1. Record Nr. UNINA9910458239103321 Autore Craig Catherine Lee Titolo Spiderwebs and silk: tracing evolution from molecules to genes to phenotypes / / Catherine L. Craig Pubbl/distr/stampa New York, New York: .: Oxford University Press. . 2003 ©2003 **ISBN** 1-280-47226-X 9786610472260 1-4237-5773-4 0-19-535163-0 1-60256-364-0 Descrizione fisica 1 online resource (257 p.) Disciplina 595.4/4 Soggetti Orb weavers - Evolution Silk Electronic books. 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; 1 Silk Proteins: Breakdown and Evolutionary Pathways; 2 The Comparative Architecture of Silks, Fibrous Proteins, and Their Encoding Genes in Insects and Spiders: 3 The Mechanical Functions of Silks and Their Correlated Structural Properties; 4 Insect Spatial Vision Is a Potential Selective Factor on the Evolution of Silk Achromatic Properties and Web Architecture: 5 Insect Color Vision Is a Potential Selective Factor on the Evolution of Silk Chromatic Properties and Web Design 6 Insect Learning Capacity Is a Potential Selective Factor in the Evolution of Silk Color and the Decorative Silk Patterns Spun by Spiders7 Inter-Gland Competition for Amino Acids and the ATP Costs of Silk Synthesis; 8 A One-Dimensional Developmental System and Life-Long Silk Synthesis May Preclude the Evolution of Higher Eusociality in Spiders; 9 Conclusions and Looking Forward; References; Index Sommario/riassunto Links the molecular evolution of silk proteins to the evolution and

behavioral ecology of web-spinning spiders and other arthropods. This

book presents an integrated understanding of an interesting biological system at the molecular and organizational levels.