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Education

1999 University of Alaska Fairbanks, PhD
1987 Purdue University, BS

Employment

2006-present Curator of Vertebrate Zoology, Denver Museum of Nature & Science.
2007-present Research Associate, Mammal Division, Museum of Southwestern Biology.
2002-2006 Assistant Professor, Biological Sciences Dept., California State Polytechnic University, Pomona.
2001-2002 Postdoctoral Researcher, Museum of Natural Sciences, Louisiana State University
1999-2001 Postdoctoral Fellow, Dept. of Biology, University of Idaho
1996-1999 Assistant Curator and Alaska Frozen Tissue Collection Coordinator, Mammal Collection University of Alaska Museum.
1993-1998 Research Assistant, Teaching Assistant and Instructor, University of Alaska Fairbanks.
1992-1993 Biologist, Dames and Moore, Cincinnati, Ohio.
1989-1991 Research Assistant, Department of Pharmacology and Biophysics, University of Cincinnati.
1987-1989 Research Biochemist, Ricerca, Inc., Painesville, Ohio.

Research Goals

I study Rocky Mountain mammals by combining fieldwork and molecular genetics to uncover the evolutionary processes that have shaped them. This is important because it helps us document and better understand the incredible diversity that surrounds us in the region.

Current Research Projects

Western Chipmunks: The 23 species of chipmunks found across western North America are a diverse group of small ground squirrels familiar to many people; 5 species occur in Colorado. Related to marmots and prairie dogs, they are found in a wide variety of mountainous habitats from high-desert sagebrush plains to forests at treeline. Because chipmunks tend to be very similar in appearance, it can be difficult to figure out how these 23 species are related to each other and how they came to be so diverse in the West. To make them even more interesting, some species will hybridize when they come into contact. Chipmunks are a lot of fun to work with and occur in some cool places across the West.

Currently, I have funding from the National Science Foundation to investigate chipmunk diversity and what happens at the genetic level when they come into contact. It's a collaboration with Dr. Jack Sullivan at the University of Idaho and involves a lot of fun fieldwork in the West and using modern molecular genetics techniques. Over the last 10 years, we've been to 12 western states and Canada, discovered new hybrid zones (one in Colorado's Front Range), and uncovered previously unknown genetic diversity in chipmunks, possibly including new species. To learn more about them, we also beginning to look at the parasites which occur in chipmunks including blood-sucking lice and pinworms.

Five most recent scientific publications:

Hird, S, N Reid, JR Demboski, and J Sullivan (2010) Introgression at differentially aged hybrid zones in red-tailed chipmunks. *Genetica*, DOI: 10.1007/s10709-010-9470-z

Good JM, S Hird, N Reid, JR Demboski, SJ Stepan, TR Martin-Nims, and J Sullivan (2008) Ancient hybridization and mitochondrial capture between two species of chipmunks. *Molecular Ecology*, 17(5): 1313-1327.

Carstens, BC, SJ Brunsfeld, JR Demboski, JA Good, and JM Sullivan (2005) Investigating the evolutionary history of the Pacific Northwest mesic forest ecosystem: Hypothesis testing within a comparative phylogeographic framework. *Evolution*, 59(8):1639–1652.

Hafner, MS, TA Spradling, JE Light, DJ Hafner, and JR Demboski (2004) Systematic revision of pocket gophers of the *Cratogeomys gymnurus* species group. *Journal of Mammalogy*, 85(6):1170–1183.

Waltari, E, JR Demboski, DA Klein, and JA Cook (2004) A molecular perspective on the historical biogeography of the northern high latitudes. *Journal of Mammalogy*. 85(4):591–600.