

Sara A. Gagné

Department of Earth, Environmental and Geographical Sciences
University of North Carolina at Charlotte,
9201 University City Blvd., Charlotte, NC 28223, USA
sgagne@charlotte.edu • www.saragagne.com • @urban_nature_clt
ORCID: 0000-0003-4385-7189

EDUCATION

- 2003 - 2009 **Doctor of Philosophy in Biology**
Department of Biology, Carleton University, Ottawa, Ontario, Canada
• Dissertation title: The effects of housing density and the trade-off
between housing density and sprawl area on breeding birds and
carabid beetles
- 1996 - 2001 **Bachelor of Science in Biology, First Class Honors**
Department of Biology, McGill University, Montreal, Quebec, Canada
- 1999 - 2000 **Visiting Student**
School of Biological Sciences, University of Wollongong, Wollongong,
New South Wales, Australia

APPOINTMENTS AND EXPERIENCE

- 2023 - present **Chair**
Department of Earth, Environmental and Geographical Sciences,
University of North Carolina at Charlotte, Charlotte, North Carolina,
USA
- 2016 - present **Associate Professor**
Department of Earth, Environmental and Geographical Sciences,
University of North Carolina at Charlotte, Charlotte, North Carolina,
USA
• Areas of specialization: landscape ecology, urban ecology, human-
environment interaction, biodiversity conservation
- 2018 - 2021 **Graduate Coordinator, Master of Science in Earth Sciences program**
Department of Earth, Environmental and Geographical Sciences,
University of North Carolina at Charlotte, Charlotte, North Carolina,
USA
- 2010 - 2016 **Assistant Professor**
Department of Earth, Environmental and Geographical Sciences,
University of North Carolina at Charlotte, Charlotte, North Carolina,
USA

- 2009 - 2010 **Postdoctoral Research Associate**
Department of Forest and Wildlife Ecology, University of Wisconsin-Madison, Madison, Wisconsin, USA
- 2003 - 2009 **Teaching Assistant**
Department of Biology, Carleton University, Ottawa, Ontario, Canada

PUBLICATIONS (student advisees are underlined)

Peer-reviewed:

28. Partridge, H. C., J. Amodeo, D. Arneson, S. Barnett, R. Baron, B. French, A. Wright, and **S. A. Gagné**. In review. Participatory bird-window collision research: Opportunities for increased project success and stakeholder engagement. *Urban Ecosystems*.
27. Netzley, R., H. C. Partridge, and **S. A. Gagné**. In press. Shadow-boxing: Major gaps to knock out in bird-window interaction research. *Ornithological Applications*.
<https://doi.org/10.1093/ornithapp/duae054>
26. Partridge, H. C., S. Barnett, J. Amodeo, J. Snyder, and **S. A. Gagné**. 2023. Vultures in the southeastern United States ingest more plastic in landscapes with more developed landcover. *Frontiers in Ecology and Evolution* **11**:1158453.
<https://doi.org/10.3389/fevo.2023.1158453>
25. Hahs, A. K., B. Fournier, M. F. J. Aronson, C. H. Nilon, A. Herrera-Montes, A. Salisbury, ..., **S. A. Gagné**, ..., and M. Moretti. 2023. Urbanisation generates multiple trait syndromes for terrestrial animal taxa worldwide. *Nature Communications* **14**:4751.
<https://doi.org/10.1038/s41467-023-39746-1>
24. Partridge, H. C., and **S. A. Gagné**. 2023. Urban vultures preferentially roost at sites surrounded by landscapes with fewer edges between forest and urban development and near water. *Urban Ecosystems* **26**:857-866. <https://doi.org/10.1007/s11252-023-01332-0>
23. Halpern, B. S., C. Boettiger, M. C. Dietze, J. A. Gephart, P. Gonzalez, N. B. Grimm, ..., **S. A. Gagné**, ..., and C. Youngflesh. 2023. Priorities for synthesis research in ecology and environmental science. *Ecosphere* **14**:e4342. <https://doi.org/10.1002/ecs2.4342>
22. Kotze, J. D., E. C. Lowe, J. S. MacIvor, A. Ossola, B. A. Norton, D. F. Hochuli, L. Mata, M. Moretti, **S. A. Gagné**, I. T. Handa, T. M. Jones, C. G. Threlfall, and A. K. Hahs. 2022. Urban forest invertebrates: How they shape and respond to the urban environment. *Urban Ecosystems* **25**:1589-1609. <https://doi.org/10.1007/s11252-022-01240-9>
21. Grilo, C., L. Borda-de-Água, P. Beja, E. Goolsby, K. Soanes, A. le Roux, E. Koroleva, F. Z. Ferreira, **S. A. Gagné**, Y. Wang, and M. González-Suaréz. 2021. Conservation threats from roadkill in the global road network. *Global Ecology and Biogeography* **30**:2200-2210.
<https://doi.org/10.1111/geb.13375>

