

LANCE B. MCNEW

Department of Animal & Range Sciences
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Montana State University
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EDUCATION

- 2010 Ph.D., Ecology and Evolutionary Biology, Kansas State University, Manhattan, KS. Advisor: Brett Sandercock
- 2003 M.S., Zoology, emphasis in Wildlife Ecology. Southern Illinois University, Carbondale, IL. Advisor: Alan Woolf
- 2001 B.S., Zoology, Eastern Illinois University, Charleston, IL.

PROFESSIONAL APPOINTMENTS

- 2020–present Associate Professor of Wildlife Habitat Ecology, Department of Animal and Range Sciences, Montana State University, Bozeman, MT.
- 2014–2020 Assistant Professor of Wildlife Habitat Ecology, Department of Animal and Range Sciences, Montana State University, Bozeman, MT.
- 2012–2014 Research Wildlife Biologist, U.S. Geological Survey, Alaska Science Center, Anchorage, AK.
- 2010–2012 Postdoctoral Research Associate, Division of Biology, Kansas State University, Manhattan, KS.
- 2003–2005 Deer Research Biologist, Indiana Department of Natural Resources, Division of Fish and Wildlife, Bloomington, IN.

TEACHING EXPERIENCE

Montana State University (2014–present)

- WILD 420: *Range & Wildlife Policy*, primary instructor
 - Average course evaluation score (2016–present): 4.5/5.0
- ARNR 555: *Rangeland Wildlife Ecology*, primary instructor
 - Average course evaluation score (2016–present): 4.8/5.0
- NRSM 490R: *Undergraduate Research*, primary instructor (2017, 2019, 2021)
- Guest lectures: NRSM 101, WILD 355, ARNR 507, LRES 594

EDITED BOOKS

McNew, L., D. Dahlgren, and J. Beck (editors). 2023. *Rangeland Wildlife Ecology and Conservation*. Springer, New York, NY, USA.

PEER-REVIEWED JOURNAL ARTICLES AND BOOK CHAPTERS

(†indicates student co-author; *indicates corresponding author)

2023

- 52) McNew, L.B.*, D. Elmore, and C. Hagen. 2023. Prairie grouse. In L.B. McNew, D. Dahlgren, and J. Beck, editors. *Rangeland Wildlife Ecology and Conservation*. Springer Nature, New York, NY USA
- 51) Dahlgren, D., L.B. McNew, and J. Beck. 2023. The future of rangeland wildlife conservation in North America. In L.B. McNew, D. Dahlgren, and J. Beck, editors. *Rangeland Wildlife Ecology and Conservation*.
- 50) McNew, L.B.*, D. Dahlgren, and J. Beck. 2023. Introduction to *Rangeland Wildlife Ecology and Conservation*. In L.B. McNew, D. Dahlgren, and J. Beck, editors. *Rangeland Wildlife Ecology and Conservation*.
- 49) Swicegood, A.E.†, M. Sather, S. Somershoe, K. Ellison, and L.B. McNew*. 2023. Detecting ecological traps in human-dominated landscapes: a case study of the thick-billed longspur nesting in croplands. *Ecology and Evolution* 13:e9993. doi.org/10.1002/ece3.9993.

2022

- 48) Lloyd, J.D.*, C. Aldridge, T. Allison, D. Haukos, C. LeBeau, L. McNew, and V. Winder. 2022. Prairie grouse and wind energy: the state of the science and implications for risk assessment. *Wildlife Society Bulletin*, e1305. https://doi.org/10.1002/wsb.1305
- 47) Milligan, M.C. and L.B. McNew*. 2022. Evaluating the cumulative effects of livestock grazing on wildlife with an integrated population model. *Frontiers in Ecology and Evolution* 10:818050. https://doi.org/10.3389/fevo.2022.818050

2021

- 46) Pulliam, J.P.†, S. Somershoe, M. Sather, and L.B. McNew*. 2021. Nest density drives productivity in chestnut-collared longspurs: implications for grassland bird conservation. *PlosOne* 16(8) e0256346
- 45) Milligan, M.C. †*, and L.B. McNew. 2021. Does researcher activity impact the nest survival of sharp-tailed grouse? *Wildlife Biology* 2021(3), https://doi.org/10.2981/wlb.00690
- 44) Epstein, K.†*, D. Wood†, K. Roemer†, B. Currey†, H. Duff†, J.D. Gay†, H. Goemann†, S. Loewen†, M.C. Milligan†, J.A.F. Wendt, E.N. Brookshire, L.B. McNew, D.B. McWethy, B.D. Maxwell, P.C. Stoy, and J.H. Haggerty. 2021. Towards an urgent yet deliberate conservation strategy: sustaining social-ecological systems in rangelands of the Northern Great Plains, Montana. *Ecology and Society* 26(1):10. doi.org/10.5751/ES-12141-260110

2020

- 43) Kurzen, M.†, D. Tyers, J. Rossi, L. McNew, and B. Sowell. 2020. Snowshoe hare use of silviculturally altered conifer forests in the Greater Yellowstone Ecosystem. *Intermountain Journal of Sciences* 21:1-9.
- 42) Wyffels, S.A.†, M.K. Petersen, D.L. Boss, B.F. Sowell, T. DelCurto, L.B. McNew, and J.G. Bowman. 2020. Dormant season grazing on northern mixed grass prairie agroecosystems: does protein supplementation and individual animal variation impact beef cattle resource use, vegetation and residual cover. *PLoSOne* 15(10): e0240629.
- 41) Milligan, M.C.†, L.I. Berkeley, and L.B. McNew*. 2020. Survival of sharp-tailed grouse under variable livestock grazing management. *Journal of Wildlife Management* 84: 1296–1305.
- 40) Milligan, M.C. †, L.I. Berkeley, and L.B. McNew. 2020. Habitat use of sharp-tailed grouse in rangelands managed for livestock. *PloSOne* 15(6): e0233756.
- 39) Mosley, J., B. Roeder, R. Frost, S. Wells†, L. McNew, and P. Clark. 2020. Mitigating human conflicts with livestock guardian dogs in extensive sheep grazing systems. *Rangeland Ecology and Management* 73:724–732.
- 38) Pulliam, J.P. †, S. Somershoe, M. Sather, and L.B. McNew*. 2020. Habitat targets for imperiled grassland birds in northern mixed-grass prairies. *Rangeland Ecology and Management* 73:511–519.
- 37) Milligan, M.C.†, L.I. Berkeley, and L.B. McNew*. 2020. Effects of rangeland management on the nesting ecology of sharp-tailed grouse. *Rangeland Ecology and Management* 73:128–137.
- 36) Ritter, T.D.†, C. Gower, and L.B. McNew*. 2020. Habitat conditions at beaver settlement sites: implications for beaver restoration projects. *Restoration Ecology* 28:196–205.

2019

- 35) Ritter, T.D.†, and L.B. McNew*. 2019. Age-mass relationships for beavers in Montana. *Intermountain Journal of Sciences* 25:1–10.
- 34) Vold, S.K. †, L.I. Berkeley, and L.B. McNew*. 2019. Effects of livestock grazing management on grassland birds in a northern mixed-grass prairie ecosystem. *Rangeland Ecology and Management* 72:933–945.
- 33) Wyffels, S.A.†, M. Petersen, J. Bowman, D. Boss, and L.B. McNew. 2019. Dormant season grazing of northern mixed grass prairies: the effect of supplementation strategies on heifer resource utilization and vegetation use. *Rangeland Ecology and Management* 72:878–887.
- 32) Milligan, M.C.†, and L.B. McNew. 2019. Effects of scavenging on assumptions of mortality analyses of radio-marked gamebirds. *Northwestern Naturalist* 100:197–205.
- 31) Wells, S.L. †, L.B. McNew*, D.B. Tyers, F.T Van Manen, and D.J. Thompson. 2019. Grizzly bear depredation on grazing allotments in the Yellowstone Ecosystem. *Journal of Wildlife Management* 83:556–566.

2018

- 30) Milligan, M.C[†], S.L. Wells[†], and L.B. McNew*. 2018. A population viability analysis of sharp-tailed grouse to inform reintroductions. *Journal of Fish and Wildlife Management* 9:565–581.
- 29) Gregory, A.J., S.M. Wisely*, L.B. McNew, and B.K. Sandercock. 2018. A landscape perspective on rates of multiple paternity and brood parasitism among greater prairie-chickens across Kansas. *Wilson Journal of Ornithology* 130:626–638.
- 28) Schroff, S.R.[†], K.A. Cutting, C.A. Carr, M.R. Frisina, L.B. McNew, and B.F. Sowell*. 2018. Characteristics of shrub morphology on nest site selection of greater sage-grouse in high-elevation sagebrush habitat. *Wilson Journal of Ornithology* 130:730–738.
- 27) Winder, V.L.* , L.B. McNew, J.C. Pitman, and B.K. Sandercock. 2018. Effects of rangeland management on survival of female greater prairie-chickens. *Journal of Wildlife Management* 82:113–122.

