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School for Environment and Sustainability
University of Michigan
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Ann Arbor, MI 48109

RESEARCH INTERESTS

Spatial ecology, landscape ecology, wildlife management and policy, wildlife ecology and conservation, human dimensions of wildlife management, complexity of coupled human and natural systems, and sustainability science

APPOINTMENTS

University of Michigan, Ann Arbor, MI

Associate Professor, School for Environment and Sustainability 2022 – Present

University of Michigan, Ann Arbor, MI

Assistant Professor, School for Environment and Sustainability 2019 – 2022

Boise State University, Boise, ID

Assistant Professor, Human-Environment Systems 2015 – 2019

PROFESSIONAL PREPARATION

National Socio-Environmental Synthesis Center, Annapolis, MD

Postdoctoral Fellow (advisor: Dr. Simon Levin at Princeton University) 2013 – 2015

Complexity of improving human well-being and conserving biodiversity

Michigan State Univ., Lansing, MI

Ph.D. from Department of Fisheries and Wildlife (advisor: Dr. Jianguo Liu) 2013

Dissertation: "Coupled Human and Natural System Approach to Tiger Conservation in Chitwan National Park, Nepal and Beyond"

Univ. of Michigan, Ann Arbor, MI

M.S. in Terrestrial Ecology from School of Natural Resources and Environment (advisor: Dr. Daniel Brown) 2007

Thesis: "Predicting the Ecological and Social Suitability of Black Bear Habitat in Michigan's Lower Peninsula"

Univ. of California San Diego, San Diego, CA

B.S. in Ecology, Behavior, and Evolution 2003

RESEARCH ACTIVITIES

PEER-REVIEWED JOURNAL ARTICLES

As of July 24 2023: Total citations (4097), h-index (28), i10-index (48)

*Advisees

2023

- (64) Carter, N.H., Wilson, E.C. and Gurung, B., 2023. Social networks of solitary carnivores: The case of endangered tigers and insights on their conservation. *Conservation Science and Practice*, p.e12976. <https://doi.org/10.1111/csp2.12976>
- (63) Frank, K.M., Ditmer, M.A., Stoner, D.C., Currie, W.S., Olson, D.D. and Carter, N.H., 2023. Dark roads aid movement but increase mortality of a generalist herbivore in the American Southwest. *Ecosphere*, 14(5), p.e4508. <https://doi.org/10.1002/ecs2.4508>
- (62) Wilson, E.C., Cousins, S., Etter, D.R., Humphreys, J.M., Roloff, G.J. and Carter, N.H., 2023. Habitat and climatic associations of climate-sensitive species along a southern range boundary. *Ecology and Evolution*, 13(5). <https://doi.org/10.1002/ece3.10083>
- (61) Killion, A.K., Honda, A., Trout, E. and Carter, N.H., 2023. Integrating spaceborne estimates of structural diversity of habitat into wildlife occupancy models. *Environmental Research Letters*. <https://doi.org/10.1088/1748-9326/acce4d>
- (60) Abrahms, B., Carter, N.H., Clark-Wolf, T.J. *et al.* 2023. Climate change as a global amplifier of human–wildlife conflict. *Nature Climate Change*. <https://doi.org/10.1038/s41558-023-01608-5>
- (59) Carter, N.H. and Linnell, J.D., 2023. Building a Resilient Coexistence with Wildlife in a More Crowded World. *PNAS Nexus*, <https://doi.org/10.1093/pnasnexus/pgad030>
- (58) Carter, N.H., Zuckerwise, A., Pradhan, N.M.B., Subedi, N., Lamichhane, B.R., Hengaju, K.D., Acharya, H.B. and Kandel, R.C., 2023. Rapid behavioral responses of endangered tigers to major roads during COVID-19 lockdown. *Global Ecology and Conservation*, <https://doi.org/10.1016/j.gecco.2023.e02388>
- (57) Easter, T., Trautmann, J., Gore, M. and Carter, N., 2023. Media portrayal of the illegal trade in wildlife: The case of turtles in the US and implications for conservation. *People and Nature*, <https://doi.org/10.1002/pan3.10448>

2022

- (56) Carter, N.H., Pradhan, N., Hengaju, K., Sonawane, C., Sage, A.H., and V. Grimm. 2022. Forecasting effects of transport infrastructure on endangered tigers: a tool for conservation planning. *PeerJ*. <https://doi.org/10.7717/peerj.13472>. IF=2.98
- (55) Sage, A.H., Hillis, V., Graves, R.A., Burnham, M. and N.H. Carter. 2022. Paths of coexistence: Spatially predicting acceptance of grizzly bears along key movement corridors. *Biological Conservation* 266 p.109468. <https://doi.org/10.1016/j.biocon.2022.109468>. IF=5.99

2021

- (54) An, L., Bohnett, E., Battle, C., Dai, J., Lewison, R., Jankowski, P., **Carter, N.**, Ghimire, D., Dhakal, M., Karki, J. and Zvoleff, A., 2021. Sex-Specific Habitat Suitability Modeling for *Panthera tigris* in Chitwan National Park, Nepal: Broader Conservation Implications. *Sustainability* 13, p.13885. <https://doi.org/10.3390/su132413885>. IF=3.251

- (53) Chinmay, C., Gidey, Y., and **N.H. Carter**. Public health and economic benefits of spotted hyenas (*Crocuta crocuta*) in a peri-urban system. *Journal of Applied Ecology*. <https://doi.org/10.1111/1365-2664.14024>. IF=6.53
- (52) Bruskotter, J.T., Vucetich, J.A., Gilbert, S., **Carter, N.H.**, and K.A George. 2021. Tragic trade-offs accompany carnivore coexistence in the modern world. *Conservation Letters*. <https://doi.org/10.1111/conl.12841>. IF=7.126
- (51) Magliocca, N., Torres, A., Margulies, J., McSweeney, K., Arroyo-Quiroz, I., **Carter, N.H.**, Curtin, K., Easter, T.S., Gore, M., Hübschle, A., Massé, F., Rege, A., and E. Tellman. 2021. Comparative Analysis of Illicit Supply Network Structure and Operations: Cocaine, Wildlife, and Sand. *Journal of Illicit Economies and Development* 3: 1-24. <https://doi.org/10.31389/jied.76>. IF=None Available
- (50) **Carter, N.H.**, Nelson, P., and T.S. Easter. 2021. A call for a national collaborative predator coexistence programme. *People and Nature*. <https://doi.org/10.1002/pan3.10245>. IF=None Available
- (49) Wilson, A.A., Ditmer, M.A., Barber, J.R., **Carter, N.H.**, Miller, E.T., Tyrrell, L.P. and C.D. Francis. 2021. Artificial night light and anthropogenic noise interact to influence bird abundance over a continental scale. *Global Change Biology*. <https://doi.org/10.1111/gcb.15663>. IF=10.863
- (48) Ditmer, M.A., Stoner, D.C. and **N.H. Carter**. 2021. Estimating the loss and fragmentation of dark environments in mammal ranges from light pollution. *Biological Conservation*, 257, p.109135. <https://doi.org/10.1016/j.biocon.2021.109135>. IF=5.99
- (47) Cove, M.V., Kays, R., ...**Carter, N.H.**, Edward Trout, and many others. 2021. SNAPSHOT USA 2019: a coordinated national camera trap survey of the United States. *Ecology* 102: e03353. <https://doi.org/10.1002/ecy.3353>. IF=4.7
- (46) Gilbert, S., **Carter, N.H.**, and R. Naidoo. 2021. Predation services: quantifying societal effects of predators and their prey. *Frontiers in Ecology and the Environment* 19: 292-299. <https://doi.org/10.1002/fee.2336>. IF=11.123
- (45) König, H. J., **Carter, N.H.**, Ceaușu, S., Lamb, C., Ford, A.T., and C. Kiffner. 2021. Human-wildlife coexistence in science and practice. *Conservation Science and Practice* 3: e401. <https://doi.org/10.1111/csp2.401>. IF=3.233
- (44) Keys, P.W., Barnes, E.A. and **Carter, N.H.**, 2021. A machine-learning approach to human footprint index estimation with applications to sustainable development. *Environmental Research Letters*. <https://doi.org/10.1088/1748-9326/abe00a>. IF=6.793
- (43) Ditmer, M.A., Stoner, D.C., Francis, C.D., Barber, J.R., Forester, J.D., Choate, D.M., Ironside, K.E., Longshore, K.M., Hersey, K.R., Larsen, R.T., McMillan, B.R., Olson, D.O., Andreasen, A.M., Beckmann, J.P., Holton, P.B., Messmer, T.A., and **Carter, N.H.**, 2021. Artificial nightlight alters the predator-prey dynamics of an apex carnivore. *Ecography*, 44, pp.149-161. <https://onlinelibrary.wiley.com/doi/full/10.1111/ecog.05251>. IF=5.992
- (42) Ditmer, M.A., Francis, C.D., Barber, J.R., Stoner, D.C., Seymore, B.M., Fristrup, K.M. and **Carter, N.H.**, 2021. Assessing the vulnerabilities of vertebrate species to light and noise pollution: expert surveys illuminate the impacts on specialist species. *Integrative and Comparative Biology*. <https://doi.org/10.1093/icb/icab091>. IF=3.326

