

Contents

Introduction	1
Aims, Definitions, Methods	2
1 Asian Wild Ass, Kulan – <i>Equus hemionus</i>	5
1.1 Status and Distribution	5
1.2 Measurements	5
1.3 Habitat	5
1.4 Diet and Feeding Habits	6
1.5 Social Organization and Behavior	9
1.6 Reproduction	11
1.7 Mortality	13
1.8 Population Structure and Densities	14
1.9 Relations to Man	14
2 Wild Boar – <i>Sus scrofa</i>	15
2.1 Status and Distribution	15
2.2 Measurements	16
2.3 Habitat	16
2.4 Diet and Feeding Habits	20
2.5 Social Organization and Behavior	24
2.6 Reproduction	26
2.7 Mortality	30
2.8 Population Structure and Densities	36
2.9 Relations to Man	37
3 Musk Deer – <i>Moschus moschiferus</i>	39
3.1 Status and Distribution	39
3.2 Measurements	39
3.3 Habitat	40
3.4 Diet and Feeding Habits	43
3.5 Social Organization and Behavior	44
3.6 Reproduction	47
3.7 Mortality	48

3.8	Population Structure and Densities	50
3.9	Relations to Man	51
4	Red Deer – <i>Cervus elaphus</i>	53
4.1	Status and Distribution	53
4.2	Measurements	56
4.3	Habitat	56
4.4	Diet and Feeding Habits	58
4.5	Social Organization and Behavior	64
4.6	Reproduction	69
4.7	Mortality	72
4.8	Population Structure and Densities	72
4.9	Relations to Man	78
5	Sika Deer Manchurian – <i>Cervus nippon</i>	79
5.1	Status and Distribution	79
5.2	Measurements	83
5.3	Habitat	83
5.4	Diet and Feeding Habits	83
5.5	Social Organization and Behavior	84
5.6	Reproduction	86
5.7	Mortality	87
5.8	Population Structure and Densities	88
5.9	Relations to Man	89
6	Moose – <i>Alces alces</i>	91
6.1	Status and Distribution	91
6.2	Measurements	92
6.3	Habitat	92
6.4	Diet and Feeding Habits	97
6.5	Social Organization and Behavior	97
6.6	Reproduction	102
6.7	Mortality	103
6.8	Population Structure and Densities	107
6.9	Relations to Man	108
7	Roe Deer – <i>Capreolus capreolus</i>, <i>C. pygargus</i>	109
7.1	Status and Distribution	109
7.2	Measurements	110
7.3	Habitat	110
7.4	Diet and Feeding Habits	113
7.5	Social Organization and Behavior	115
7.6	Reproduction	118

7.7	Mortality	119
7.8	Population Structure and Densities	121
7.9	Relations to Man	122
8	Reindeer – <i>Rangifer tarandus</i>	127
8.1	Status and Distribution	127
8.2	Measurements	128
8.3	Habitat	128
8.4	Diet and Feeding Habits	134
8.5	Social Organization and Behavior	137
8.6	Reproduction	144
8.7	Mortality	148
8.8	Population Structure and Densities	153
8.9	Relations to Man	155
9	Goitred Gazelle – <i>Gazella subgutturosa</i>	157
9.1	Status and Distribution	157
9.2	Measurements	157
9.3	Habitat	157
9.4	Diet and Feeding Habits	160
9.5	Social Organization and Behavior	163
9.6	Reproduction	165
9.7	Mortality	166
9.8	Population Structure and Densities	169
9.9	Relations to Man	169
10	Saiga Antelope – <i>Saiga tatarica</i>	171
10.1	Status and Distribution	171
10.2	Measurements	172
10.3	Habitat	172
10.4	Diet and Feeding Habits	176
10.5	Social Organization and Behavior	178
10.6	Reproduction	180
10.7	Mortality	182
10.8	Population Structure and Densities	185
10.9	Relations to Man	186
11	European Bison Wisent – <i>Bison bonasus</i>	187
11.1	Status and Distribution	187
11.2	Measurements	188
11.3	Habitat	188
11.4	Diet and Feeding Habits	190
11.5	Social Organization and Behavior	191

