

ALAN H. KRAKAUER

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CURRENT POSITION

University of California, Davis. Dept. of Evolution and Ecology (2012 – present)

Assistant Project Scientist and Lecturer. I am a Co-PI on an NSF-funded project to study the interaction between foraging ecology, courtship behavior, and mating success in lekking Greater Sage-grouse (*Centrocercus urophasianus*).

EDUCATION

Post- University of California, Davis. Dept. of Evolution and Ecology (2005-12)
doc

Behavior, ecology, acoustics, and conservation of lekking Greater Sage-grouse (*Centrocercus urophasianus*).
Advisor: G. Patricelli.

Ph.D. University of California, Berkeley. Dept. of Integrative Biology (Fall 2005)

Dissertation: *The Evolution of Cooperative Male Courtship: Kin Selection and the Mating system of the Wild Turkey* (*Meleagris gallopavo*)

W. Koenig and E. Lacey (co-chairs), S. Beissinger, R. Dudley, and N. Johnson.

B.S. Cornell University, Dept. of Biology (1996)

High Honors, concentration in Ecology and Systematics

GRANTS

Current Funding: Co-PI, NSF IOS-1258217 with PI Gail Patricelli/UC Davis and Jennifer Forbey/Boise State University, 2013-2015

National Science Foundation: Co-PI, NSF IOS-0925038, 2009-2012

Doctoral Dissertation Improvement Grant, 2001-2004. International Scholar Travel Award, 2006

American Ornithologist's Union: Student Research Award, 2001. Marsha Tucker Brady Student Travel Awards, 2002 & 2004. Postdoctoral Scholar Travel Award, 2009

Animal Behavior Society: Student Research Award, 2001

Sigma Xi: Grant in aid of Research, 2000.

University of California Berkeley: Internal grants from the Department of Integrative Biology and the Museum of Vertebrate Zoology totaling more than \$20,000

University of California Davis: Postdoctoral Scholar's Association Travel Award, 2006
Academic Federation Travel Award, 2012

AWARDS

American Ornithologists' Union: Nellie Johnson Baroody Award, student paper 2004

Animal Behavior Society: Warner Clyde Allee student award (honorable mention), 2005

National Science Foundation: Graduate Research Fellowship, 1999

Museum of Vertebrate Zoology: Joseph Maillard Fellowship, 2003, 2005

University of California Davis Office of Research: Postdoctoral Fellowship, Laboratory Management Institute, 2006-2007

TEACHING EXPERIENCE

University of California, Davis.

Behavioral Ecology (WFC 141). Instructor. Winter 2016

Animal Behavior (NPB 102). Co-Instructor. Summer 2013

Introduction to Evolution (EVE 100). Instructor. Fall 2012, Fall 2013

Graduate Group Core Course, Animal Behavior (ANB/PSC 218B). Co-Instructor. 2007-16

Animal Behavior (ANB 102). Guest lecture. 2007

Animal Communication (EVE 107). Guest lecture. 2006-2014

Behavioral Ecology (WFC 141). Guest lecture 2008, 2010

Freshman Seminar in Sexual Selection. Guest Instructor 2009

University of California, Berkeley.

Animal Behavior (ESPM 126C/IB 144). Instructor. 2015.

Research Reviews in Animal Behavior (IB C204). Coordinator for seminar/discussion series. 2004-5

Behavioral Ecology (IB 146). Grader and course coordinator. 2004

Animal Behavior (IB 144). Teaching Assistant and coordinator, 2002-3

Mammalogy (IB 173/173L). Teaching assistant (lab). 2001

Field Ecology Section (Bio 1B). Teaching Assistant and co-developer of special section of Intro Biology course. 1998-1999. Course received UCB Ed. Initiatives Award.

Introductory Biology (Bio 1B). Teaching Assistant. 2000, 2004

MENTORSHIP EXPERIENCE

University of California, Davis

Trained and supervised 44 post-graduate field interns.

