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Nota di contenuto	Prehistoric Life; Contents; Preface; Chapter 1 Introductionto Fossils; History, Science, and Historical Science; Time, Life, and Stratigraphy; What is a Fossil?; How do Fossils Form?; Conclusions: Fossils as Curious Stones; Additional Reading; Chapter 2 The Nature of the Fossil Record; Fossils in Sedimentary Rock; Taphonomy; Time Averaging; Mode of Growth; Colonial Organisms; Trace Fossils; Concluding Remarks; Additional Reading; Chapter 3 Organizing the Fossil Record; History of Ideas on Biological Classification; Applying Linnaeus' Hierarchy What is a Species and How Does a Paleontologist Identify Them? Conclusions: the Difference Between Inanimate Atoms and Living Things; Additional Reading; Chapter 4 Introduction to Evolution; Introduction; A Biological Definition of Evolution; The History of Evolutionary Thought; Science and Religion; Darwin and Wallace: Never Ask a Stranger to Present Your Paper at a Meeting You Cannot Attend; Natural Selection; Conclusions: Why was Natural Selection Not Endorsed at Once by Many Scientists?; Additional Reading; Chapter 5

Macroevolution, Progress, and the History of Life; Introduction
Competition and Macroevolution Does Evolution Happen Gradually or
Episodically?; Natural Selection Operating Above and Below the Level of
the Individual Organism; Progress and the History of Life; Conclusions:
Patterns and Processes of Increasing Complexity; Additional Reading;
Chapter 6 Extinctions: The Legacy of the Fossil Record; Introduction;
Contingency; Boundaries in the Geological Time Scale and the Nature of
Extinction; The Cretaceous-Tertiary Mass Extinction; How has the
Existence of Mass Extinctions Influenced the History of Life?; Were Most
Extinctions Caused by Asteroid Impact?
The Permo-Triassic Mass Extinction-Causes and Consequences The
Ordovician-Silurian Mass Extinction; Other Mass Extinction Events: The
Late Devonian and the End of the Triassic; Habitat Degradation and
Mass Extinctions; The Sixth Great Mass Extinction: The Current
Biodiversity Crisis; Conclusions: Lessons from the Past and Future
Prospects for Humanity; Additional Reading; Chapter 7 Systematics and
the Fossil Record; Introduction; Methods and Approaches in
Systematics; The Growth of Molecular Biology and Improvements in
DNA Sequencing Technology
The Spread of Computers and Computer Programs Used to Study
Evolutionary Relationships Systematics and How to go About Identifying
Species in the Fossil Record; Systematics and its Relevance for
Identifying Patterns of Mass Extinction; Systematics and the Meaning of
Adaptations; Concluding Remarks; Additional Reading; Chapter 8
Principles of Growth and Form: Life, the Universe, and Gothic
Cathedrals; Introduction; Galileo's Principle; Galileo's Principle and its
Relevance to the Biology of Living Organisms; Galileo's Principle and
Constraints on the Evolution of Large Body Size
Galileo's Principle and its Relevance to Medieval Architecture

Sommario/riassunto

Prehistoric life is the archive of evolution preserved in the fossil record. This book focuses on the meaning and significance of that archive and is designed for introductory college science students, including non-science majors, enrolled in survey courses emphasizing paleontology, geology and biology. From the origins of animals to the evolution of rap music, from ancient mass extinctions to the current biodiversity crisis, and from the Snowball Earth to present day climate change this book covers it, with an eye towards showing how past life on Earth puts the modern world into its
