

George Wittemyer

Dept. Fish, Wildlife, Conservation Biology Colorado State University G.Wittemyer@ColoState.edu
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APPOINTMENTS

2015- Associate Professor Dept. of Fish, Wildlife, Conservation Biology, Colorado State University
2014- Scientific Board Member: Elephants Alive!
2012- Technical Advisory Board, Kenya Wildlife Service
2010- Faculty Graduate Degree Program in Ecology, Colorado State University
2010- Chairman of the Scientific Board, Save the Elephants
2009-2015 Assistant Professor Dept. of Fish, Wildlife, Conservation Biology, Colorado State University
2009- Member IUCN Species Survival Commission African Elephant Specialist Group
2007-2009 Adjunct Professor Dept. of Biology, Portland State University
2007-2008 Postdoctoral Associate, Department of Environmental Science, Policy and Management, UC Berkeley
2006 Postdoctoral Associate, Department of Evolutionary Sciences, University of Copenhagen
2005 Postdoctoral Associate, Institute of Environment and Natural Resources, Makerere University
2000-2003 National Science Foundation Graduate Research Fellow
1997-1998 Fulbright Fellow

EDUCATION

Postdoc Dept. of Environmental Science, Policy, and Management University of California, Berkeley 2007-2008
Postdoc National Science Foundation International Research Fellowship Makerere University, Uganda and University of Copenhagen, Denmark 2006-2007
Ph.D. Dept. of Environmental Science, Policy, and Management University of California, Berkeley; Dissertation Chair: Wayne M. Getz 2005
B.A. Colorado College, Biology (Honors), 1997

FELLOWSHIPS, GRANTS, & AWARDS

2017 National Park Service Biological Monitoring
2017-2018 World's Women's Works Grant
2016-2017 Wildlife Conservation Society, Wilderness Society, National Park Service Collaborative Funding Grant

2015-2018	The Nature Conservancy
2015-2018	National Park Service Natural Sounds and Night Skies Research Grant (annually)
2015	Google Earth Engine Academic Research Awards
2015-2018	XTO Energy Development and Conservation Research Grant
2014-2015	XTO Energy Development and Conservation Research Grant
2014-2015	Chevron Corporation Energy Development Research Grant
2014	Wildlife Conservation Society Research Grant
2013-2014	National Park Service Natural Sounds and Night Skies Research Grant
2012-2018	Save the Elephants Research Grant (Annually)
2011-2013	Liz Claiborn Art Ortenberg Foundation Conservation Grant
2011-2013	Safari Club International
2010-2014	Exxon Energy Development and Conservation Research Grant
2006-2007	NSF International Research Postdoctoral Fellowship
2000-2003	NSF Graduate Research Fellow
2000	Outstanding Graduate Student Instructor
1997-1999	Fulbright Fellowship

PUBLICATIONS

Research Articles

2017

- (78) Goldenberg, S. Z., **Wittemyer, G.** 2017. Relatives and young calves drive social integration for orphaned female elephants. *Scientific Reports* 7:14408.
- (77) Lendrum, P.E., Crooks, K.R., and **Wittemyer, G.** 2017. Changes in circadian activity patterns of a wildlife community post high-intensity energy development. *Journal of Mammalogy* **98**:1265-1271.
- (76) Keyel, A.C., Reed, S.E., McKenna, M., **Wittemyer, G.** 2017. Modeling anthropogenic noise propagation using the Sound Mapping Tools ArcGIS toolbox. *Environmental Monitoring Software* 97:56-60
- (75) *Goldenberg, S. Z., Douglas-Hamilton, I., Daballen, D., Wittemyer, G.* 2017. Challenges of using behavior to monitor anthropogenic impacts on wildlife: a case study on illegal killing of African elephants. *Animal Conservation* **20**:215-224
- (74) *Buxton, R.T., McKenna, M.F., Mennit, D., Fristrup, K.M., Crooks, K.R., Angeloni, L.M., Wittemyer, G.* 2017. Noise pollution is pervasive in U.S. protected areas. *Science* **356**:531-533.
- (73) *Goldenberg, S. Z., Douglas-Hamilton, I., Daballen, D., Wittemyer, G.* 2017. Challenges of using behavior to monitor anthropogenic impacts on wildlife: a case study on illegal killing of African elephants. *Animal Conservation* **20**:215-224
- (72) **Wittemyer, G.**, Keating, L.M., Vollrath, F., Douglas-Hamilton, I. 2017. Graph theory illustrates spatial and temporal features that structure elephant rest locations. *Ecography* **40**:598-605.
- (71) Turkalo, A.K., Wrege, P., **Wittemyer, G.** 2017. Slow intrinsic growth rate in Forest Elephants (*Loxodonta cyclotis*) indicates recovery from poaching will require decades. *Journal of Applied Ecology* **54**:153-159.