11.6	Reproduction	193
11.7	Mortality	195
11.8	Population Structure and Densities	198
11.9	Relations to Man	198
12	West Caucasian Tur – <i>Capra caucasica</i>	199
12.1	Status and Distribution	199
12.2	Measurements	199
12.3	Habitat	199
12.4	Diet and Feeding Habits	202
12.5	Social Organization and Behavior	202
12.6	Reproduction	205
12.7	Mortality	206
12.8	Population Structure and Densities	206
12.9	Relations to Man	206
13	East Caucasian Tur – <i>Capra cylindricornis</i>	207
13.1	Status and Distribution	207
13.2	Measurements	207
13.3	Habitat	208
13.4	Diet and Feeding Habits	210
13.5	Social Organization and Behavior	211
13.6	Reproduction	213
13.7	Mortality	215
13.8	Population Structure and Densities	215
13.9	Relations to Man	216
14	Markhor – <i>Capra falconeri</i>	217
14.1	Status and Distribution	217
14.2	Measurements	217
14.3	Habitat	217
14.4	Diet and Feeding Habits	219
14.5	Social Organisation and Behaviour	220
14.6	Reproduction	221
14.7	Mortality	222
14.8	Population Structure and Densities	222
14.9	Relations to Man	222
15	Wild Goat – <i>Capra hircus</i>	223
15.1	Status and Distribution	223
15.2	Measurements	223
15.3	Habitat	224
15.4	Diet and Feeding Habits	225

15.5	Social Organization and Behavior	226
15.6	Reproduction	227
15.7	Mortality	227
15.8	Population Structure and Densities	227
15.9	Relations to Man	229
16	Asiatic Ibex – <i>Capra sibirica</i>	231
16.1	Status and Distribution	231
16.2	Measurements	231
16.3	Habitat	231
16.4	Diet and Feeding Habits	235
16.5	Social Organization and Behavior	237
16.6	Reproduction	241
16.7	Mortality	241
16.8	Population Structure and Densities	243
16.9	Relations to Man	244
17	Chinese Goral – <i>Naemorhedus caudatus</i>	245
17.1	Status and Distribution	245
17.2	Measurements	245
17.3	Habitat	245
17.4	Diet and Feeding Habits	249
17.5	Social Organization and Behavior	249
17.6	Reproduction	252
17.7	Mortality	252
17.8	Population Structure and Densities	253
17.9	Relations to Man	254
18	Musk Ox – <i>Ovibos moschatus</i>	255
18.1	Status and Distribution	255
18.2	Measurements	255
18.3	Habitat	255
18.4	Diet and Feeding Habits	256
18.5	Social Organization and Behavior	259
18.6	Reproduction	260
18.7	Mortality	261
18.8	Population Structure and Densities	261
18.9	Relations to Man	262
19	Argali, Asian Wild Sheep, Marco Polo Sheep – <i>Ovis ammon</i>	263
19.1	Status and Distribution	263
19.2	Measurements	264

19.3	Habitat	264
19.4	Diet and Feeding Habits	269
19.5	Social Organization and Behavior	269
19.6	Reproduction	272
19.7	Mortality	274
19.8	Population Structure and Densities	276
19.9	Relations to Man	276
20	Mouflon – <i>Ovis aries</i>	277
20.1	Status and Distribution	277
20.2	Measurements	277
20.3	Habitat	278
20.4	Diet and Feeding Habits	280
20.5	Social Organization and Behavior	281
20.6	Reproduction	282
20.7	Mortality	282
20.8	Population Structure and Densities	283
20.9	Relations to Man	283
21	Snow Sheep – <i>Ovis nivicola</i>	285
21.1	Status and Distribution	285
21.2	Measurements	286
21.3	Habitat	286
21.4	Diet and Feeding Habits	290
21.5	Social Organization and Behavior	292
21.6	Reproduction	293
21.7	Mortality	296
21.8	Population Structure and Densities	297
21.9	Relations to Man	298
22	Urrial – <i>Ovis vignei</i>	299
22.1	Status and Distribution	299
22.2	Measurements	299
22.3	Habitat	300
22.4	Diet and Feeding Habits	304
22.5	Social Organization and Behavior	304
22.6	Reproduction	306
22.7	Mortality	309
22.8	Population Structure and Densities	309
22.9	Relations to Man	309
23	Chamois – <i>Rupicapra rupicapra</i>	311
23.1	Status and Distribution	311
23.2	Measurements	311

23.3	Habitat	312
23.4	Feeding	312
23.5	Social Organization and Behavior	314
23.6	Reproduction	317
23.7	Mortality	317
23.8	Population Structure and Densities	319
23.9	Relations to Man	319
24	Przewalski's Horse – <i>Equus caballus</i>	321
24.1	Status and Distribution	321
25	Mongolian Gazelle – <i>Procapra gutturosa</i>	323
25.1	Status and Distribution	323
Appendix 1	Plant Genera Eaten by Ungulates	325
Appendix 2	Helminths and Ectoparasites	377
References	387
	List of monographs and articles containing reviews of ungulate ecology	431