2020

- (41) Senzaki, M., Barber, J.R., Phillips, J.N., **Carter, N.H.**, Cooper, C.B., Ditmer, M.A., Fristrup, K.M., McClure, C.J., Mennitt, D.J., Tyrrell, L.P. and Vukomanovic, J., 2020. Sensory pollutants alter bird phenology and fitness across a continent. *Nature*, 587, pp.605-609. <https://www.nature.com/articles/s41586-020-2903-7>. IF=42.778
- (40) Killion, A.K., Ramirez, J.M. and **Carter, N.H.**, 2020. Human adaptation strategies are key to cobenefits in human-wildlife systems. *Conservation Letters*, p.e12769. <https://conbio.onlinelibrary.wiley.com/doi/full/10.1111/conl.12769>. IF=7.126

- (39) **Ditmer, M.A.**, Iannarilli, F., Tri, A.N., Garshelis, D.L. and **Carter, N.H.**, 2020. Artificial night light helps account for observer bias in citizen science monitoring of an expanding large mammal population. *Journal of Animal Ecology*. <https://doi.org/10.1111/1365-2656.13338> IF=5.09
- (38) Lute, M.L., **Carter, N.H.**, López-Bao, J.V. and Linnell, J.D., 2020. Conservation professionals' views on governing for coexistence with large carnivores. *Biological Conservation*, 248, p.108668. <https://doi.org/10.1016/j.biocon.2020.108668>. IF=5.99
- (37) **Easter, T.**, Bouley, P., and **N.H. Carter**. 2020. Intraguild dynamics of understudied carnivores in a human-altered landscape. *Ecology and Evolution*. <https://doi.org/10.1002/ece3.6290>. IF=2.39
- (36) Dominoni DM, W Halfwerk, E Baird, RT Buxton, E Fernandez-Juricic, KM Frstrup, MF McKenna, DJ Mennit, EK Perkin, BM Seymoure, DC Stoner, JB Tennessen, CA Toth, LP Tyrell, A Wilson, CD Francis, **NH Carter** & JR Barber. 2020. Why conservation biology can benefit from sensory ecology. *Nature Ecology and Evolution*. <https://doi.org/10.1038/s41559-020-1135-4>. IF=12.543
- (35) **Carter, N.H.**, Killion, A., **Easter, T.**, Brandt, J., and Ford, A. 2020. Road development in Asia: range-wide risks to tigers. *Science Advances*. <https://advances.sciencemag.org/content/6/18/eaaz9619>. (May cover issue). IF=14.136
- (34) Belote, T., Faurby, S, Brennan, A, **Carter, N**, Dietz, M, Hahn, B, McShea, WJ, and Gage, J. 2020. Mammal species composition reveals new insights into Earth's remaining wilderness. *Frontiers in Ecology and the Environment*. <https://doi.org/10.1002/fee.2192>. IF=11.123
- (33) Lute, M.L. and **N.H. Carter**. 2020. Are We Coexisting with Carnivores in the American West? *Frontiers in Ecology and Evolution*. 8:48. <https://www.frontiersin.org/articles/10.3389/fevo.2020.00048/full>. IF=3.26
- (32) **Carter, N.H.**, Baeza, A., and N. Magliocca. 2020. Emergent conservation outcomes of shared risk perception in human-wildlife systems. *Conservation Biology*. <https://conbio.onlinelibrary.wiley.com/doi/abs/10.1111/cobi.13473>. IF=6.560
- (31) **Carter, N.H.**, Williamson, M.A., Gilbert, S., Lischka, S., Prugh, L.R., Lawler, J., Metcalf, A.L., Jacob, A., Beltran, B.J., Castro, A.J., **Sage, A.**, and M. Burnham. 2020. Integrated spatial analysis for human-wildlife coexistence in the American West. *Environmental Research Letters* 15: 021001. <https://doi.org/10.1088/1748-9326/ab60e1>. IF=6.793
- (30) Marescot, L., Lyet, A., Singh, R., **Carter, N.** and Gimenez, O., 2020. Inferring wildlife poaching in Southeast Asia with multispecies dynamic occupancy models. *Ecography* 43: 239-250. <https://doi.org/10.1111/ecog.04536>. IF=5.992

2019

- (29) Expósito-Granados, M., Castro, A.J., Lozano, J., Aznar-Sanchez, J.A., **Carter, N.H.**, Requena-Mullor, J.M., Malo, A.F., Olszańska, A., Morales-Reyes, Z., Moleón, M. and J.A. Sánchez-Zapata. 2019. Human-carnivore relations: conflicts, tolerance and coexistence in the American West. *Environmental Research Letters* 14: 123005. <https://doi.org/10.1088/1748-9326/ab5485>. IF=6.793
- (28) Jones, K., Abrams, J., Belote T., Beltrán, B.J., Brandt, J., **Carter, N.H.**, Castro, A.J., Chaffin, B.C., Metcalf, A., Roesch-McNally, G, Wallen, K.E., and M.A. Williamson. 2019. The American West as a social-ecological region: Drivers, dynamics and implications for nested social-ecological systems. *Environmental Research Letters* 14: 115008. <https://doi.org/10.1088/1748-9326/ab4562>. IF=6.793
- (27) **Carter, N.H.**, Grimm, V., and S. Levin. 2019. Effects of human-induced prey depletion on large carnivores in protected areas: lessons from modelling tiger populations in stylized spatial scenarios. *Ecology and Evolution* 9: 11298-11313. <https://doi.org/10.1002/ece3.5632>. IF=2.39
- (26) **Easter, T.**, Bouley, P., and **N.H. Carter**. 2019. Opportunities for biodiversity conservation outside of Gorongosa National Park, Mozambique: A multispecies approach. *Biological Conservation* 232, 217-227. <https://doi.org/10.1016/j.biocon.2019.02.007>. IF=5.99
- (25) Ceasu, S., **Graves, R.**, **Killion, A.**, Svenning, J., and **N.H. Carter**. 2018. Governing trade-offs in ecosystem services and disservices to achieve human-wildlife coexistence. *Conservation Biology*. <https://doi.org/10.1111/cobi.13241>. (Recommended by [Faculty of 1000](https://www.facultyof1000.org/)). IF=6.560

- (24) Killion, A., Lindquist, E., Melvin, T.A., and **N.H. Carter**. 2018. Tracking a half-century of media reporting on gray wolves. *Conservation Biology*. <https://doi.org/10.1111/cobi.13225>. IF=6.560
- (23) Bouyer, J., **Carter, N.H.**, Batavia, C., and M. Nelson. 2019. The ethics of eliminating harmful species – the case of the tsetse fly. *BioScience*. <https://doi.org/10.1093/biosci/biy155> (February cover issue). IF=8.589

2018

- (22) Bouley, P., M. Poulos, R. Branco, and **N.H. Carter**. 2018. Post-war recovery of the African lion in response to large-scale ecosystem restoration. *Biological Conservation* 227: 233-242. <https://doi.org/10.1016/j.biocon.2018.08.024>. IF=5.99
- (21) Guerrero, A., Bennett, N., Wilson, K., **Carter, N.H.**, Gill, D., Mills, M., Ives, C., Selinske, M., Larrosa, C., Bekessy, S., Januchowski-Hartley, F., Travers, H., Wyborn, C., Nuno, A. 2018. Achieving the promise of integration in social-ecological research: A review and prospectus. *Ecology and Society* 23(3):38. <https://doi.org/10.5751/ES-10232-230338>. IF=4.16
- (20) Gaynor, K., Hojnowski, C.E., **Carter, N.H.**, Brashares, J.S. 2018. The influence of human disturbance on wildlife nocturnality. *Science* 360: 1232-1235 (Recommended by [Faculty of 1000](#)). DOI: [10.1126/science.aar7121](https://doi.org/10.1126/science.aar7121). IF=41.845
- (19) **Carter, N.H.**, Bouley, P., Moore, S., Poulos, M., Bouyer, J., and S. Pimm. 2018. Climate change, disease range shifts, and the future of Africa lion. *Conservation Biology* 32: 1207-1210. <https://doi.org/10.1111/cobi.13102>. IF=6.560
- (18) Easter, T., Killion, A., and **N.H. Carter**. 2018. Climate change, cattle, and the challenge of sustainability in a telecoupled system in Africa. *Ecology and Society* 23(1):10. <https://doi.org/10.5751/ES-09872-230110>. IF=4.16
- (17) Lute, M.L., **Carter, N.H.**, López-Bao, J.V. and Linnell, J.D. 2018. Conservation professionals agree on challenges to coexisting with large carnivores but not on solutions. *Biological Conservation* 218: 223-232. <https://doi.org/10.1016/j.biocon.2017.12.035>. IF=5.99
- (16) O'Bryan, C., Beyer, H.L., Braczkowski, A.R., **Carter, N.H.**, Watson, J.E.M., and E. McDonald-Madden. 2018. The contribution of predators and scavengers to human health and well-being. *Nature Ecology and Evolution* 2: 229–236. <https://doi.org/10.1038/s41559-017-0421-2>. IF=12.543

