BIOGRAPHICAL SKETCH

NAME	POSITION TITLE
Richard J. Douglass	Professor of Biology and Chair

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE *(if applicable)*	YEAR(s)	FIELD OF STUDY
University of Utah	B.S.	1968	Zoology
University of Utah	M.S.	1970	Biology
Montana State University	Ph.D.	1973	Zoology

Positions and Employment

1973-1979 Vertebrate Ecologist, Renewable Resources Consulting Services, Edmonton, Alberta and Fairbanks, AK
1979-1982 Vertebrate Ecologist, LGL Ecological Research Associates, Fairbanks, AK and Grand Junction CO.
1983-current Assistant Professor, Associate Professor, Professor of Biology, Montana Tech.
1983-current Adjunct Assistant, Associate Professor, Professor, Montana State University.

Other Experience and Professional Memberships

2000 Visiting Ecologist C.E.A.N., Junin de los Andes, Argentina
1990 Visiting Professor of Biology, University of Turin, Faculty of Veterinary Medicine
1986 Acting Research Director of Montana Tech
1979 Acting Assistant Professor, University of Alaska

Honors

1993 Mershon Award for Science, Montana Academy of Science
1996 Couer D'Alene Professor of the Year
1999 Bush Professor of the Year
1999 Carnegie Foundation for the Advancement of Teaching, C.A.S.E., Professor of the year, 1999
2003 Life time Research Award. Montana Tech
2010 Distinguished Researcher Award, Montana Tech

Selected peer-reviewed publications (in chronological order).

Carver, S, A Kuenzi, K H Bagamian, J N Mills, PE Rollin, SN Zanto and R Douglass, 1911. A temporal dilution effect: hantavirus infection in deer mice and the intermittent presence of voles in Montana. Oecologia 166:713-721.

Richardson, K, S Carver, R Douglass and A Kuenzi, 2011. Effect of rock cover on small mammal abundance in a Montana grassland. Intermountain Journal of Sciences 17:20-29.

Leary, AJ AJ Kuenzi and RJ Douglass, 2011. Grazing effects on deer mice with implications to human exposure to Sin Nombre Virus. Intermountain Journal of Sciences 17:3037.

Carver, S, JT Tueax, RJ Douglass, and A kuenzi, 2011. Delayed density-dependent prevalence of *Sin Nombre virus* infection in deer mice (*Peromyscus maniculatus*) in central and western Montana. J. Wildlife Diseases 47:56-63.

Piudo, L, M Monteverde, RS Walker and RJ Douglass. 2010 . Rodent community structure and Andes Virus infection in sylvan and peridomestic Habitats in Northwestern Patagonia, Argentina,. Vector Borne and Zoonotic Diseases Vector Borne and Zoonotic Diseases (In press).

Cline, BJ, S Carver and RJ Douglass, 2010. Relationship of human behavior within outbuildings to potential exposure to Sin Nombre Virus in Western Montana. EcoHealth 7:389-393.

Carver, S, AM Kilpatrick, A Kuenzi, R Douglass, RS Ostfeld and P Weinstein. Environmental monitoring to enhance comprehension and control of infectious diseases, 2010. J. of Environmental Monitoring (in Press)

Carver, S, JN Mills, A Kuenzi, T. Flietstra and R Douglass, 2010. Sampling frequency differentially influeces interpretation of zoonotic pathogen and host dynamics: Sin Nombre virus and deer mice. Vector-Borne and Zoonotic Diseases 10:575-583.

Luis, AD, RJ. Douglass, JN. Mills, ON. Bjørnstad The effect of seasonality, density and climate on the population dynamics of Montana deer mice, important reservoir hosts for Sin Nombre hantavirus. Journal of Animal Ecology. Journal of Animal Ecology 2010, 79: 462–470

Waltee, D, BN Lonner, AJ, Kuenzi and RJ Douglass 2009. Seasonal dispersal patterns of sylvan deer mice (*Peromyscus maniculatus*) within Montana Range Lands. J. Wildlife Diseases 45:998-1007.

