

Curriculum Vitae

N. Thompson Hobbs

Natural Resource Ecology Laboratory
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Academic training

Grinnell College	Biology	B.A. with honors 1974
Colorado State University	Wildlife Biology	M.S. 1977
Colorado State University	Wildlife Biology	Ph.D. 1979

Professional experience

2007-	Senior Research Scientist and Professor, Natural Resource Ecology Laboratory, Department of Ecosystem Science and Sustainability, and Graduate Degree Program in Ecology, Colorado State University.
2008 -2009	Program Director, Ecology Program, National Science Foundation
2005-2007	Professor and Head, Department of Forest, Rangeland, and Watershed Stewardship, Colorado State University
1999-2007	Senior Research Scientist, Natural Resource Ecology Laboratory, Colorado State University
1987-1999	Research Scientist, Natural Resource Ecology Laboratory, Colorado State University
1980-2002	Wildlife Researcher, Colorado Division of Wildlife

Awards

Rocky Mountain National Park Resource Stewardship Award, 2017

Outstanding Publication of the Year Award 2015, Colorado State University, Warner College of Natural Resources for Hobbs, N. T. and M. B. Hooten (2015). Bayesian models: a statistical primer for ecologists. Princeton University Press.

National Socio-Environmental Synthesis Center Visiting Scientist Fellowship, 2013-2014

August T. Larsson Guest Researcher Fellowship, Swedish University of Agricultural Sciences, 2012-2014

Natural Resource Ecology Laboratory Outstanding Graduate Advisor, 2005, 2011

Colorado State University Resident Distinguished Ecologist, 2011

Aldo Leopold Leadership Fellow, 2004

Society of Conservation Biology Distinguished Service Award, 1998

Society for Conservation Biology Distinguished Service Award for an Individual in Government, 1998

Governor's Citation for Outstanding Contributions to Smart Growth and Development, 1996

Colorado Chapter of the American Planning Association Publication Award, 1996

Coach of the Year, Fort Collins Soccer Club, 1996
The Wildlife Society Publication Award for the Outstanding Article in Wildlife Ecology and Management, 1992 (Shared with T. A. Hanley)
The Richard V. Denny Award for Outstanding Public Speaking, 1991
Colorado Department of Natural Resources Outstanding Employee, Honorable Mention, 1988
The Wildlife Society Group Achievement Award, 1986 (Shared with other members of the Colorado Division of Wildlife Research Section)
Colorado Division of Wildlife Citation for Devoted and Invaluable Service, 1985
Colorado State University College of Natural Resources Professional Achievement Award, 1985
Colorado Chapter of the Wildlife Society Award for Outstanding Professional Achievement, 1985
The Wildlife Society Publication Award for the Outstanding Article in Wildlife Ecology and Management, 1985 (Shared with D. L. Baker and R. B. Gill)
Colorado Wildlife Federation Researcher of the Year, 1984

Grants and contracts

Hobbs, N. T., Mevin B. Hooten, and Bailey Fosdick. 2021. Workshop: Intensive, interdisciplinary short courses on Bayesian inference for ecologists. National Science Foundation \$413,000, 2021-2024

Hobbs, N. T. OPUS: A general, resource-based explanation for density dependence in mammals. National Science Foundation. \$159,000, 2018-2020.

Hobbs, N. T. Models and data for predicting the abundance of moose and elk on the Summer range in Rocky Mountain National Park, National Park Service. \$71,000, 2017 - 2020

Hobbs, N. T. , R. J. Monello, and M. Kauffman. 2014. Developing a proactive framework for adaptive management of chronic wasting disease on the national elk refuge. U.S. Fish and Wildlife Service. \$47,170, 2014-2016

Hobbs, N. T., D. J. Cooper, D. Smith, and G. Spong Long-term research in environmental biology: Understanding controls on state-transition on Yellowstone's northern range. National Science Foundation \$450,000. 2017-2022.

Hobbs, N. T., J. S. Clark, M. B. Hooten, K. Ogle, and M. Uriarte. Building capacity in Bayesian modeling for practicing ecologists. National Science Foundation, \$385,000. 2012-2016.

Hobbs, N. T., D. J. Cooper, J. A. Hoeting, M. J. Kauffman, F. Watson, G. Spong, and D. Smith. Long-term research in environmental biology: Understanding controls on state-transition on Yellowstone's northern range. National Science Foundation \$450,000. 2012-2017.

Hobbs, N. T. Developing methods to understand elk movements and abundance on winter range in Rocky Mountain National Park. National Park Service. \$47,000. 2015-2017.

Hobbs, N. T., R. Boone, M. W. Miller, J. A. Hoeting, S. Tavener, and M. Antolin. Bayesian hierarchical modeling of disease dynamics: a case example using chronic wasting disease. National Science Foundation. \$2,499,881. 2009-2014.

