

CONTENTS

Preface	14
The story of the birth of humankind	18
Chapter One: Formation of the Earth	19
The Big Bang: Appearance of atom	21
Birth of the Universe	29
Formation of the Milky Way	31
Formation of the Solar System	32
Formation of the Earth	34
Summary of chapter one	36
Chapter Two: Abiogenesis	37
Worse than the Hell	39
Formation of the Moon	40
Birth of the oceans	42
The calm before the storm	44
Birth of life	44
Earth bombardment begins	46
Summary of chapter two	50
Chapter Three: Birth of the Animal	51
Birth of the first cell	53
Birth of the Archaea	55
Formation of the Earth's magnetic field	57
Formation of tectonic plates	59
Birth of cyanobacteria	61
Birth of the first continent	62
Oxygen appears in the atmosphere	62
Birth of the eukaryotic cell	64
Start of the cell locomotion	68
Birth of the unikonts	69
Birth of sexes	70

Birth of the opisthokonts	71
Birth of the life's flag-bearer	71
Birth of the Parazoa	72
Summary of chapter three	78

Chapter Four: Birth of the Chordates **79**

Earth gets ready for the explosion of life	81
The colossal supercontinent breaks down	82
Tissue appears	85
Animal body gets bigger	86
Appearance of the third germ layer	89
Coelom forms	91
Formation 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 aquatic locomotion	101
Formation of brain and heart	103
Summary of chapter four	116

Chapter Five: Birth of the Tetrapods **117**

From uniconts 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
Lobe fins appear	155
Lungs appear in the fish	159
To the land	161
On the edge of land	165
Conquering the land	169
Summary of chapter five	174

Chapter Six: Birth of the Mammals	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 on 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	 225
Extinction, again	227
Mammals	228
Animal becomes viviparous	232
Appearance of placenta	236
Pangaea breaks down	243
Ancestors of today's animals appear	246
Animal climbs the trees	253
Summary of chapter seven	262
 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
Communal life forms	278
Grasses appear	281
Tail disappears	281
Brain gets bigger	286

Our 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	 305
The bipeds	307
Man's boundary	309
Homo genus	314
The first Homo species	315
Homo erectus	323
Big-game hunting begins	327
In search of food	333
Evolution of Homo erectus	340
Humankind's direct ancestor?	351
Our cousin	355
Summary of chapter nine	360
 Chapter Ten: Conquering the World	 361
The elder brother	363
Homo sapiens sapiens	365
Birth of speech	372
The great leap	376
Conquering the world	384
The mind's Big Bang	388
Homo sapiens and Neanderthals	389
Towards today	397
Summary of chapter ten	401
 Appendixes	 403
References	427
Glossary	439