≤2017

- 26) Thompson, S.J.* , C.M. Handel, and L.B. McNew. 2017. Autonomous acoustic recorders reveal complex patterns in avian detection probability. *Journal of Wildlife Management* 81:1228–1241.
- 25) Vold, S.[†], C.M. Handel, and L.B. McNew*. 2017. Comparison of acoustic recorders and field observers for monitoring tundra bird communities. *Wildlife Society Bulletin* 41:566–576.
- 24) Winder, V.L.* , L.B. McNew, J.C. Pitman, and B.K. Sandercock. 2017. Space use of greater prairie-chickens in response to fire and grazing interactions. *Rangeland Ecology and Management* 70:165–174.
- 23) Thompson, S.J.* , C.M. Handel, R. Richardson, and L.B. McNew. 2016. When winners become losers: Arctic birds demonstrate non-linear responses to gradients of woody vegetation. *PLoS ONE* 11(11): e0164755. doi:10.1371/journal.
- 22) Ganser, C., A.J. Gregory, L.B. McNew, L.M. Hunt[†], B.K. Sandercock, and S.M. Wisely*. 2016. Fine-scale distribution modeling of avian malaria vectors in north-central Kansas. *Journal of Vector Ecology* 31:114–122.
- 21) Winder, V.L., M.R. Herse[†], L.M. Hunt[†], A.J. Gregory, L.B. McNew, and B.K. Sandercock*. 2016. Patterns of nest attendance by female greater prairie-chickens in northcentral Kansas. *Journal of Ornithology* 157:733–745.
- 20) Ragen, D.L. [†], E.E. Nix, L.B. McNew, W.A. Whitehurst, T.M. Liles, R.B. Sager, E.S. Read, B.S. Hauptman, C.G. Hooley, and P.G. Hatfield. 2016. Effects of pasture vs. drylot flushing on ewe body weight change and number of lambs born. *American Journal of Experimental Agriculture* 11(2):1-10.
- 19) McNew, L.B.* , V.L. Winder, J.C. Pitman, and B.K. Sandercock. 2015. Alternative rangeland management and the nesting ecology of greater prairie-chickens. *Rangeland Ecology and Management* 68:298–304.
- 18) Winder, V.L.* , K.M. Carrlson, A.J. Gregory, C.A. Hagen, D.A. Haukos, D.C. Kesler, L.C. Larsson, L.B. McNew, M.A. Patten, J.C. Pitman, L.A. Powell, J.Smith, T. Thompson, D.H. Wolfe, and B.K. Sandercock. 2015. Factors affecting female space use in ten populations of

- prairie chickens. *Ecosphere* 6:166. [Wildlife Publications Award - Outstanding Article, The Wildlife Society].
- 17) Winder, V.L.*, A.J. Gregory, L.B. McNew, and B.K. Sandercock. 2015. Responses of male greater prairie-chickens to wind energy development. *Condor* 117:284–296.
 - 16) McNew, L.B.*, and C.M. Handel. 2015. Evaluating species richness: biased ecological inference results from spatial heterogeneity in detection probabilities. *Ecological Applications* 25:1669–1680.
 - 15) Winder, V.L.*, L.B. McNew, A.J. Gregory, L.M. Hunt, S.M. Wisely, and B.K. Sandercock. 2014. Space use of female greater prairie-chickens in response to wind energy development in north-central Kansas. *Ecosphere* 5:art3.
 - 14) McNew, L.B.*, L.M. Hunt, A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2014. Effects of wind energy development on the nesting ecology of greater prairie-chickens. *Conservation Biology* 28:1089–1099.
 - 13) Winder, V.*, L.B. McNew, L.M. Hunt, A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2014. Effects of wind energy development on seasonal survival of greater prairie-chickens. *Journal of Applied Ecology* 51:395–405.
 - 12) Blanco-Fontao, B.*, B.K. Sandercock, J.R. Obeso, L.B. McNew, and M. Quevedo. 2013. Effects of sexual dimorphism and landscape composition on the trophic behavior of greater prairie-chickens. *PLoS ONE* 8(11): e79986. doi: 10.1371/journal.pone.0079986.
 - 11) McNew, L.B.*, A.J. Gregory, and B.K. Sandercock. 2013. Spatial heterogeneity in habitat selection: nest site selection by prairie-chickens. *Journal of Wildlife Management* 77:791–801.
 - 10) McNew, L.B.*, A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2012. Demography of greater prairie-chickens: regional variation in vital rates, sensitivity values, and population dynamics. *Journal of Wildlife Management* 76:987–1000. [Wildlife Publications Award - Outstanding Article, The Wildlife Society].
 - 9) McNew, L.B.*, and W.J. White. 2012. First case of renesting after the loss of a brood by greater prairie-chicken. *Wilson Journal of Ornithology* 124:185–187.
 - 8) McNew, L.B.*, T.J. Prebyl, and B.K. Sandercock. 2012. Effects of rangeland management on the site occupancy dynamics of prairie-chickens in a protected prairie preserve. *Journal of Wildlife Management* 76: 38–47.
 - 7) McNew, L.B.*, A. J. Gregory, S.M. Wisely, and B.K. Sandercock. 2011. Reproductive biology of a southern population of greater prairie-chickens. Pages 209–221 in B.K. Sandercock, K. Martin, and G. Segelbacher, editors. *Ecology, Conservation, and Management of Grouse (SAB 39)*. University of California Press, Berkeley, CA.
 - 6) McNew, L.B.*, A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2011. Human-mediated selection on life-history traits of greater prairie-chickens. Pages 255–266 in B.K. Sandercock, K. Martin, and G. Segelbacher, editors. *Ecology, Conservation, and Management of Grouse (SAB 39)*. University of California Press, Berkeley, CA.

- 5) Gregory, A.J., L.B. McNew, T.J. Prebyl, B.K. Sandercock, and S.M. Wisely*. 2011. Hierarchical modeling of lek habitats of greater prairie-chickens. *Studies in Avian Biology* 39:21–32.
- 4) McNew, L.B.*, A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2009. Estimating the stage of incubation for nests of greater prairie-chickens using egg flotation: a float curve for grouse. *Grouse News* 38:12–14.
- 3) McNew, L.B., C.K. Nielsen*, and C.K. Bloomquist. 2007. Use of snares to live-capture beavers. *Human-Wildlife Interactions* 1:107–112.
- 2) McNew, L.B.*, and A. Woolf. 2005. Dispersal patterns and survival of juvenile beavers in southern Illinois. *American Midland Naturalist* 154:217–228.
- 1) McNew, L.B., T. A. Nelson*, and S. T. McTaggart. 2003. Prevalence of *Giardia intestinalis* in Illinois beavers. *Transactions of the Illinois State Academy of Science* 96:113–118.

SELECTED TECHNICAL REPORTS and OTHER SCHOLARLY PRODUCTS

- Sullivan, A.*, T. Bayne*, and L. McNew. 2023. Smith River Wildlife Management Area Wildlife Monitoring Plan. Montana State University, Bozeman.
- Lloyd, J.D., C. Aldridge, T. Allison, D. Haukos, C. LeBeau, L. McNew, and V. Winder. 2020. Prairie grouse and wind energy: the state of the science. American Wind Wildlife Institute, Denver, CO. 39 pp.
- Milligan, M.C. and L.B. McNew. 2019. Does cattle grazing affect nesting sharp-tailed grouse? Montana State University College of Agriculture and Extension Research Report 5.
- Mosley, J., R. Frost, B.L. Roeder, S. Wells, L.B. McNew, and P. Clark. 2018. How far do guard dogs roam from their sheep? Montana State University College of Agriculture and Extension Research Report 4:25–27.
- Vold, S.T. and L.B. McNew. 2018. Effects of livestock grazing management on occupancy of mesocarnivores in a northern mixed-grass prairie ecosystem. Montana State University College of Agriculture and Extension Research Report 4:40–44.
- Ritter, T.D. and L.B. McNew. 2018. Beaver-mediated restoration: understanding habitat conditions associated with new colonies. Montana State University College of Agriculture and Extension Research Report 4:32–35.
- McNew, L.B. 2018. It depends: relationships between wildlife and livestock grazing management vary across space and time. *Proceedings of the Nebraska Grazing Conference*, Kearny, NE: pages 36–41.
- McNew, L.B. 2018. Restoring sharp-tailed grouse to western Montana: MSU graduate students evaluate restoration potential and develop recovery recommendations. *Grouse News* 48:12–13.
- Knight, J. L. Schmidt, and L. McNew. 2017. Electric fencing to exclude deer and elk from recovering burned areas. Pages 28–29 in M. Van Emon, editor. *After wildfire: Information for landowners coping with the aftermath of wildfire*. Montana State University Extension report 4455.

- McNew, L.B., B. Cascaddan, A. Hicks-Lynch, M. Milligan, A. Netter, S. Otto, J. Payne, S. Vold, S. Wells, and S. Wyffels. 2017. Restoration plan for sharp-tailed grouse recovery in western Montana. Montana State University, Bozeman. DOI: 10.13140/RG.2.2.26189.95204.
- Ragen, D.L., E.E. Nix, L.B. McNew, W.A. Whitehurst, T.M. Liles, R.B. Sager, E.S. Read, B.S. Hauptman, C.G. Hooley, and P.G. Hatfield. 2016. Effects of pasture vs. drylot flushing on ewe body weight change and number of lambs born. College of Agriculture and Extension Research Report, Montana State University, Bozeman.
- McNew, L.B. 2014. Ranching for Prairie-Chickens. Kansas Wildlife and Parks Magazine. March/April, pages 17-20.
- McNew, L., C. Handel, J. Pearce, T. DeGange, L. Holland-Bartels, and M. Whalen. 2013. Changing Arctic Ecosystems: the role of ecosystem changes across the boreal-Arctic transition zone on the distribution and abundance of wildlife populations. U.S. Geological Survey Fact Sheet 2013-3054, 2p.
- SandercocK, B.K., S.M. Wisely, L.B. McNew, A.J. Gregory, and L.M. Hunt. 2013. Effects of wind power development on the population biology of greater prairie-chickens in Kansas. Research Brief, National Wind Coordinating Collaborative, American Wind Wildlife Institute, Washington DC.
- McNew, L.B. 2013. New research highlights importance of fire and grazing to prairie-chicken populations. The Lek. Great Plains Fire Science Exchange newsletter, February issue (invited).
- McNew, L.B. and C.M. Handel. 2012. Potential changes in avian distribution, abundance, and demography within a shifting ecotone in northwestern Alaska. Annual Performance Report, U.S. Geological Survey, Alaska Science Center, Anchorage, AK.
- McNew, L.B., and B. Blanco-Fontao. 2008. World grouse in peril: summary of the 11th International Grouse Symposium. Grouse News 36:22–25.

