

Exotic Animal Medicine *for the* Veterinary Technician



Edited by

Bonnie Ballard, D.V.M. and Ryan Cheek, R.V.T.

Contents

Contributors	xi
Preface	xiii
Dedication	xiv
Acknowledgments	xv
Disclaimer	xvi
1. The Role of Veterinary Technicians in Exotic Animal Medicine <i>Bonnie M. Ballard</i>	3
2. The Avian Patient <i>Cheryl B. Greenacre</i>	5
Taxonomy and Common Species Seen in Practice	5
Behavior of Selected Species	5
Anatomy and Physiology	8
Husbandry and Nutrition	10
Common and Zoonotic Diseases (Infectious and Noninfectious)	11
Noninfectious Diseases	14
Nutritional Deficiencies	15
Other Diseases	15
Taking the History and Performing a Physical Exam	16
Preventative Medicine	17
Restraint	17
Radiology	18
Anesthesia and Surgery	19
Parasitology	20
Hematology	21
Emergency and Critical Care	21
Neonatology and Pediatrics	22
Sex Determination	23
Techniques	23
Euthanasia	28
3. The Lizard <i>Brad Wilson</i>	31
Introduction	31
Anatomy and Physiology	31
Husbandry	40
Quarantine	44
Nutrition	45
Common Disorders	48
Zoonoses	55
History and Physical Exam	57

Radiology	61
Surgery and Anesthesia	62
Parasitology	64
Emergencies	68
Techniques	72
Euthanasia	77

Color plates (following p.80)

4. The Snake	81
<i>Ryan Cheek and Shannon Richards</i>	
Introduction	81
Captive-Bred Versus Wild-Caught	81
Behavior	81
Anatomy and Physiology	82
Reproductive Biology and Husbandry	89
Egg Incubation and Management	90
Housing	92
Quarantine	99
Nutrition	100
Diseases and Clinical Conditions	102
Taking a History	106
Preparing for the Physical Exam	108
Restraint	108
The Physical Exam	110
Radiology	111
Anesthesia	112
Surgery	114
Parasitology	115
Common Parasites of Snakes	116
Emergency and Critical Care	117
Emergency Conditions	118
Critical Care Monitoring	119
Sex Determination	119
Clinical Techniques	120
Transportation	125
Venomous Snakes	125
Euthanasia	125
Being a Responsible Snake Owner	126
5. The Chelonians	129
<i>Samuel Rivera</i>	
Introduction	129
Anatomy and Physiology	129
Husbandry and Nutrition	131
Common Diseases	133
Zoonoses	135
Obtaining a History and Performing a Physical Examination	136
Radiology	137
Anesthesia	137
Parasitology	138
Emergency and Critical Care	138

	Clinical Techniques	139
	Euthanasia	142
6. The Amphibians		145
	<i>Brad Wilson</i>	
	Introduction, Taxonomy, and Natural History	145
	Anatomy and Physiology	149
	Husbandry	154
	Quarantine	160
	Nutrition	161
	Common Disorders	164
	Obtaining a History, Restraint, and Physical Exam	168
	Radiology	171
	Anesthesia and Surgery	172
	Techniques	173
	Euthanasia	176
7. The Ferret		179
	<i>James R. McClearn and Julie Mays</i>	
	Anatomy	179
	Biological and Reproductive Data	180
	Behavior	180
	Husbandry	181
	Nutrition	182
	Common and Zoonotic Diseases	183
	History and Physical Examination	184
	Preventative Medicine	184
	Restraint	184
	Radiology and Ultrasound	185
	Surgery and Anesthesia	185
	Parasitology	185
	Urinalysis	186
	Emergency and Critical Care	186
	Sex Determination	187
	Techniques	187
	Euthanasia	189
8. The Rabbit		191
	<i>Michael J. Huerkamp</i>	
	Introduction	191
	Common Types Seen in Practice	191
	Behavior	191
	Anatomy and Physiology	192
	Biologic and Reproductive Data	195
	Husbandry	196
	Nutrition	196
	Common and Zoonotic Diseases	198
	Taking the History and Performing a Physical Examination	205
	Restraint	206
	Radiology	207
	Anesthesia	208
	Common Surgical Procedures	213