- Hobbs, N. T. and M. W. Miller. WildSense: Instrumenting wildlife to gather contact rate information using delay tolerant wireless sensor networks. National Science Foundation \$260,887. 2009-2013.
- Cooper, D. J., N. T. Hobbs, J. A. Hoeting, and D. M. Theobald. Landscape configuration in Yellowstone National Park: an alternative state stabilized by herbivory? National Science Foundation \$400,000. 2007-2010.
- Hobbs, N. T., J. K. Detling, S. Tavener, and A. Joern. Effects of habitat fragmentation on consumer-resource dynamics in environments varying in space and time. National Science Foundation \$250,000. 2005-2008.
- Reid, R., N. T. Hobbs, and P. Chapman. Sources of heterogeneity in grasslands: responses of wildlife to people on savanna landscapes. National Science Foundation. \$463,544. 2004-2007.
- Hobbs, N. T., M. W. Miller and B. A. Wunder. Development of technology for remote monitoring of contact processes in animal populations and communities. Small Grants in Exploratory Research. National Science Foundation. \$49,964. 2003-2004.
- Hobbs, N. T., R. A. Davis, J. A. Hoeting, and D. S. Schimel. Workshop proposal: New approaches to the statistical analysis of ecological data. National Science Foundation. \$65,000. 2003-2004.
- Davis, R., J. Hebers, N. T. Hobbs, and R. Miranda. PRIMES: Program for interdisciplinary mathematics, ecology, and statistics. National Science Foundation. \$2,167,776. 2002-2007.
- Ellis, J. E., N. T. Hobbs, P. K. Thornton, R. Boone, and R. Behnke. Scale and complexity in arid land ecosystems. National Science Foundation \$962,920. 2001-2006.
- Singer, F. J., N. T. Hobbs. Field trials with immunocontraceptives to reduce fertility in wild horses on lands administered by the Bureau of Land Management. U.S. Geological Survey and Bureau of Land Management. \$250,636. 2001-2007
- Singer, F. J., N. T. Hobbs, and D. Cooper. Willow persistence in Yellowstone National Park. U.S. Geological Survey and U. S. National Park Service. \$283,192. 2001-2004.
- Hobbs, N. T., E. S. Williams, M. W. Miller, K. Burnham, J. Thomas, R. Reich, and D. M. Theobald. Spatial and temporal dynamics of prion disease in wildlife: responses to changing land use. National Science Foundation and National Institute of Health. \$2,166,690. 2000-2005.
- Hobbs, N. T. and F. J. Singer. A synthesis of data, model-based analyses and refinements of possible management scenarios for bison and elk in the Jackson valley. U.S. Geological Survey. \$157,080. 2000-2003.
- Hobbs, N.T., L. A. Shipley, B. A. Wunder, and J. Thomas. Collaborative research: responses of mammalian herbivores to spatial heterogeneity expressed at multiple scales. National Science Foundation. \$450,000 awarded to Colorado State University and Washington State University. 2000-2003.
- Hobbs, N. T., D. Ojima, J. Loomis, S. Weiler, D. M. Theobald, A. P. Covich, J. S. Baron, T. J. Stohlgren, and M. B. Coughenour. An integrated assessment of the effects of climate change on Rocky Mountain National Park and its gateway community. Environmental Protection Agency. \$894,000. 1999-2002.
- Hobbs, N. T. and D. M. Theobald. The role of habitat in the decline of mule deer in Colorado: research and adaptive management at landscape scales. Colorado Division of Wildlife. \$830,118. 1999-2004.

- Hobbs, N. T. an analysis of alternatives for managing elk and vegetation in Rocky Mountain National Park. \$43,000. National Park Service. 1999-2000.
- Hobbs, N. T., M. B. Coughenour, and J. E. Ellis. An ecosystem approach for comparing alternatives for managing elk populations. Colorado Habitat Partnership Program. \$55,000. 1998.
- Hobbs, N. T. The Natural Diversity Information System. Colorado Division of Wildlife. \$1,027,240. 1999-2005.
- Hobbs, N. T., J. E. Gross, D. M. Theobald, and W. Riebsame. Forecasting impacts of land use change on elk habitat in the Rocky Mountains. Rocky Mountain Elk Foundation \$92,233. 1996-1999.
- Miller, J. R., N. T. Hobbs, and J. A. Wiens. Avian diversity and predator assemblages in lowland riparian areas across a gradient of urbanization. City of Boulder Open Space Department, \$18,000. 1995-1997
- Hobbs, N. T., J. E. Gross, J. R. Miller, D. Malkinson, R. B. Gill, and D. L. Schrupp. SCoP: a system for conservation planning. Great Outdoors Colorado Trust Fund \$300,000. 1994-1997.
- Hobbs, N. T., and B. A. Wunder. Linking environmental heterogeneity to foraging behavior: plant community geometry and herbivore functional response. Research Experience for Undergraduates, National Science Foundation \$6000. 1994.
- Hobbs, N. T., D. E. Spalinger, and B. A. Wunder. Linking environmental heterogeneity to foraging behavior: plant community geometry and herbivore functional response. National Science Foundation \$214,000. 1993-1995.
- Detling, J. K., and N. T. Hobbs. Grass-grazer interactions at Wind Cave National Park: primary production, nitrogen uptake, and regrazing frequency. National Park Service \$5700. 1991-1992.
- Spalinger, D. E., N. T. Hobbs, and B. A. Wunder. New models of the functional response in vertebrate herbivores: the role of plant availability and animal morphology. National Science Foundation \$190,000. 1990-1992.
- Woodward, A., N. T. Hobbs, and M. B. Coughenour. The role of browsers in regulating primary production of shrub-grasslands: a planning proposal. National Science Foundation \$12,000. 1989-1990.
- Schimel, D. S., N. T. Hobbs, and C. Wiesman. Biological control of land surface/atmosphere exchange: an ecosystem approach. National Science Foundation \$300,000. 1989-1991.
- Schimel, D. S., W. J. Parton, C. E. Owensby, L. A. Kapustka, and N. T. Hobbs. Ecosystem regulation by fire and grazing: effects on nutrient cycling and patch dynamics. National Science Foundation \$668,000. 1984-1987.