(70) *de Silva, S., Schmid, V.S., Wittemyer, G.* 2017. Fission-fusion processes weaken dominance networks of female Asian elephants in a productive habitat. *Behavioral Ecology* **28**:243-252.

2016

(69) **Wittemyer, G.** 2016. Illegal wildlife trade: Look to the elephants. *Science* **353**:1507.

(68) *Stabach, J.A., Wittemyer, G., Boone, R.B., Reid, R.S., Worden, J.S.* 2016. Variation in habitat selection across three populations of resident white-bearded wildebeest. *Ecosphere* **7**:e01428.

(67) *Northrup, J. M., Anderson, C. R., Hooten, M., Wittemyer, G.* 2016. Movement reveals scale-dependence in habitat selection of a large ungulate. *Ecological Applications* **26**:2744-2755.

(66) *Shannon, G., Angeloni, L.M., Wittemyer, G., Fristrup, K.M., and Crooks, K.R.* 2016. The effect of road noise on predator detection: testing the distraction hypothesis on a free-ranging mammal. *Behavioral Ecology* **27**:1370-1375

(65) *Shannon, G., McKenna, M. F., Angeloni, L.M., Lynch, E., Warner, K.A., Nelson, M.D., Leumas, C., Briggs, J., McFarland, S., Crooks, K.R., Fristrup, K.M., and Wittemyer, G.* 2016. A synthesis of two decades of research documenting the effects of noise on wildlife. *Biological Reviews* **91**:982-1005.

(64) *Goldenberg, S. Z., Odour, S., Kinnaird, M.F., Daballen, D., Douglas-Hamilton, I., Wittemyer, G.* 2016. Evidence of strong spatial segregation between elephant subpopulations in the contiguous Laikipia-Samburu ecosystem in Kenya. *African Journal of Ecology* **54**:261-264

(63) *Northrup, J. M., Anderson, C. R., Wittemyer, G.* 2016. Environmental dynamics and anthropogenic landscape change alter philopatry and range size in a North American cervid. *Diversity and Distributions* **22**:547-557

(62) *Schafer, A. B., Northrup, J. M., Wilkelski, M., Wittemyer, G., Wolf, J.B.* 2016. Forecasting ecological genomics: high-tech animal instrumentation meets high-throughput sequencing. *PLoS Biology* **14**:e1002350

(61) *Goldenberg, S. Z., Douglas-Hamilton, I., Wittemyer, G.* 2016. Vertical transmission of social roles drives resilience to poaching in elephant networks. *Current Biology* **26**:75-79

2015

(60) *Northrup, J. M., Anderson, C. R., Wittemyer, G.* 2015. Quantifying spatial habitat loss caused by hydrocarbon development through assessing habitat selection patterns of mule deer. *Global Change Biology* **21**:3961-3970

(59) *Ihwagi, F.W., Wang, T., Wittemyer, G., Skidmore, A.K., Toxopeus, A.G., Ngene, S., Worden, J., King, J., Omondi, P., Douglas-Hamilton, I.* 2015. Using elephant distribution and poaching levels to assess the conservation efficacy of private, communal and government land in northern Kenya. *PLoS One* **10**:e0139079

