Record Nr. UNINA9910284951003321 Temperature adaptation in a changing climate: nature at risk / / edited **Titolo** by Kenneth B. Storey and Karen K. Tanino Wallingford;; Cambridge, MA,: CAB International, c2012 Pubbl/distr/stampa **ISBN** 1-283-42585-8 9786613425850 1-84593-935-2 Descrizione fisica 1 online resource (247 p.) Collana CABI climate change series;; 3 Altri autori (Persone) StoreyK. B (Kenneth B.) TaninoKaren K Disciplina 577.22 Soggetti Adaptation (Biology) Biodiversity - Climatic factors 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 Contents; Contributors; 1. Introduction: Nature at Risk; 2. Temperature Perception and Signal Transduction - Mechanisms Across Multiple Organisms; 3. Microorganisms and Plants: a Photosynthetic Perspective; 4. Insects; 5. Temperature Adaptation in Changing Climate: Marine Fish and Invertebrates; 6. Fish: Freshwater Ecosystems; 7. Strategies of Molecular Adaptation to Climate Change: The Challenges for Amphibians and Reptiles; 8. The Relationship between Climate Warming and Hibernation in Mammals; 9. On Thin Ice: Marine Mammals and Climate Change: 10. Climate Change and Plant Diseases 11. Trees and Boreal Forests12. The Paradoxical Increase in Freezing Injury in a Warming Climate: Frost as a Driver of Change in Cold Climate Vegetation; 13. Annual Field Crops; 14. Perennial Field Crops; 15. The Potential Impact of Climate Change on Temperate Zone Woody Perennial Crops; 16. Conclusion: Temperature Adaptation Across Organisms; Index; A; B; C; D; E; F; G; H; I; L; M; N; O; P; R; S; T; U; V; W;

Sommario/riassunto

Temperature adaptation is a much neglected field in the minds of climate change researchers and policy makers. However, increasing fluctuations in temperature means that the risk of cold and heat stress

will pose an increasing threat to both wild and cultivated plants and animals, with frost injury expected to cause devastating damage to crops on an increasingly large scale. Improving shared knowledge of the biological mechanisms of temperature adaptation in plants and animals will help prevent major losses of crops and genetic resources in the future. This book is the first to focus on the me