SUBMITTED GRANTS PENDING

- McNew, L., J. Mosley, J. Beaver, R. Walker, B. Hauptman. How Will Ending a 50-year Public Land Road Closure Alter Elk and Cattle Behavior on Public and Adjacent Private Lands? Bair Ranch Foundation. \$119,416. January 2024 – December 31, 2026.
- Mosley, J., B. Roeder, L. McNew, J. Beaver, C. Hibbard, A. Bardwell, S. Skelton. Can livestock guardian dogs mitigate wildlife-cattle conflicts on western ranches? Wester SARE Research and Education pre-proposal. \$347,824. April 2024 – March 2027.

RESEARCH GRANTS and OTHER SUPPORT RECEIVED

(† indicates PI; >\$4.6 million)

- Mosley, J.†, J. Beaver, L. McNew, R. Walker. Will ending a public land road closure increase or decrease elk use of private ranch lands? Montana Grazing Land Conservation Initiative. \$37,840. January 2023 – September 2025.
- Atwater, D.†, A. Felton, L. McNew, E. Belasco, C. Posbergh, S. Ewing, R. Marques, J. Beaver, L. Rew, and C. Yeoman. Enhancing collaborative long-term research and Red Bluff

November 2022

- Research Ranch. MSU College of Agriculture Minigrant, \$49,465. January 2023 – December 2023.
- McNew, L.B.† Evaluation of motus technology for monitoring space use of ground foraging birds. Montana Fish, Wildlife and Parks, \$154,068. January 2023 – December 2025.
- McNew, L.B.† Restoration ecology of sharp-tailed grouse in western Montana. MPG Ranch Foundation. \$600,324. July 2022 – June 2028.
- McNew, L.B.† and J. Beaver. Smart cameras for wildlife research. MSU College of Agriculture/MAES Equipment Grant. \$23,980. January 2022 – June 2022.
- Williams, P.†, J.P. Ritten, J.C. Mosley, C. Hagen, J.D. Wulfhorst, K. Lee, J. Beck, D. Dahlgren, J. Dinkins, and L.B. McNew. Sustaining rural livelihoods, livestock grazing, and sage-grouse habitat in western sagebrush systems. \$650,000. USDA NIFA. January 2022 – December 2025.
- Beaver, J. †, T. Bayne, L. McNew, J. Mosley. Bringing Wildlife-Livestock Conflict Mitigation into the 21st Century: Exploring Emerging Technologies to Reduce Wildlife Conflicts on Montana Ranches. Bair Ranch Foundation, \$29,700. January 2022 – January 2023.
- Beaver, J. †, J. Mosley, L. McNew. Bringing Wildlife-Livestock Conflict Mitigation into the 21st Century: Exploring Emerging Technologies to Reduce Wildlife Conflicts on Montana Ranches. MSU College of Agriculture minigrant program, \$49,820. January 2021 – June 2022.
- McNew, L.B. Development of new textbook: Rangeland Wildlife Ecology & Conservation. Faculty Excellence Grant, Montana State University, \$5,000. July 2020 – June 2021.
- McNew, L.B. † and A. Hartshorn. Utility and validation of soil sampling protocols within sage-grouse habitats in Northcentral Montana. Bureau of Land Management, Montana Dakotas Office, \$248,596. July 2020 – June 2025.
- McNew, L.B. †, S. Somershoe, M. Sather, and K. Ellison. Fatal attraction for an imperiled songbird: is cropland in the northern Great Plains an ecological trap for McCown's longspurs? National Fish and Wildlife Foundation. \$194,063. May 2020 – May 2023.
- McNew, L.B. † Suitability of grassland habitat for lesser prairie-chickens after restoration. Turner Enterprises, \$93,271. July 2019–June 2022.
- McNew, L.B.† Estimating the occupancy and abundance of dusky grouse: developing protocols for unbiased population monitoring in Montana. Montana Fish, Wildlife, and Parks, \$176,050. July 2018–June 2022.
- McNew, L.B.† Greater sage-grouse habitat research in the sagebrush focal area of northcentral Montana. Bureau of Land Management, Montana Dakotas State Office, \$309,917. September 2017 – December 2021.
- McNew, L.B.†, B. Sowell†, and T. DelCurto†. Remote evaluations of wildlife and livestock habitats using UAVs. Bair Ranch Foundation, \$52,073. August 2017 – July 2019.
- McNew, L.B.† 2016. Defining habitat quality for northern grassland birds in Montana. U.S. Fish and Wildlife Service, \$315,872. January 2017 – June 2021.

- Wyffels, S.A., L.B. McNew[†], and J. Bowman[†]. Sustainability of dormant season grazing on northern mixed grass prairie agroecosystems: Does protein supplementation impact beef cattle performance, soil organic matter, vegetation, and residual cover for wildlife? Western SARE Graduate Student Grant, \$24,970. August 2016 – July 2018.
- McNew, L.B.[†] 2016. Weather data loggers for long-term agro-ecological research and teaching. College of Agriculture/MAES Equipment Grant, \$5,000. October 2015.
- McNew, L.B.[†], L. Berkeley, J. Ensign, and M. Foster. 2016. Effects of livestock grazing management on the ecology of sharp-tailed grouse, grassland birds, and their predators in mixed grass prairie habitats of Montana. Wildlife Aid and Restoration Program, Montana Department of Fish, Wildlife, and Parks, \$533,975. August 2015 – December 2021.
- McNew, L.B.[†] 2015. Distribution of grizzly bears in relationship to Forest Service grazing allotments and moth aggregation sites in the Greater Yellowstone Ecosystem. U.S. Forest Service, \$80,000. August 2015 – December 2019.
- McNew, L.B.[†] 2015. Effects of electric fences on grizzly bears habitat use in the Blackfoot Valley. Blackfoot Challenge, \$19,000. December 2015 – May 2017.
- Marlow, C.[†], E. Glunk, and L. McNew. 2015. The sustainability of grass-based beef production systems: are stocking rates important on winter ranges. Bair Ranch Foundation, \$47,704. September 2015 – June 2018.
- McNew, L.B.[†] 2015. Developing and evaluating population estimation methods for threatened prairie grouse species. Faculty Excellence Grant, Montana State University, \$5,000. July 2015 – June 2016.
- Mosley, J.[†], A. Litt, B. Roeder, T. Mosley, J.P. Tanner, L. McNew, and D. Dahlgren. 2015. Targeted cattle grazing to enhance sage-grouse brood-rearing habitat. Bair Ranch Foundation, \$56,746. July 2015 – June 2018.
- McNew, L.B.[†] 2015. Effects of electric fence permeability on grizzly bears in the Blackfoot Valley. Montana Outdoor Legacy Foundation, \$26,500. May 2015 – May 2017.
- McNew, L.B.[†], and C. Frost. 2015. Habitat selection, movements, and survival of dispersing juvenile beavers in Southwestern Montana. U.S. Forest Service, \$65,000. August 2015 – December 2017.
- Glunk, E.[†], L. McNew[†], R. Endecott, J. Thomson, J. Boles, D. Boss, and C. Marlow. 2015. Are Feedlot-based performance cattle limiting ecological services for rangeland ecosystems in northern mixed-grass prairies? Western SARE Professional-Producer Grant, \$50,000. May 2015 – August 2017.
- McNew, L.B.[†] 2015. Range cow adaptive mechanisms to stressors: genetic, metabolic and behavioral. USDA Animal Research Service, \$33,000, April 2015 – March 2016.
- McNew, L.B.[†] 2014. A mobile telemetry system for wildlife-habitat evaluations in agricultural landscapes. College of Agriculture/MAES Equipment Grant (internal), \$7,315. September 2014.
- McNew, L.B.[†] 2014. Applied ecosystem studies: bridging geoscience and ecology. NAGT/USGS Cooperative Summer Field Training Program. Cost-shared intern, \$6,500. May–August 2014.

McNew, L.B.† 2013. Environmental Stewards Summer Intern Program. Conservation Legacy. Received support for 3 summer interns, 2013–2014, \$12,000.

McNew, L.B.†, B.K. Sandercock, and J.C. Pitman. 2011. Effects of the Conservation Reserve Program (CRP) State Acres for Wildlife Enhancement (SAFE) program on bird populations in Kansas. Wildlife Aid and Restoration Program, Kansas Department of Wildlife and Parks, \$210,631. January 2012 – December 2014.

McNew, L.B.†, J.C. Pitman, and B.K. Sandercock. 2011. Impacts of alternative grassland management regimes on the population ecology of grassland birds. Wildlife Aid and Restoration Program, Kansas Department of Wildlife and Parks, \$655,626. September 2010 – December 2014.

