

CONTENTS

Preface	ix
Part I Beyond the Mainland	1
1 Introduction	3
2 History of Island Studies	7
3 Factors that Influence Island Faunas	14
Types of Islands	15
Dispersals to Islands	17
The Candidate Species	23
Composition of Island Faunas	27
Part II The Islands and Their Faunas	31
4 Cyprus	33
Geology and Palaeogeography	34
Historical Palaeontology	34
Biozones and Faunal Units	37
5 Crete	43
Geology and Palaeogeography	44
Historical Palaeontology	44
Biozones and Faunal Units	49
6 Gargano	62
Geology and Palaeogeography	63
Historical Palaeontology	65
Biozones and Faunal Units	67
7 Sicily	80
Geology and Palaeogeography	81
Historical Palaeontology	81
Biozones and Faunal Units	84
8 Malta	92
Geology and Palaeogeography	93
Historical Palaeontology	93
Biozones and Faunal Units	98
9 Sardinia and Corsica	103
Geology and Palaeogeography	104

	Historical Palaeontology	105
	Biozones and Faunal Units	113
10	The Balearic Islands	131
	Geology and Palaeogeography	132
	Historical Palaeontology	133
	Biozones and Faunal Units	137
11	Madagascar	147
	Geology and Palaeogeography	148
	Historical Palaeontology	151
	Biozones and Faunal Units	157
12	Java	172
	Geology and Palaeogeography	173
	Historical Palaeontology	174
	Biozones and Faunal Units	179
13	Flores	190
	Geology and Palaeogeography	191
	Historical Palaeontology	192
	Biozones and Faunal Units	197
14	Sulawesi	206
	Geology and Palaeogeography	207
	Historical Palaeontology	209
	Biozones and Faunal Units	211
15	The Philippines	216
	Geology and Palaeogeography	217
	Historical Palaeontology	219
	Biozones and Faunal Units	222
16	Japan	228
	Geology and Palaeogeography	229
	Historical Palaeontology	231
	Biozones and Faunal Units	234
17	The Southern and Central Ryukyu Islands	244
	Geology and Palaeogeography	245
	Historical Palaeontology	248
	Biozones and Faunal Units	250
18	The Californian Channel Islands	262
	Geology and Palaeogeography	263
	Historical Palaeontology	264
	Biozones and Faunal Units	265
19	The West Indies	270
	Geology and Palaeogeography	271
	Historical Palaeontology	274
	Biozones and Faunal Units	282

Part III	Species and Processes	303
20	Elephants, Mammoths, Stegodons and Mastodons	305
	Distribution and Range	306
	Dispersals	307
	Taxonomic Confusions	307
	Common Morphological Traits	310
	Other Common Trends	313
21	Rabbits, Hares and Pikas	314
	Distribution and Range	315
	Common Morphological Traits	316
	Dispersal of Lagomorphs	317
22	Rats, Dormice, Hamsters, Caviomorphs and other Rodents	319
	Distribution and Range	320
	Common Morphological Traits	324
	Remark on Taphonomy	326
23	Insectivores and Bats	327
	Distribution and Range	328
	Common Morphological Traits	330
24	Cervids and Bovids	332
	Distribution and Range	333
	Common Morphological Trends	334
	Taxonomic Confusions	337
25	Hippopotamuses and Pigs	340
	Distribution and Range	341
	Common Morphological Traits	341
	Taxonomic Confusions	343
26	Carnivores	345
	Distribution and Range	346
	Common Morphological Traits	350
	Taxonomic Confusions	354
27	Patterns and Trends	355
	Dwarfism and Gigantism	358
	Increased Size Variation	359
	Shorter Limbs and Stiff Joints	361
	Increased Grinding Force	363
	Neurological Changes	364
	Changes in Metabolism	366
28	Evolutionary Processes in Island Environments	367
	Types of Speciation on Islands	368
	Intrinsic and Extrinsic Factors	377

29	Extinction of Insular Endemics	390
	Natural Disasters	391
	Disappearance of the Island	392
	Competition by New Species	393
	Effects of Exotic Predators	394
	Transmission of Diseases	397
	Habitat Loss	398
	Hunting to Extinction	400
	References	404
	Index	462