CONTENTS

	PREFACE	XIII
	LIST OF ILLUSTRATIONS AND FIGURES	xvi
1	The Problem of Perception	1
	EXPANDING HORIZONS	7
	Culture and Nature	
	Science and Christian Tradition	
	THE NATURE OF SCIENCE	16
	The Scientific Method	
	Science as a Social Activity	
1	Science and Ideology	all the
2	The Ancient and Medieval Worlds	32
9	GREECE AND ROME	36
	W Rival Cosmologies	
	Plato and Aristotle	
	Late Antiquity	
	V THE MEDIEVAL PERIOD	56
	V Bestiaries and Herbals	
	The Revival of Scholarship	Assistan
3	Renaissance and Revolution	66
V	HUMANISM AND THE NATURAL WORLD	69
	✓ Secret Powers	
	The Riches of Nature	
	Animal, Vegetable and Mineral	
	THE GREAT INSTAURATION	84
	Natural History and Revolution	
	The Mechanical Philosophy	

viii Contents

4 Theories of the Earth	99
SCIENCE IN AN AGE OF REASON	100
Classification and Explanation	
The Earth Described	Street on
THE ORIGIN OF THE EARTH	112
The Meaning of Fossils	
New Cosmogonies	
FIRE AND WATER	125
Neptunism	
Plutonism	
5 Nature and the Enlightenment	139
THE DIVERSITY OF LIFE	140
The Classical Era	o and the
The Social Environment	A STATE OF THE STA
The Argument from Design	
THE SYSTEM OF NATURE	155
The Chain of Being	
System and Method	
Linnaeus	
THE ECONOMY OF NATURE	166
Rural Harmony	
Maintaining the Balance	
The Geography of Life	
THE POSSIBILITIES OF CHANGE	177
Filling in the Gaps	
Buffon Materialism and the Origin of Life	D 30500
Materialism and the Origin of Life Natural Progress	SALAKI SALAK
	100
6 The Heroic Age	193 197
THE ORGANIZATION OF SCIENCE	177
Europe Surveys the Earth	

	America Catches Up	
	A NEW GEOGRAPHY	204
	Humboldt and the Cosmos Humboldtian Science	
	THE GEOLOGICAL RECORD	211
	Fossils and Stratigraphy The Ancient Rocks	
	CLIMATE AND TIME	220
	The Cooling Earth	
	Ice Ages	
	MOUNTAINS AND CONTINENTS	230
	The Shrinking Earth Floating Continents	
	THE RATE OF CHANGE	237
	Catastrophist Geology	
	The Uniformity of Nature The Age of the Earth	
	AND SECTION OF THE PARTY OF A SECTION OF A S	
ļ	he Philosophical Naturalists	248
	KNOWLEDGE AND POWER	251
	Professionals and Amateurs Science and Politics	
	THE PATTERN OF NATURE	258
	Chains, Trees and Circles	
	Form and Function	
	THE GEOGRAPHY OF PLANTS	272
	Botanical Provinces	
	Historical Biogeography	
	THE HISTORY OF LIFE	280
	The Extinction of Species	
	Progressive Development	

	-	-		400
~	Ca	ut	011	TC
X	Col			

THE PROCESS OF CHANGE	291
Transmutation before Darwin	
The Origins of Darwin's Theory	
Natural Selection	
A TYAIRIAN DEICEMBIA	
8 The Age of Evolution	306
EXPLOIT OR CONSERVE?	309
Science and Empire	
The Professionalization of Biology	
Early Conservationism	
THE DARWINIAN REVOLUTION	323
Interpretations of Darwinism	
The Darwinians	
Anti-Darwinism	
W/ THE TREE OF LIFE	336
Evolutionary Morphology	
Fossils and Ancestors	
Human Origins	
EVOLUTION AND THE ENVIRONMENT	351
Paths of Migration	
Evolution and Adaptation	478
THE ORIGINS OF ECOLOGY	361
The New Biology	
Plant Ecology	CASE OF
9 The Earth Sciences	379
SCIENCE IN THE MODERN WORLD	382
Expansion and Fragmentation	
The Age of Big Science	
The End of Exploration	te de
A GLOBAL PHYSICS	392
Weather Patterns	
Ice Ages Again	Must .

	Contents xi
DRIFTING CONTINENTS	399
Geology in Crisis	and the same of th
Wegener's Initiative	
The Reaction to Wegener	
	in the second
PLATE TECTONICS	412
Paleomagnetism	THEAT
Sea-Floor Spreading	
Past and Present	
10 Darwinism Triumphant	428
SCIENCE AND IDEOLOGY	431
Images of Power	
Nature and Culture	
	115
THE EVOLUTIONARY SYNTHESIS	445
Parallel Evolution	
The Defence of Lamarckism	
Population Genetics	RECORD SANTERS
The New Darwinism The Implications of Darwinism	security or at
The Implications of Darwinism	S SUBSEC
ANIMAL BEHAVIOUR	478
Mind and Brain	
Evolution and Ethology	
Primate Studies	
Sociobiology	
11 Ecology and Environmentalism	503
CHANGING VALUES	504
Subduing the Wild	AND DESIGNATION
The Rise of Environmentalism	
ECOLOGY COMES OF AGE	518
Plant Ecology	
Animal Ecology	
Marine Ecology	

xii Contents

MODERN ECOLOGY	535
Populations and Systems	
Ecology and the Environmental Crisis	
NOTES	554
BIBLIOGRAPHICAL ESSAY	564
INDEX	607