Trained and supervised approximately 300 undergraduates (~70% female, ~24 minority), including 2 honors theses, 4 senior practica, 2 Biology Undergraduate Scholars Program participants, 1 Davis Honors Challenge student, and 1 McNair Scholar. Mentored 3 high-school interns (Youth Scholars Program and FASTRACK program). Lab received campus-wide recognition for undergraduate mentorship in 2012.

Completed *Entering Mentoring* workshop (Bio Undergrad Scholars Program).

University of California, Berkeley

Trained and supervised 5 undergraduates, 9 post-graduate field interns.

Mentored 10 undergraduate teaching assistants in 3 separate courses.

Cornell University

Trained and supervised 5 laboratory and field assistants.

RESEARCH EXPERIENCE

University of California, Davis: Department of Neurobiology and Behavior (2014).

Project lead for telemetry study on proximate cues for timing of migration in white-crowned sparrows. Supervised two technicians.

University of California, Berkeley: Museum of Vertebrate Zoology (2005). Curatorial Assistant, Mammal Collection.

Cornell University: Department of Psychology. (1997-1998). Laboratory Technician, conducted research on development of behavior in captive Zebra Finch.

KEY PUBLICATIONS

Patricelli, G.L., **Krakauer, A.H.**, Taff, C.C. (2016) Variable Signals in a complex world. *Advances in the Study of Behavior*. 48: 319-386.

Krakauer A.H. et al*. 2016. Successfully mating male sage-grouse show greater laterality in courtship and aggressive interactions. *Animal Behaviour* 11: 261-267. (includes 4 undergraduates as co-authors)

Diaz-Muñoz, S. et al., 2014. Cooperating to compete: altruism, sexual selection and causes of male reproductive cooperation. *Animal Behaviour* 88: 67-78.

Blickley et al., 2012. Experimental chronic noise is related to elevated fecal corticosteroid metabolites in lekking male greater sage-grouse (*Centrocercus urophasianus*). *PLoS One* 7: article e50462. Includes one post-grad field assistant as a co-author.

Blumstein, D.T. et al., 2011. Acoustic monitoring in terrestrial environments: applications, technological considerations, and prospectus. *Journal of Applied Ecology*. 48: 758-767.

Patricelli, G.L. & **A.H. Krakauer**. 2010. Tactical allocation of display effort reduces trade-offs among multiple sexual signals in greater sage-grouse: an experiment with a robotic female. *Behavioral Ecology* 21: 97-106.

Krakauer, A.H. 2008. Sexual selection and the genetic mating system of Wild Turkeys. *Condor* 110(1): 1-12.

Krakauer, A.H. 2005. Kin selection and cooperative courtship in wild turkeys. *Nature* 434:69-72.