Recently Unfunded

Mosley, J.†, L. McNew, J. Beaver, R. Walker, K. Proffitt, and E. Bradley. Elk response to ending a 50-Year road closure on the Spotted Dog. Rocky Mountain Elk Foundation. \$24,762. January 2023 – June 2025. [submitted 05.29.22; unfunded]

Mosley, J.†, L. McNew, J. Beaver, R. Walker, K. Proffitt, and E. Bradley. Will ending a public land road closure increase or decrease elk use of private ranch lands? Western SARE. \$350,000. January 2023 – June 2025. [submitted 05.17.22; unfunded]

McNew, L.B.† Effects of surface mining activities and reclamation on wildlife communities and functional diversity in Montana. Montana Department of Environmental Quality. \$541,679. January 2023 – December 2028. [submitted 05.10.22; unfunded]

McNew, L.B.†, C. Hagen, J. Mosley, J.D. Wulfhorst, J. Ritten, R. Coupal, J. Beck, and D. Dahlgren. Socioeconomic-ecological resilience and transformation in the new rural west—the convergence of exurban migration, energy development, and climate change. National Science Foundation – Dynamics of Integrated Socio-Environmental Systems (DISES) NSF 20-579. \$1.6 million. July 2022 – June 2027. [submitted 11.15.21; unfunded]

MEDIA COVERAGE

- Billings Gazette – New sharp-tailed grouse study will launch drones, April 13, 2023
- KVGm radio – Rangelands for Wildlife, November 22, 2022
- *Big Sky Journal* – Homecoming, October 11, 2022 (<https://bigskyjournal.com/homecoming-3/>)
- *Venerary and Veritas* podcast– Upland Game Birds, 01 June 2022.
- *The Progressive Farmer*– Grazing is a Balancing Act, 10 October 2018.
- *MFWP Outdoor Report*– Researchers use egg-floatation to study grouse productivity. (<https://www.youtube.com/watch?v=TqlNXUBs2GI&feature=youtu.be>, 10 August 2017)
- *MFWP Outdoor Report*– New research looks at how prairie birds react to wildlife friendly grazing (https://www.youtube.com/watch?v=B_GFfJwxPAw&feature=youtu.be, 1 May 2016)
- NBC Montana – Researchers study how bears interact with electric fences (<http://www.nbcmontana.com/news/researchers-study-how-bears-interact-with-electric-fences/34248720>, 19 July 2015)

- Western Farmer-Stockman – Montana livestock researcher honored (November 2014)
- KNOM – Science in our backyard: biologists study effects of climate change on birds in western Alaska (radio interview, 20 June, 2014)
- RedOrbit – Wind power has minimal impact on greater prairie-chickens (11 July, 2013)
- Science Daily – Wind power does not strongly affect greater prairie-chickens, seven-year study finds (10 July, 2013)
- *Topeka Capital-Journal* – Wildlife researchers study prairie-chickens (24 April, 2011)
- *Wichita Eagle* - Are burning, grazing bad for prairie chickens? (10 April, 2011).

HONORS AND AWARDS

Everyday Research Hero Award – Montana State University, 2023

Wildlife Publications Award - Outstanding Article, The Wildlife Society, 2014, 2016

Faculty Excellence Grant, Office of the Provost, MSU, \$5,000, 2015, 2020.

Exceptional Performance Award, U.S. Geological Survey, Alaska Science Center, 2012, 2013

Donald H. Rusch Memorial Game Bird Research Scholarship, The Wildlife Society, 2009

Student Travel Grant, The Wildlife Society, 2003, 2009

Outstanding Wildlife Student Scholarship, Illinois Federation for Outdoor Resources, 2002

Errett and Mazie Warner Award in Zoology. Department of Biological Sciences, Eastern Illinois University, 2001

Lowenstein Merit Award for Math and Science. Wabash Valley College, 1999

INVITED PRESENTATIONS / SEMINARS / WORKSHOPS

- 35) McNew, L.B. 2022. Managing rangelands to include wildlife. Gallatin Valley Science Inquiry Series, Museum of the Rockies, Bozeman, MT.
- 34) McNew, L.B. 2022. Wildlife in working rangelands: the science of private and public lands Management. Department of Wildlife Ecology and Conservation Seminar Series, University of Florida, Gainesville, FL.
- 33) McNew, L.B. 2020. Managing rangelands with fire for wildlife. Guest lecture in WILD 355 - Wildlife-Livestock Habitat Restoration, Bozeman, MT.
- 32) McNew, L.B. 2020. Effects of wind energy development on prairie grouse: the state of the science. American Wind and Wildlife Institute, Denver, CO.
- 31) McNew, L.B. 2020. Rangeland management and biodiversity. Annual Meeting of the Society for Range Management, Denver, CO.
- 30) McNew, L.B. 2020. Grazing management effects on grassland wildlife communities. Institute on Ecosystems, Montana State University, Bozeman, MT.
- 29) McNew, L.B. 2018. Wildlife ecology research in Montana's working rangelands. Charlie M. Russell NWR working group, Malta, MT.
- 28) McNew, L.B., S.K. Vold, and M. Milligan. 2018. Livestock grazing and grassland wildlife associations in eastern Montana. 2018 Montana Range Tour, Sidney, MT.

- 27) McNew, L.B. 2018. It depends: relationships between wildlife and livestock grazing management vary across space and time. The 18th Nebraska Grazing Conference, Kearny, NE.
- 26) McNew, L.B. 2018. Working lands & wildlife: understanding wildlife-habitat relationships to improve agroecosystems. College of Ag Connects, Montana State University, Bozeman, MT.
- 25) Ritter, T.D.*, and L.B. McNew. 2018. Ecosystem pioneers: examining beaver dispersal and settlement site selection to improve riparian restoration efforts. Annual Meeting of the Society for Range Management, Reno, Nevada.
- 24) McNew, L.B. 2017. Grazable acres: factors affecting livestock habitat selection and grazing distribution. Range 101 Workshop, 24th Annual Meeting of the Wildlife Society, Albuquerque, NM.
- 23) McNew, L.B. 2016. Managing rangelands for habitat heterogeneity. U.S. Geological Survey, Northern Rocky Mountain Science Center, Bozeman, MT.
- 22) McNew, L.B. 2015. Embracing imperfection: managing rangelands for heterogeneity to improve wildlife habitat. Montana Cattle Producer School, Miles City, MT.
- 21) McNew, L.B. 2014. Introduction to new wildlife research program at MSU. Montana Woolgrowers Convention, Billings, MT.
- 20) McNew, L.B. 2014. Potential partnerships for wildlife. Big Hole Watershed Committee Board Meeting (November), Divide, MT.
- 19) McNew, L.B. 2014. Effects of rangeland management of tallgrass prairie obligates. Annual Meeting of the International Mountain Section of the Society of Range Management, Bozeman, MT.
- 18) McNew, L.B. 2014. Wildlife in working landscapes. Animal and Range Science Advisory Committee Meeting, Bozeman, MT.
- 17) McNew, L.B. 2014. Potential partnerships for wildlife. Blackfoot Challenge Board Meeting (October), Missoula, MT.
- 16) McNew, L.B. 2014. Ranching for wildlife: effects of human land use on tallgrass prairie obligates, Department of Animal & Range Sciences, Montana State University, Bozeman, MT.
- 15) McNew, L.B. 2014. Rangeland management and wildlife conservation. Rangeland Management class, Montana State University Northern, Havre, MT.
- 14) McNew, L.B. 2014. Accounting for spatial heterogeneity in habitat selection. Symposium on Resource Selection, Annual meeting of the Alaska Chapter of The Wildlife Society, Anchorage, AK.
- 13) McNew, L.B. 2013. Applications of Bayesian hierarchical models in ecology. Lecture in *Biostatistics*. Alaska Pacific University, Anchorage, AK.
- 12) McNew, L.B. 2012. Using binomial mixture models to project avian responses to climate change. U.S. Geological Survey, Alaska Science Center, Anchorage, AK.

- 11) McNew, L.B. 2012. Ecology of grassland birds in human-altered landscapes. U.S. Geological Survey, Alaska Science Center, Anchorage, AK.
- 10) McNew, L.B. 2011. Ecology of prairie-chickens: Factors affecting population demography and viability. Department of Fish, Wildlife and Conservation Ecology, New Mexico State University, Las Cruces, NM.
- 9) McNew, L.B. 2011. Declines of greater prairie-chickens in Kansas: causes and recommendations for conservation. Annual banquet of the Kansas Wildlife Federation, Great Bend, KS.
- 8) McNew, L.B. 2011. Population responses of greater prairie-chickens to human manipulations of grassland landscapes. Annual meeting of the Kansas Upland Bird Partnership, Topeka, KS.
- 7) McNew, L.B. 2010. The effects of human land use on the population ecology of obligate grassland species. Ecology Seminar Series, Emporia State University, Emporia, KS.
- 6) Hagen, C. and L.B. McNew. 2008. Potential impacts of wind power development on the ecology of prairie grouse. 126th Stated Meeting of the American Ornithologists' Union, Portland, OR.
- 5) McNew, L.B. 2008. Greater prairie-chicken ecology and status: recommendations for landowners. NRCS Range Management Rodeo, Dexter, KS.
- 4) McNew, L.B., and A.J. Gregory. 2008. Status of the Flint Hills population of greater prairie-chickens: the good, the bad, and the worse. Ecology and Evolutionary Biology Seminar Series, Kansas State University, Manhattan, KS.
- 3) McNew, L.B. 2005. Mitigating beaver damage to managed wetlands. Special meeting of Ducks Unlimited restoration biologists and design engineers, Ann Arbor, MI.
- 2) McNew, L.B. 2004. Big game population management in Indiana. Student chapter meeting of The Wildlife Society, Ball State University, Muncie, IN.
- 1) McNew, L.B., and S.T. McTaggart. 2002. Relative abundance, colony composition, demography, and dispersal characteristics of beavers in Illinois. Illinois Trappers Association Annual Meeting, Benton, IL.