2017

- (15) Bruskotter, J.T., J.A. Vucetich, G. Karns, M.J. Manfredo, C. Wolf, K. Ard, **N.H. Carter**, J. Lopez-Bao, S. Gehrt, and W.J. Ripple. 2017. Modernization, risk and conservation of the world's largest carnivores. *BioScience* 67: 646-655. <https://doi.org/10.1093/biosci/bix049>. IF=8.589
- (14) **Carter, N.H.**, J.V. López-Bao, J.T. Bruskotter, M. Gore, G. Chapron, A. Johnson, M. Shrestha, J. Frank, O. Ohrens, and A. Treves. 2017. A conceptual framework for understanding illegal killing of large carnivores. *AMBIO* 46: 251-264. (April cover issue). <https://doi.org/10.1007/s13280-016-0852-z>. IF=5.129

2016

- (13) **Carter, N.H.** and J.D.C. Linnell. 2016. Mainstreaming Coexistence with Wildlife: Reply to Gallagher. *Trends in Ecology and Evolution*. <http://dx.doi.org/10.1016/j.tree.2016.08.007>. IF=17.712
- (12) **Carter, N.H.** and T. Allendorf. 2016. Gendered perceptions of tigers in Chitwan National Park, Nepal. *Biological Conservation* 202: 69-77. <https://doi.org/10.1016/j.biocon.2016.08.002>. IF=5.99
- (11) **Carter, N.H.** and J.D.C. Linnell. 2016. Co-adaptation is key to coexistence with large carnivores. *Trends in Ecology and Evolution* 31: 575-578. <https://doi.org/10.1016/j.tree.2016.05.006>. IF=17.712
- (10) Inskip, C., **N.H. Carter**, S.J. Riley, Z. Fahad, T. Roberts, and D. MacMillan. 2016. Towards human-carnivore coexistence: understanding tolerance for tigers in Bangladesh. *PLoS One*. <https://doi.org/10.1371/journal.pone.0145913>. IF=3.24

2015

- (9) **Carter, N.H.**, S. Levin, A. Barlow, and V. Grimm. 2015. Modeling tiger population and territory dynamics using an agent-based approach. *Ecological Modelling* 312: 347-362. <https://doi.org/10.1016/j.ecolmodel.2015.06.008>. IF=2.974
- (8) **Carter, N.H.**, M. Jasny, B. Gurung, and J. Liu. 2015. Impacts of people and tigers on leopard spatiotemporal activity patterns in a global biodiversity hotspot. *Global Ecology and Conservation*. <http://dx.doi.org/10.1016/j.gecco.2014.11.013>. IF=3.38

2014

- (7) **Carter, N.H.**, A. Viña, V. Hull, W. McConnell, W. Axinn, D. Ghimire, and J. Liu. 2014. Coupled human and natural systems approach to wildlife research and conservation. *Ecology and Society* 19(3):43. <http://dx.doi.org/10.5751/ES-06881-190343>. IF=4.16
- (6) **Carter, N.H.**, S.J. Riley, A. Shortridge, B. Shrestha, and J. Liu. 2014. Spatial assessment of attitudes toward tigers in Nepal. *AMBIO* 43: 125-137. (March cover issue). <https://doi.org/10.1007/s13280-013-0421-7>. IF=5.129

2013

- (5) **Carter, N.H.**, B. Gurung, A. Viña, H. Campa III, J. Liu, and J. Karki. 2013. Assessing spatiotemporal changes in tiger habitat across different land management regimes. *Ecosphere* 4:art124. <http://dx.doi.org/10.1890/ES13-00191.1>. IF=3.171
- (4) **Carter, N.H.**, B. Shrestha, J. Karki, N. Pradhan, and J. Liu. 2013. Reply to Goswami et al., Karanth et al., and Harihar et al.: Fine-scale interactions between tigers and people. *PNAS*. <https://doi.org/10.1073/pnas.1217414110>. IF=11.205

2012

- (3) **Carter, N.H.**, B. Shrestha, J. Karki, N. Pradhan, and J. Liu. 2012. Coexistence between wildlife and humans at fine spatial scales. *PNAS* 109: 15360-15365. (Highlight in Nature 489:181 and recommended by Faculty of 1000). <https://doi.org/10.1073/pnas.1210490109>. IF=11.205
- (2) **Carter, N.H.**, S.J. Riley, J. Liu. 2012. Utility of a psychological framework for carnivore conservation. *Oryx* 46: 525-535. <https://doi.org/10.1017/S0030605312000245>. IF=2.693

2010

- (1) **Carter, N.H.**, Brown, D.G., Etter, D.R., and L.G. Visser. 2010. American black bear habitat selection in northern Lower Peninsula, Michigan, USA, using discrete-choice modeling. *URSUS* 21: 57-71. <https://doi.org/10.2192/09GR011.1>. IF=0.846

BOOK CHAPTERS

- (4) **Carter, N.H.**, Bruskotter, J., Vucetich, J., Crabtree, R., Jaicks, H., Karns, G., Nelson, M.P., Smith, D., and J.D.C. Linnell. 2019. Toward human-wildlife coexistence through the integration of human and natural systems: the case of grey wolves in the Rocky Mountains, USA. In "Human-Wildlife Interactions: Turning Conflict into Coexistence" edited by Frank, B., Glickman, J., and Marchini, S. for Cambridge University Press.
- (3) **Carter, N.H.**, An, L., and J. Liu. 2016. Cross-site synthesis of complexity in coupled human and natural systems, in: Liu, J., Hull, V., Yang, W., Viña, A., Ouyang, Z., and Zhang, H. (Eds.), *Pandas and People: Coupling Human and Natural Systems for Sustainability*. Oxford University Press, Oxford, p. 278.
- (2) Liu, J., Hull, V., Yang, W., Viña, A., An, L., **Carter, N.H.**, Chen, X., Liu, W, Ouyang, Z., and H. Zhang. 2016. Lessons from local studies for global sustainability, in: Liu, J., Hull, V., Yang, W., Viña, A., Ouyang, Z., and Zhang, H. (Eds.), *Pandas and People: Coupling Human and Natural Systems for Sustainability*. Oxford University Press, Oxford, p. 278.

- (1) Liu, J., Hull, V., **Carter, N.H.**, Viña, A., and W. Yang. 2016. Framing sustainability of coupled human and natural systems, in: Liu, J., Hull, V., Yang, W., Viña, A., Ouyang, Z., and Zhang, H. (Eds.), *Pandas and People: Coupling Human and Natural Systems for Sustainability*. Oxford University Press, Oxford, p. 278.

RESEARCH FUNDING: CURRENT GRANTS

- UM School for Environment and Sustainability Themes Research Grants (**\$79,572**): **2023-2024**
PI on "Adaptive management of culturally and economically important wildlife in tribal lands of Michigan's Upper Peninsula."
- UM Institute for Global Change Biology: PI on Working Group titled "Forecasting climate-driven changes in human-wildlife interactions." **2022-2025**
- US Fish and Wildlife Service Tiger and Rhino Conservation Fund (**\$199,609**): Co-PI on "Preventing habitat fragmentation and securing future of the tigers in Nepal through better understanding of tiger behavior and response to roads." **2022-2024**
- NASA Biodiversity (**\$698,502**): PI on "The landscape of fitness: fusing GPS measurements with GEDI and ECOSTRESS data products to map responses of migratory animals to vegetation canopy structure and water stress." **2021-2024**
- NSF DISES (**\$1,597,830**): Co-PI on "DISES: Cumulative effects of ecological and social stressors on the dynamics of integrated ranching-wildlife systems: drought, wolves, and human decision-makers." **2021-2026**
- NASA Ecological Forecasting (**\$749,723**): Co-PI on "Biodiversity, connectivity, and ecological forecasting: applying NASA earth observation data to conservation management in the Greater Kruger National Park region, South Africa" **2020-2024**
- McIntire-Stennis USDA Program (**\$144,882**): PI on "Forecasting effects of forestry responses to climate change on landscape-scale forest structure and wildlife habitats." **2021-2023**

RESEARCH FUNDING: COMPLETED GRANTS

- Michigan Institute for Data Science Propelling Original Data Science (PODS) grants (**\$55,294**): PI on "Probabilistic methods to infer structure and dynamics of illicit wildlife trade networks." **2020-2021**
- Future Investigators in NASA Earth and Space Science and Technology (**\$136,216**): PI on "Utilizing NASA's GEDI mission to characterize habitat structure for wildlife research." **2019-2022**
- NASA Ecological Forecasting (**\$585,057**): PI on "Using NASA resources to better inform wildlife conservation in the Anthropocene: Spatially predicting impacts of anthropogenic nightlight and noise on wildlife habitat integrity across the contiguous United States." Co-PIs: Clinton Francis (CalPoly), Jesse Barber (BSU), Andrew Molthan (NASA), and David Stoner (USU). **2017-2021**
- USDA Idaho Conservation Innovation Grant (**\$73,744**): PI on "Co-developing decision-support tools to minimize risks from predation and improve wildlife habitats in grazinglands." **2018-2021**
- IUCN Rapid Response Facility (**\$28,620**): Co-PI on "Reducing impacts of linear infrastructure on tigers in Nepal's Chitwan National Park – a UNESCO site." **2018**
- Wood River Women's Foundation (**\$25,000**): Co-PI on "Corridors for Coexistence." **2018-2019**
- MILES IWG grant (**\$8,395**): Co-PI on "The social-ecological dynamics of ecosystem service provision on private lands in the High Divide." Co-PIs: Vicken Hillis (PI), Bray Beltran, Jodi Brandt, and Morey Burnham. **2017**