Journal articles (* indicates a student at Colorado State)

- Galloway, N. L., R. J. Monello, D. Brimeyer, E. K. Cole, and N. T. Hobbs. 2021. Supporting adaptive management with ecological forecasting: chronic wasting disease in the Jackson elk herd. *Ecosphere* In press.
- Andren, H., N. T. Hobbs, M. Aronsson, H. Broseth, G. Chapron, J. D. C. Linnell, J. Odden, J. Persson, and E. B. Nilsen. 2020. Harvest models of small populations of a large carnivore using Bayesian forecasting. *Ecological Applications* 30:e02063.
- Ruprecht, J. S., D. N. Koons, K. Hersey, N. T. Hobbs, and D. R. MacNulty. 2020. The effect of climate on population growth in a cold-adapted ungulate at its equatorial range limit. *Ecosphere* <https://doi.org/10.1002/ecs2.3058>.

- Ketz*, A. C., T. L. Johnson, M. B. Hooten, and N. T. Hobbs. 2019. A hierarchical Bayesian approach for handling missing classification data. *Ecology and Evolution* 9:3130-3140.
- Ketz*, A. C., T. L. Johnson, R. J. Monello, J. Mack, J. George, B. Kraft, M. A. Wild, M. B. Hooten, and N. T. Hobbs. 2018. Estimating abundance of an open population with mark-recapture using auxiliary data on animal movements. *Ecological Applications*, 28:816–825, 2018.
- Ketz*, A. C., T. L. Johnson, R. J. Monello, and N. T. Hobbs. 2016. Informing management with monitoring data: the value of Bayesian forecasting. *Ecosphere* 7:e01587-n/a.
- Ahn, J., A. Mysore, K. Zybko*, C. Krumm, S. Thokala, X. Xing, M. Lian, R. Han, S. Mishra, and N. T. Hobbs. 2016. WildSense: Monitoring interactions among wild deer in harsh outdoor environments using a delay-tolerant WSN. *Journal of Sensors* 2016:17.
- Campbell*, E. E., W. J. Parton, J. L. Soong*, K. Paustian, N. T. Hobbs, and M. F. Cotrufo. 2016. Using litter chemistry controls on microbial processes to partition litter carbon fluxes with the Litter Decomposition and Leaching (LIDEL) model. *Soil Biology & Biochemistry* 100:160-174.
- Geremia*, C., M. W. Miller, J. A. Hoeting, M. F. Antolin, and N. T. Hobbs. 2015. Bayesian modeling of prion disease dynamics in mule deer using population monitoring and capture-recapture data. *PLoS ONE* 10:20.
- Geremia*, C. A. J. A. Hoteing Jennifer, L. Wolfe, N. Galloway M. Antolin, T. Spraker, M. W. Miller and N. T. Hobbs. 2015. Age and repeated biopsy influence antemortem prpcwd testing in mule deer (*Odocoileus hemionus*) in Colorado, USA. *Journal of Wildlife Diseases* 51:801-810.
- Hooten, M. B. and N. T. Hobbs. 2015. A guide to Bayesian model selection for ecologists. *Ecological Monographs*, 85: 3-28. (ISI Highly Cited Paper)
- Hobbs, N. T., C. Geremia*, J. Treanor, R. Wallen, P. J. White, M. B. Hooten, and J. C. Rhyan. 2015 State-space modeling to support management of brucellosis in the Yellowstone bison population. *Ecological Monographs*. 85:525-556
- Searle, K. R., M. B. Rice, C. R. Anderson, C. Bishop, and N. T. Hobbs. 2015. Asynchronous vegetation phenology enhances winter body condition of a large mobile herbivore. *Oecologia* 179:377-391.
- Raiho*, A. M, M. B. Hooten, S. Bates and N. T. Hobbs. 2015. Forecasting the effects of fertility control on overabundant ungulates: white-tailed deer in the National Capital Region. *PLoS ONE*. 10(12): e0143122. doi:10.1371/journal.pone.0143122
- Geremia, C., P. J. White, J. A. Hoeting, R. L. Wallen, F. G. R. Watson, D. Blanton, and N. T. Hobbs. 2014. Integrating population- and individual-level information in a movement model of Yellowstone bison. *Ecological Applications* 24:346-362.
- Marshall*, K. N., D. J. Cooper, and N. T. Hobbs. 2014. Interactions among herbivory, climate, topography and plant age shape riparian willow dynamics in northern Yellowstone National Park, USA. *Journal of Ecology* 102:667-677.
- Monello, R. J., J. G. Powers, N. T. Hobbs, T. R. Spraker, M. K. Watry, and M. A. Wild. 2014. Survival and population growth of a free ranging elk population with a long history of exposure to chronic wasting disease. *Journal of Wildlife Management* 78:214-223.