CONFERENCE PRESENTATIONS (*student presenter)

- 113) Bayne, T. *, J Beaver, J. Mosley, and L. McNew. 2023. Smart wildlife monitoring: evaluating camera traps enabled with artificial intelligence. Annual Meeting of the Society for Range Management, Boise, ID.
- 112) Leipold, E.*, and L.B. McNew. 2022. Developing methods for producing unbiased population estimates for the "prairie grouse of the mountains". 34th Meeting of the Prairie Grouse Technical Council, Lewistown MT. (poster)
- 111) Sullivan, A.R.*, W. Blake, B. Larkin, and L.B. McNew. 2022. Comparative evaluation of transmitters to inform prairie grouse monitoring. 34th Meeting of the Prairie Grouse Technical Council, Lewistown MT. (poster)

- 110) Haynam, R.T.*, and L.B. McNew. 2022. Classification of sage-grouse movement modes to account for behavior in habitat-response research. 34th Meeting of the Prairie Grouse Technical Council, Lewistown MT. (poster)
- 109) Solomon, M.*, and L.B. McNew. 2022. Landscape-based evaluation of habitat suitability for prioritizing prairie-chicken conservation in the mixed-grass prairie. 34th Meeting of the Prairie Grouse Technical Council, Lewistown MT.
- 110) Hanlon, J.A., L.B. McNew, I. Buzytzky, and B.H. Martin. 2022. Drones and machine learning promise advancements in lek-based population surveys of prairie grouse. 34th Meeting of the Prairie Grouse Technical Council, Lewistown MT.
- 109) Deeble, B., B. Larkin, T. Cross, B. Balis, C. Hammond, A. Sullivan, and L.B. McNew. 2022. Restoration of sharp-tailed grouse in western Montana. 34th Meeting of the Prairie Grouse Technical Council, Lewistown MT.
- 108) Haynam, R.T.*, M. Borggreen, and L. McNew. 2022. Grouse-habitat relationships are driven by multilevel movement processes. 34th Meeting of the Prairie Grouse Technical Council, Lewistown MT.
- 107) Haynam, R.T.*, M. Borggreen, and L. McNew. 2022. Classification of sage-grouse movement modes to account for behavior in habitat-response research. 34th Meeting of the Prairie Grouse Technical Council, Lewistown MT.
- 106) Monroe, M.*, B. Beaver*, and L. McNew. 2022. A camera trap assessment of mammalian species richness at Red Bluff Research Ranch in Montana. 29th Annual Conference of The Wildlife Society, Spokane, WA (poster).
- 105) Jakabosky, O.*, R. Smith, L. McNew, and J.D.A. Santacruz. 2022. Evaluating the effects of electric cables on urban howler monkeys with local knowledge and naturalistic observation. 29th Annual Conference of The Wildlife Society, Spokane, WA (poster).
- 104) Leipold, E.*, L. McNew, K. Banner, L. Berkeley, and C. Gower. 2022. Developing methods for producing unbiased population estimates of dusky grouse. 29th Annual Conference of The Wildlife Society, Spokane, WA.
- 104) Leipold, E.*, L. Berkeley, C. Gower, and L.B. McNew. 2022. Predicting dusky grouse habitat in Montana using Integrated Monitoring in Bird Conservation Regions (IMBCR) data. Joint Conference of the American Ornithological Society and Birds of the Caribbean. San Juan, Puerto Rico.
- 103) Haynam, R.T.*, M. Borggreen, and L. McNew. 2022. Classification of sage-grouse movement modes to account for behavior in habitat-response research. 29th Annual Conference of The Wildlife Society, Spokane, WA.
- 102) Swicegood, A.*, M. Sather, S. Somershoe, K. Ellison, and L. McNew. 2022. Use of autonomous recording units (ARUs) in assessing arrival phenology of a migratory bird in the northern Great Plains. 2022 Ornithological Conference, San Juan, Puerto Rico.
- 101) Swicegood, A.*, M. Sather, S. Somershoe, K. Ellison, and L. McNew. 2022. Fatal attraction for an imperiled songbird: Is cropland in the Northern Great Plains an ecological trap for breeding thick-billed longspurs? 2022 Ornithological Conference, San Juan, Puerto Rico.

- 100) Haynam, R.T., M. Borggreen, J. Carlson, and L. McNew. 2022. Behavior-season mapping of sage-grouse use intensity to define habitat. 59th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference.
- 99) Swicegood, A.* and L. McNew. 2022. Use of Autonomous Recording Units (ARUs) in assessing phenologies of a migratory bird species in the Northern Great Plains. 59th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference.
- 98) Swicegood, A.*, M. Sather, S. Somershoe, K. Ellison, and L. McNew. 2022. Fatal attraction for an imperiled songbird: Is cropland in the Northern Great Plains an ecological trap for breeding thick-billed longspurs? 59th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference. (graduate poster award).
- 97) Bayne, T.*, J. Beaver, J. Mosley, and L. McNew. 2022. Testing new technology for wildlife-conflict mitigation evaluating AI-enabled camera traps. 59th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference.
- 96) Leipold, E.A.*, C. Gower, and L.B. McNew. 2022. Predicting dusky grouse habitat in Montana. 59th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference.
- 95) Jakabosky, O*., R. Smith, L. McNew, and J.D.A. Santacruz. 2022. Evaluating the effects of electric cables on urban howler monkeys with local knowledge and naturalistic observation. 59th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference. (undergraduate poster award).
- 94) Karch, K.B.*, E.A. Leipold, C. Gower, and L.B. McNew*. 2022. Effects of weather conditions on dusky grouse counts in Montana. 59th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference.
- 93) McNew, L.B. and M. Milligan. 2021. Evaluating the cumulative effects of habitat management on wildlife using joint analyses. 28th Annual Conference of The Wildlife Society, virtual conference.
- 92) Swicegood, A.*, M. Sather, S. Somershoe, K. Ellison, and L. McNew. 2021. Are crop fields in the Northern Great Plains an ecological trap for breeding thick-billed longspurs? 58th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference.
- 91) Solomon, M.* and L.B. McNew. 2021. Predicting habitat suitability for lesser prairie-chickens in the mixed-grass prairie ecoregion. 58th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference. (poster).
- 90) Leipold, L.*, C. Gower, and L.B. McNew. 2021. Unbiased population monitoring of mountain grouse. 58th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference.
- 89) Haynam, R. *, M. Borggreen, J. Carlson, and L. McNew. 2021. Migration, movements and space use of sage-grouse in northcentral Montana. 58th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference.
- 88) Jakabosky, O. * E. Leipold*, C. Gower, and L. McNew. 2021. Anthropogenic effects on grouse observations based on road and trail characteristics. 58th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference. (poster).

- 87) Grace, S.G. *, C. Carr, L.B. McNew, and C.J. Yeoman. 2021. Wild ruminants possess variable rumen microbial metabolism that degrades the toxic alkaloid methyllycaconitine. 58th Annual Conference of the Montana chapter of The Wildlife Society, virtual conference. (poster).
- 86) Solomon, M.* and L.B. McNew. 2020. Habitat suitability for lesser prairie-chicken reintroductions. 57th Annual Conference of the Montana chapter of The Wildlife Society, Butte, MT. (poster).
- 85) Macon, L*., M. Milligan, J. Mosley, and L.B. McNew. 2020. Using ecological site condition to evaluate habitat selection by sharp-tailed grouse broods. 57th Annual Conference of the Montana chapter of The Wildlife Society, Butte, MT.
- 84) Leipold, L.*, C. Gower, and L.B. McNew. 2020. Estimating the abundance of dusky grouse for population monitoring. 57th Annual Conference of the Montana chapter of The Wildlife Society, Butte, MT.
- 83) McNew, L.B. and M. Milligan. 2019. Grazing management for prairie-grouse. 33rd Meeting of the Prairie Grouse Technical Council, Bartlesville, OK.
- 82) Milligan, M. *, L. Berkeley, and L. McNew. 2019. Effects of rangeland management on the ecology of sharp-tailed grouse. American Fisheries Society & The Wildlife Society Joint Annual Conference, Reno, Nevada.
- 81) Milligan, M. *, L. Berkeley, and L. McNew. 2019. Effects of flushing on nest survival of sharp-tailed grouse. American Fisheries Society & The Wildlife Society Joint Annual Conference, Reno, Nevada (poster).
- 80) Leipold, L. *, C. Gower, and L. McNew. 2019. Developing methods for estimating density and abundance of dusky grouse for unbiased population monitoring. American Fisheries Society & The Wildlife Society Joint Annual Conference, Reno, Nevada (poster).
- 79) Milligan, M. *, L.I. Berkeley, and L.B. McNew. 2019. Importance of the spatial scale of heterogeneity for sharp-tailed grouse in mixed-grass prairie. Annual Meeting of the Ecological Society of America, Louisville, Kentucky.
- 78) Macon, L.K*., M. Milligan, and L.B. McNew. 2019. Using ecological site condition to evaluate habitat selection by sharp-tailed grouse broods. 56th Annual Conference of the Montana Chapter of The Wildlife Society, Helena, Montana (poster).
- 77) Milligan, M. *, L.I. Berkeley, and L.B. McNew. 2019. Effects of rangeland management on the ecology of sharp-tailed grouse in mixed-grass prairies. 56th Annual Conference of the Montana Chapter of The Wildlife Society, Helena, Montana.
- 76) Milligan, M. *, L.I. Berkeley, and L.B. McNew. 2019. Effects of flushing on sharp-tailed grouse survival. 56th Annual Conference of the Montana Chapter of The Wildlife Society, Helena, Montana.
- 75) Leipold, E. *, C. Gower, and L.B. McNew. 2019. Predicting habitat suitability for dusky grouse in Montana. 56th Annual Conference of the Montana Chapter of The Wildlife Society, Helena, Montana (poster).
- 74) Pulliam, J. *, and L.B. McNew. 2019. Assessing habitat quality for four grassland songbird species of concern in northern mixed-grass prairie. Milligan, M. *, L.I. Berkeley, and