- NASA Idaho Space Grant Consortium EPSCOR Research Initiation Grant (**\$27,500**): PI on "Using satellite sensors to investigate effects of artificial nightlight on large mammals along the wildland-urban interface of Boise, Idaho." Co-PIs: Jesse Barber (BSU), Nancy Glenn (BSU), and David Stoner (USU). **2016-2017**
- SESYNC Venture (**\$100,000**): PI on "New tools to predict and prevent human-wildlife conflicts." **2014-2016**
- The Biodiversity Foundation: Small Grants for Science and Conservation (**\$6,942**): Co-PI on "Building the foundations for conservation action: assessing human-tiger conflict research and management needs in the Terai, Nepal." **2014**
- U.S. Fish and Wildlife Service, Rhinoceros and Tiger Conservation Fund Grant (**\$42,859**): PI on "Coupled human and natural systems approach to tiger conservation in Chitwan, Nepal, and beyond." **2010-2012**
- Michigan Department of Natural Resources and Environment Research Grant (**\$10,000**): PI on "American black bear habitat in Northern Lower Peninsula, Michigan." **2007**

NONFUNDED RESEARCH PARTNER AND ADVISORY ROLE

- TOPFORSK Research Council of Norway (**\$3,073,292**): Non-funded research partner on "Developing heuristics for human-wildlife coexistence in the Anthropocene." **2016-2020**
- UK Department for Environment, Food, and Rural Affairs Darwin Initiative (**\$270,000**): Non-funded project advisor on "Living with Tigers in Nepal: poverty reduction for human-wildlife coexistence." **2016-2019**

AWARDS AND FELLOWSHIPS

- NASA-MSU Professional Enhancement Award (\$600). Award provides travel support to the 2013 US-IALE annual meeting and networking opportunities **2013**
- Travel support (\$1,600) to International Congress for Conservation Biology from Michigan State Univ. **2011**
- CHANS-Net: International Network of Research on Coupled Human and Natural Systems fellowship. Fellowship included travel support to 2011 AAAS annual meeting (\$1,000) and networking opportunities. **2011**
- 2010 Global Land Project (GLP) travel support from GLP **2010**
- NASA Earth and Space Science Graduate Fellowship (\$150,000) **2009-2012**
- Michigan State Univ. Pre-dissertation Travel Award (\$3,000) **2008**
- Michigan State Univ. Distinguished Fellowship – 2 year duration (\$100,000) **2007-2008**
- School of Natural Resources and Environment faculty elected Howard M. Wight Memorial Award for the Outstanding Wildlife Graduate Student **2007**
- Joseph G. Schotthoefer Memorial Student Award from Safari Club International (\$1,000) **2006**
- Univ. of Michigan Rackham Graduate School Discretionary Fund (\$1,500) **2006**

INVITED ACADEMIC PRESENTATIONS

- **Carter, N.H.** March 2023. [Building a resilient coexistence with wildlife in a more crowded world.](#) *Seminar to the Department of Forestry & Environmental Conservation, Clemson University, Clemson, SC.*

- **Carter, N.H.** December 2022. Building a resilient coexistence with wildlife in a more crowded world. *Seminar to the Center for Systems Integration and Sustainability*, Michigan State University, Lansing, MI.
- **Carter, N.H.** September 2022. Building a resilient coexistence with wildlife in a more crowded world. *Seminar to the Center for Conservation Biology*, Stanford University, Stanford, CA.
- **Carter, N.H.** September 2022. Co-adapting and co-existing with wildlife in a more crowded world. *Faculty seminar in Department of Environmental Science, Policy, and Management*, University of California, Berkeley, CA.
- **Carter, N.H.** February 2020. Spatial dynamics of human dimensions of wildlife and their feedbacks on conservation. *Spring Seminar Series on Human-Wildlife Interactions*, Colorado State University, Fort Collins, CO.
- **Carter, N.H.** January 2020. Probabilistic Methods to Infer Structure and Dynamics of Illicit Wildlife Trade Networks. *Michigan Institute for Data Science*, University of Michigan, Ann Arbor, MI.
- **Carter, N.H.** December 2019. Complex adaptive systems and human-wildlife coexistence. *Center for the Study of Complex Systems*, University of Michigan, Ann Arbor, MI.
- **Carter, N.H.** March 2019. Wildlife ecology in a brighter and louder world. *School of Environmental and Forest Sciences*, University of Washington, Seattle, WA.
- **Carter, N.H.** January 2019. A complex adaptive systems approach to understanding coexistence between humans and wildlife. *School for Environment and Sustainability*, University of Michigan, Ann Arbor, MI.
- **Carter, N.H.** April 2018. Modeling human-wildlife coexistence. *Center for Modeling Complex Interactions*, University of Idaho, Moscow, ID.
- **Carter, N.H.** February 2014. Synthesizing social and environmental data and theories to advance tiger conservation. Helmholtz Centre for Environmental Research – UFZ, Leipzig, Germany.
- **Carter, N.H.** May 2013. Integrating social and ecological sciences for coexistence. Carnivore Coexistence Lab, Nelson Institute for Environmental Studies, Univ. of Wisconsin, Madison, WI.

CONFERENCE PRESENTATIONS AND POSTERS

- **Carter, N.H.** May 2023. Revealing human impacts to wildlife dynamics in shared lands (invited plenary speaker). *NASA Carbon Cycle & Ecosystems Joint Science Workshop*, College Park, MD.
- **Carter, N.H.**, D. Stoner, J. Sexton, M. Ditmer, and M. Leclerc. December 2022. Mapping the Changing Landscape of Fitness for Large Mammals in the American West. *American Geophysical Union Fall Meeting*, Chicago, USA.
- **Carter, N.H.**, A. Zuckerwise, N.M.B. Pradhan, N. Subedi, B.R. Lamichhane, K.D. Hengaju, and H.B. Acharya November 2022. Tiger response to highway and anthropause in Nepal: using GPS-based movements to inform conservation planning. *The Wildlife Society Annual Meeting*, Spokane, WA
- **Carter, N.H.** and J. Linnell. October 2022. Building a resilient coexistence with wildlife in a more crowded world. *International Wildlife Coexistence Conference*, Pray, MT.
- **Carter, N.H.**, M. Ditmer, C. Francis, J. Barber, and D. Stoner. Light and noise pollution: macroscale impacts on wildlife and approaches to reduce them (accepted). *International Congress on Conservation Biology*, Kigali, Rwanda (Virtual).
- **Carter, N.H.**, M. Ditmer, D. Stoner, J. Forester, C. Francis, and J. Barber. December 2021 (accepted). Large Mammal Responses to a Novel Sensory Pollutant Across Urban-Wildland Gradients. *American Geophysical Union Fall Meeting*, New Orleans, LA.
- **Carter, N.H.** October 2021. Spatially predicting impacts of anthropogenic nightlight and noise on wildlife habitat integrity across the contiguous United States. *NASA Biodiversity and Ecological Forecasting Annual Meeting*, Washington, DC.
- **Carter, N.H.** November 2020. Road development hampers tiger recovery: toward smart infrastructure planning. *First National Conference on Zoology: Biodiversity in a Changing World*, Virtual.