- Ogutu, J. O., R. S. Reid, H. P. Piepho, N. T. Hobbs, M. E. Rainy, R. L. Kruska, J. S. Worden, and M. Nyabenge. 2014. Large herbivore responses to surface water and land use in an East African savanna: implications for conservation and human-wildlife conflicts. *Biodiversity and Conservation* 23:573-596.
- Ransom, J. I., J. G. Powers, N. T. Hobbs, and D. L. Baker. 2014. Ecological feedbacks can reduce population-level efficacy of wildlife fertility control. *Journal of Applied Ecology* 51:259-269.
- Reynolds*, L. V., D. J. Cooper, and N. T. Hobbs. 2014. Drivers of riparian tree invasion on a desert stream. *River Research and Applications* 30:60-70.
- Marshall*, K. N., N. T. Hobbs, and D. J. Cooper. 2013. Stream hydrology limits recovery of riparian ecosystems after wolf reintroduction. *Proceedings of the Royal Society B-Biological Sciences* 20122977. <http://dx.doi.org/10.1098/rspb.2012.2977>.
- Ransom*, J. I., N. T. Hobbs, and J. Bruemmer. 2013. Contraception can lead to trophic asynchrony between birth pulse and resources. *PLoS ONE* 8. Article Number: e54972.
- Monello, R. J., J. G. Powers, N. T. Hobbs, T. R. Spraker, K. I. O'Rourke, and M. A. Wild. 2013. Efficacy of antemortem rectal biopsies to diagnose and estimate prevalence of chronic wasting disease in free-ranging cow elk (*Cervus elaphus nelsoni*). *Journal of Wildlife Diseases* 49:270-278.
- Wang, G., N. T. Hobbs, N. A. Slade, J. F. Merritt, L. L. Getz, M. Hunter, S. H. Vessey, J. Witham, and A. Guillaumet. 2013. Comparative population dynamics of large and small mammals in the Northern Hemisphere: deterministic and stochastic forces. *Ecography* 36:439-446.
- Davis*, M. J., S. Thokala, X. Y. Xing, N. T. Hobbs, M. W. Miller, R. Han, and S. Mishra. 2013. Testing the functionality and contact error of a GPS-based wildlife tracking network. *Wildlife Society Bulletin* 37:855-861.
- Herbener*, K. W., S. J. Tavener, and N. T. Hobbs. 2012. The distinct effects of habitat fragmentation on population size. *Theoretical Ecology* 5:73-82.
- Bhola, N., J. O. Ogutu, H. P. Piepho, M. Y. Said, R. S. Reid, N. T. Hobbs, and H. Olf. 2012. Comparative changes in density and demography of large herbivores in the Masai Mara Reserve and its surrounding human-dominated pastoral ranches in Kenya. *Biodiversity and Conservation* 21:1509-1530.
- Hobbs, N. T., H. Andren, J. Persson, M. Aronsson, and G. Chapron. 2012. Native predators reduce harvest of reindeer by Sámi pastoralists. *Ecological Applications* 22:1640-1654.
- Liberg, O., G. Chapron, P. Wabakken, H. C. Pedersen, N. T. Hobbs, and H. Sand. 2012. Shoot, shovel and shut up: cryptic poaching slows restoration of a large carnivore in Europe. *Proceedings of the Royal Society B-Biological Sciences* 279:910-915.
- Johnston*, D. B., D. J. Cooper, and N. T. Hobbs. 2011. Relationships between groundwater use, water table, and recovery of willow on Yellowstone's northern range. *Ecosphere* 2:art20.
- LaDeau, S. L., G. E. Glass, N. T. Hobbs, A. Latimer, and R. S. Ostfeld. 2011. Data-model fusion to better understand emerging pathogens and improve infectious disease forecasting. *Ecological Applications* 21:1443-1460.
- Hobbs, N. T., and K. Ogle. 2011. Introducing data-model assimilation to students of ecology. *Ecological Applications* 21:1537-1545.