- L.B. McNew. 2019. Effects of rangeland management on the ecology of sharp-tailed grouse in mixed-grass prairies. 56th Annual Conference of the Montana Chapter of The Wildlife Society, Helena, Montana.
- 73) Haynam, R.*, J. Carlson, P. Gunderson, M. Borgreen., and L.B. McNew. 2019. Delineating important seasonal habitats of greater sage-grouse in north-central Montana. Milligan, M.*, L.I. Berkeley, and L.B. McNew. 2019. Effects of rangeland management on the ecology of sharp-tailed grouse in mixed-grass prairies. 56th Annual Conference of the Montana Chapter of The Wildlife Society, Helena, Montana (poster).
- 72) Milligan, M. and L.B. McNew. 2018. Effects of livestock grazing on sharp-tailed grouse ecology in northern mixed grass prairies. 14th International Grouse Symposium, Logan, UT.
- 71) Ritter, T.*, and L.B. McNew. 2018. Habitat conditions associated with new settlement sites of beavers in southwest Montana. 14th Biennial Scientific Conference on the Greater Yellowstone Ecosystem, Jackson, WY.
- 70) Wyffels, S.A.*, L.B. McNew, J. Bowman, and M.K. Petersen. 2018. The effects of supplementation strategy and dormant season grazing on cattle use of mixed-grass prairie habitats. Annual Meeting of the Society for Range Management Meeting, Sparks, NV.
- 69) Payne, J. M.*, J. Mosley, A. Litt, B.L. Roeder, T., Mosley, L.B. McNew, and H. Goosey. 2018. Targeted cattle grazing to enhance sage-grouse brood-rearing habitat. Annual Meeting of the Society for Range Management Meeting, Sparks, NV.
- 68) Milligan, M.*, L.B. McNew, and L. Berkeley. 2018. Effects of rangeland management on sharp-tailed grouse habitat selection in mixed-grass prairies. Annual Meeting of the Society for Range Management Meeting, Sparks, NV.
- 67) Vold, S.*, L.B. McNew, and L. Berkeley. 2018. Effects of livestock grazing management on grassland bird ecology in northern mixed-grass prairie. Annual Meeting of the Society for Range Management Meeting, Sparks, NV.
- 66) Payne, J. M.*, J. Mosley, A. Litt, B.L. Roeder, T., Mosley, L.B. McNew, and H. Goosey. 2018. Can targeted cattle grazing increase abundance of forbs or arthropods in sage-grouse brood-rearing habitat? 55th Meeting of the Montana Chapter of The Wildlife Society, Butte, MT.
- 65) Milligan, M.*, L.B. McNew, and L. Berkeley. 2017. Flushing hens from nests results in lower nest survival. Biannual Meeting of the Prairie-grouse Technical Council. Dickinson, ND.
- 64) Milligan, M.*, L.B. McNew, and L. Berkeley. 2017. Effects of grazing management on nest survival of sharp-tailed grouse in Montana. 24th Annual Conference of The Wildlife Society, Albuquerque, New Mexico. (poster)
- 63) Vold, S.*, L.B. McNew, and L. Berkeley. 2017. Effects of grazing management on the abundance and diversity of grassland birds in northern mixed-grass habitats. 24th Annual Conference of The Wildlife Society, Albuquerque, New Mexico.

- 62) Milligan, M.*, L.B. McNew, and L. Berkeley. 2017. Factors affecting space use of sharp-tailed grouse in Montana. 24th Annual Conference of The Wildlife Society, Albuquerque, New Mexico. (poster).
- 61) Sandercock, B. L.B. McNew, and V. Winder. 2017. Rangeland management impacts on grassland obligate birds in tallgrass prairie ecosystems. Annual Meeting of the British Ecological Society, Brussels, Belgium.
- 60) McNew, L.B., V. Winder, and B.K. Sandercock. 2017. Impacts of alternative rangeland management regimes on the ecology of greater prairie-chickens. Annual Meeting of the Society for Range Management, St. George, Utah.
- 59) Payne, J.M.*, J.C. Mosley, A.R. Litt, B.L. Roeder, T.K. Mosley, L.B. McNew, and H.B. Goosey. 2017. Targeted cattle grazing to enhance sage-grouse brood-rearing habitat. Annual Meeting of the Society for Range Management, St. George, Utah.
- 58) Regan, B.S.*, F.T. van Manen, L.B. McNew, D. Tyers, K. Gunther, B. Sowell, and D.W. Smith. 2016. Grizzly bear scavenging of spring carrion across two management jurisdictions of the northern Yellowstone winter range (1997–2012). Biennial Greater Yellowstone Ecosystem Conference, Jackson, Wyoming.
- 57) Wells, S.L.*, L.B. McNew, and D.B. Tyers. 2016. Grizzly bear use of forest service grazing allotments in the Greater Yellowstone Ecosystem. 54th Annual Conference of the Montana Chapter of The Wildlife Society, Missoula, Montana (poster).
- 56) Ritter, T.D.*, and L.B. McNew. 2016. Habitat selection, movements, and survival of dispersing juvenile beavers in southwestern Montana. 54th Annual Conference of the Montana Chapter of The Wildlife Society, Missoula, Montana.
- 55) Regan, B.S.*, F.T. van Manen, L.B. McNew, D. Tyers, K. Gunther, B. Sowell, and D. Smith. 2016. Grizzly bear scavenging of carrion on the northern Yellowstone winter range (1997-2012). 54th Annual Conference of the Montana Chapter of The Wildlife Society, Missoula, Montana (poster).
- 54) Johnson, B.* and L.B. McNew. 2016. Effects of electric fence permeability on grizzly and black bears in the Blackfoot Valley of Montana. 54th Annual Conference of the Montana Chapter of The Wildlife Society, Missoula, Montana (poster).
- 53) Micklewright, A.E*, T. Ritter, and L.B. McNew. 2016. Age determination of live-captured beavers by weight in southwest Montana. 54th Annual Conference of the Montana Chapter of The Wildlife Society, Missoula, Montana (poster).
- 52) Winder, V.L., K.M. Carrlson, A.J. Gregory, C.A. Hagen, D.A. Haukos, D.C. Kesler, L.C. Larsson, T.W. Matthews, L.B. McNew, M.A. Patten, J.C. Pitman, L.A. Powell, J.A. Smith, T. Thompson, D.H. Wolfe, and B.K. Sandercock. 2015. Factors affecting female space use in ten populations of prairie chickens. Prairie Grouse Technical Council (31st), Nevada, Missouri.
- 51) Winder, V.L., L.B. McNew, and B.K. Sandercock. 2015. Demographic and movement responses of Greater Prairie-Chickens to patch-burn grazing on private lands. Prairie Grouse Technical Council (31st), Nevada, Missouri.

- 50) Sandercock, B.K., A.J. Gregory, L.B. McNew, and V.L. Winder. 2015. Effects of wind power and rangeland management on Greater Prairie-Chickens. International Grouse Symposium (13th), Reykjavik, Iceland. September 2015.
- 49) Herse, M.R.*, V.L. Winder, L.M. Hunt, A.J. Gregory, L.B. McNew, and B.K. Sandercock. 2015. Timing of incubation breaks and predation risk for nesting Greater Prairie-Chickens. International Grouse Symposium (13th), Reykjavik, Iceland. September 2015 (poster).
- 48) Winder, V.L., L.B. McNew, and B.K. Sandercock. 2014. Demographic and movement responses of Greater Prairie-Chickens to patch-burn grazing on private lands. Joint Meeting of the American Ornithologists' Union (132nd), Cooper Ornithological Society (84th), and Society for Canadian Ornithologists (32nd), Estes Park, Colorado.
- 47) Gregory, A.J., L.B. McNew, B.K. Sandercock, and S.M. Wisely. 2014. A landscape genetic perspective on prairie-chicken response to wind energy development in Kansas. North America Congress for Conservation Biology, Missoula, Montana.
- 46) Thomas, A.D.*, L.B. McNew and B.K. Sandercock. 2014. Occupancy of grassland birds in State Acres for Wildlife Enhancement program enrollment fields in Kansas. Midwest Fish and Wildlife Conference (74th), Kansas City, Missouri.
- 45) Winder, V.L., L.B. McNew, A.J. Gregory, L.M. Hunt, S.M. Wisely, and B.K. Sandercock. 2014. Quantifying Greater Prairie-Chicken spatial ecology in response to wind energy development in northcentral Kansas. Midwest Fish and Wildlife Conference (74th), Kansas City, Missouri.
- 44) McNew, L.B., and C.M. Handel. 2014. Ecological inference of species richness: do common metrics of biodiversity measure up? Annual meeting of the Alaska Chapter of The Wildlife Society, Anchorage, AK (poster).
- 43) McNew, L.B., and C.M. Handel. 2013. Changes in the distribution and abundance of birds in the boreal arctic transition zone of northwestern Alaska. Annual meeting of the Alaska Chapter of The Wildlife Society, Fairbanks, AK.
- 42) Sandercock, B.K., A.J. Gregory, L.M. Hunt, L.B. McNew, V.L. Winder, and S.M. Wisely. 2013. Effects of rangeland management and wind power on Greater prairie-chickens in eastern Kansas. 66th Meeting of the Society for Range Management, Oklahoma City, OK.
- 41) Erickson, A.N.*, L.B. McNew, and B.K. Sandercock. 2013. Demographic responses of grassland songbirds to patch-burn grazing management in the Flint Hills. 6th Kansas Natural Resources Conference, Wichita, KS.
- 40) Sandercock, B.K., A.J. Gregory, L.M. Hunt, L.B. McNew, V.L. Winder, and S.M. Wisely. 2013. Effects of wind power on movements and demography of Greater prairie-chickens in Kansas. 6th Kansas Natural Resources Conference, Wichita, KS.
- 39) Thomas, A.D.*, L.B. McNew, and B.K. Sandercock. 2013. State Acres for Wildlife Enhancement and grassland birds: implications for the role of America's farmland in conservation. 6th Kansas Natural Resources Conference, Wichita, KS.