- **Carter, N.H., M. Ditmer, D. Stoner, J. Forester, C. Francis, and J. Barber.** August 2020. Artificial nightlight alters predator-prey dynamics: cougars and deer in the southwestern United States. *Ecological Society of America Annual Meeting*, Virtual.
- **Carter, N.H.** July 2020. Road development hampers tiger recovery: a cross-scale assessment of risks. *North American Congress for Conservation Biology*, Virtual.
- **Carter, N.H.** May 2019. Spatially predicting impacts of anthropogenic nightlight and noise on wildlife habitat integrity across the contiguous United States. *NASA Biodiversity and Ecological Forecasting Annual Meeting*, Washington, DC.
- **Carter, N.H., S. Levin, V. Grimm, A. Baeza-Castro, and N. Magliocca.** 2018. Multi-model approach to understanding human-wildlife systems (poster). *Boundary Spanning: Advances in Socio-Environmental Systems Research. An International Symposium*, Annapolis, MD.
- **Carter, N.H., A. Baeza-Castro, and N. Magliocca.** July 2018. Social contagion of risk perception in human-wildlife interactions. *Symposium on agricultural and land-use policy trade-offs for wildlife connectivity*, North American Congress for Conservation Biology, Toronto, Canada.
- **Carter, N.H., A. Baeza-Castro, and N. Magliocca.** July 2017. Mechanistic modeling of social-ecological systems for wildlife conservation. *International Congress for Conservation Biology*, Cartagena, Colombia.
- **Carter, N.H.** April 2017. Behavioral responses of tigers to humans on shared landscapes: Implications for human-wildlife coexistence. *International Association for Landscape Ecology*, Baltimore, MD.
- **Carter, N.H., M.L. Lute, J.D.C. Linnell, and J.V. López-Bao.** July 2016. Does the conservation community agree on human-carnivore coexistence in the age of the Anthropocene? *North American Congress for Conservation Biology*, Madison, WI.
- **Carter, N.H., S. Levin, and V. Grimm.** May 2016. Modeling the effects of different spatial distributions and magnitudes of human disturbance on tiger population dynamics inside protected areas. *International Society for Ecological Modelling Global Conference*, Towson, MD.
- **Carter, N.H.** August 2015. Realizing coexistence between people and large carnivores in shared landscapes (poster). *International Congress for Conservation Biology*, Montpellier, France.
- **Carter, N.H.** June 2015. Approaching carnivore poaching with a global framework. *USC Conference on Conservation, Computation, and Criminology*, Washington, DC.
- **Carter, N.H.** July 2014. The keys to coexistence: realizing the potential for integrating large carnivores into multi-use landscapes. *North American Congress for Conservation Biology*, Missoula, MT.
- **Carter, N.H., A. Viña, H. Campa III, and J. Karki.** April 2013. Effects of different land management regimes on wildlife habitat: the case of tigers in Nepal (poster). *International Association of Landscape Ecology Annual Meeting*, Austin, TX, USA.
- **Carter, N.H., B. Shrestha, J. Karki, N. Pradhan, and J. Liu.** October 2012. Adaptation of tigers in space and time to high human densities in Nepal: implications for conservation across the tiger's range. *The Wildlife Society Annual Meeting*, Portland, OR.
- **Carter, N.H., A. Shortridge, S.J. Riley, and B. Shrestha, J. Liu.** September 2012. Evaluating the spatial distribution of local intolerance to tigers. *Pathways to Success: Integrating Human Dimensions into Fisheries and Wildlife Management*, Breckenridge, CO.
- **Carter, N.H., A. Shortridge, S.J. Riley, and B. Shrestha.** September 2012. Evaluating the spatial distribution of attitudes, beliefs, and perceptions towards tigers: implications for conservation in human-dominated regions. *Association for Nepal and Himalayan Studies*, Kalamazoo, MI.
- **Carter, N.H., A. Shortridge, and S.J. Riley.** February 2012. Using geospatial models to map local attitudes, beliefs, and perceptions towards a conflict-prone predator. *American Association for Geographers*, New York, NY.
- **Carter, N.H., J. Liu, and H. Campa.** July 2011. Impacts of community-based natural resource management on large vertebrate habitat with implications on landscape scale conservation in Nepal. *International Congress for Conservation Biology*, Auckland, New Zealand.

- **Carter, N.H.** October 2011. Acceptance capacity for tigers in Nepal: Implications for conservation of predators in human-dominated landscapes. *Association for Nepal and Himalayan Studies*, St. Paul, MN.
- **Carter, N.H.**, J. Liu, S.J. Riley, H. Campa, and A. Shortridge. August 2011. Integrating natural and human dimensions to advance tiger conservation. *Ecological Society of America Annual Meeting*, Austin, TX.
- **Carter, N.H.**, A. Viña, J. Liu, D. Dangol, B. Shrestha. June 2011. Impacts of decentralized natural resource management on wildlife habitat around a protected area in Nepal. *International Symposium on Society and Resource Management*, Madison, WI.
- **Carter, N.H.**, J. Liu, S.J. Riley, H. Campa, and A. Shortridge. February 2011. Coupled human and natural systems approach to tiger conservation (poster). *American Association for the Advancement of Science Annual Meeting*, Washington, DC.
- **Carter, N.H.**, S.J. Riley, and J. Liu. February 2010. Local Acceptance Capacity towards Tigers. *Midwest Fish and Wildlife Conference*, Minneapolis, MN.
- **Carter, N.H.**, A. Viña, J. Liu, D. Dangol, and B. Shrestha. October 2010. Evaluating the Impacts of Community Forests on Vegetation at Chitwan National Park, Nepal. *Global Land Project Open Science Meeting*, Tempe, AZ.
- **Carter, N.H.**, S.J. Riley, and J. Liu. September 2010. Evaluating and Modeling Local Acceptance Capacity towards Tigers in Chitwan National Park, Nepal. *Pathways to Success: Integrating Human Dimensions into Fisheries and Wildlife Management*, Estes Park, CO.
- **Carter, N.H.**, Brown, D.G., Etter, D.R., and L.G. Visser. March 2009. Predicting Black Bear Habitat Suitability in Michigan's Lower Peninsula. *American Association of Geographers*, Las Vegas, NV.
- **Carter, N.H.**, Brown, D.G., Etter, D.R., and L.G. Visser. December 2008. Predicting the Ecological Suitability of Black Bear Habitat in Michigan's Lower Peninsula. *Midwest Fish and Wildlife Conference*, Columbus, OH.

ORGANIZED CONFERENCE SESSIONS AND WORKSHOPS

- Abrahms, B., and **N.H. Carter** (co-organizers). 2022. Symposium *Climate change impacts on human-wildlife interactions* at The Wildlife Society Annual Meeting, Spokane, WA.
- Magliocca, N., **Carter, N.H.**, and M. Gore (co-organizers). 2019. *Convergent Research Priorities, Data Sources, and Methodologies for Understanding the Socio-Environmental Impacts of Illicit Supply Networks*, University of Alabama, Tuscaloosa, AL. August 12-15.
- **Carter, N.H.**, Hillis, V., Brandt, J, and K. Hopping (co-organizers). 2018. *Social-Ecological Future of the American West*, Boise State University, Boise, ID. May 7-10
- **Carter, N.H.** and M. Lute (co-organizers). July 2014. Symposium *Human-Carnivore Coexistence? Integrating Science, Ethics, and Practice to Address a Major Conservation Challenge* at North American Congress for Conservation Biology, Missoula, MT.

INVITED WORKSHOPS

- 2019. Defenders of Wildlife. [Human-Wildlife Coexistence Summit](#). Pray, Montana. October 22-24.
- 2017. World Wildlife Fund. *Science and Law Enforcement*. Phnom Penh, Cambodia. October 10-13.
- 2014. World Wildlife Fund. [Human-Tiger Conflict Working Group](#). Chitwan, Nepal. October 28-31

CO-AUTHORED CONFERENCE AND POSTER PRESENTATIONS

- Ma, D., Abrahms, B., Allgeier, J., Weeks, B., Newbold, T., **Carter, N.H.** August 2023. Increases in human-wildlife overlap will present conservation challenges and opportunities in the next 50 years. Oral presentation (accepted). *Ecological Society of America Annual Meeting*, Portland, WA.

- Leclerc, M., Ditmer, M., Stoner, D., Wang, P., Sexton, J., Carter, N.H. June 2023. How remote sensing tools can help us better predict wildlife behavior. Oral presentation. *Canadian Society for Ecology and Evolution*, Winnipeg, Canada.
- Chapman, M., Goldstein, B., Schell, C., Brashares, J., Xu, L., Ellis-Soto, D., Norman, K., Longdon, J., Scoville, C., Faxon, H., **Carter, N.**, Goldstein, J., O'Rourke, D., and Boettiger, C. April 2023. The social and political dimensions of biodiversity monitoring. *EGU General Assembly*, Vienna, Austria.
- Merz, L., Bruskotter, J., and N.H. Carter. May 2023. What drives the lethal removal of wolves? Oral Presentation. *Pathways 2023: Human Dimensions of Wildlife*, Fort Collins, CO.
- Mills, K.L., E. Bennitt, N.H. Carter, and N. Sanders. December 2022. The cascading impacts of water availability on livestock depredation by predators in northern Botswana. Oral Presentation. *British Ecological Society Annual Meeting*, Edinburgh, UK.
- Mills, K.L., E. Bennitt, N.H. Carter, and N. Sanders. November 2022. The cascading impacts of water availability on livestock depredation by predators in northern Botswana. Oral Presentation. *The Wildlife Society Annual Conference*, Spokane, WA.
- Wilson, E., N.H. Carter. November 2022. Modeling the Distributions of Climate-Sensitive Vertebrates to Inform Future Management Strategies. Oral Presentation. *The Wildlife Society Annual Conference*, Spokane, WA.
- Abrahms, B., **N.H. Carter**, T.J. Clark, K. Gaynor, E. Johansson, A. McInturff, A. Nisi, K. Rafiq, and L. West. November 2022. Climate Change as a Global Amplifier of Human-Wildlife Conflict: A Quantitative Review of Case Studies Across Our Lands and Oceans. Oral Presentation. *The Wildlife Society Annual Conference*, Spokane, WA.
- Mills, K.L., N.H. Carter, and N. Sanders. August 2022. Human-induced behavioral tradeoffs lead to a modified spatiotemporal niche in African lions. Oral Presentation. *Ecological Society of America*, Montreal, QC.
- Easter, T.S., J. Trautmann, M. Gore, and N.H. Carter. July 2022. Media Framing of the Illegal Trade in Turtles in the US and its Implications for Policy. Oral presentation. *North American Congress on Conservation Biology*, Reno, NV.
- Darling, R. and N.H. Carter. July 2022. Anthropogenic Night Light and Noise Differentially Influence the Ecosystem Services Provided by Breeding Birds in the Contiguous United States. Poster presentation. *North American Congress on Conservation Biology*, Reno, NV.
- Hiltner, E., N.H. Carter. July 2022. Changing Snow Conditions and Shifts in American Marten (*Martes americana*) Distribution in Michigan's Upper Peninsula. Oral Presentation. *North American Congress on Conservation Biology*, Reno, NV.
- Easter, T.S. and N.H. Carter. May 2022. Problem framing of the illegal trade of turtles. Oral Presentation. *Pathways 2021: Human Dimensions of Wildlife Conference*, Bremerton, WA.
- Killion, A.K. and N.H. Carter. March 2022. Intervention type best predicts coexistence outcomes in global human-wildlife conflict analysis. Oral Presentation. *International Conference on Human-Wildlife Conflict and Coexistence*, Oxford, United Kingdom.
- Killion, A.K. and N.H. Carter. December 2021. Spatial prioritization of sustainable livestock production and wildlife conservation in sub-Saharan Africa. Oral Presentation. *International Congress on Conservation Biology*, Kigali, Rwanda (Virtual).
- Killion, A.K. and N.H. Carter. December 2021. Using spaceborne LiDAR to advance wildlife ecology and conservation. Oral Presentation. *International Congress on Conservation Biology*, Kigali, Rwanda (Virtual).
- Keys, P., Barnes, E., and **N.H. Carter**. December 2021. A machine-learning approach to human footprint index estimation with applications to sustainable development. Oral Presentation. *International Congress on Conservation Biology*, Kigali, Rwanda (Virtual).
- Frank, K., Ditmer, M.A., Stoner, D.C., Currie, W., and N.H. Carter. November 2021. Landscape Predictors of Mule Deer Road Crossing Behavior in the American Southwest. Poster Presentation. *The Wildlife Society Conference*, Spokane, WA.