OTHER PUBLICATIONS

- Koch*, R.E., **Krakauer, A.H.**, & Patricelli, G.L. 2015. Investigating female mate choice for mechanical sounds in the male Greater Sage-Grouse. *The Auk: Ornithological Advances* 132: 349-358. (*undergraduate honors thesis)
- Pellis, S.M., et al., 2013. Drawn into the vortex: The facing-past encounter and combat in lekking male greater sage-grouse (*Centrocercus urophasianus*). *Behaviour* 150: 1567-1599.
- Benedict, L. & **Krakauer, A.H.** 2013. Kiwis to Peewees: the value of studying bird calls. *Ibis*. 155: 225-228.
- Nonne, D. et al., 2013. Effects of radio collars on male sage-grouse survival and lekking behavior. *Condor* 115: 769-776.
- Blickley et al., 2012. Experimental chronic noise is related to elevated fecal corticosteroid metabolites in lekking male greater sage-grouse (*Centrocercus urophasianus*). *PLoS One* 7: article e50462. *Includes one post-grad field assistant as a co-author.*
- Krakauer, A.H.**, Webster, M.S., DuVal, E.H., Jones, A.G., & Shuster, S.M. 2011. The opportunity for sexual selection: not mismeasured, just misunderstood. *Journal of Evolutionary Biology*. 24: 2064-71.
- Patricelli, G.L., **Krakauer, A.H.**, & McElreath, R. 2011. Assets and tactics in a mating market: economic models of negotiation offer insights into animal courtship dynamics. *Current Zoology*. 57: 225-236.
- Krakauer, A.H.**, et al., 2009. Vocal and anatomical evidence for a two-voiced system in the greater sage-grouse (*Centrocercus urophasianus*). *Journal of Experimental Biology* 212: 3719-3727. *(includes 2 undergraduates and one post-graduate as co-authors)*
- Koenig, W.D., et al., 2009. Mast-producing trees and the geographical ecology of Western Scrub Jays. *Ecography* 32: 561-570.
- Krakauer, A.H.** & Kimball, R.T. 2009. Interspecific brood parasitism in galliform birds. *Ibis* 151: 373-381.
- Kuchta, S.R., **Krakauer, A.H.**, and Sinervo, B. 2008. Why does the Yellow-eyed *Ensatina* have yellow eyes? Batesian mimicry of rough-skinned newts (genus *Taricha*) by the salamander *Ensatina eschscholtzii xanthoptica*. *Evolution* 62: 984-990.
- Krakauer, A.H.** 2003. California Quail lays egg in Wild Turkey nest. *Western Birds* 34:169-170.
- Adkins-Regan, E., & **Krakauer, A.** 2000. Removal of adult males from the rearing environment increases preference for same sex partners in the zebra finch (*Taeniopygia guttata*). *Animal Behaviour* 60: 47-53.
- Walcott, C., Evers, D., Froehler, M, & **Krakauer, A.** 1999. Individuality in "Yodel" calls recorded from a banded population of Common Loons (*Gavia immer*). *Bioacoustics*, 10: 101-114.

- Krakauer, A.H.** & Krakauer, T.H. 1999. Foraging of Yellow-headed Caracaras in the fur of a three-toed sloth. *Journal of Raptor Research* 33: 270.
- Tauber, C.A. & **Krakauer, A.H.** 1997. Larval characteristics and generic placement of endemic Hawaiian Hemerobiids (Neuroptera). *Pacific Science* 51: 413-423.
- Krakauer, A.H.** & Tauber, C.A. 1996. Larvae of *Micromus*, generic characteristics and a description of *Micromus subanticus* (Neuroptera: Hemerobiidae). *Annals of the Entomological Society of America* 89: 203-211.

BOOK CHAPTERS

- Krakauer, A.H.** & DuVal, E.H. 2011. Kin selection and cooperative courtship in birds. In C.A. Salmon and T.K. Shackelford (eds.), *The Oxford Handbook of Evolutionary Family Psychology*. New York: Oxford University Press.
- Koenig, W.D., et al., 2009. Reproductive skew in avian societies. Pp. 227-264 in (R. Hager, and C.B. Jones, eds) *Reproductive Skew in Vertebrates: Proximate and Ultimate Causes*, Cambridge University Press, Cambridge.

MANUSCRIPTS SUBMITTED

- Fremgen, M. et al. (in review). Necklace style transmitters are associated with changes in display vocalizations of male sage-grouse. *Wildlife Biology*.
- Forbey et al.* (in review). Using technology to monitor grouse in a changing world. *Wildlife Biology*.
- Rios-Chelen et al.* (in review). Do birds vocalize at higher pitch in noise, or is it a matter of measurement? *Behavioral Ecology and Sociobiology*.