- 38) Winder, V.L., A.N. Erickson, L.B. McNew, and B.K. Sandercock. 2013. Demographic and movement responses of greater prairie-chickens to patch-burn grazing on private lands. 6th Kansas Natural Resources Conference, Wichita, KS.
- 37) McNew, L.B. and C.M. Handel. 2012. Potential changes in avian distribution, abundance, and demography within a shifting ecotone in northern Alaska. 15th Alaska Bird Conference, Anchorage, AK.
- 36) Sandercock, B.K., L.M. Hunt, A.J. Gregory, L.B. McNew, and S.M. Wisely. 2012. Effects of wind power development on greater prairie-chickens in Kansas. 9th Wind Wildlife Research Meeting, Denver, CO.
- 35) Erickson, A.N.*, L.B. McNew, and B.K. Sandercock. 2012. Responses of grassland songbirds to rangeland management based on patch-burn grazing. Patch-burn Grazing Working Group Conference, Elmdale, KS.
- 34) Winder, V.L., L.B. McNew, and B.K. Sandercock. 2012. Demographic responses of greater prairie-chickens to patch-burn grazing on private lands. Patch-burn Grazing Working Group Conference, Elmdale, KS.
- 33) Erickson, A.N.*, L.B. McNew, and B.K. Sandercock. 2012. Demographic responses of grassland songbirds to patch-burn grazing management in the Flint Hills. 5th North American Ornithological Conference, Vancouver, British Columbia, Canada.
- 32) Hunt, L.M., L.B. McNew, A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2012. Greater prairie-chicken nest survival within a fragmented grassland landscape in northcentral Kansas. 5th North American Ornithological Conference, Vancouver, British Columbia, Canada.
- 31) Erickson, A.N.*, B.K. Sandercock, and L.B. McNew. 2012. Demographic responses of grassland songbirds to patch-burn grazing management in the Flint Hills. 5th Kansas Natural Resources Conference, Wichita, KS.
- 30) Hunt, L.M.*, L.B. McNew, A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2012. Greater prairie-chicken nest survival in relation to habitat characteristics and anthropogenic disturbance in north central Kansas. 5th Kansas Natural Resources Conference, Wichita, KS.
- 29) McNew, L.B., A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2011. Demography of greater prairie-chickens: regional variation in vital rates, sensitivity values, and population dynamics. 29th Meeting of the Prairie Grouse Technical Council, Hayes, KS.
- 28) McNew, L.B., and W.J. White. 2011. First documented case of double-brooding by a prairie chicken. 29th Meeting of the Prairie Grouse Technical Council, Hayes, KS (poster).
- 27) Hunt, L.M.*, L.B. McNew, A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2011. Greater prairie-chicken nest survival in relation to habitat characteristics and anthropogenic disturbance. 29th Meeting of the Prairie Grouse Technical Council, Hayes, KS.
- 26) Gregory, A.J., L.B. McNew, B.K. Sandercock, and S.M. Wisely. 2011. Multiple paternity and conspecific brood parasitism among greater prairie-chickens: a conditional strategy for coping with anthropogenic landscape disturbance. 29th Meeting of the Prairie Grouse Technical Council, Hayes, KS. (poster).

- 25) Ganser, C.*, K. Schroeder, A. Casey, J. Augustine, L. McNew, A. Gregory, B. Sandercock, S. Wisely. 2011. Going global: a tale told by two grassland bird species. Kansas State University Graduate Research Forum, Manhattan, KS. (student presenter).
- 24) Sandercock, B.K., L.B. McNew, L.M. Hunt, A.J. Gregory, and S.M. Wisely. 2011. Demographic responses of greater prairie-chickens to landscape fragmentation. 129th American Ornithologists' Union Meeting, Jacksonville, FL.
- 23) Schroeder, K., C. Ganser, A.J. Gregory, L.B. McNew, L.M. Hunt, C.A. Simmons, B.K. Sandercock, and S.M. Wisely. 2011. Haemoprotozoan diversity in greater prairie-chickens across the Midwest. Meril-NIH National Veterinary Scholars Symposium. Orlando, FL. (poster, student presenter).
- 22) McNew, L.B., and B.K. Sandercock. 2011. Effects of rangeland management on the site occupancy dynamics of prairie chickens in a protected prairie preserve. 4th Annual Kansas Natural Resources Conference, Wichita, KS.
- 21) McNew, L.B., A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2009. Location of greater prairie-chicken nests in relation to wind power development. 28th Meeting of the Prairie Grouse Technical Council, Portales, NM.
- 20) McNew, L.B., A.J. Gregory, S.M. Wisely, and B.K. Sandercock. 2009. Life history strategies across a gradient of human landscape alteration: comparative demography of greater prairie chicken populations in Kansas. 16th Annual Conference of the Wildlife Society, Monterey, CA.
- 19) McNew, L.B., A.J. Gregory, B.K. Sandercock, and S.M. Wisely. 2009. Breeding season space use and habitat selection of female greater prairie-chickens in Kansas. 2nd Annual Kansas Natural Resources Conference, Wichita, KS.
- 18) Gregory, A.J., L.B. McNew, B.K. Sandercock, and S.M. Wisely. 2009. The use of population genetics to evaluate landscape permeability. 4th International Biogeography Conference, Merida, Mexico.
- 17) Sandercock, B.K., M. Alfaro, P.E. Klug, L.B. McNew, R. Lohnes, and B. Sousa. 2008. Catastrophic effects of hail storms on the nesting success and survival of grassland birds. 60th Annual meeting of the Kansas Ornithological Society, Fort Hays State University.
- 16) McNew, L.B. 2008. Demography of greater prairie-chickens at the core of their range: regional variation in population dynamics and vital rate contributions. XIth International Grouse Symposium, Whitehorse, Yukon, Canada.
- 15) Gregory, A.J., L.B. McNew, S.M. Wisely, and B.K. Sandercock. 2008. The link between Greater prairie-chicken genetic structure and landscape configuration. XIth International Grouse Symposium, Whitehorse, Yukon, Canada.
- 14) McNew, L.B., and B.K. Sandercock. 2008. Population dynamics of greater prairie-chickens in the Flint Hills: preliminary results. 1st Annual Kansas Natural Resources Conference, Wichita, KS.
- 13) McNew, L.B., A.J. Gregory, and B.K. Sandercock. 2007. Effects of wind power development on the demography of greater prairie-chickens: pre-construction vital rates

from the Flint Hills. 27th Meeting of the Prairie Grouse Technical Council, Chamberlain, SD.

- 12) McNew, L.B. and B.K. Sandercock. 2007. Reproductive success of greater prairie-chickens in the Flint Hills. Kansas Ornithologists' Union Meeting, Manhattan, KS.
- 11) Gregory, A.J., L.B. McNew, S.M. Wisely, and B.K. Sandercock. 2007. The potential for habitat fragmentation to alter greater prairie-chicken genetic structure in Kansas. 14th Annual Conference of The Wildlife Society, Tucson, Arizona.
- 10) Prebyl, T.J.*, A.J. Gregory, L.B. McNew, S.M. Wisely, and B.K. Sandercock. 2007. Greater prairie-chicken genetic diversity and structure in a contiguous grassland landscape. 125th Meeting of the American Ornithologists' Union, Laramie, WY. (student presenter).
- 9) McNew, L.B., A.J. Gregory, B.K. Sandercock, and S.M. Wisely. 2006. The effects of wind power development on the demography of greater prairie-chickens: preliminary results. National Wind Coordinating Committee Wind-Wildlife Workgroup Meeting, San Antonio, TX.
- 8) Gregory, A.J., L.B. McNew, S.M. Wisely, and B.K. Sandercock. 2006. The genetic consequences of wind power development on greater prairie-chicken leks of eastern Kansas. National Wind Coordinating Committee Wind-Wildlife Workgroup Meeting, San Antonio, TX. McNew, L.B., C.K. Bloomquist, and C.K. Nielsen. 2005. Using snares to live-capture beavers. 2005 Midwest Fish and Wildlife Conference, Grand Rapids, MI.
- 7) McNew, L.B. 2005. Reducing landowner and hunter dissatisfaction: a scientific approach. Semi-annual Indiana Fish and Wildlife Staff Meeting, Edinburgh, IN.
- 6) McNew, L.B. 2005. Summary of the 2004 Indiana deer season. Semi-annual meeting of the Indiana Deer Advisory Committee, Indianapolis, IN.
- 5) McNew, L.B. 2005. The effect of major license fee increases on hunter participation. Semiannual Indiana Fish and Wildlife Staff Meeting, Edinburgh, IN.
- 4) McNew, L.B. 2004. 2003 deer season summary. Semi-annual meeting of the Indiana Deer Advisory Committee, Indianapolis, IN.
- 3) McNew, L.B., and A. Woolf. 2003. Dispersal patterns and survival of juvenile beavers in southern Illinois. 10th Annual Conference of The Wildlife Society, Burlington, VT.
- 2) McNew, L.B., and A. Woolf. 2002. Overland dispersal patterns of beavers. 105th Annual Meeting of the Illinois State Academy of Science, Normal, IL.
- 1) McNew, L.B., T.A. Nelson, and S.T. McTaggart. 2001. Prevalence of *Giardia* in Illinois beavers. 12th Annual EIU Research Conference, Charleston, IL.

ADVISING & RESEARCH SUPERVISION

Graduate Students and Post-doctoral Fellows Supervised

Aubrey Sullivan (M.S.). Evaluation of Motus technology for monitoring space use and demography of ground-dwelling birds. Montana State University, 2022–present

Hunter Stier (M.S.). Utility and validation of ESD soil sampling within sage-grouse habitats in northcentral Montana. Montana State University, 2020–present

Elizabeth Leipold (Ph.D.). Estimating the occupancy and abundance of dusky grouse. Montana State University, 2018–present.

Robert Haynam (Ph.D.). Seasonal space use and demography of greater sage-grouse in northern Montana. Montana State University, 2018–present.

Amanda Lipinsky (Post-doc). Population ecology of prairie-grouse. Montana State University, 2020–2021.

Amber Swicegood (M.S.). Agricultural fields as ecological traps of McCown’s longspurs. Montana State University, 2020–2022.

Morgan Solomon (M.S.). Quantifying habitat availability and quality for lesser prairie-chicken translocations. Montana State University, 2019–2022.