20. Collins, L., G. D. Paton, and S. A. Gagné. 2021. Testing the Likeable so Abundant Hypothesis: Bird species likeability by urban residents varies significantly with species traits. *Land* **10**:487. <https://doi.org/10.3390/land10050487>
19. Dutta, D., G. Chen, C. Chen, S. A. Gagné, C. Li, C. Rogers, C. Matthews. 2020. Detecting plant invasion in urban parks with aerial image time series and Residual Neural Network. *Remote Sensing* **12**:3493. <https://doi.org/10.3390/rs12213493>
18. **Gagné, S. A., K. Bryan-Scaggs, R. H. W. Boyer, and W.-N. Xiang.** 2020. Conserving biodiversity takes a plan: How planners implement ecological information for biodiversity conservation. *Ambio* **49**:1490-1505. <https://doi.org/10.1007/s13280-019-01281-z>
17. Paton, G. D., A. V. Shoffner, A. M. Wilson, and S. A. Gagné. 2019. The traits that predict the magnitude and spatial scale of forest bird responses to urbanization intensity. *PLoS ONE* **14**:e0220120. <https://doi.org/10.1371/journal.pone.0220120>
16. Shoffner, A., A. M. Wilson, W. Tang, and S. A. Gagné. 2018. The relative effects of forest amount, forest configuration, and urban matrix quality on forest breeding birds. *Scientific Reports* **8**:17140. <https://doi.org/10.1038/s41598-018-35276-9>
15. Davis, D. E., and S. A. Gagné. 2018. Boundaries in ground beetle (Coleoptera: Carabidae) and environmental variables at the edges of forest patches with residential developments. *PeerJ* **6**:e4226. <https://doi.org/10.7717/peerj.4226>
14. Tayouga, S. J., and S. A. Gagné. 2016. The socio-ecological factors that influence the adoption of green infrastructure. *Sustainability* **8**:1277. <https://doi.org/10.3390/su8121277>
13. Mayer, A. L., B. Buma, A. Davis, **S. A. Gagné**, E. L. Loudermilk, R. M. Scheller, F. K. A. Schmiegelow, Y. F. Wiersma, and J. Franklin. 2016. How landscape ecology informs global land-change science and policy. *BioScience* **66**:458-469. <https://doi.org/10.1093/biosci/biw035>
12. **Gagné, S. A., P. J. Sherman, K. K. Singh, and R. K. Meentemeyer.** 2016. The effect of human population size on the breeding bird diversity of urban regions. *Biodiversity and Conservation* **25**:653-671. <https://doi.org/10.1007/s10531-016-1080-3>
11. **Gagné, S. A., J. L. Bates, and R. O. Bierregaard.** 2015. The effects of road and landscape characteristics on the likelihood of a Barred Owl (*Strix varia*)-vehicle collision. *Urban Ecosystems* **18**:1007-1020. <https://doi.org/10.1007/s11252-015-0465-5>
10. **Gagné, S. A., F. Eigenbrod, D. G. Bert, G. M. Cunnington, L. T. Olson, A. C. Smith, and L. Fahrig.** 2015. A simple landscape design framework for biodiversity conservation. *Landscape and Urban Planning* **136**:13-27. <https://doi.org/10.1016/j.landurbplan.2014.11.006>
9. Wine, S., S. A. Gagné, and R. K. Meentemeyer. 2015. Understanding human-coyote encounters in urban ecosystems using citizen science data: What do socioeconomics tell us? *Environmental Management* **55**:159-170. <https://doi.org/10.1007/s00267-014-0373-0>