(58) *Durant, S.M., Becker, M.S., Creel, S., Bashir, S., Dickman, A.J., Beudels-Jamar, R.C., Lichtenfeld, L., Hilborn, R., Wall, J., Wittemyer, G., Badamjav L., Blake, S., Boitani, L., Breitenmoser, C., Broekhuis, F., Christianson, D., Cozzi, G., Davenport, T.R.B., Deutsch, J., Devillers, P., Dollar, L., Dolrenry, S., Douglas-Hamilton, I., Dröge, E., FitzHerbert, E., Foley, C., Hazzah, L., Hopcraft, J.G.C., Ikanda, D., Jacobson, A., Joubert, D., Kelly, M.J., Milanzi, J., Mitchell, N., M'Soka, J., Mshu, M., Mweetwa, T., Nyahongo, J., Rosenblatt, E., Schuette, P., Sillero-Zubiri, C., Sinclair, A.R.E., Stanley-Price, M. R., Zimmermann, A., Pettorelli, N.* 2015. Developing fencing policies for dryland ecosystems. *Journal of Applied Ecology* **52**:544-551

(57) Polanksy, L., Kilian, W., **Wittemyer, G.** 2015. Elucidating the significance of spatial memory on movement decisions by African elephants using state-space models. *Proceedings of the Royal Society: B* **282**:20143042

(56) Lynch, E.; Northrup, J. M.; McKenna, M. F.; Anderson, C. R.; Angeloni, L.; **Wittemyer, G.** 2015. Landscape and anthropogenic features influence the use of auditory vigilance by mule deer. *Behavioral Ecology* **26**:75-82.

2014

(55) Sienne, J.M., Buchwald, R., **Wittemyer, G.** 2014. Plant mineral concentrations related to foraging preferences of Western lowland gorilla in Central African forest clearings. *American Journal of Primatology* **76**:1115-1126

(54) Northrup, J. M., Shafer, A.B., Anderson, C. R., Coltman, D.W., **Wittemyer, G.** 2014. Fine-scale genetic correlates to condition and migration in a wild Cervid. *Evolutionary Applications* **7**:937-948

(53) **Wittemyer, G.**, Northrup, J.M., Blanc, J., Douglas-Hamilton, I., Omondi, P., and Burnham, K. 2014. Illegal killing for ivory drives global decline in African elephants. *Proceedings of the National Academy of Sciences* **111**:13117-13121

(52) Wall, J., **Wittemyer, G.**, LeMay, V., Douglas-Hamilton, I., and Klinkenberg, B. 2014. Elliptical time-density model to estimate animal utilization distributions. *Methods in Ecology and Evolution* **5**:780-790

(51) Goldenberg, S.Z., de Silva, S., Rasmussen, H.B., Douglas-Hamilton, I., and **Wittemyer, G.** 2014. Dynamic states and social properties among male African elephants, *Loxodonta africana*. *Animal Behaviour* **95**:111-119

(50) Shannon, G., Angeloni, L.M., **Wittemyer, G.**, Fristrup, K.M., and Crooks, K.R. 2014. Road traffic noise modifies behaviour of a keystone species. *Animal Behaviour* **94**:135-141

(49) Northrup, J. M., Anderson, C. R., **Wittemyer, G.** 2014. Effects of capture and handling on movement behavior of mule deer. *Journal of Wildlife Management* **78**:731-738

(48) Wall, J., **Wittemyer, G.**, Klinkenberg, B., and Douglas-Hamilton, I. 2014. Novel opportunities for wildlife conservation and management using real-time monitoring. *Ecological Applications* **24**: 593-601

(47) Chiyo, P.I., Grieneisen, L.E., **Wittemyer, G.**, Moss, C.J., Lee, P.C., Douglas-Hamilton, I., Archie, E.A. 2014. The influence of social structure, habitat, and host traits on the transmission of *Escherichia coli* in wild elephants. *PLoS One* e93408

(46) Noa Pinter-Wollman, N., Hobson E. A., Smith, J. E., Edelman, A. J., Shizuka, D., Waters, J. S., de Silva, S., Prager, S. D., Sasaki, T., **Wittemyer, G.**, Fewell, J., McDonald, D. B. 2014. The dynamics of network dynamics. *Behavioral Ecology* **25**:260-261

(45) Noa Pinter-Wollman, N., Hobson E. A., Smith, J. E., Edelman, A. J., Shizuka, D., Waters, J. S., de Silva, S., Prager, S. D., Sasaki, T., **Wittemyer, G.**, Fewell, J., McDonald, D. B. 2014. The dynamics of animal social networks: analytical, conceptual, and theoretical advances. *Behavioral Ecology* **25**:242-255