- Sage, A. and **N.H. Carter**. April 2021. Integrating human social dimensions into spatial connectivity planning for grizzly bears. Oral Presentation. *Wildlands Network* (Virtual).
- Coose, S., Trout, E., Carter, N.H., Hopping, K., Thoreson, K., and G. Hill. July 2020. Recreation and Wildlife Activity in the Wood River Valley. Oral Presentation. *Idaho Conference on Undergraduate Research*, Boise State University, Boise, Idaho, USA.
- Barnes, E., Keys, P., and **N.H. Carter**. December 2020. Sustainable Development Goal Achievement in the Presence of Increased Human Pressure. Oral Presentation. *American Geophysical Union* (Virtual).
- Coose, S., Trout, E., Carter, N.H., Hopping, K., Thoreson, K., and G. Hill. April 2020. Recreation and Wildlife Activity in the Wood River Valley. Oral Presentation. *Undergraduate Research Showcase*, Boise State University. Boise, Idaho, USA.
- Sonawane, C., Yirga, G., and **N.H. Carter**. March 2020. The public health and economic benefits of Spotted Hyenas (*Crocuta crocuta*) scavenging. Oral Presentation (cancelled due to COVID19). *The Mammal Society's 66th Spring Conference*, Cambridge, UK.
- Sonawane, C., Yirga, G., and **N.H. Carter**. January 2020. The public health and economic benefits of spotted hyena (*Crocuta crocuta*) scavenging behaviours in Ethiopia. Poster Presentation. *National Collegiate Research Conference*, Cambridge, USA.
- Sage, A. and **N.H. Carter**. December 2019. Incorporating social dimensions into ecological research: case of the grizzly bear. Oral Presentation. *USGS National Wildlife Health Center: All Hands Meeting*, Madison, WI.
- Ditmer, M.A., Stoner, D.C., Francis, C.D., Barber, J.R., and **N.H. Carter**. November 2019. Spatial and spectral: Illuminating ways of integrating remotely-sensed artificial light data into wildlife analyses. Oral Presentation. *Conservation Sciences Seminar Series*, University of Minnesota, Saint Paul, MN.
- Ditmer, M.A., Stoner, D.C., Francis, C.D., Barber, J.R., and **N.H. Carter**. September 2019. Artificial night light creates a predator buffet. Oral Presentation. *The Wildlife Society Annual Conference*, Reno, NV.
- Easter, T.S., Bouley P., and **N.H. Carter**. July 2019. Opportunities for biodiversity conservation outside of Gorongosa National Park, Mozambique. Oral Presentation. *International Congress for Conservation Biology*, Kuala Lumpur, Malaysia.
- Killion, A.K., Ramirez, J., and **N.H. Carter**. July 2019. A Global Analysis: Human Adaptation Strategies for Human-Wildlife Coexistence. Oral Presentation. *International Congress for Conservation Biology*, Kuala Lumpur, Malaysia.
- Ramirez, J., Wendt, A., and **N.H. Carter**. May 2019. Estimating Anthropogenic Influences on Mammal Occupancy at La Selva Research Station, Costa Rica. Poster Presentation. *Pacific Northwest Research Conference*, University of Washington, Seattle, WA.
- Ditmer, M.A., Stoner, D.C., Francis, C.D., Barber, J.R., and **N.H. Carter**. April 2019. Artificial night light creates a predator buffet. Oral Presentation. *International Association for Landscape Ecology*, Fort Collins, CO.
- Sage, A. and **N.H. Carter**. April 2019. Spatially predicting social acceptance of grizzly bears along key dispersal corridors. Oral Presentation. *International Association for Landscape Ecology*, Fort Collins, CO.
- Ramirez, J., Wendt, A., and **N.H. Carter**. April 2019. Estimating Anthropogenic Influences on Mammal Occupancy at La Selva Research Station, Costa Rica. Poster Presentation. *Undergraduate Research Conference*, Boise State University, Boise, ID.
- Ramirez, J., Wendt, A., and **N.H. Carter**. August 2018. Estimating Anthropogenic Influences on Mammal Occupancy at La Selva Research Station, Costa Rica. Oral presentation. *La Selva Research Symposium*, Puerto Viejo de Sarapiquí, Costa Rica.
- Gaynor, K., Hohnowski, C., **Carter, N.H.,** and J. Brashares. July 2018. Human activity creates a more nocturnal natural world. Oral Presentation. *North American Congress for Conservation Biology*, Toronto, Ontario, Canada.
- Marescot, L., Lyet, A., Singh, R., **Carter, N.H.,** and O. Gimenez. July 2018. Developing a multispecies dynamic patch-occupancy model to infer poaching in Southeast Asia. Oral Presentation. *International Statistical Ecology Conference*, St Andrews, United Kingdom.

- Easter, T.S., Bouley P., and **N.H. Carter**. July 2018. Quantifying Mammalian Richness and Distributions to Inform Conservation Planning in a Multi-Use Landscape of Mozambique. Poster Presentation. *North American Congress for Conservation Biology*, Toronto, Ontario, Canada.
- Killion, A.K., Melvin, T., and **N.H. Carter**. April 2018. Quantifying Spatiotemporal Changes in Issue Salience of an Endangered Large Carnivore. Oral Presentation. *International Association for Landscape Ecology*, Chicago, IL.
- Ramirez, J., Luna, J., Killion, A., and **N.H. Carter**. March 2018. Coexistence 101: A Review of Human-Wildlife Conflict Mitigation Strategies. Oral Presentation. *PNW LSAMP/SHPE Research Conference*, Boise State University, Boise, ID
- Sage, A. and **N.H. Carter**. March 2018. Combining habitat suitability and human acceptance to evaluate conflict likelihood for grizzly bears in Idaho and Montana. Poster Presentation. *Idaho Chapter of the Wildlife Society (TWS)*, Idaho Falls, ID.
- Ramirez, J., Luna, J., Killion, A., and **N.H. Carter**. August 2017. Coexistence 101: A Review of Human-Wildlife Conflict Mitigation Strategies. Oral Presentation. *Summer Research Symposium*, Boise State University, Boise, ID
- Ramirez, J., Luna, J., Killion, A., and **N.H. Carter**. July 2017. Coexistence 101: A Review of Human-Wildlife Conflict Mitigation Strategies. Poster Presentation. *Idaho Conference on Undergraduate Research*, Boise State University, Boise, ID
- Killion, A.K. and **N.H. Carter**. October 2016. A Participatory Mapping and Agent-Based Approach to Promote Coexistence Between Idaho Ranchers and Gray Wolves. Poster Presentation. *Idaho NSF EPSCoR Annual Meeting*, Coeur d'Alene, ID.

TEACHING AND MENTORSHIP ACTIVITIES

COURSES AND LECTURING

School for Environment and Sustainability, University of Michigan (2019-present)

EAS 531/ENVIRON 411, Principles of Geographic Information Systems

The class provides students with a firm understanding of the conceptual approaches and uses (lecture), plus technical methods (lab) in GIS.

**Winter 2020,
Winter 2021,
Winter 2022**

EAS 501.007, Wildlife and Society

The class trains students to use a coupled natural-human systems approach to understand human-wildlife interactions and contemporary wildlife conservation issues from local to global scales.

**Fall 2020, Fall
2021**

Human-Environment Systems, Boise State University (2015-2019)

HES 400/500, Foundations in Human-Environment Systems Science

This course provided students with a foundational understanding of the theories, methods, and applications of HES science.