8. **Gagné, S. A.** 2013. The distinguishing features of the study of the ecology of urban landscapes. *Geography Compass* **7**:266-286. <https://doi.org/10.1111/gec3.12038>
7. **Gagné, S. A.**, and L. Fahrig. 2011. Do birds and beetles show similar responses to urbanization? *Ecological Applications* **21**:2297-2312. <https://doi.org/10.1890/09-1905.1>
6. **Gagné, S. A.**, and L. Fahrig. 2010. The trade-off between housing density and sprawl area: minimising impacts to forest breeding birds. *Basic and Applied Ecology* **11**:723-733. <https://doi.org/10.1016/j.baae.2010.09.001>
5. **Gagné, S. A.**, and L. Fahrig. 2010. The trade-off between housing density and sprawl area: minimizing impacts to carabid beetles (Coleoptera: Carabidae). *Ecology and Society* **15**(4):12. <http://www.ecologyandsociety.org/vol15/iss4/art12/>
4. **Gagné, S. A.**, and L. Fahrig. 2010. Effects of time since urbanization on anuran community composition in remnant urban ponds. *Environmental Conservation* **37**:128-135. <https://doi.org/10.1017/S0376892910000421>
3. **Gagné, S. A.**, and R. Proulx. 2009. Accurate delineation of biogeographical regions depends on the use of an appropriate distance measure. *Journal of Biogeography* **36**:561-562. <https://doi.org/10.1111/j.1365-2699.2008.01990.x>
2. **Gagné, S. A.**, R. Proulx, and L. Fahrig. 2008. Testing Holling's textural-discontinuity hypothesis. *Journal of Biogeography* **35**:2149-2150. <https://doi.org/10.1111/j.1365-2699.2008.02031.x>
1. **Gagné, S. A.**, and L. Fahrig. 2007. Effect of landscape context on anuran communities in breeding ponds in the National Capital Region, Canada. *Landscape Ecology* **22**:205-215. <https://doi.org/10.1007/s10980-006-9012-3>

Book chapters:

1. Singh, K. K., **S. A. Gagné**, and R. K. Meentemeyer. 2018. Urban forests and human well-being. Pages 287-305 in S. Liang, editor. *Comprehensive remote sensing, volume 9*. Elsevier, Oxford, UK. <https://doi.org/10.1016/B978-0-12-409548-9.10421-X>

Books:

1. **Gagné, S. A.** 2023. *Nature at your door: Connecting with the wild and green in the urban and suburban landscape*. Stackpole Books, Essex, Connecticut, USA.

Popular press articles:

4. **Gagné, S. A.** August 18 2024. *Fall Calendar Alert: Swirling Swifts in NC's Old Brick Chimneys*. North Carolina Science Trail. <https://ncsciencetrail.org/science-blog/fall-calendar-alert-swirling-swifts-in-ncs-old-brick-chimneys/>
3. **Gagné, S. A.** July 15 2024. *Discover salamanders and more in North Carolina's urban and suburban streams*. North Carolina Science Trail. <https://ncsciencetrail.org/science-blog/discover-salamanders-and-more-in-north-carolinas-urban-and-suburban-streams/>

2. **Gagné, S. A.** June 18 2024. *Explore your street trees: The innumerable ecological wonders of an overlooked ecosystem*. North Carolina Science Trail. <https://ncsciencetrail.org/science-blog/explore-your-street-trees-the-innumerable-ecological-wonders-of-an-overlooked-ecosystem/>
1. **Gagné, S. A.** April 15 2024. *City surprise: Urban areas are brimming with biodiversity*. The Revelator. <https://therevelator.org/urban-biodiversity/>
 - i. Featured in The Browser's Top of the Week, April 20 2024 <https://thebrowser.com/top-of-the-week-182/>

Datasets:

2. **Partridge, H. C.**, and **S. A. Gagné**. 2023. Vulture roosting attendance in the southeastern United States. *PANGAEA*, <https://doi.org/10.1594/PANGAEA.960173>
1. **Partridge, H. C.**, **S. Barnett**, **J. Amodeo**, **J. Snyder**, and **S. A. Gagné**. 2023. Plastic composition of vulture pellets in the southeastern United States. *PANGAEA*, <https://doi.org/10.1594/PANGAEA.960286>

Outreach:

1. **Gagné, S. A.**, F. Eigenbrod, and A. MacIntosh. 2006. *Amphibian conservation in eastern Ontario*. Geomatics and Landscape Ecology Research Laboratory, Carleton University, Ottawa, Canada.