(44) Sienne, J.M., Buchwald, R., **Wittemyer, G.** 2014. Differentiation in mineral constituents in water and soil resources across Central African basins. *European Journal of Wildlife Research* **60**:377-382

(43) Gessner, J., Buchwald, R., **Wittemyer, G.** 2014. Assessing species occurrence and species specific use patterns of basins in Central Africa with camera traps. *African Journal of Ecology* **52**:59-68.

2013

- (42) Turkalo, A.K., Wrege, P., and **Wittemyer, G.** 2013. Long term monitoring of the Dzanga bai forest elephants: Population description and bai use patterns. *PLoS One* **8**(12):e85154
- (41) *de Silva, S.*, Webber C.E., Weerathunga, U.S., Pushpakumara, T.V., Tharanga, J.S., Weerakoon, D., **Wittemyer, G.** 2013. Demographic variables for wild Asian elephants using longitudinal observations. *PLoS One* **8**(12):e82788
- (40) *Polansky L.*, Douglas-Hamilton, I., **Wittemyer, G.** 2013. Using diel movement behavior to infer foraging strategies related to ecological and social factors in elephants. *Movement Ecology* **1**:13
- (39) Creel, S. et al. 2013. Conserving large populations of lions – the argument for fences has holes. *Ecology Letters* **16**:1413-e3
- (38) Uno, K., Quade, J. Fisher, D.C., **Wittemyer, G.**, Douglas-Hamilton, I., Adanje, S., Omondi, P., Litoroh, M., Cerling, T.E. 2013. Bomb-curve radiocarbon measurements of recent biologic tissues and applications to stable isotope ecology and paleoecology, and to wildlife forensics. *Proceedings of the National Academy of Sciences* **110**(29):11736-11741
- (37) *Lynch, E.*; Angeloni, L.; Fristrup, K.; Joyce, D., **Wittemyer, G.** 2013. The use of on-animal acoustical recording devices for studying animal behaviour. *Ecology and Evolution* **3**(7):2030-2037
- (36) *Northrup, J. M.*, Hooten, M. B., Anderson, C. R., **Wittemyer, G.** 2013. Practical guidance on availability sampling for resource selection functions. *Ecology* **94**(7):1456-1463
- (35) Maisels, F., et al. 2013. Devastating decline of forest elephants in Central Africa. *PLoS One* **8**(3): e59469
- (34) *Wall, J.*, **Wittemyer, G.**, Klinkenberg, B. LeMay, V., and Douglas-Hamilton, I. 2013. Characterizing properties and drivers of long distance movements by elephants (*Loxodonta africana*) in the Gourma, Mali. *Biological Conservation* **157**:60-68
- (33) *Northrup, J.M.* and **Wittemyer, G.** 2013. Characterizing the impacts of emerging energy development on wildlife, with an eye towards mitigation. *Ecology Letters* **16**:112-125
- (32) **Wittemyer, G.**, Daballen, D., and Douglas-Hamilton, I. 2013. Comparative demography of an at risk African elephant population. *PLoS One* **8**(1):e53726

2012

- (31) *de Silva, S.* and **Wittemyer, G.** 2012. A comparison of social organization in Asian elephants and African savannah elephants. *International Journal of Primatology* **33**:1125-1141.

2011

- (30) **Wittemyer, G.**, Daballen, D., and Douglas-Hamilton, I. 2011. Rising ivory prices threaten elephants. *Nature* **476**:282-283.
- (29) Bouché, P., Douglas-Hamilton, I., **Wittemyer, G.**, Nianogo, A.J., Doucet, J., Lejeune, P., and Vermeulen, C. 2011. Will elephants soon disappear from West African savannahs? *PLoS One* **6**:e20619
- (28) Boetiger, A*., **Wittemyer, G.***, Starfield, R., Volrath, F., Douglas-Hamilton, I., and Getz, W.M.. 2011. Inferring ecological and behavioral drivers of African elephant movement using a linear filtering approach. *Ecology* **92**:1648-1657.
- (27) **Wittemyer, G.** 2011. Effects of economic downturns on mortality of wild African elephants. *Conservation Biology* **25**:1002-1009.