**Fall 2016, Fall
2017, Fall 2018**

HES 620, Agent-based Modeling of Human-Environment Systems

This course trained students to use spatial agent-based models to understand animal movements and habitat use, landscape and ecosystem changes, human decision making, and policy impacts.

**Spring 2018,
Spring 2019**

HES 600, Research Methods in Human-Environment Systems Science

This course trained graduate students to design HES research and introduce them to the variety of methods employed in HES science.

Spring 2017

Guest Lectures

FW 893, Metacoupling Science: Interdisciplinary Frontiers and Global Applications, Michigan State University.	2021
WIS 6934, Coupled Human and Natural Systems Approaches to Wildlife Conservation, University of Florida.	2020, 2021
HES 297, Complex Systems and Sustainability, Boise State University.	2018
BIOL 497/597, Science and Society, Boise State University.	2018
EEB 601, Principles in EEB, Boise State University.	2017
BIOL 497/597, Science and Society, Boise State University.	2017
BIOL 422, Conservation Biology, Boise State University.	2017
BIOL 497/597, Science and Society, Boise State University.	2016
FW 434, Human Dimensions of Fisheries and Wildlife Management, Michigan State University.	2012
FW 434, Human Dimensions of Fisheries and Wildlife Management, Michigan State University.	2011

Other Teaching Experience

Graduate Student Instructor, Biology 390, Evolution, University of Michigan.	2006
Graduate Student Instructor NRE 531, Principles of Geographic Information Systems, University of Michigan.	2006

MENTORSHIP

Postdoctoral Researchers (Current and Previous)

• Kirby Mills	2023-2025
• Deqiang Ma	2022-2024
• Martin Leclerc	2022-2023
• Leandra Merz	2022-2023
• Evan Wilson	2021-2023
• Mark Ditmer	2018-2020
• Rose Graves	2017-2018
• Michael Poulos	2016-2017

PhD Dissertation Chair (Current)

• Jason Hagani, PhD student, SEAS: TBD	2023-2028
• Anna Yu, PhD student, SEAS: Coexisting with snow leopards in Sanjiangyuan, China	2022-2027
• Amelia Zuckerwise, PhD candidate, SEAS: Tiger behavior and response to road infrastructure in the Nepal Terai	2021-2026

PhD Dissertation Committee (Current and Previous)

• Derek Fedak, PhD student, Colorado State University: Ecological forecasting in the Kruger	2022-2027
• Tiffany Dias, PhD candidate, SEAS: Warming-driven changes to bird morphology	2021-2026
• Kirby Mills, PhD received, EEB: Livestock depredation by African lions in the Magkadigkadi ecosystem	2018-2023

MS Thesis Chair (Current)

- Fang Chen, SEAS: Assessing the Dynamics of Space Use and Habitat Selection of Formosan Black Bears (*Ursus thibetanus formosanus*) in Anthropogenic Landscapes **2022-2024**
- Carly Thompson, SEAS: TBD **2022-2024**

MS Thesis Committee (Current and Previous)

- Morgan Dean, SEAS (UM): *Avian dispersal capacity and gene flow across geographic barriers.* **2020-2022**
- Rachel Leibovich, SEAS (UM): *The farm sanctuary movement in the Americas* **2020-2022**
- Wei Hu, SEAS (UM): *Validating computer vision technologies for social media interpretation outdoor aesthetics* **2020-2022**
- Zijun Li, SEAS (UM): *Assessing heat vulnerability of New Orleans using multitemporal remote sensing and demographic data* **2019-2021**
- Hunter Cole, Biology (Boise State): *Shedding light on nocturnal fauna: the effects of artificial light at night on bats and insects.* **2017-2020**
- Siria Gomez, EEB (UM): *Downtown diet: a global meta-analysis reveals urbanization modifies predation* **2018-2020**
- Teague Scott, Biology (Boise State): *Home range and the use of protected areas by white-headed vultures *Trigonoceps occipitalis*, and their movement patterns relative to white-backed vultures *Gyps africanus*.* **2017-2020**
- Anna Levine, Geography (U. of Alabama): *Social-ecological systems of sheep ranching, recreation, and large carnivores on multiple-use U.S. public lands* **2018-2020**
- Mitch Levenhagen, Biology (Boise State): *Ecosystem services provided by soundscapes link people and wildlife* **2016-2019**
- Maia Chicherio, Sociology (Idaho State U.): *Life histories and hunter-wolf conflict: an investigation into the sociocultural dimensions of human-wildlife conflict* **2017-2019**
- Ellie Opdahl, Biology (Boise State): *Outdoor recreational activity and landscape aesthetic effects on human biological stress and the outdoor recreational experience* **2016-2018**

Master's Projects (Current and Completed)

- Title: *Biodiversity Impact Assessment at Banke-Bardia Complex along East-West Highway electrified railway alignment in Nepal* **2020-2022**
Team: Ryan Pickerill, Nathaniel Arringdale, Caitlyn Renowden, Samuel Lisak
Client: World Wildlife Fund – Nepal
- Title: *Human-Leopard Conflict and Coexistence in Northern Kenya* **2019-2021**
Team: Alan Ching, Anna Urso, Joyce Choi, Laura McNeil, Robert Hart
Client: San Diego Zoo Global

Undergraduate Mentorship (Current and Previous)

- Elliott Smith (University of Michigan, PitE), Chinmay Sonawane (Harvard University), Julie Ramirez (Boise State), Jessica Mueller (Boise State), Anna Roser (Boise State), Javier Luna (Boise State), and Sarah Coose (Boise State)

Graduated PhD and MS thesis students (as chair)

- Tara Easter, PhD in Environment and Sustainability (UM): *Social and Policy Dimensions of Freshwater Turtle Trade in the US* **2019-2023**
- Madeline Standen, MS in SEAS: *Environmental predictability dictates seasonal movements of mule deer in Utah* **2021-2023**
- Ella Hartshorn, MS in SEAS: *A Critical Assessment of Conservation Outcomes in Indigenous Peoples' Lands and Protected Areas* **2021-2023**
- Rachel Darling, MS in SEAS: *The effect of sensory pollutants on the ecosystem services provided by North American breeding birds.* **2020-2022**
- Kaitlyn Frank, MS in SEAS: *Landscape predictors of the road crossing behavior of mule deer of the American Southwest.* **2020-2022**

- Ethan Hiltner, MS in SEAS: *Assessing effects of changing snow depths in Michigan's Upper Peninsula on the interactions between two mesocarnivores* **2020-2022**
- Alexander Killion, PhD in Environment and Sustainability (UM): *Coexisting with wildlife in shared landscapes: an interdisciplinary assessment to inform conservation* **2021**
- Edward Trout, MS in Biology (Boise State): *Corridors for Coexistence: Evaluating spatiotemporal impacts of livestock on wildlife community dynamics.* **2021**
- Natalie Madden, MS in SEAS (UM): *How traits affect bird responses to anthropogenic noise – a meta-analysis.* **2020**
- Abigale Sage, MS in Biology (Boise State): *Integrating social dimensions into spatial connectivity planning for grizzly bears* **2019**
- Tara Easter, MS in Biology (Boise State): *Quantifying mammalian interactions and distributions to inform conservation planning in Mozambique* **2018**

SERVICE AND OUTREACH ACTIVITIES

INVITED REFEREE

Journal Articles

- African Journal of Ecology, AMBIO, Animal Conservation, Biodiversity and Conservation, Biological Conservation, BioScience, Canadian Journal of Zoology, Conservation and Society, Conservation Biology, Conservation Letters, Conservation Science and Practice, Diversity and Distributions, Ecography, Ecological Applications, Ecological Economics, Ecological Modelling, Ecology and Society, Ecosphere, Environmental Research Letters, Frontiers in Ecology and Evolution, Global Ecology and Conservation, Human Dimensions of Wildlife, Journal of Applied Ecology, Journal of Applied Ecology, Journal of Mammalogy, Journal of Wildlife Management, Land, Landscape Ecology, Michigan Journal of Sustainability, Oryx, PeerJ, PLoS One, Proceedings of the National Academy of Sciences, Regional Environmental Change, Science Advances, Trends in Ecology and Evolution, URSUS. **2015-present**

Grant Proposals and Books

- Ad-hoc reviewer for NSF Geography and Spatial Sciences Program **Fall 2017, Fall 2018**
- Book: Serengeti IV: Sustaining biodiversity in a coupled human-natural system **Fall 2013**

SERVICE TO UNIVERSITY

University of Michigan (2019-present)

- Coordinator: School for Environment and Sustainability; *Geospatial Data Science Specialization Coordinator* **Fall 2021-Fall 2022**
- Committee Member: School for Environment and Sustainability; *Faculty Space Committee* **Fall 2021**
- Reviewer: Michigan Institute for Data Science; *Propelling Original Data Science (PODS) proposals* **Winter 2021**
- Committee Member: School for Environment and Sustainability; *Diversity, Equity, and Inclusion subcommittee on (dis)Ability and Accessibility* **Winter 2021**
- Faculty Participant: School for Environment and Sustainability; participate and vote during faculty business and working sessions, participate in MS/PhD student visit day, and review graduate student applications. **Fall 2019-present**