Parasitology	214
Urinalysis	215
Emergency and Critical Care	215
Sex Determination	216
Clinical Techniques	216
Euthanasia	222
9. The Mouse, Rat, Gerbil, and Hamster	227
<i>Anne Hudson</i>	
Anatomy and Physiology	227
Biologic and Reproductive Data	228
Husbandry	229
Nutrition	229
Common Parasites, Diseases, and Zoonoses	229
Behavior	231
History and Physical Examination	232
Restraint and Handling	232
Radiology	233
Surgery and Anesthesia	233
Bandaging and Wound Care	234
Emergency and Critical Care	234
Sex Determination	234
Techniques	234
Euthanasia	237
10. The Chinchilla	239
<i>Trevor Lyon</i>	
Taxonomy/Common Species Seen in Practice	239
Anatomy and Physiology	239
Reproduction	241
Husbandry	241
Nutrition	241
Common and Zoonotic Diseases	241
Behavior	243
Taking the History and Performing the Physical Exam	243
Handling and Restraint	243
Radiology	243
Anesthesia and Surgery	244
Parasitology	244
Urinalysis	244
Emergency and Critical Care	244
Sex Determination	244
Techniques	244
Euthanasia	246
11. The Guinea Pig	247
<i>Anne Hudson</i>	
Common Types	247
Behavior	247
Anatomy and Physiology	247
Biologic and Reproductive Data	247
Husbandry	248
Nutrition	248

Common and Zoonotic Diseases	249
History and Physical Exam	249
Restraint	249
Radiology	250
Surgery and Anesthesia	250
Parasitology	250
Urinalysis	251
Emergency and Critical Care	251
Sex Determination	251
Techniques	251
Euthanasia	253
12. The Hedgehog	255
<i>Michael Duffy Jones</i>	
Taxonomy, Anatomy, and Physiology	255
Biologic and Reproductive Data	256
Behavior	256
Husbandry	257
Nutrition	257
Common Diseases	258
Obtaining a History and Physical Examination	258
Radiology	258
Anesthesia and Surgery	259
Urinalysis	259
Parasitology	259
Emergency and Critical Care	259
Sex Determination	259
Techniques	259
13. Other Species Seen in Practice	263
<i>Samuel Rivera</i>	
Skunks	263
Prairie Dogs	267
Sugar Gliders	269
14. The Role of the Veterinary Technician in Wildlife Rehabilitation	273
<i>Melanie Haire</i>	
Introduction	273
Getting Started	273
Rehabilitating Wildlife in a Small Animal Veterinary Hospital	274
Clinic Protocols	274
Intake Procedures	277
Ethical Considerations and Reducing Stress in Captive Wildlife	278
Initial Exam	278
Choosing Treatment Routes	279
Release Criteria Versus Euthanasia	280
Imprinting and Taming	281
Transporting Wildlife	282
Raptor Care	283
Altricial Orphan Songbird Basic Care	290
Caring for Adult Passerine (Song) Birds	295
Precocial Bird Basic Care	298
Adult Precocial Birds (Including Waterfowl and Wading Birds)	299

General Orphan Mammal Care	300
Species Care Sheets	304
15. Avian and Reptile Hematology	307
<i>Denise I. Bounous</i>	
Introduction	307
Blood Collection	307
Blood Smear and Assessment	307
Appendices	
1. State/Federal Wildlife Permit Offices	313
2. Wildlife Admissions/Exam/Care Forms	317
3. Handling and Restraint of Wildlife Species	321
4. Tail Wrapping	327
5. Guide to Identification of Hatchling and Nestling Songbirds	329
6. Average Body Weights of Selected North American Songbirds	335
7. Species Care Sheets	337
8. Biological Data of Selected North American Wild Mammals	347
9. Glossary of Medical Conditions and Treatments	349
10. Wildlife Product Sources	353
11. Additional Reading	357
12. Supplies Necessary for an Exotic Practice	361
Index	363