1. Record Nr. UNINA9910424631603321 Autore Pournou Anastasia Titolo Biodeterioration of wooden cultural heritage: organisms and decay mechanisms in aquatic and terrestrial ecosystems / / Anastasia Pubbl/distr/stampa Cham, Switzerland:,: Springer,, [2020] ©2020 **ISBN** 3-030-46504-7 Edizione [1st ed. 2020.] Descrizione fisica 1 online resource (XV, 538 p. 242 illus., 168 illus. in color.) Disciplina 620.122 Soggetti Wood - Deterioration Building, Wooden - Conservation and restoration Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Chapter 1. Wood anatomy, chemistry and physical properties --Nota di contenuto Chapter 2. Ecology and the biodeterioration environment -- Chapter 3. Biology of wood deteriogens -- Chapter 4. Wood deterioration by aquatic microorganisms -- Chapter 5. Wood deterioration by marine borers -- Chapter 6. Wood deterioration by terrestrial microorganisms -- Chapter 7. Wood deterioration by insects. Since prehistoric times and throughout the course of human evolution. Sommario/riassunto wood has been an integral part of all civilizations. Wooden Cultural Heritage can be found worldwide, providing valuable information on the social and economic context of human history. Nonetheless, as a natural cellulosic material, wood shows low resistance to biodeterioration and thus wooden Cultural Heritage often fails to escape decomposition in both aquatic and terrestrial ecosystems. This book provides a comprehensive overview on the biodeterioration of

> wooden Cultural Heritage and describes the decay mechanisms of key organisms and microorganisms encountered in aquatic and terrestrial

ecosystems. Cultural Heritage professionals, researchers and academics may explore within this book the associations between deteriogens, habitats and decay, which will assist them to understand wood biodeterioration and design effective prevention, mitigation and remediation strategies. The book presents case studies around the

world to demonstrate the impact of biogenic deterioration on wooden Cultural Heritage and illustrates mechanisms and patterns in order to be a useful handbook of decay diagnosis. Lastly, by adopting a holistic approach to wood decay, basic concepts of wood technology, ecology, and deteriogens' biology are introduced, permitting readers of different scientific backgrounds to easily comprehend wood biodeterioration.