- Blackburn*, H. B., N. T. Hobbs, and J. K. Detling. 2011. Nonlinear responses to food availability shape effects of habitat fragmentation on consumers. *Ecology* 92:98-107.
- Wild, M. A., N. T. Hobbs, M. S. Graham, and M. W. Miller. 2011. The role of predation in disease control: a comparison of selective and nonselective removal on prion disease dynamics in deer. *Journal of Wildlife Diseases* 47:78-93.
- Searle, K. R., N. T. Hobbs, and S. T. Jaronski. 2010. Asynchrony, fragmentation, and scale determine benefits of landscape heterogeneity to mobile herbivores. *Oecologia* 163:815-824.
- Ransom*, J. I., B. S. Cade, and N. T. Hobbs. 2010. Influences of immunocontraception on time budgets, social behavior, and body condition in feral horses. *Applied Animal Behaviour Science* 124:51-60.
- Ogutu, J. O., H. P. Piepho, R. S. Reid, M. E. Rainy, R. L. Kruska, J. S. Worden, M. Nyabenge, and N. T. Hobbs. 2010. Large herbivore responses to water and settlements in savannas. *Ecological Monographs* 80:241-266.
- Krumm*, C. E., M. M. Conner, N. T. Hobbs, D. O. Hunter, and M. W. Miller. 2010. Mountain lions prey selectively on prion-infected mule deer. *Biology Letters* 6:209-211.
- Dulberger*, J., N. T. Hobbs, H. M. Swanson, C. J. Bishop, and M. W. Miller. 2010. Estimating chronic wasting disease effects on mule deer recruitment and population growth. *Journal of Wildlife Diseases* 46:1086-1095.
- Wang, G. M., N. T. Hobbs, S. Twombly, R. Boone, A. Illius, I. Gordon, and J. Gross. 2009. Density dependence in northern ungulates: interactions with predation and resources. *Population Ecology* 51:123-132.
- Hobbs, N. T., K. A. Galvin, C. J. Stokes, J. M. Lockett, A. J. Ash, R. B. Boone, R. S. Reid, and P. K. Thornton. 2008. Fragmentation of rangelands: Implications for humans, animals, and landscapes. *Global Environmental Change-Human and Policy Dimensions* 18:776-785.
- Bilyeu*, D. M., D. J. Cooper, and N. T. Hobbs. 2008. Water tables constrain height recovery of willow on Yellowstone's northern range. *Ecological Applications* 18:80-92.
- Bradford*, J. B. and N. T. Hobbs. 2008. Regulating overabundant ungulate populations: An example for elk in Rocky Mountain National Park, Colorado. *Journal of Environmental Management* 86:520-528.
- Wolf*, E. C., D. J. Cooper, and N. T. Hobbs. 2007. Hydrologic regime and herbivory stabilize an alternative state in Yellowstone National Park. *Ecological Applications* 17:1572-1587.
- Twombly, S., G. M. Wang, and N. T. Hobbs. 2007. Composite forces shape population dynamics of copepod crustaceans. *Ecology* 88:658-670.
- Searle, K. R., N. T. Hobbs, and I. J. Gordon. 2007. It's the "foodscape", not the landscape: Using foraging behavior to make functional assessments of landscape condition. *Israel Journal of Ecology & Evolution* 53:297-316.
- Manier, D. J. and N. T. Hobbs. 2007. Large herbivores in sagebrush steppe ecosystems: livestock and wild ungulates influence structure and function. *Oecologia* 152:739-750.
- Johnston*, D. B., D. J. Cooper, and N. T. Hobbs. 2007. Elk browsing increases above-ground growth of water-stressed willows by modifying plant architecture. *Oecologia* 154:467-478.