- (26) Polansky, L.* and Wittemyer, G.* 2011. A framework for understanding the architecture of collective movements using pair-wise analyses of animal movement data. *Journal of the Royal Society Interface* **8**:323-333.

2010

- (25) Kahindi, O., Wittemyer, G., King, J., Ihwagi, F., Omondi, P., & Douglas-Hamilton, I. 2010. Employing participatory surveys to monitor the illegal killing of elephants across diverse land uses in Laikipia-Samburu, Kenya. *African Journal of Ecology* **48**:972-983.
- (24) Polansky, L., Wittemyer, G., Cross, P.C., Tambling, C.J. & Getz, W.M. 2010. Fourier and wavelet analyses applied to animal movement time series. *Ecology* **91**:1506-1518.
- (23) Wasser, S., et al. 2010. Elephants, Ivory, and Trade. *Science* **327**:1331-1332

2009

- (22) Wittemyer, G., Cerling, T.E., & Douglas-Hamilton I. 2009. Establishing longitudinal diet chronologies from isotopic profiles in serially collected hairs. *Chemical Geology* **267**:3-11
- (21) Wittemyer, G., Okello, J.B.A., Rasmussen, H.B., Arctander, P., Nyakaana, S., Douglas-Hamilton, I., & Siegismund, H. 2009. Where sociality and relatedness diverge: the genetic basis for hierarchical social structure in African elephants. *Proceedings of the Royal Society: Biological Sciences* **276**:3513-3521
- (20) Cerling, T.E., Wittemyer, G., Ehleringer, J.R., Remien, C.H., Douglas-Hamilton I. 2009. History of Animals using Isotope Records (HAIR): A 6-year dietary history of one family of African elephants. *Proceedings of the National Academy of Sciences* **106**:8093-8100

2008

- (19) Wittemyer, G., Polansky, L., Douglas-Hamilton, I. and Getz, W.M. 2008. Disentangling the effects of forage, social rank and risk on movement autocorrelation of elephants using Fourier and wavelet analysis. *Proceedings of the National Academy of Sciences* **105**:19108-19113
- (18) Wittemyer, G. *, Elsen, P., Bean, W.T., Burton, A.C.O. and Brashares, J.S.*. 2008. Accelerated human population growth at protected area edges. *Science* **321**:123-126.
- (17) Okello, J.B.A.*, Wittemyer, G.*, Rasmussen, H.B., Arctander, P., Nyakaana, S., Douglas-Hamilton, I., & Siegismund, H. 2008. Effective population size dynamics reveal impacts of historic climatic events and recent anthropogenic pressure in African elephants. *Molecular Ecology* **17**:3788-3799
- (16) Okello, J.B.A., Masembe, C., Rasmussen, H.B., Wittemyer, G., Omondi, P., Kahindi, O., Douglas-Hamilton, I., Arctander, P., Nyakaana, S., & Siegismund, H. 2008. Population genetic structure of elephants in Kenya. *Journal of Heredity* **99**:443-452
- (15) Rasmussen, H.B., Okello, J.B.A., Wittemyer, G., Siegismund, H., Vollrath, F., & Douglas-Hamilton, I. 2008. Age and tactic related paternity success in male African elephants. *Behavioral Ecology* **19**: 9-15

2007

- (14) Wittemyer, G., Getz, W.M., Vollrath, F. & Douglas-Hamilton, I. 2007. Social dominance, seasonal movements, and spatial segregation in the African elephant: A contribution to conservation behavior. *Behavioral Ecology and Sociobiology* **61**:1919-1931
- (13) Wittemyer, G. and Getz, W.M. 2007. Hierarchical dominance and social structure in African elephants (*Loxodonta africana*). *Animal Behaviour* **73**:671-681

(12) **Wittemyer, G.**, Ganswindt, A., and Hodges, K. 2007. The impact of ecological variability on the reproductive endocrinology of wild female African elephants. *Hormones and Behavior* **51**:346-354

