

Rabies, Lyme Disease, Hanta Virus

and Other Animal-Borne Human Diseases
in the United States & Canada



What every Parent, Householder, Camper, Hiker,
Teacher, Wildlife Rehabilitator, Hunter and
Fisherman Needs to Know

E. Lendell Cockrum, PhD

Contents

Some ABCs of Safety First	viii
Diseases Associated with Bats, Rodents and Rabbits	1
Most Common Diseases	8
Viruses	
Hanta Virus Pulmonary Syndrome (HPS)	11
Colorado Tick Fever (CTF)	15
Encephalitis	15
Eastern Equine Encephalitis (EEE)	16
Venezuelan Equine Encephalitis (VEE)	16
Western Equine Encephalitis (WEE)	16
California Encephalitis (CE)	16
LaCrosse Encephalitis (LCV)	16
St. Louis Encephalitis (SLE)	17
Dengue	17
Rabies	18
Rickettsia Organisms	27
Rocky Mountain Spotted Fever (Tick Fever)	27
Ricksettsial Pox	28
Typhus	28
Epidemic Typhus	28
Brill-Zinsser Disease	28
Scrub Typhus	28
Murine Typhus	28
Ehrlichiosis	29
Bacteria	30
Relapsing Fevers (Tick Fever)	30
Lyme Disease	32
Intestinal Bacterial Infections	32
Leptospirosis (Weil's Syndrome)	33
Plague	34
Bubonic Plague	35
Septicemic Plague	35
Pneumonic Plague	35
Urban Plague	35
Sylvatic Plague	36
Tularemia (Rabbit Fever)	36
Parasitic Diseases	37
Protozoa-Caused Diseases	37
Babesiosis	37
Chagas' Disease	38
Giardiasis (Beaver Fever)	39
Fungi-Caused Diseases	40
Coccidiomycosis (Valley Fever)	40
Histoplasmosis	41
Chronic Fatigue Syndrome	42

Some Animal Biology	43
Classification	44
Populations	46
Ecology	49
Population Control	51
Main Bats, Rodents and Rabbits of the United States and Canada ...	55
Bats (Order Chiroptera)	61
Ghost-Faced Bat Family (Mormoopidae)	
Ghost-Faced Bats	63
New World Leaf-Nosed Bat Family (Phyllostomatidae).....	64
Short-Eared, Nectar-Feeding Leaf-Nosed Bats	65
Big-Eared, Insect-Feeding Leaf-Nosed Bats.....	66
Plain-Nosed Bat Family (Vespertilionidae).....	67
Mouse-Eared Bats	68
Big Brown Bats.....	69
Pipistrelles	70
Evening Bats.....	71
Tree Bats.....	72
Silver-Haired Bats.....	73
Hoary Bats	74
Red Bats	75
Yellow Bats	76
Big-Eared Bats	77
Spotted Bat.....	78
Allen's Big-Eared Bats	79
Pallid Bats.....	80
Free-Tailed Bat Family (Molossidae).....	81
Brazilian Free-Tailed Bats (Guano Bat).....	82
Large Free-Tailed Bats	83
Mastiff Bats	84
Rodents (Order Rodentia)	85
Mountain Beaver Family (Aplodontidae).....	86
Mountain Beavers (Sewellel).....	87
Squirrel Family (Sciuridae)	88
Subfamily Pteromyinae	89
Flying Squirrels	89
Subfamily Sciurinae	90
Holarctic Ground Squirrels (Tribe Marmotini)	90
Marmots (Groundhogs).....	91
Prairie Dogs	92
Ground Squirrels	93
Antelope Squirrels	95
Chipmunks.....	96
Chipmunk Squirrels (Tribe Tamiasciurini).....	97
Red Squirrels	98
Tree Squirrels (Tribe Sciurini).....	99
Tree Squirrels	100

North American Burrowing Rodent Family (Geomyidae)	101
Pocket Gophers	102
Beaver Family (Castoridae)	103
Beavers	104
North American Desert Rodent Family (Heteromyidae)	105
Subfamily Perognathinae—Pocket Mice	106
Kangaroo Mice	107
Spiny Pocket Mice	108
Silky Pocket Mice	109
Subfamily Dipodominae—Kangaroo Rats	110
Kangaroo Rats	111
Rats and Mice Family (Muridae)	112
Subfamily Sigmodontinae—New World Rats and Mice	112
Rice Rats	113
Harvest Mice	114
Pygmy Mice	115
Deer Mice	116
Grasshopper Mice	117
Cotton Rats	118
Wood Rats (Pack Rats)	119
Subfamily Arvicolinae—Lemmings and Voles	120
Voles and Meadow Mice	121
Muskrats	122
Subfamily Murinae—Old World Rats and Mice	123
House Mice	124
Old World Rats	125
Jumping Mice and Rats Family (Dipodidae)	126
Jumping Mice	127
Porcupine Family (Erethizontidae)	128
Porcupines	129
Rabbits and Pikas (Order Lagomorpha)	130
Pika Family (Ochotonidae)	130
Pikas	131
Hares and Rabbits Family (Leporidae)	132
Cottontails	133
Hares and Jackrabbits	134
Some Useful References	135
Acknowledgments	139
Index	141