- Bilyeu*, D. M., D. J. Cooper, and N. T. Hobbs. 2007. Assessing impacts of large herbivores on shrubs: tests of scaling factors for utilization rates from shoot-level measurements. *Journal of Applied Ecology* 44:168-175.
- Wang, G. M., N. T. Hobbs, R. B. Boone, A. W. Illius, I. J. Gordon, J. E. Gross, and K. L. Hamlin. 2006. Spatial and temporal variability modify density dependence in populations of large herbivores. *Ecology* 87:95-102.
- Searle*, K. R., T. Vanderveide, N. T. Hobbs, L. A. Shipley, and B. A. Wunder. 2006. Spatial context influences patch residence time in foraging hierarchies. *Oecologia* 148:710-719.
- Searle*, K. R., N. T. Hobbs, B. A. Wunder, and L. A. Shipley. 2006. Preference in patchy landscapes: the influence of scale-specific intake rates and variance in reward. *Behavioral Ecology* 17:315-323.
- Miller*, M. W., N. T. Hobbs, and S. J. Taverer. 2006. Dynamics of prion disease transmission in mule deer. *Ecological Applications* 16:2208-2214.
- Manier, D. J. and N. T. Hobbs. 2006. Large herbivores influence the composition and diversity of shrub-steppe communities in the Rocky Mountains, USA. *Oecologia* 146:641-651.
- Hobbs, N. T. and R. Hilborn. 2006. Alternatives to statistical hypothesis testing in ecology: A guide to self teaching. *Ecological Applications* 16:5-19.
- Hall*, S. A., I. C. Burke, and N. T. Hobbs. 2006. Litter and dead wood dynamics in ponderosa pine forests along a 160-year chronosequence. *Ecological Applications* 16:2344-2355.
- Farnsworth*, M. L., J. A. Hoeting, N. T. Hobbs, and M. W. Miller. 2006. Linking chronic wasting disease to mule deer movement scales: A hierarchical Bayesian approach. *Ecological Applications* 16:1026-1036.
- Cooper, D. J., J. Dickens*, N. T. Hobbs, L. Christensen, and L. Landrum. 2006. Hydrologic, geomorphic and climatic processes controlling willow establishment in a montane ecosystem. *Hydrological Processes* 20:1845-1864.
- Theobald, D. M., T. Spies, J. Kline, B. Maxwell, N. T. Hobbs, and V. H. Dale. 2005. Ecological support for rural land-use planning. *Ecological Applications* 15:1906-1914.
- Searle*, K. R., T. Vanderveide, N. T. Hobbs, and L. A. Shipley. 2005. Gain functions for large herbivores: tests of alternative models. *Journal of Animal Ecology* 74:181-189.
- Searle*, K. R., N. T. Hobbs, and L. A. Shipley. 2005. Should I stay or should I go? Patch departure decisions by herbivores at multiple scales. *Oikos* 111:417-424.
- Manier, D. J., N. T. Hobbs, D. M. Theobald, R. M. Reich, M. A. Kalkhan, and M. R. Campbell. 2005. Canopy dynamics and human caused disturbance on a semi-arid landscape in the Rocky Mountains, USA. *Landscape Ecology* 20:1-17.
- Hobbs, N. T. and K. R. Searle*. 2005. A reanalysis of the body mass scaling of trampling by large herbivores. *Oecologia* 145:462-464.
- Farnsworth*, M. L., L. L. Wolfe, N. T. Hobbs, K. P. Burnham, E. S. Williams, D. M. Theobald, M. M. Conner, and M. W. Miller. 2005. Human land use influences chronic wasting disease prevalence in mule deer. *Ecological Applications* 15:119-126.
- Miller, M. W., E. S. Williams, N. T. Hobbs, and L. L. Wolfe. 2004. Environmental sources of prion transmission in mule deer. *Emerging Infectious Diseases* 10:1003-1006.

- Miller*, J. R., J. A. Wiens, N. T. Hobbs, and D. M. Theobald. 2003. Effects of human settlement on bird communities in lowland riparian areas of Colorado (USA). *Ecological Applications* 13:1041-1059.
- Hobbs, N. T., J. E. Gross, L. A. Shipley, D. E. Spalinger, and B. A. Wunder. 2003. Herbivore functional response in heterogeneous environments: A contest among models. *Ecology* 84:666-681.
- Hobbs, N. T. 2003. Challenges and opportunities in integrating ecological knowledge across scales. *Forest Ecology and Management* 181:223-238.
- Wolfe, L. L., M. M. Conner, T. H. Baker, V. J. Dreitz, K. P., Burnham, E. S. Williams, N. T. Hobbs, and M. W. Miller. 2002. Evaluation of antemortem sampling to estimate chronic wasting disease prevalence in free-ranging mule deer. *Journal of Wildlife Management* 66:564-573.
- Weisberg, P. J., N. T. Hobbs, J. E. Ellis, and M. B. Coughenour. 2002. An ecosystem approach to population management of ungulates. *Journal of Environmental Management* 65:181-197.
- Wang, G. M., N. T. Hobbs, F. J. Singer, D. S. Ojima, and B. C. Lubow. 2002. Impacts of climate change on elk population dynamics in Rocky Mountain National Park, Colorado, USA. *Climatic Change* 54:205-223.
- Wang, G. M., N. T. Hobbs, K. M. Giesen, H. Galbraith, D. S. Ojima, and C. E. Braun. 2002. Relationships between climate and population dynamics of white-tailed ptarmigan *Lagopus leucurus* in Rocky Mountain National Park, Colorado, USA. *Climate Research* 23:81-87.
- Wang, G. M., N. T. Hobbs, H. Galbraith, and K. M. Giesen. 2002. Signatures of large-scale and local climates on the demography of white-tailed ptarmigan in Rocky Mountain National Park, Colorado, USA. *International Journal of Biometeorology* 46:197-201.
- Theobald, D. M., and N. T. Hobbs. 2002. A framework for evaluating land use planning alternatives: Protecting biodiversity on private land. *Conservation Ecology* 6.
- Theobald, D. M., N. T. Hobbs, T. Bearly, J. A. Zack, T. Shenk, and W. E. Riebsame. 2000. Incorporating biological information in local land-use decision making: designing a system for conservation planning. *Landscape Ecology* 15:35-45.
- Miller*, J. R., and N. T. Hobbs. 2000. Recreational trails, human activity, and nest predation in lowland riparian areas. *Landscape and Urban Planning* 50:227-236.
- Hobbs, N. T., D. C. Bowden, and D. L. Baker. 2000. Effects of fertility control on populations of ungulates: General, stage-structured models. *Journal of Wildlife Management* 64:473-491.
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Books