GRANTS

2024	University of North Carolina at Charlotte Charlotte Green Initiative Grant <i>Sycamore bird-friendly window markers</i> T. Sokolowski (PI) and S. A. Gagné (co-PI)	\$13,100
2021-2022	University of North Carolina at Charlotte Faculty Research Grant <i>A deep dive into North American river otter (Lontra canadensis) behavior and trophic dynamics in an urban ecosystem</i> S. A. Gagné (PI) and A. M. Reitzel (co-PI)	\$15,654
2020	University of North Carolina at Charlotte Charlotte Green Initiative Grant <i>Autonomous Monitoring of Campus Pollinator Populations Using AI Video Analytics</i> S. A. Gagné (PI), D. A. Shoemaker, and H. Tabkhi (co-PIs)	\$3,948
2019 - 2020	Microsoft AI for Earth Grant	\$5,000

The MAPS-AI project: Mapping And Predicting the Spread of Alien Invasives in urban forests
S. A. Gagné (PI), G. Chen, and Y. Wang (co-PIs)

2018 - 2019	University of North Carolina Inter-institutional Planning Grant <i>Chapel Hill, Charlotte, and Wilmington: creating an interdisciplinary network to investigate the drivers of urban biodiversity</i> S. A. Gagné (PI), N. Kaza, R. Urbanek, and C. Dumas (co-PIs)	\$22,000
2014 - 2016	National Fish and Wildlife Foundation <i>The Butterfly Highway: connecting people and nature</i> J. Sorensen (PI) and S. A. Gagné (co-PI)	\$33,545
2014 - 2015	University of North Carolina at Charlotte Chancellor's Diversity Challenge Fund <i>The Butterfly Highway: connecting people and nature</i> S. A. Gagné (PI) and A. Hjarding (co-PI)	\$5,000
2014 - 2015	University of North Carolina at Charlotte Faculty Research Grant <i>Urban heat island effects on anuran breeding activity in the Charlotte Metropolitan Region</i> S. A. Gagné (PI) and M. D. Eastin (co-PI)	\$11,920
2013 - 2014	University of North Carolina at Charlotte Scholarship of Teaching and Learning Grant <i>Teaching the Theory of Island Biogeography as an on-campus field laboratory</i> W. J. Garcia (PI) and S. A. Gagné (co-PI)	\$13,048
2011 - 2012	University of North Carolina at Charlotte Faculty Research Grant <i>Exploring the effects of urbanization on biodiversity in remnant forests of the Charlotte Metropolitan Region</i> S. A. Gagné (PI)	\$5,869

AWARDS

- University of North Carolina at Charlotte Reassignment of Duties Leave Award (two-course teaching release; 2023)
- University of North Carolina at Charlotte Junior Faculty Development Award (two-course teaching release; 2014)

- University of North Carolina at Charlotte Office of International Programs International Travel Grant (\$800; 2011)
- Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship - Doctoral (\$42,000; 2007-2009)
- Carleton University Graduate Student Research Bursary (\$3,900; 2006, 2008 & 2009)
- Ontario Graduate Scholarship (\$15,000; 2006-2007)
- Natural Sciences and Engineering Research Council of Canada Postgraduate Scholarship - Master's (\$34,600; 2003-2005)

PRESENTATIONS (*presenter; student advisees are underlined)

Invited (academic):

Gagné, S. A.*. September 21 2018. The effects of urbanization on carabid beetles. North Carolina State University Mike Duke Seminar, Raleigh, North Carolina, USA.