Boise State University (2015-2019)

- Faculty Mentor: NSF Gateways Scholar program (1 undergraduate) **Fall 2018**

- Faculty Mentor: Louis Stokes Alliances for Minority Participation program (1 undergraduate) **Fall 2018**
- Elected member of Graduate Studies Committee for Ecology, Evolution, and Behavior PhD program **Fall 2016-Fall 2018**
- Three faculty search committees for Human-Environment Systems research group **Fall 2015, Fall 2016, Fall 2017**
- Key participant in NSF-EAGER grant titled "Aligning Stakeholders and Structures to Enable Risk Taking (ASSERT)." **2016-2017**
- Faculty Participant: Human-Environment Systems research group; participate and vote during faculty meetings, develop curriculum, and engage with other units on campus **Fall 2015-Winter 2019**

SERVICE TO ACADEMY

- Associate Editor for journal *Ambio* **2023-present**
- Subject-Matter Editor for journal *Ecological Applications*. **2021-present**
- Associate Editor for journal *Conservation Science and Practice*. **2019-2023**
- Guest Editor for Focus Collection on "The Social-Ecological Future of the American West" in the journal *Environmental Research Letters*. **2019-2020**

CAPACITY BUILDING

- Mentor for the [Nepal Conservation Research Fellows](#) program. **2022-present**
- National Socio-Environmental Synthesis Center. *Teaching Socio-Environmental Synthesis with Case Studies*, Annapolis, MD. July 15-18. Developed hands-on exercises and lecture materials for advanced graduate students, postdocs, and professors. **2014**
- Institute for Social and Environmental Research. *Introduction to Geographic Information Systems*, Chitwan, Nepal. Feb 14-15. Developed and led training course in Nepal to staff from wildlife conservation agencies and local university students in environmental science. **2010**

COMMUNITY ENGAGEMENT

- Invited speaker for [Tiger Dialogues: Conflict, coexistence, co-occurrence & co-adaptation](#). **February 2023**
- Participated in Podcast program "WildCats Pawcast" on the topic "[Is transportation development a roadblock to tiger conservation?](#)" **December 2022**
- Presented "[Mitigating wildlife impacts from noise and Light Pollution](#)" for National Park Service's Connected Conservation Seminar Series (virtual). **July 2021**
- Presented "[Light and Noise Pollution: Impacts on Wildlife and Tools for Large Landscape Conservation](#)" for National Park Service's Natural Resource Stewardship and Science Directorate Monthly Webinar **June 2020**
- Presented "[The contribution of predators and scavengers to human well-being](#)" for [Rethinking Animals Summit](#), New York, NY **September 2019**
- Presented "Interdisciplinary insights on living with tigers and grizzly bears" for San Diego Zoo Institute for Conservation Research, San Diego, CA. **March 2019**
- Presented "Human activity creates a more nocturnal natural world" for Boise Rotary Club, Boise, ID. **February 2019**

- Presented "Human-Wildlife Coexistence" for Zoo Boise fund raising event at Chandler's Restaurant, Boise, ID. **February 2019**
- Presented "Effects of artificial light at night on wildlife habitats: integrating science with decision-support tools" for the Consortium for Dark Skies Studies meeting (virtual). **January 2019**
- Presented "Human-Wildlife Coexistence" for Zoo Boise Conservation Series, Boise, ID **May 2018**
- Presented "Human-Wildlife Coexistence" for Zoo Boise Conservation Series, Boise, ID **June 2017**
- Presented with PhD student, Tara Easter, "[Predators of the Foothills](#)" for the Foothills Learning Center, Boise, ID. **November 2016**
- Presented "Integrating science, ethics, and practice to advance carnivore conservation in a human-dominated world" for Café Scientifique, 49 West Coffee Shop, Annapolis, MD. **July 2014**
- Presented "Tigers and Biodiversity Conservation" for class at Annapolis High School, Annapolis, MD. **October 2013**
- Presented "Bridging human and natural sciences to advance tiger conservation in Nepal and beyond" for Wildlife Conservation Society, Bronx, NY. **May 2012**
- Presented "Coupled Human and Natural System Approach to Tiger Conservation in Chitwan National Park, Nepal and Beyond" for Annual Meeting on the Status of Endangered Species in Nepal, Kathmandu, Nepal. **March 2010**

OUTREACH (ARTICLES AND BLOGS)

- **Carter, N.H.** 2021. [GPS tracking could help tigers and traffic coexist in Asia](#). The Conversation.
- **Carter, N.H.** 2020. [Endangered tigers face growing threats from an Asian road-building boom](#). The Conversation.
- O'Bryan, C., McDonald-Madden, E., Watson, J., and **N.H. Carter**. 2018. [Helping farmers and reducing car crashes: the surprising benefits of predators](#). The Conversation.
- **Carter, N.H.** 2014. SESYNC Blog: [Protecting Predators, Protecting People](#)
- **Carter, N.H.** 2011. Tiger Tales: Evaluating wildlife acceptance capacity in Nepal. MSU Fisheries and Wildlife SPOTLIGHT. Issue 7. Pages 17 – 19.

MEDIA COVERAGE

- [Rapid behavioral responses of Nepalese tigers to reduced road traffic during COVID-19 lockdown](#) featured in Michigan News and [The Wildlife Society](#) **2023**
- [Fostering Human-Tiger Coexistence in Nepal](#) featured in Stewards magazine **2022**
- [U-M study forecasts effects of roads and railways on endangered tigers](#) featured in [Mongabay](#) **2022**
- Cited in BBC news coverage [Hydroelectric dams linked to tiger and jaguar losses](#) **2021**
- [Hyena scavenging provides public health and economic benefits to African cities](#) **2021**
- [Researchers push for a national program to help people coexist with predators](#) **2021**
- [New paper calls for national-level predator coexistence program](#). **2021**
- [Large-scale nest study shows that noise and light pollution alter bird reproduction](#). **2020**
- [Light pollution alters predator-prey interactions between cougars and mule deer in western US](#) **2020**

- [Best practices for reducing human-wildlife conflict](#) **2020**
- [Artificial night light helps account for observer bias in wildlife conservation efforts](#) **2020**
- [Thousands of miles of planned Asian roads threaten the heart of tiger habitat](#) **2020**
- *Nature Ecology and Evolution* paper discussed in [The Wildlife Society](#) bulletin **2020**
- [‘Sensory danger zones’: How sensory pollution impacts animal survival](#) **2020**
- [NASA Helps National Parks Track Impact of Noise, Lighting on Wildlife](#) **2019**
- *Science* paper covered in [NY Times](#), [Nature](#), [Scientific American](#), and over 100 other news outlets. **2018**
- Discussed *Science* paper on [NPR weekend edition](#). **2018**
- *Conservation Biology* paper featured in the Royal Geographical Society’s [Geographical magazine](#). **2018**
- Research in *Nature Ecology and Evolution* mentioned in over 30 news outlets. **2018**
- Research in *Biological Conservation* featured in Boise State news update and [newswise](#). **2018**
- Human-Environment Systems featured in the Boise Arbiter **2017**
- Human-Environment Systems featured in the [Idaho Statesman](#) **2016**
- Research on Gender, Attitudes, and Tigers highlighted in [Newswise Boise News Update, Biosphere, and Mongabay](#) **2016**
- Discussed research in interview on [Boise State NPR](#) **2016**
- Research on coexistence highlighted in “[takepart](#)” blog post **2016**
- Research on tolerance to tigers and coexistence highlighted in [Boise News Update](#) **2016**
- Research on community forestry and tiger habitat highlighted in [Yale e360](#) **2013**
- Research highlighted in [Conservation Magazine](#) **2013**
- Discussed research in interviews with [Science Update](#) **2012**
- Research highlighted in [BBC](#), [New York Times](#), Discovery Channel, AAAS, [Scientific American](#), NSF, Nature and Science magazines, [Conservation Magazine](#), and as comic called Night Growl. **2012**
- Spartan Saga. "Understanding the human-nature dance" **2011**
- MSUToday show (No 26). ["Living with Tigers"](#). **2011**

PROFESSIONAL AFFILIATIONS AND MEMBERSHIPS (PAST AND PRESENT)

- IUCN Cat Specialist Group, Member since 2021
- American Geophysical Union
- International Association for Landscape Ecology
- American Association for the Advancement of Science
- Society for Conservation Biology
- Association of American Geographers
- Ecological Society of America
- The Wildlife Society
- International Association for Society and Natural Resources

- Coupled Human and Natural Systems Network (CHANS-Net.org)

RELEVANT TRAINING

TRAINING AND CERTIFICATIONS

- Awarded one of 20 competitive positions in Emerging Wildlife Conservation Leaders ([EWCL](#)) training and mentoring initiative. EWCL provides intense training in conservation campaign development. My EWCL team and I developed a lion conservation and awareness campaign in Northern Kenya called LION WATCH. **2011 – 2012**
- Chemical immobilization of wildlife from Safe Capture International, Cleveland, OH **2008**
- Chemical immobilization of big cats from Henry Doorly Zoo, Omaha, NE **2008**
- Received GIS certification from San Diego Mesa Community College, San Diego, CA **2005**