Contents

Preface: Revolution #3		1X
Introductio	n: Butterflies, Zebras, and Embryos	1
Part I	The Making of Animals	
. 1	Animal Architecture: Modern Forms, Ancient Designs	17
2	Monsters, Mutants, and Master Genes	37
3	From E. coli to Elephants	53
4	Making Babies: 25,000 Genes, Some Assembly Required	81
5	The Dark Matter of the Genome: Operating Instructions for the Tool Kit	109
Part II	Fossils, Genes, and the Making of Animal Diversity	
6	The Big Bang of Animal Evolution	137

7	Little Bangs: Wings and Other Revolutionary	4.07
	Inventions	167
8	How the Butterfly Got Its Spots	197
9	Paint It Black	221
10	A Beautiful Mind: The Making of Homo sapiens	249
l 1	Endless Forms Most Beautiful	281
	Sources and Further Reading	307
	Acknowledgments	329
	Index	333