Gagné, S. A.*, K. Bryan-Scaggs, R. H. W. Boyer, and W.-N. Xiang. August 7 2018. What information do planners need to conserve biodiversity in their jurisdictions? Presented in the symposium *Exploring links between cities and surrounding landscapes: can cities enhance regional resilience and biodiversity in an era of climate change and extreme events?* Ecological Society of America Annual Meeting, New Orleans, Louisiana, USA.

Gagné, S. A.*, A. G. Ayon, L. E. Collins, G. D. Paton. July 25 2018. Biological diversity and human well-being in urban green spaces. Presented in the symposium *Frontiers of urban green space conservation and management*. North American Congress for Conservation Biology, Toronto, Ontario, Canada.

Gagné, S. A.*, and L. Fahrig. August 26 2016. How can we maximize biodiversity in urban regions? Urban Ecology Symposium *Maximizing biodiversity in urbanized landscapes*, University of Zurich, Zurich, Switzerland.

Davis, D. E., and **S. A. Gagné***. July 8 2015. Complex edge effects in forest patches surrounded by varying development intensities. Presented in the symposium *Urban sprawl: methods, drivers, limits and implications for planning*. International Association for Landscape Ecology World Congress, Portland, Oregon, USA.

Gagné, S. A.*, and R. Boyer. May 19 2014. The contribution of landscape ecology to urban land use policy and planning. Presented in the special symposium *Prioritizing landscape ecology's contribution to policy and analysis I*. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Anchorage, Alaska, USA.

Fahrig, L.*, and **S. A. Gagné**. September 4 2013. How can we maximize biodiversity in urbanized regions? Harvard University Graduate School of Design Colloquium, Cambridge, Massachusetts, USA.

Gagné, S. A.*, F. Eigenbrod, D. G. Bert, G. M. Cunnington, L. T. Olson, A. C. Smith, and L. Fahrig. February 21 2013. Five steps for terrestrial ecological landscape design for biodiversity conservation. University of North Carolina at Chapel Hill Curriculum for the Environment and Ecology Seminar Series, Chapel Hill, North Carolina, USA.

Gagné, S. A.*, F. Eigenbrod, D. G. Bert, G. M. Cunnington, L. T. Olson, A. C. Smith, and L. Fahrig. March 30 2012. Five steps for terrestrial ecological landscape design for biodiversity conservation. University of North Carolina at Charlotte Department of Biological Sciences Seminar Series, Charlotte, North Carolina, USA.

Gagné, S. A.*, and L. Fahrig. March 23 2011. The effects of housing density and the trade-off between housing density and sprawl area on breeding birds and carabid beetles. University of North Carolina at Greensboro Department of Biology Seminar Series, Greensboro, North Carolina, USA.

Gagné, S. A.*, and L. Fahrig. October 30 2009. The effects of housing density and the trade-off between housing density and sprawl area on breeding birds and carabid beetles. Concordia University Geography, Planning and Environment Seminar Series, Montreal, Quebec, Canada.

Invited (outreach):

Gagné, S. A. September 7 2024. Where is the best place to connect with nature? At your door! Museum of York County, Rock Hill, South Carolina, USA.

Gagné, S. A. April 23 2024. Where is the best place to connect with nature? At your door! Wells Fargo Internal Audit Town Hall, Charlotte, North Carolina, USA.

Gagné, S. A. April 17 2024. Where is the best place to connect with nature? At your door! DavidsonLearns, Davidson, North Carolina, USA.

Gagné, S. A. March 25 2024. Where is the best place to connect with nature? At your door! Central Piedmont Community College Green Club, Charlotte, North Carolina, USA.

Gagné, S. A. March 12 2024. Where is the best place to connect with nature? At your door! Charlotte Wildlife Stewards, Charlotte, North Carolina, USA.

Gagné, S. A. March 10 2024. Nature at your door and beyond. Charlotte chapter of the North Carolina Native Plant Society, Charlotte, North Carolina, USA.

Gagné, S. A. February 21 2024. Where is the best place to connect with nature? At your door! Wildlife and Garden Keepers Club, Fort Mill, South Carolina, USA.

Gagné, S. A. January 22 2024. Where is the best place to connect with nature? At your door! Charlotte Garden Club, Charlotte, North Carolina, USA.

