Record Nr. UNINA9910437613103321 **Titolo** Phenology: an integrative environmental science // Mark D. Schwartz, editor Pubbl/distr/stampa Dordrecht;; New York,: Springer, c2013 **ISBN** 94-007-6925-3 Edizione [2nd ed.] 1 online resource (xx, 610 pages): illustrations (some color), maps Descrizione fisica Collana Gale eBooks Altri autori (Persone) SchwartzMark Donald Disciplina 551.5 Soggetti Phenology **Environmental sciences** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Nota di bibliografia Includes bibliographical references and index. Nota di contenuto 1. Introduction -- 2. East Asia -- 3. Australia and New Zealand -- 4. Europe -- 5. North America -- 6. A Review of Plant Phenology in South and Central America -- 7. Antarctica -- 8. International Phenological Observation Networks: Concept of IPG and GPM -- 9. Tropical Dry Climates -- 10. Mediterranean Phenology -- 11. Phenologies of North American Grasslands and Grasses -- 12. Mesic Temperate Deciduous Forest Phenology -- 13. Phenology at High Latitudes -- 14. Phenology at High Altitudes -- 15. Plant Development Models -- 16. Animal Life Cycle Models (Poikilotherms) -- 17. Daily Temperature-based Temporal and Spatial Modeling of Tree Phenology -- 18. Plant Phenological "Fingerprints" -- 19. High-Resolution Phenological Data -- 20. Weather Station Siting: Effects on Phenological Models -- 21. Remote Sensing of Land Surface Phenology: A Prospectus -- 22. Near-Surface Sensor-Derived Phenology -- 23. Aquatic Plants and Animals -- 24. Birds --25. Reproductive Phenology of Large Mammals -- 26. Vegetation Phenology in Global Change Studies -- 27. Temperature Sensitivity of Canopy Photosynthesis Phenology in Northern Ecosystems -- 28. Phenology and Evapotranspiration -- 29. Phenology in Agriculture and Horticulture -- 30. Winegrape Phenology -- 31. Phenology in Higher Education: Ground-Based and Spatial Analysis Tools. Sommario/riassunto Phenology refers to recurring plant and animal life cycle stages, such as leafing and flowering, maturation of agricultural plants, emergence of

insects, and migration of birds. It is also the study of these recurring

events, especially their timing and relationships with weather and climate. Phenological phenomena all give a ready measure of the environment as viewed by the associated organism, and are thus ideal indicators of the impact of local and global changes in weather and climate on the earth's biosphere. Assessing our changing world is a complex task that requires close cooperation from experts in biology, climatology, ecology, geography, oceanography, remote sensing, and other areas. Like its predecessor, this second edition of Phenology is a synthesis of current phenological knowledge, designed as a primer on the field for global change and general scientists, students, and interested members of the public. With updated and new contributions from over fifty phenological experts, covering data collection, current research, methods, and applications, it demonstrates the accomplishments, progress over the last decade, and future potential of phenology as an integrative environmental science.