

1. Record Nr.	UNINA9910966214603321
Autore	Sapp Jan
Titolo	Genesis : the evolution of biology / / Jan Sapp
Pubbl/distr/stampa	Oxford, : New York, : Oxford University Press, 2003
ISBN	1-4237-4592-2 1-280-50245-2 1-4337-0068-9 9786610502455 0-19-515619-6 0-19-803550-0
Edizione	[1st ed.]
Descrizione fisica	1 online resource (385 p.)
Disciplina	570
Soggetti	Biology - History Evolution (Biology) - History Genetics - History
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 (p. 273-345).
Nota di contenuto	Contents; PART I: EVOLUTION AND MORPHOLOGY; 1. Evolution and Revolution; Two Worldviews; Revolution to Evolution; Lamarckian Myths; Simple to Complex; Disconnecting the Unity of Life; The Cuvier-Geoffroy Debate; 2. The Origin; When Making Other Plans; Darwin's Bible; The Beagle Voyage; Natural Selection and Natural Theology; Wallace's Manuscript; Concepts of The Origin; 3. Darwin's Champions; Man's Place in Nature; Natural Theology and Agnosticism; Archetype and Idealism; Ontogeny and Phylogeny; Materialism for Mysticism; 4. Darwinism and Sociopolitical Thought; Laissez-faire Social Darwinism Exported War and Racism; Darwinism on the Left; Was Darwin a Social Darwinist?; Social Theory in Evolution; The Division of Labor; Darwin and Malthus; 5. Mutualism; Anarchism; Between Individuals; Between Species; Roots in Natural Theology; 6. Dissent from Darwin; Is the Earth Old Enough?; Blending Inheritance; What Is a Species?; Speciation and Isolation; Is Everything Adapted?; Holes in the Record; Neo-Lamarckism; Orthogenesis; Saltationism; PART II: THE CELL IN DEVELOPMENT AND HEREDITY; 7. The Myth of the Cell Theory;

An Historical Paradox; Cells from Cells

More than Meets the Eye; Vitalism, Materialism, and Spontaneous Generation; 8. The Body Politic; The Cell State; The Dawn of Protistology; A Cell Is Not a Cell; What's in a Word; Organisms within Organisms; Weismannism; 9. Evolving Embryology; Technical Virtuosity; The Organism as a Whole; Epigenesis and Preformation; 10. The Egg; The Body Plan in the Egg; Maternal Inheritance; Cellular Differentiation; Cytoplasmic Evolution; PART III: GENETICS AND THE CLASSICAL SYNTHESIS; 11. Mendel Palimpsest; Mendel's Laws; Neglect and Rediscovery; Making a Discoverer; Why Multiple Meanings? Geneticists versus Statisticians; Mendel Made Darwinian; Is the Scientific Paper Fiction?; 12. Emerging Genetics; The Field of Heredity; Genotype and Phenotype; Disciplinary Design; Biology out of Balance; Are Genes Real?; 13. Darwinian Renaissance; Merging Mendelism; The Importance of Sex; Population Genetics; Random Drift and Nonadaptive Change; The Species Problem; Microevolution as Macroevolution; Lessons of Synthesis; 14. Genes, Germs, and Enzymes; The Garrod Tale; Physiology and Genetics; Early Gene-Enzyme Associations; The One-Gene: One-Enzyme Hypothesis; Domesticating Microbes The Chosen Few; The Rockefeller Foundation; 15. Genetic Heresy and the Cold War; Non-Darwinian Development; Plasmon to Plasmagenes; The Inheritance of Acquired Characteristics; University Politics; Morgan's Smile; PART IV: MOLECULAR BIOLOGY AND ORGANISMIC COMPLEXITY; 16. Conceiving a Master Molecule; DNA or Protein?; Transformation and Transduction; Chromatography; X-Ray Crystallography; Digital DNA; Transcription and Translation; Turning Genes On and Off; Classical Doctrines of Molecular Biology; 17. Beyond the Genome; Complexity and the Human Genome; A Genetic Plan?; Confronting Old Dogmas Cell Architecture and Spatial Information

---

Sommario/riassunto

What is evolution? What is a gene? How did these concepts originate and how did they develop? This book is a short history ranging from Lamarck and Darwin to DNA and the Human Genome Project, exploring the conceptual oppositions, techniques institutional conditions and controversies that have shaped the development of biology.

---