Gagné, S. A. January 16 2024. Where is the best place to connect with nature? At your door! Wing Haven Garden & Bird Sanctuary, Charlotte, North Carolina, USA.

Gagné, S. A. November 8 2023. Where is the best place to connect with nature? At your door! North Carolina Department of Environmental Quality Lunchtime Discovery Series (virtual). <https://www.youtube.com/watch?v=-4pcd55xqps>

Gagné, S. A. October 23 2023. Where is the best place to connect with nature? At your door! Denison University, Granville, Ohio, USA.

Gagné, S. A. October 5 2023. Where is the best place to connect with nature? At your door! Mecklenburg Audubon Society, Charlotte, North Carolina, USA.

Gagné, S. A. March 27 2023. The connections between you and nature in your yard. Sedgefield Garden Club, Charlotte, North Carolina, USA.

Gagné, S. A.*. December 5 2020. University of North Carolina at Charlotte Sustainability Summit, Charlotte, North Carolina, USA.

Gagné, S. A.*. December 6 2018. Breeding bird responses to urbanization at local, landscape, and city scales. Mecklenburg Audubon Society, Charlotte, North Carolina, USA.

Gagné, S. A.*. October 1 2018. The social side of biodiversity conservation. Mecklenburg County Morrison Regional Library, Charlotte, North Carolina, USA.

Gagné, S. A.*, K. Bryan-Scaggs, R. H. W. Boyer, and W.-N. Xiang. July 26 2018. The information planners need to conserve nature in their jurisdictions. Western North Carolina Water Quality Conference, Hickory, North Carolina, USA.

Gagné, S. A.*. April 19 2018. How can we maximize biodiversity in cities? GLOBE Southeast (U.S.) Regional Student Research Symposium, Charlotte, North Carolina, USA. (Keynote speaker)

Gagné, S. A.*. April 2 2018. The social side of biodiversity conservation. Integrated Network for Social Sustainability, Charlotte, North Carolina, USA.

Gagné, S. A.*. October 19 2017. How can we maximize biodiversity in cities? Charlotte Reconnecting Ourselves with Nature, chapter of the North Carolina Wildlife Federation, Charlotte, North Carolina, USA.

Gagné, S. A.*, F. Eigenbrod, D. G. Bert, G. M. Cunnington, L. T. Olson, A. C. Smith, and L. Fahrig. January 23 2017. Five steps for terrestrial ecological landscape design for biodiversity conservation. Sedgefield Garden Club, Charlotte, North Carolina, USA.

Gagné, S. A.*, F. Eigenbrod, D. G. Bert, G. M. Cunnington, L. T. Olson, A. C. Smith, and L. Fahrig. May 9 2013. Five steps for terrestrial ecological landscape design for biodiversity conservation. Frontenac County Stewardship Council Elements of a Stewardship Plan Workshop, Kingston, Ontario, Canada.

Gagné, S. A.*, and L. Fahrig. June 3 2009. The trade-off between housing density and sprawl area: minimising impacts to forest breeding birds and carabid beetles. Carleton University Faculty of Science Science Cafe Seminar Series, Ottawa, Ontario, Canada.

Gagné, S. A.*, and L. Fahrig. December 1 2008. The trade-off between housing density and sprawl area: minimising impacts to forest breeding birds and carabid beetles. City of Ottawa Planning and Development, Ottawa, Ontario, Canada.

Gagné, S. A.*, and L. Fahrig. March 26 2008. The trade-off between housing density and sprawl area: minimising impacts to forest breeding birds and carabid beetles. City of Ottawa Planning and Development, Ottawa, Ontario, Canada.

Oral presentations at conferences:

Gagné, S. A. April 15-26 2024. Where is the best place to connect with nature? At your door! The Nature of Cities Festival (virtual). <https://tnoc-festival.com/wp/2024-micro-talks/>

Gagné, S. A.*, and Caroline A. Brinegar. March 21 2024. Meta-analyses of the ecological effects of urban form: sprawl versus compact residential development. Association of Southeastern Biologists Annual Meeting, Chattanooga, TN, USA.