Kuenzi, AJ and R Douglass 2009. An experimental test of factors attracting deer mice into buildings. Intermountain Journal of Sciences 15:27-31

Calisher, CH, CJ Peters, RJ Douglass and AJ Kuenzi, 2009 Hantaviral infections of rodents: possible scenarios. Arch Viro 154:1195-1197.

Lonner, B, RJ Douglss, AJ Kuenzi and K. Huges, 2008 Seroprevalence Against Sin Nombre virus in Resident and Dispersing Deer Mice. Vector Borne and Zoonotic Diseases Vector Borne and Zoonotic Diseases 8: 1-9.

Douglass, RJ, CH Calisher, KD Wagoner, and JN.Mills, 2007. Sin Nombre virus infection of deer mice in Montana: characteristics of newly infected mice, Incidence, and temporal pattern of infection. J. Wildlife Diseases, 43(1), 2007, pp. 12-22.

Waring, T and R Douglass, 2007. Mercury in mouse hair: a monitoring tool for environmental exposure. Int. Mountain J. of Sciences, 13:110-115.

Calisher CH, K D Wagoner, BR Amman, JJ Root, RJ Douglass, AJ Kuenzi, KD Abbott, C Parmenter, TL. Yates, TG. Ksiazek, BJ. Beaty, and JN. Mills, 2006. Demographic Factors Associated with Prevalence of Antibody to Sin Nombre Virus in Deer Mice in the Western United States. J. Wildlife Diseases, 43:1-11.

Douglass, RJ, WJ Semmens, SJ Matock-Cooley and AJ Kuenzi, 2006. Deer mouse movements in peridomestic and sylvan setting in relation to Sin Nombre virus antibody prevalence. J. Wildlife Diseases. 42: 813-818.

Kuenzi, AJ, RJ Douglass, CW Bond, CH Calisher and JN Mills, 2005. Long-term Dynamics of Sin Nombre viral RNA and antibody in deer mice in Montana. J. Wilslife Diseases, 41:473-481.

Douglass, RJ, CH Calisher and KC Bradley, 2005. State-by-state incidences of hantavirus pulmonary syndrome in the United States of America, 1993-2004. Vector-Borne and Zoonotic Diseases. 5:18-192.

Douglass, RJ, AJ, Kuenzi, CY Williams, SJ Douglass, 2003. Removing deer mice from buildings: potential

effects on risk of human exposure to Sin Nombre Virus. Emerging Infectious Diseases. 9:390-392.

Douglass, RJ, T. Wilson, W.J. Semmens, S.N. Zanto, C.W. Bond, R.C. Van Horne and J.N. Mills. 2001 Longitudinal studies of Sin Nombre Virus in deer mouse dominated ecosystems of Montana. American Journal of Tropical Medicine and Hygiene. 65:33-41.

Kuenzi, AJ, RJ Douglass, D White, jr, CW Bond and JN Mills 2001. Antibody to Sin Nombre Virus in rodents associated with peridomestic habitats ini west central Montana. American Journal of Tropical Medicine and Hygiene. 64:147-146.

Kuenzi, AJ, R.J. Douglass, D White, Jr., C.W. Bond and JN Mills, 2001. Prevalence of antibodies to Sin Nombre Virus in deer mice captured in human occupied dwellings in Montana. Emerging and Infectious diseases. 65:137-146.

Douglass, R.J., A.J. Kuenzi, T. Wilson and R.C. Van Horne, 2000. Effects of bleeding non-anesthetized handling mortality and subsequent captures of small mammals. J. Wildlife Diseases. 36:700-704.
Van Horn, R.C. and R.J. Douglass 2000. Disinfectant effects on capture rates of deer mice (Peromyscus maniculatus), Am. Midl.Nat. 143:257-260.

Van Horn, VC and RJ Douglass, 2000. Disinfectant effects on capture rates of deer mice (*Peromyscus maniculatus*). Am. Mid. Nat. 143:257-260.