(11) **Wittemyer, G.***, Rasmussen, H. B.*, & Douglas-Hamilton, I. 2007. Breeding phenology in relation to NDVI variability in free-ranging African elephant. *Ecography* **30**:42-50

2006

(10) **Wittemyer, G.** and Getz, W.M. 2006. A Likely Ranking Interpolation for Resolving Dominance Orders in Systems with Unknown Relationships. *Behaviour* **143**:909-930

(9) Cerling, T.E., **Wittemyer, G.**, Rasmussen, H., Vollrath, F., Cerling, C.E., Robinson, T.J. & Douglas-Hamilton, I. 2006. Stable isotopes in elephant hair documents migration patterns and diet changes. *Proceedings of the National Academy of Sciences* **103**:371-373

(8) Rasmussen, H. B.*, **Wittemyer, G.***, & Douglas-Hamilton, I. 2006. Predicting time-specific changes in demographic processes using remote-sensing data. *Journal of Applied Ecology* **43**:366-376

(7) Douglas-Hamilton, I., Bhalla, S., **Wittemyer, G.**, & Vollrath, F. 2006. Behavioural reactions of elephants towards a dying and deceased matriarch. *Applied Animal Behaviour Science* **100**:87-102

2005

(6) **Wittemyer, G.**, Douglas-Hamilton, I., & Getz, W.M. 2005. The socio-ecology of elephants: Analysis of the processes creating multileveled societies. *Animal Behaviour* **69**:1357-1371

(5) **Wittemyer, G.**, Daballen, D., Rasmussen, H., Kahindi, O., Douglas-Hamilton, I. 2005. Demographic status of elephants in the Samburu and Buffalo Springs National Reserves, Kenya. *African Journal of Ecology* **43**:44-47

(4) Okello, J.B.A., **Wittemyer, G.**, Rasmussen, H.B., Douglas-Hamilton, I., Nyakaana, S., Arctander, P., & Siegismund, H. 2005. Noninvasive microsatellite genotyping and Mendelian inheritance in African savanna elephants. *Journal of Heredity* **96**:679-687

(3) Rasmussen, H. B., **Wittemyer, G.**, & Douglas-Hamilton, I. 2005. Estimating age of immobilized elephants from teeth impressions using dental silicon. *African Journal of Ecology* **43**:215-219

2002

(2) Rasmussen, L.E.L. & **Wittemyer, G.** 2002. Chemosignaling of musth by individual wild African elephants, (*Loxodonta africana*): implications for conservation and management. *Proceedings of the Royal Society: Biological Sciences* **269**:853-860

2001

(1) **Wittemyer, G.** 2001. The elephant population of Samburu and Buffalo Springs National Reserves, Kenya. *African Journal of Ecology* **39**:357-365

*Joint first authors

Graduate Students and Post Docs italicized

Book Chapters & Other Articles

(8) **Wittemyer, G.** 2015. Testimony to U.S. Senate Foreign Relations Subcommittee on Africa and Global Health. <http://www.foreign.senate.gov>

(7) **Wittemyer, G.** 2013. Perceptions of elephants. In *Global Guide to Animal Protection*. University of Illinois Press, Champaign, IL.

- (6) **Wittemyer, G.** 2011. Family Elephantidae In: *Handbook of Mammals of the World Volume 2* (D.E. Wilson & R.A. Mittermeier, Eds.). Lynx Edicions in association with Conservation International and IUCN.
- (5) **Wittemyer, G.** 2008. National Geographic Geopedia: Samburu Elephants. http://ngm.nationalgeographic.com/geopedia/Samburu_Elephants
- (4) Ipcizade, C. (consultants Saunders-Smith, G., & **Wittemyer, G.**) 2008. Pebble Plus African Mammals Children's Book Series. Capstone Press, Minnesota.
- (3) **Wittemyer, G.** and Kuriyan, R. 2007. Human-elephant relationship: Understanding the past and novel approaches for the future. In *Encyclopedia of Human-Animal Relationships* (Marc Bekoff, Ed.). Greenwood Press, Westport, Connecticut.
- (2) **Wittemyer, G.** 2005. Book Review: Secrets of the Savanna: Twenty-three Years in the African Wilderness unraveling the Mysteries of Elephants and People. *Social Biology* **52**:192-193
- (1) Kuriyan, R. and **Wittemyer, G.** (1999). Integrating community conservation and research. *SWARA: The Journal of the East African Wildlife Society* **22**:38-41
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MENTORING