Partridge, H. C.*, **S. A. Gagné**, and C. Hammelman. August 11 2023. Sitting ducks: Landscape factors, impacts, and management strategies for black vulture conflicts near animal care facilities. American Ornithological Society and Society of Canadian Ornithologists Conference, London, Ontario, Canada.

Gagné, S. A.*, and Caroline A. Brinegar. June 6 2023. Meta-analyses of the ecological effects of urban form: sprawl versus compact residential development. International Urban Wildlife Conference, Washington, DC, USA.

Partridge, H. C.*, **S. A. Gagné**, and C. Hammelman. March 23-27 2023. Sitting ducks: Landscape factors, impacts, and management strategies for black vulture conflicts near animal care facilities. American Association of Geographers Annual Meeting, Denver, Colorado, USA.

Gagné, S. A.*, C. Dumas, N. Kaza, and R. Urbanek. April 11 2022. Interactions between bird-diversity-landscape structure relationships and the socioeconomic characteristics of urban areas in North Carolina, USA. In the symposium *Multi-city landscape ecology: towards a better understanding of urban ecological patterns and processes* (Co-organizers: **S. A. Gagné**, S. Magle, and R. Urbanek). North American Regional Association of the International Association for Landscape Ecology Annual Meeting (virtual).

Gagné, S. A.*, C. Dumas, N. Kaza, and R. Urbanek. July 7 2021. The biogeophysical and socioeconomic drivers of biodiversity across metropolitan areas in North Carolina, USA. Third World Conference of the Society for Urban Ecology, Posnan, Poland.

Gagné, S. A.*, C. Dumas, N. Kaza, and R. Urbanek. April 14 2021. The biogeophysical and socioeconomic drivers of biodiversity across metropolitan areas in North Carolina, USA. North American Regional Association of the International Association for Landscape Ecology Annual Meeting (virtual).

Grilo, C.*, L. Borda-de-Água, P. Beja, E. Goolsby, K. Soanes, A. le Roux, E. Koroleva, F. Z. Ferreira, **S. A. Gagné**, Y. Wang, and M. González-Suaréz. January 13 2021. Roadkill as a threat to global mammal conservation. Infrastructure and Ecology Network Europe International Conference (virtual).

Brinegar, C. A.*, and **S. A. Gagné**. August 3-6 2020. Ecosystem effects of urban form: a systematic review. Ecological Society of America Annual Meeting (virtual).

Paton, G. D.*, A. V. Shoffner, A. M. Wilson, and **S. A. Gagné**. April 13 2018. The traits that predict forest bird responses to urbanization intensity. American Ornithological Society Meeting, Tucson, Arizona, USA.

Paton, G. D.*, A. V. Shoffner, A. M. Wilson, and **S. A. Gagné**. April 11 2018. The traits that predict forest bird responses to urbanization intensity. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Chicago, Illinois, USA.

Ayon, A.*, and **S. A. Gagné**. April 9 2018. Can urban birds have a positive effect on neighborhoods well-being? US Regional Association of the International Association for Landscape Ecology Annual Meeting, Chicago, Illinois, USA.

Gagné, S. A.*, K. K. Singh, and L. Fahrig. August 8 2017. Testing Holling's Textural-Discontinuity Hypothesis along an urban gradient. Ecological Society of America Annual Meeting, Portland, Oregon, USA.

Gagné, S. A.*, K. K. Singh, and L. Fahrig. April 12 2017. Testing Holling's Textural-Discontinuity Hypothesis along an urban gradient. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Baltimore, Maryland, USA.

Gagné, S. A.*, K. K. Singh, and L. Fahrig. March 30 2017. Testing Holling's Textural-Discontinuity Hypothesis along an urban gradient. Association of Southeastern Biologists Annual Meeting, Montgomery, Alabama, USA.

Grilo, C.*, K. Soanes, A. le Roux, E. Koroleva, F. Ferreira, **S. A. Gagné**, Y. Wang, A. Bager, and L. Borda-de-Água. September 1 2016. What are the effects of road-kills on mammal population's persistence? Infra Eco Network Europe International Conference, Lyon, France.