Douglass, R.J., J. Quinn, K.W. Coffin and G. Mariani, 1999. Initial effects of a landscape ecology treatment of a coniferous forest on small mammals, Intermountain Journal of Sciences 5:12-22.

Coffin, KW, QJ Kujala, RJ Douglass and LR Irby 1997. Interactions among prey availability, vulnerability and habitat structure. *In*: *Martes*: taxonomy, ecology, techniques and management, pp199-210. Provincial Museum of Alberta, Edmonton, Alberta Canada.

Douglass, R.J., R. Van Horn, K.W. Coffin and S.N. Zanto, 1996. Hantavirus in Montana deer mouse populations: Preliminary results, Wildlife Diseases 32:527-530.

Douglass, R.J., and M.R. Frisina, 1993. Mice and management on the Mount Haggin Wildlife Management Area. Rangelands 15:8-12.

Douglass, R.J., K.S. Douglass, L. Rossi, 1992. Ecological Distribution of bank voles and wood mice in disturbed habitats: Preliminary results. ACTA Theriologica 37:359-370.

Douglass, R.J., 1992. Effects of radio-collaring on deer mouse survival and vulnerability to ermine predation. American Midland Naturalist. Am. Midl. Nat. 127:198-199.

Douglass, R.J., An assessment of the use of rodents in ecological monitoring 1989. Environmental Management 13:355-363.

Douglass, R.J., 1989. An Evaluation of Trap-revealed microhabitat selection; Using Radio-telemetry to test critical assumptions. Journal of Mammalogy. 70:648-652

Douglass, R.J., 1984. Ecological distribution of small mammals in the De Long Mountains of Northwestern Alaska. Arctic 37:148-154.

Douglass, R.J., L.G. Fisher and M. Mair, 1983. Habitat selection and food habits of Marten, *Martes americana* in the Northwest Territories. The Canadian Field-Naturalist. 97:71-74.

Douglass, R.J., 1977. Effects of winter roads on rodents in the Northwest Territories. Journal of Applied Ecology. 14:827-834.

Douglass, R.J., 1977. Population dynamics, home ranges and habitat selection of the yellow-cheeked vole,

(Microtus xanthognathus) in the Northwest Territories. The Canadian Field-Naturalist. 91:237-247.

Douglass, R.J. and K.S. Douglass, 1977. Notes on the microhabitat selection of chestnut-cheeked voles (Microtus xanthognathus) on the beach of a thermokarst lake in the Northwest Territories. The Canadian Field-Naturalist 91:72-73.Douglass, R.J. and A. McNaughton, 1976. A new northern record for the meadow jumping mouse (Zapus hudsonicus) in the Northwest Territories. The Canadian Field-Naturalist. 90:96-97.

Douglass, R.J. and D. McDonald, 1976. New Northern record for the heather vole (Phenacomys intermedius) in the Northwest Territories. The Canadian Field-Naturalist. 90:82-83.
Douglass, R.J., 1976. A method of examining dental characteristics of live rodents. American Midland Naturalist 96:470-471.

Douglass, R.J., 1976. Spatial interactions and micro-habitat selections of two sympatric voles, Microtus montanus and Microtus pennsylvanicus. Ecology 57:346-352.

Douglass, RJ, 1976. A method for examining dental characteristics of live rodents. Am. Midland Nat. 96:470-471.

Technical Reports- Non-peer reviewed

Coffin, K, C Fager, Q Kujala, L Irby, R Douglass, 2002. Winter ecology of American marten in Southwestern Montana. Mt. Fish, Wildlife and Parks, Wildlife Division, Technical Bulletin, Helena, Montana. p54.

Douglass, R.J., 1990. Some impacts of the Alaska oil pipeline on wildlife. *In*. Les Entretiens DeBourgelat. Gestion Des Populations Animales. 18-19 Oct 90 pp. 69-70.

Douglass, R.J., J.M. Wright, S.G. Fancy, E.H. Fullman and J.L. Hectel, 1980. Assessment of the knowledge of potential effects of the Northwest Alaskan Pipeline Project on mammals: Literature review and agencyinput. Prepared for Northwest Alaskan Pipeline Co., Agent and Operator for Alaska Natural Gas Transportation Co.