- Hobbs, N. T., and M. B. Hooten. 2015. *Bayesian models: A statistical primer for ecologists*. Princeton University Press. Winner of the Outstanding Publication of the Year Award 2015, Colorado State University, Warner College of Natural Resources.
- K. A. Galvin, R. S. Reid, R. H. Behnke, and N. T. Hobbs eds. 2008. *Fragmentation in semi-arid and arid landscapes: consequences for human and natural systems*. Springer.
- Duerksen, C. J., N. T. Hobbs, D. L. Elliot, E. Johnson, and J. R. Miller. 1996. *Managing Development for People and Wildlife: A habitat protection handbook for local governments*. Clarion Associates, Denver Colorado. Winner of the Colorado Chapter of the American Planning Association Publication Award, 1996.

Book chapters, symposia, book reviews

- Rolf O. Peterson, Robert L. Beschta, David J. Cooper, N. Thompson Hobbs, Danielle Bilyeu Johnston, Daniel Kotter, Eric J. Larsen, Daniel R. MacNulty, Kristin N. Marshall, Luke E. Painter, William J. Ripple, Douglas W. Smith and Evan C. Wolf. In press. Indirect effects of carnivore restoration on vegetation. *Yellowstone Wolves*. University of Chicago.
- Hobbs, N. T., and D. J. Cooper. 2013. Have wolves restored riparian willows in northern Yellowstone? Pages 179-194 in P. J. White, R. A. Garrott, and G. E. Plumb, editors. *Yellowstone's Wildlife in Transition*. Harvard University Press, Cambridge MA, USA.
- Hobbs, N. T. 2011. Frequentist statistics. Sourcebook in theoretical ecology. A. Hastings and L. Gross, editors. University of California Press.
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- Boone R. B., BurnSilver S. B., Worden J. S., Galvin K. A., Hobbs N. T. 2007. Large-scale movements of large herbivores: livestock following changes in seasonal forage supply. In: van 10 Langeveld F, Prins HHT (eds). *Resource Ecology*. Kluwer Publishing, Dordrecht, The Netherlands
- Lackett, J. M and N. T. Hobbs. 2007. Land-use, fragmentation, and impacts on wildlife in Jackson Valley, Wyoming, USA. Pages 135-150 in 44 in K. A. Galvin, R. S. Reid, R. H. Behnke, and N. T. Hobbs eds. *Fragmentation in semi-arid and arid landscapes: consequences for human and natural systems*. Springer.
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Management. University of Wyoming, Laramie.

Impact

Web of Science career citations: 6,853

Web of Science h-index: 45

Google Scholar career citations: 13,434

Google Scholar h-index: 64

Most cited paper: Hobbs, N. T. 1996. Modification of ecosystems by ungulates. *Journal of Wildlife Management* 60:695-713. Cited 1063 times.

Service

Panelist, National Science Foundation Advisory Panel, Population and Community Ecology Program, 2012, 2013, 2016, 2019

Tenure and promotion review, Woods Hole Oceanographic Institution, 2018

Panelist, Coupled Human and Natural Systems Advisory Panel, National Science Foundation, 2017

Tenure and promotion review, University of California, Santa Cruz, 2016

Panelist, National Institute of Health Advisory Panel, Models of Infectious Disease Agent Study, 2014

Tenure and promotion review, Georgetown University, 2014

Panelist, National Oceanic and Atmospheric Administration Science Review Panel, Impacts of salmon abundance on northwest killer whale populations, 2011-2012

Panelist, National Science Foundation Advisory Panel, National Ecological Observatory Network Operations and Maintenance Site Review, 2012

Tenure and promotion review, Columbia University, 2011

Panelist, National Science Foundation Advisory Panel, Ecosystem Science Program, 2009
Program Director, National Science Foundation Population and Community Ecology Program, 2008-2009

Panelist, National Science Foundation Advisory Panel, Ecology Program, 2000-2006

Member, Greater Yellowstone Science Agenda Working Group, 2009

International Opponent, Department of Ecology, Swedish University of Agricultural Sciences, 2007

Member, Yellowstone National Park Wildlife Health Planning Group, 2007

Member, National Science Foundation Site Review Team, Hubbard Brook Long Term Ecological Research Project, 2007

Leader, Tiger Team, National Ecological Observatory Network Data Products for Fundamental Sentinel Units, 2007

Panelist, U. S. Department of Agriculture National Wildlife Research Center Promotion Evaluation Panel, 2005

