CONTENTS

Preface		14
The story of th	18	
Chapter One:	19	
The I	Big Bang: Appearance of atom	21
Cosn	nogenesis	29
Form	nation of the Milky Way	31
Form	nation of the Solar System	32
Form	nation of the Earth	34
Sum	mary of chapter one	36
Chapter Two:	Abiogenesis	37
Here	is the Hell	39
	nation of the Moon	40
	of the oceans	42
	calm before the storm	44
	of life	44
	bombardment begins	46
Sumi	mary of chapter two	50
-	: Birth of Metazoa	51
	of the first cell	53
	of the Archaea	55
	nation of the Earth's magnetic field	57
	nation of tectonic plates	59
	of cyanobacteria	61
	of the first continent	62
	gen appears in the athmosphere	62
	of the eukaryotic cell	64
	of the cell locomotion	68
	of the Unikonta	69
Birth	of sexes	70

	Birth of the Opisthoconta	71
	Birth of the life's flag-bearer	71
	Birth of the Parazoa	72
	Summary of chapter three	78
Chanter F	our: Birth of the chordates	79
Onapter 1	Earth gets ready for the explosion of life	81
	Earth's largest supercontinent breaks down	82
	Tissue appears	85
	Animal body gets bigger	86
	Appearance of the third germ layer	89
	Coelom forms	91
	Birth of the second opening	92
	Formation of the ozone layer	94
	Birth of the deuterostomes	96
	Formation of soil	97
	Appearance of pharyngeal slits	99
	Start of swim	101
	Formation of brain and heart	103
	Summary of chapter four	116
Chapter F	ive: Birth of the tetrapods	117
•	From start to the birth of the chordates	119
	Life's Big Bang	123
	Cephalization	125
	Birth of the fish	132
	The broken-down supercontinent	135
	Arthropods conquer the land	137
	Plants move to land	138
	Start of hunting	139
	To the fresh waters	148
	The great extinction	154
	Appearance of lobe fins	155
	Lungs appear in the fish	159
	Toward the land	161
	On the edge of land	165
	Conquering the land	169
	Summary of chapter five	174

Chapter Six: Birth of the mammmals	175
Gills disappear	177
Timely escape	180
How is the new habitat?	181
Only one fossil	182
What's to be done?	184
On the land	185
Oviparity in the land	187
The great separation	193
The last supercontinent	196
Teeth evolution starts	197
Animal stands on feet	198
Birth of endothermy	199
Cynodonts	202
Hair appears	209
How was the world?	213
Larger brain, stronger jaws	219
Mammaliamorphs	220
Summary of chapter six	224
Chapter Seven: Birth of the primates Extinction, again	225 227
Mammals	228
Animal becomes viviparous	232
Appearance of placenta	236
Pangaea breaks down	243
_	243
Birth of the ancestors of today's animals	253
Animal climbs the trees Summary of chapter seven	262
carrinary of chapter severi	202
Chapter Eight: Birth of the homos	263
Birth of the primates	265
Vision becomes stronger	268
Birth of the monkeys	269
Our ancestors move to Africa	274
Birth of the communal life	278
Appearance of grass	281
Tail disappears	281
Brain gets bigger	286

Ancestors descend from the trees	289
Exercising bipedalism	292
Standing on the feet	300
Summary of chapter eight	304
Chapter Nine: Birth of the Homo Sapiens The bipeds On the boundary of becoming Mathematical Homo genus The first Homo species Homo erectus Big-game hunting begins In search of food Evolution of Homo erectus Our direct ancestor? Our cousin Summary of chapter nine	305 307 309 314 315 323 327 333 340 351 355 360
Chapter Ten: Conquering the world Our elder brother Homo sapiens sapiens Birth of speech The great leap Conquering the world The mind's Big Bang Homo sapiens and Neanderthals Towards today Summary of chapter ten	361 363 365 372 376 384 388 389 397 401
Appendix	403
References	427
Glossory	439