Douglass, R.J., D.G. Roseneau, P.J. Bente, D.M. Troy and E.C. Murphy, 1979. Baseline studies in a proposed mineral development area in the De Long Mountains during 1978 and 1979. Prepared for GCO Minerals Company, Anchorage, Alaska.

Douglass, R.J., 1974, 1975, 1976. Three progress reports. Population dynamics, movements and habitat selection of small mammals near Chick Lake, Northwest Territories. Submitted to Canadian Arctic Gas Study Ltd., Calgary, Alberta.

Douglass, R.J., 1973. Effects of water pollution on populations of mammals in a swamp near Reserve, Louisiana. Submitted to the Philadelphia Academy of Natural Science.

Feigley, H.P., R.J. Douglass, C.C. Youmans, 1983. Annie Creek project wildlife study. 1982 annual report. Unpub. Man. submitted to Wharf Resources, Lead, South Dakota.

Wright, J.M., S.G. Fancy, and R.J. Douglass, 1980. The effects of access roads and feeder lines on the behavior and movement of Caribou at Prudhoe Bay, Alaska. Submitted to ARCO Oil and Gas Co., Anchorage, Alaska.

A. Research Support.

<u>Ongoing Research Support</u>

CDC Continued hanta reservoir studies 5/1/09-5/10/10
$40,000

CDC US3/CCU813599-07 Douglass (PI) 10/01/94 - 9/30/07
US Centers for Disease Control and Prevention
Longitudinal studies of rodent reservoirs of hantaviruses in the Northwestern U.S. This study was designed to determine the long term ecology and maintenance of SNV in sylvan deer mouse populations.
Role: PI

Award: $2,008,000

NIH 1 P20 RR020185-3Douglass (PI or Co-PI) 7/1/05 - 6/30/10
National Institutes of Health
INBRE: Peridomestic studies of deer mice and hantavirus. This study will determine the effects of dispersal and habitat modification on the entrance of deer mice into peridomestic settings where humans can be exposed to SNV
Award: $1,050,000

Completed Research Support

CDC Program Announcement 00057 Douglass (PI) 10/95-09/98
US Centers for Disease Control and Prevention
Ecology of deer mice (*Peromyscus maniculatus*) in peridomestic settings. This project determined ecological factors related to occupation of buildings by deer mice and some aspects of deer mouse ecology and maintenance of SNV in peridomestic populations.
Award: $468,638

NIH 5P20RR16455-02 10/01/02 - 9/30/04
National Institutes of Health
Montana Network for Biomedical Research Opportunities: Building research capabilities in bio-medical research. This project allowed Montana Tech to hire an anatomist and create various kinds of infrastructure required to build student interest and research capabilities.
Award: $198,580

Campus committees, Faculty Senate, Chair of the Editorial Board for the Intermountain Journal of Sciences, reviewed papers for, Mamma logy, Ecology, Biogeography, J. Wildlife Diseases, Emerging and Infectious Diseases, Journal of Tropical Disease and Hygiene, Vector Borne and Zoonotic Diseases and Intermountain Journal of Sciences. President of the Montana/Patagonia Partners of the Americas.

Courses taught: Vertebrate Anatomy, Zoology, Cell Biology, Experimental Biology, Alpine Ecology, Winter Ecology, Human Anatomy and Physiology, Ecology, Animal Ecology, Environmental Issues, Exercise Physiology, Advanced Exercise Physiology, Introduction to Evolution and Ecology, Evolution, Evolution of Man, Environmental Quality.

Current Ph.D students: Karoun Bagamian, Emory, Angie Luis, Pen State, Martine Monteverde, Univ. of Buenos Aeries, Liciana Piudo, Universidad del Comahue, Bariloche, Argentina.

Recent MS students: Brent Lonner, Dean Waltee and Abigail Leary: Interdisciplinary Studies in Emerging and Infectious Disease Ecology, Mt. Tech/University of Montana.