Reviewer, National Ecological Observatory Network Integrated Science and Education Plan, 2005

Member, American Institute of Biological Sciences Workshop, Ecology of Infectious Diseases, National Ecological Observatory Network, 2004

Member, National Park Service Rocky Mountain Monitoring Network Science Panel, 2004

Member, National Science Foundation National Ecological Observatory Network Consortium Site Review Team, 2004

Panelist, National Science Foundation National Ecological Observatory Network Consortium Advisory Panel, 2004

Panelist, David Smith Fellowship Advisory Panel, The Nature Conservancy, 2004

International Opponent, Department of Animal Ecology, Swedish University of Agricultural Sciences, 2003

Academic Mentor, David Smith Fellowship, The Nature Conservancy, 2000-2002

Panelist, National Science Foundation Advisory Panel, Professional Opportunities for Women in Research, 2000

Member, Executive Committee, Natural Resource Ecology Laboratory, Colorado State University 1998-1999

Member, Selection Committee, Director of the Colorado Natural Heritage Program, 1998

Member, Steering Committee for the Colorado Natural Diversity Information Source, 1997-2000

Member, Ecological Society of America Committee on Land-Use Change, 1996-2000

Member, Scientific Review Panel, Interior Columbia Basin Ecosystem Management Project, U. S. Department of Agriculture Forest Service and U. S. Department of Interior Bureau of Land Management, 1996

Member, Scientific Review Panel, Interior Columbia Basin Ecosystem Management Project, U. S. Department of Agriculture Forest Service and U. S. Department of Interior Bureau of Land Management, 1996

Scientific Reviewer, Standards and Guidelines for Resource Advisory Councils, U. S. Department of the Interior Bureau of Land Management, 1995

Member, Science Team, U. S. Department of Agriculture Forest Service Ecological Stewardship Workshop, 1995

Member, Planning, Budgeting, and Evaluation Process Team, Colorado Division of Wildlife, 1995-96

Member, Position Description Panel for Scientists, Colorado State Government, 1992-1994

Chair, Cultural Diversity Working Group, Colorado Division of Wildlife Terrestrial Section, 1994

Member, Search Committee for the Director of the Graduate Degree Program in Ecology, Colorado State University, 1994

Charter Member, Statewide Council for the Habitat Partnership Program, Colorado 1990-1994

Member, Executive Council, Program in Ecological Studies, Colorado State University, 1991-1993

Editorial boards

Ecological Applications, 2002-present

Journal of Wildlife Management, 1995-1997

Journal of Range Management, 1985-1989

Graduate students supervised

Student	Degree	Year graduated
Alison Ketz	Ph.D	2017
Ann Raiho	Masters	2015
Chris Geremia	Ph.D	2014
Kristin Marshall	Ph.D	2013
Jason Ransom	Ph.D	2013
Kate Schoeneker	Ph.D	2013
Caroline Krumm	Masters	2010
Kate Searle	Ph.D	2006
Matt Farnsworth	Ph.D	2006
James Miller	Ph.D	2005
Thomas Dailey	Ph.D	1989

Invited seminars and plenary lectures

Dartmouth College, 2018

University of Maine, 2018

Utah State University, 2018

University of Michigan, 2015

Keynote, Biennial Western States and Provinces Deer and Elk Workshop, 2015

Nordic Wildlife Conference, 2011

Swedish University of Agricultural Sciences, 2008

National Science Foundation Model-Data Assimilation Workshop, 2007

Keynote, Workshop on Chronic Wasting Disease in the Greater Yellowstone Ecosystem, 2006

Keynote, University of Kentucky, Symposium on Ecology of Savannas, 2004

Keynote, Workshop on Adaptive Management of Fish and Wildlife, Umea, Sweden, 2004

University of Washington, 2004

University of Colorado, 2003

University of Rhode Island, 2003

Institute of Medicine, The National Academies of Science, 2003

Institute for Ecosystem Studies, 2003

Commencement Speaker, Colorado State University, College of Natural Resources, 2002

Keynote, International Conference on Forest Dynamics and Ungulate Herbivory, 2001

University of Illinois, 2000

Keynote, Ungulate Ecology and Management: Integrating Across Scales, 1999

Vth International Symposium on the Nutrition of Herbivores, 1999

Thorne Ecological Institute, 1998

Rocky Mountain Land Use Institute, 1996

U. S. Forest Service Ecological Stewardship Workshop, 1995

National Watchable Wildlife Conference, 1995

American Association of Landscape Architects 1995

International Workshop on Herbivore Foraging, 1993
International Symposium on Wildlife Contraception 1993
University of Edinburgh, 1992
Macaulay Land Use Research Institute, 1992
Uppsala University, 1992
Agricultural University of Sweden, 1992
University of Alaska, 1991
N.A.T.O. International Advanced Research Workshop, 1989
University of British Columbia, 1989
University of California at Irvine, 1986