Milligan, Megan (Ph.D.) Effects of livestock grazing management on sharp-tail grouse in northern mixed-grass prairie habitats. Montana State University, 2016–2019.

Pulliam, John (M.S.). Habitat associations of grassland birds in northern mixed-grass ecosystems. Montana State University, 2017–2019.

Vold, Skyler, (M.S.). Effects of grazing systems on the abundance and diversity of grassland birds and mesocarnivores in northern mixed-grass prairie habitats. Montana State University, 2016–2018.

Ritter, Torrey (M.S.). Habitat selection, movements, and survival of dispersing juvenile beavers in Southwestern Montana. Montana State University, 2016–2018.

Johnson, Brittani (M.S.). Effectiveness and ecological impacts of electric fencing on grizzly bears in Montana. Montana State University, 2016–2018.

Wyffels, Sam (Ph.D.). Effects of protein supplementation and dormant-season grazing on cattle behavior, rangeland condition, and animal performance in northern mixed-grass prairie. Montana State University, 2015–2018.

Wells, Smith (M.S.). Livestock depredation by grizzly bears on Forest Service grazing allotments in the Greater Yellowstone Ecosystem. Montana State University, 2015–2017.

Undergraduate student research projects supervised

Beaver, Ray. Wildlife diversity at Red Bluff Research Ranch. Montana State University, 2021–present.

Monroe, Morgan. Inventory of mammals at Red Bluff Research Ranch. Montana State University, 2021–present.

Jakabosky, Olivia. Interdisciplinary study of the effects of electric cables on urban howler monkeys. Montana State University, 2020–present.

Macon, Lara. Effects of ecological site condition on brood habitat selection of sharp-tailed grouse. Montana State University, 2018–2020.

Krieger, Elisabeth. Effects of grazing management and habitat conditions on invertebrate biomass. Montana State University, 2017–2018.

Micklewright, Ashley. Estimating the age of live-captured beavers from morphometrics. Montana State University, *First Year Research Experience* Intern, 2015–16.

Vold, Skyler. Spatial and temporal heterogeneity in detection of landbirds using remote song meters. Bemidji State University / U.S. Geological Survey, 2014–15.

Graduate Student Committees Served

Jason Hanlon (M.S.). Land Resources and Environmental Science, MSU, 2021–present.

Taylor Bayne (M.S.). Animal and Range Sciences, Montana State University, 2021–present.

Savannah Grace (M.S.). Animal and Range Sciences, Montana State University, 2019–2022.

Wood, David (Ph.D.). Ecology and Environmental Sciences, Department of Land Resources and Environmental Sciences, Montana State University, 2017–2021.

Flesch, Elizabeth (Ph.D.). Bighorn sheep genetics. Department of Animal & Range Sciences, Montana State University, 2016–2021.

Garcia, Neto (Ph.D.). Generalizing and transferring GIS-based bison distribution models. Department of Animal & Range Sciences, Montana State University, 2016–2021.

Kurzen, Mark (M.S.). Snowshoe hare population and habitat selection in the Bear Creek drainage. Department of Animal & Range Sciences, Montana State University, 2016–2019.

Lowrey, Blake (Ph.D.). Spatial ecology of mountain ungulates in the Greater Yellowstone Area. Department of Ecology, Montana State University, 2015–2019.

Payne, Jarrett (M.S.). Targeted grazing to improve sage-grouse brood-rearing habitat. Department of Animal & Range Sciences, Montana State University, 2015–2018.

Regan, Brooke (M.S.). Ecological factors influencing the use of ungulate carcasses by grizzly bears in the Yellowstone ecosystem. Department of Animal & Range Sciences, Montana State University, 2015–2016.

Rossi, Joao (M.S.). Bear response to mine reclamation and road construction in the Cooke City Basin, MT. Department of Animal & Range Sciences, Montana State University, 2014–2016.

Undergraduate Students Advised

2015 – present (Montana State University)

~14 Advisees per year

PROFESSIONAL ACTIVITIES & SERVICE

Current Member: Prairie Grouse Technical Council (Chair; 2019–2022), Society for Range Management (National, Intermountain West chapter, Wildlife Habitat Working Group), The Wildlife Management Institute, The Wildlife Society (National, Northwestern Section, Montana state chapter, Rangeland Wildlife Working Group (secretary), International Union for Conservation of Nature, Species Survival Commission, Galliformes Specialist Group

Invited Speaker: University of Florida Department of Fisheries and Wildlife (2022), Gallatin Valley Friends of the Sciences, Science Inquiry Series (2022), CMR workgroup (Montana; 2019), Montana Department of Natural Resources Conservation (2019), American Prairie Reserve (Montana; 2019), Alaska Chapter of the Wildlife Society, Alaska Pacific University, Ball State University (Indiana), Ducks Unlimited (Michigan), Emporia State University (Kansas), Illinois Federation for Outdoor Resources, Illinois Trappers Association, International Mountain Section of the Society of Range Management, Kansas State University, Kansas State

University Extension, Kansas Upland Bird Partnership, Kansas Wildlife Federation, Montana State University, Montana State University Northern, New Mexico State University, Southern Illinois University, USDA NRCS (Indiana, Kansas), University of Alaska, U.S. Geological Survey (Alaska, Montana)

Book Editor: Rangeland Wildlife Ecology and Conservation (2020–2023)

Journal Editor: Rangeland Ecology and Management (2015–2019)

Reviews for Scientific Periodicals: Rangeland Ecology and Management (Associate Editor 2015–2018), Auk, Condor, Ecography, Ecosphere, Forest Ecology and Management, Human-Wildlife Interactions, Ibis, Intermountain Journal of Science, Journal of Field Ornithology, Journal of Fish and Wildlife Management, Journal of Mammalogy, Journal of Wildlife Management, Northeastern Naturalist, Northeast Wildlife, PloSONE, Studies in Avian Biology, Wildlife Biology, Wildlife Society Bulletin.

Reviews for Funding Agencies: MSU College of Agriculture (2018, 2020), Indiana Department of Natural Resources (2003–05), U.S. Geological Survey (2012–14)

Permits held: Institutional Animal Care and Use Committee (KSU, MSU, USGS), Kansas Department of Wildlife and Parks Collecting and Use Permit (2006–12), Montana Department of Fish, Wildlife, and Parks Scientific Collectors Permit (2014–present), North Dakota Scientific Collection Permit (2015–present), National Park Service Research Permit (2011–2014; 2015–2018)

University Service: MSU Institutional Animal Care and Use Committee (2019–present), Montana Institute on Ecosystems Advisory Board (2022–present), MSU Faculty Senate (A&RS alternate 2022–present), Dan Scott Ranch Management Advisory Committee (2019–present), MSU A&RS New Faculty Mentoring Committee (2019–present), A&RS Diversity and Inclusion Committee (2022–present), Faculty Advisor - MSU Backcountry Hunters and Anglers (2018–present), Faculty Advisor - MSU Ducks Unlimited (2022–present), MSU Ecology and Environmental Science Advisory Board (2019–present), Rangeland Ecologist faculty search committee (Chair; 2021–2022), COA-MAES Awards of Excellence Selection Committee (2020–2022), A&RS Retention, Promotion and Tenure Committee (2020–present), A&RS Graduate Teaching Committee (2019–2022), Department of Animal & Range Sciences (A&RS) Graduate Assessment Committee (Chair; 2017–2022), First Year Research Experience Faculty Mentor (2015–2020), A&RS Awards Nomination Committee (Chair; 2016–2021), Bair Ranch Foundation Seminar Committee (2018–2022), Ruminant Nutritionist faculty search committee (2019–2020), Extension Wildlife Specialist faculty search committee (2016, 2018–2019), COA-MAES Hatch project review committees (3, 2016–2018), Indigenous Mentoring Program (2016–2019), ADVANCE Work-Life Integration Advisory Committee (2015), MAES/CoA grant committee (2015), CoA Ranching Systems Program Workgroup (2015–16), Montana State University Research Initiatives (2016–2018)

Other Service: TWS Rangeland Wildlife Working Group (*Nominations and Elections Chair*, 2018–present; Secretary, 2014–2016), Montana Wildlife Society (annual conference student paper judge, quiz bowl committee, session moderator), Alaska Bird Conference student presentation judge (2013), Alaska Chapter of the Wildlife Society (*program coordinator*, 2014), Biometrics Working Group (*TWS*, 2010–14), Boreal Partners in Flight (2012–15), Citizen Advisory Committee on Captive Cervids (Indiana, *technical advisor*, 2003–05), Conservation

Leaders for Tomorrow (*instructor and recruiter, 2009–present*), Donald H. Rusch Memorial Game Bird Research Scholarship Selection Committee (TWS; 2010, 2015, 2017), Graduate Affairs Committee (KSU, *student representative, 2008–10*), Comprehensive Wildlife Strategy Technical Committee (IDNR, *species expert, 2003–05*), Deer Advisory Committee (Indiana, *technical advisor, 2003–05*), Montana Ag Live (guest expert, 2015), Midwest Fish and Wildlife Conference (2004, 2011, *wildlife technical committee, session organizer and moderator*), National Park Service Arctic Parks Network (*species expert, Biological Review Team, 2014*), Prairie Grouse Technical Council (member: 2007–present; Chair 2019–2021), Rangeland Wildlife Working Group (TWS; Secretary, 2014–16), START Federal Emergency Response Team (2012–14), The Wildlife Society 2009 Annual Conference Program Committee (*contributed and special posters subcommittee, contributed paper session moderator*).

TRAINING & CERTIFICATIONS

- *Certified Wildlife Biologist®*, The Wildlife Society, 2011
- *Certified Wildland Firefighter*, National Wildfire Coordinating Group, 2004
- *Principle Investigator Training*, Montana State University, 2014
- *Graduate Advising Workshop*, Montana State University, 2014
- *Undergraduate Advising Workshop*, Montana State University, 2014