plant growth and functioning to changes in water supply in a changing climate; 5.1 Introduction: a changing climate and its effects on plant growth and functioning; 5.2 Growth of plants in drying soil; 5.2.1 Hydraulic regulation of growth
5.3 Water relations of plants in drying soil

Sommario/riassunto

Evidence grows daily of the changing climate and its impact on plants and animals. Plant function is inextricably linked to climate and atmospheric carbon dioxide concentration. On the shortest and smallest scales, the climate affects the plant's immediate environment and so directly influences physiological processes. At larger scales, the climate influences species distribution and community composition, as well as the viability of different crops in managed ecosystems. Plant growth also influences the local, regional and global climate, through the exchanges of energy and gases between the