Graduate Students

- 2016- Annie Kellner PhD; Polar bear spatial strategies in the face of climate and land use changes
- 2016- Jenna Parker PhD; Elephant physiological responses to illegal killing
- 2014- Patrick Lendrum PhD; Wildlife community occupancy in relation to natural gas development in the Piceance Basin
- 2011-2016 Shifra Goldenberg PhD; Social impacts of human perturbations on wild elephants
- 2010-2015 Joe Northrup PhD; Mule deer movement in relation to energy development in the Piceance Basin
- 2010-2014 Julia Gessner PhD (Co-Advised at University of Oldenburg, Germany); Correlates of wildlife use in bai systems in Central Africa
- 2011-2013 Emma Lynch MSc; Mule deer space use in relation to the soundscape in the Piceance Basin

Postdoctoral Associates

- 2017- Shifra Goldenberg
- 2017- Guillaume Bastille-Rousseau
- 2016 - Brett Seymour
- 2016- Alexander Keyel
- 2015- Rachel Buxton
- 2015-2016 Joe Northrup
- 2015-2016 Jake Wall
- 2012-2014 Graeme Shannon
- 2011-2014 Shermin de Silva
- 2010 Leo Polansky

TEACHING EXPERIENCE

Lecturer

- 2016 Graduate Level Wildlife Space Use and Habitat Management, CSU
2013 Graduate Seminar on Applied Evolutionary Ecology, CSU
2012 Graduate Seminar on Acoustic Ecology, CSU
2011- Evolutionary Concepts in Conservation, CSU
2010- (6x) Principles of Wildlife Management, CSU
2010- (4x) Wildlife Space Use and Habitat Management, CSU
2005 Wildlife Ecology, UC Berkeley

Teaching Assistant

- 2004 Environmental Issues, UC Berkeley
2000 Wildlife Ecology, UC Berkeley

PRESENTATIONS (1st Authored Only)

Invited

- 2017 Biodiversity Working Group Ignite—Fort Collins, CO
2017 University of Chicago, Dept. of Ecology and Evolution Seminar Series—Chicago, IL
2017 Front Range Student Ecology Seminar Ignite Presentations—Fort Collins, CO
2017 Aspen Environmental Institute Lecture Series—Aspen, CO
2017 Wilderness Workshop Lecture Series—Carbondale, CO
2016 Denver Museum of Nature and Science—Denver, CO
2016 IUCN World Conservation Congress: Google Pavilion Talks—Honolulu, HI
2016 IUCN World Conservation Congress: Applied Movement Ecology—Honolulu, HI
2016 U.S. Fish and Wildlife Service Monitoring Illegal Killing—Washington, D.C.
2016 Smithsonian Museum Wide Movement of Life Initiative—Front Royal, VA
2015 Smithsonian Conservation Biology Institute Animal Movement Initiative—Front Royal, VA.
2015 UC Davis Dept. Fish, Wildlife and Conservation Biology Seminar—Davis, CA.
2015 UC Berkeley Environmental Science, Policy and Management Colloquium—Berkeley, CA.
2015 Clinton Global Initiative Winter 2015 Meeting—New York, NY
2014 Michigan State University Wildlife Biology Seminar—Lansing, MI
2014 Distinguished Ecologist: Michigan State University Ecology, Evolution, and Behavioral Biology's Lecture Series—Lansing, MI
2014 SXSW Eco—Austin, TX
2014 Plenary: Guild of Rocky Mountain Ecologists and Evolutionary Biologists—Pingree, CO
2014 Ignite Biodiversity School of Global Environmental Sustainability—Fort Collins, CO
2014 Ecology and Evolutionary Biology Seminar Series—University of California at Los Angeles
2014 Environmental Science Colloquium—University of California at Los Angeles
2013 Smithsonian Zoological Park Seminar Series—Washington, D.C.
2013 Environmental Studies Seminar—University of California at Santa Cruz
2013 Denver Museum of Science and Nature — Denver, CO