PRESENTATIONS- SCIENTIFIC MEETINGS AND WORKSHOPS

- Acoustical Society of America: (invited), 2012*
- American Association for the Advancement of Science Pacific Division: 2009 (invited)*
- American Ornithologists' Union: 2001, 2004 (award), 2005, 2007 (invited), 2009, 2010*
- Animal Behavior Society: 2004, 2005 (award, hon. mention), 2010, 2011*
- Bay Area Conservation Symposium: 2003*
- International Grouse Symposium: (presentation and invited technical workshop) 2015*
- International Ornithological Congress: 2010*
- International Society for Behavioral Ecology: 2002, 2006, 2008, 2014*
- National Science Foundation- Microphone Array Workshop: 2008*
- North American Ornithological Congress: 2002, 2012*
- Society for Integrative and Comparative Biology: 2013*
- Southern California Animal Behavior Conference: 2005*
- University of California Davis Regional Animal Behavior Conference: 2009*
- Winter Animal Behavior Conference: 2014 (invited)*

OUTREACH AND INVITED TALKS

Invited Seminars: Duke University, UNC Greensboro, UNC Chapel Hill, UC Berkeley, UC Davis, UC Santa Cruz, City College of San Francisco, Central Wyoming College

Public Talks: Audubon Society (Monterey Chapter, Cody Wyoming Chapter, Red Desert Wyoming Chapter, Mt. Diablo California Chapter, Yolo California Chapter), Chapel Hill Bird Club, Lander Rancher's Association, Lander Sage-grouse Working Group, Point Reyes National Seashore, Santa Lucia Preserve.

Interviews: Radio (BBC, KCBS- Bay Area, KQED Quest), Magazines (*Science News*, *Science and Spirit*, *Living Bird*, *Outdoor News*, *The Scientist*, *PetStreet*), Newspapers (*SF Chronicle*, *NY Times*, *Boston Globe*, *Wall Street Journal*, *Berkeley Daily Planet*, *Carmel Valley Pine Cone*, *Contra Costa Times*, *East Bay Express*, *Los Angeles Times*, *Wrentham Times*), Undergraduate journalists (Harvard, UA Fairbanks, Vassar, UC Davis, UC Berkeley).

Media Assistance: PBS *Nature* "What Females Want and What Males Will Do" (2008), BBC *Life* (2009), *Science Nation* (NSF) video, Cornell Laboratory of Ornithology *Sagebrush Sea* (2015), *Wild Utah* video, Exploration Productions/Discovery Channel Canada.

Other Outreach: WonderLab (Bloomington Indiana) event, Brighton and Mays Science Museum Exhibit (UK), Lander Wy Earth Day Film Festival, Lander Wy Teen Tech Week, Lander Area 4th Grade Outdoor Education Day, Golden Gate Audubon Society Guest Blog, Animal Behavior Graduate Group Outreach Blog, Las Positas Community College Zoology project contact, UC Davis Birders Group Administrator, volunteered on career panels and academic life seminars for undergraduates.

PROFESSIONAL SERVICE

Manuscript Reviewer: Acta Ethologica, American Naturalist, Animal Behaviour, Animal Conservation, Journal of Applied Ecology, The Auk: Ornithological Advances, Behavioral Ecology, Behavioral Ecology and Sociobiology, Bioacoustics, Bird Study, Canadian Journal of Zoology, Current Biology, Ecology, Ethology, Evolution, Ibis, Molecular Ecology, Molecular Ecology Resources, Naturwissenschaften, Northwestern Naturalist, Journal of Ornithology, Ostrich, PLoS One, Wildlife Biology, Wilson Bulletin for Ornithology.

Grant Reviewer: National Science Foundation, Earthwatch Institute, National Geographic Society, UC Davis committee for Mathias Award (graduate student grant for UC Natural Reserve System), UC Davis Postdoctoral Scholars Association Travel Grants.

Research Assistance and Consulting: Point Reyes National Seashore (paid consulting), Environment Saskatchewan.

Professional Committees and Academic Service: American Ornithologists' Union Young Professionals Committee, AOU Membership Committee, AOU Student Awards Judge. Friends of Wildcat Canyon Advisory Board. UC Davis Academic Federation merit reviews and reclassifications. Co-Administrator, UC Davis Birders Group.