- 2012 IUCN Conservation Congress — Jeju, Korea
- 2012 Colorado College Biology Symposium — Colorado Springs, CO
- 2011 The Wildlife Society Movement Symposium — Hawaii
- 2011 Biology Departmental Seminar — Colorado State U.
- 2011 Evolutionary Ecology Seminar—University of Northern Colorado
- 2009 J.N.C. Applied Scientific Research— Bangalore, India
- 2009 IUCN SSC African Elephant Specialist Group—Nairobi, Kenya
- 2008 Woodrow Wilson Policy Center—Washington D.C.
- 2008 Dept. Fish, Wildlife, Conservation Biology—Colorado State U.
- 2008 Animal Behavior Seminar—U.C. Davis
- 2007 Center for Population Biology—U.C. Davis
- 2007 Biology Departmental Seminar—Portland State University
- 2006 Wildlife Trust of India—New Delhi, India
- 2006 Centre for Ecological Science, Indian Institute Science—Bangalore, India
- 2001/2004 Oakland Zoo—California
- 2000 Elephants: Behavioral, Ecological, and Cultural Perspectives—U.C. Davis
- 1999 Kenya Wildlife Service Research Seminar Series—Kenya

Contributed

- 2014 28th Annual Society Conservation Biology Meeting —Montana
- 2012 26th Annual Society Conservation Biology Meeting —California
- 2010 Pathways to Success: Human Dimensions of Conservation—Colorado
- 2007 Ecological Society of America Annual Meeting—California
- 2007 21th Annual Society Conservation Biology Meeting—South Africa
- 2007 Etosha National Park Centennial Symposium—Namibia
- 2007 MVZ Evolutionary Biology Seminar Series—UC Berkeley
- 2003 17th Annual Society Conservation Biology Meeting—Minnesota
- 2003/2007 Bay Area Conservation Biology Symposium—California
- 2001/03/07 Behavior Group Seminar Series—UC Berkeley
- 2001/2007 Wildlife and Conservation Biology Seminar Series—UC Berkeley

POLICY

- 2015 Testimony to U.S. Senate Foreign Relations Subcommittee on Africa and Global Health.
<http://www.foreign.senate.gov>
- 2015 Clinton Global Initiative Winter Meeting: Roundtable on elephant poaching (attended by Hillary Clinton, Bill Clinton, and Chelsea Clinton)
- 2013 State Department Briefing on Illegal Killing of Elephants
- 2013 White House Wildlife Trafficking Technical Advisory Board Meeting

REVIEWING

African Journal of Ecology; Animal Behaviour; Animal Cognition; Animal Conservation; Austral Ecology; Behavioral Ecology; Behavioral Ecology and Sociobiology; Behaviour; Biological Conservation;

Conservation Biology; Diversity and Distributions; Ecography; Ecological Applications; Ecological Economics; Ecology; Ecology Letters; Functional Ecology; Heredity; Hormones and Behavior; J. of Applied Ecology; J. of Environmental Management; J. of Mammalogy; J. of Zoology; Naturwissenschaften; Oikos; Pachyderm; Population Ecology; PLoS One; Proceedings of the National Academy of Science U.S.A.; Proceedings of the Royal Society: Biological Sciences + Biology Letters; Rangeland Ecology and Management; Reproduction, Fertility, and Development; Science; Social Biology; National Science Foundation, National Geographic and numerous private funding bodies

POPULAR PRESS (primary pieces)

Animal Planet, Associated Press, BBC News, BBC Planet Earth Live, Coloradoan, Discovery Channel/News, Economist, Examiner, Five-Thirty-Eight, Fox News, Guardian Unlimited, Huffington Post, Int. Business Times, Los Angeles Times, National Geographic Magazine/Web News, National Public Radio (Morning Edition, Radio Times), Nature Magazine, New York Times, Reuters, Scientific American, Science Today, Science Now (Science Magazine), Telegraph, Washington Post, Wired

*Exceptional press on "Illegal killing for ivory drives global decline in African elephants" in the *Proceedings of the National Academy of Sciences* exceeded any story handled by Warner College

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