Boucher, A. F.*, M. D. Eastin, and **S. A. Gagné**. April 6 2016. Effects of the Urban Heat Island on anurans in remnant and stormwater control ponds in the Charlotte Metropolitan Region. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Asheville, North Carolina, USA.

Gagné, S. A.*, J. L. Bates, and R. O. Bierregaard. April 6 2016. The effects of road and landscape characteristics on the likelihood of a Barred Owl (*Strix varia*)-vehicle collision. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Asheville, North Carolina, USA.

Shoffner, A.*, A. M. Wilson, W. V. Tang, and **S. A. Gagné**. April 4 2016. The relative impacts of habitat amount, habitat configuration, and urbanization on forest breeding birds. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Asheville, North Carolina, USA.

Gagné, S. A.*, J. L. Bates, and R. O. Bierregaard. April 1 2016. The effects of road and landscape characteristics on the likelihood of a Barred Owl (*Strix varia*)-vehicle collision. Association of Southeastern Biologists Annual Meeting, Concord, North Carolina, USA.

Boucher, A. F.*, M. D. Eastin, and **S. A. Gagné**. April 1 2016. Effects of the Urban Heat Island on anurans in remnant and stormwater control ponds in the Charlotte Metropolitan Region. Association of Southeastern Biologists Annual Meeting, Concord, North Carolina, USA.

Shoffner, A.*, A. M. Wilson, W. V. Tang, and **S. A. Gagné**. April 1 2016. The relative impacts of habitat amount, habitat configuration, and urbanization on forest breeding birds. Association of Southeastern Biologists Annual Meeting, Concord, North Carolina, USA.

Eastin, M. D.* , **S. A. Gagné**, M. Baber, A. Boucher, and R. Hubler. January 14 2016. Impacts of the Charlotte (North Carolina) Urban Heat Island on local precipitation, biodiversity, human health, and energy use. American Meteorological Society Annual Meeting, New Orleans, Louisiana, USA.

Sherman, P. J., and **S. A. Gagné***. November 17 2013. How does city size affect the relationship between bird species richness and urbanization? International Biogeography Society Special Meeting, Montreal, Quebec, Canada.

Gagné, S. A.*, F. Eigenbrod, D. G. Bert, G. M. Cunningham, L. T. Olson, A. C. Smith, and L. Fahrig. April 9 2012. Five steps for ecological landscape design. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Newport, Rhode Island, USA.

Gagné, S. A.*, F. Eigenbrod, D. G. Bert, G. M. Cunningham, L. T. Olson, A. C. Smith, and L. Fahrig. August 20 2011. Five principles for ecological landscape design. International Association for Landscape Ecology World Congress, Beijing, China.

Gagné, S. A.*, and L. Fahrig. April 6 2011. Do birds and beetles show similar responses to urbanization? US Regional Association of the International Association for Landscape Ecology Annual Meeting, Portland, Oregon, USA.

Gagné, S. A.*, and L. Fahrig. May 17 2009. Do birds and beetles show similar responses to urbanization? Canadian Society for Ecology and Evolution Annual Meeting, Halifax, Nova Scotia, Canada.

Gagné, S. A.*, and L. Fahrig. July 14 2008. Clustering housing development minimizes impacts on forest breeding birds. Society for Conservation Biology Annual Meeting, Chattanooga, Tennessee, USA.

Gagné, S. A.*, and L. Fahrig. August 9 2006. The effect of time since urbanization on anuran communities in urban ponds. Ecological Society of America Annual Meeting, Memphis, Tennessee, USA.

Gagné, S. A.*, and L. Fahrig. September 18 2005. Effect of landscape context on amphibian communities in breeding ponds. Canadian Amphibian and Reptile Conservation Network Annual Meeting, Ottawa, Ontario, Canada.

Gagné, S. A.*, and L. Fahrig. May 9 2005. Effect of landscape context on amphibian communities in breeding ponds. Ontario Ecology and Ethology Colloquium, Ottawa, Ontario, Canada.

Poster presentations at conferences:

Wilson, L.*, A. Lupton, J. Peterson, and **S. A. Gagné**. October 22 2024. A deep dive into North American river otter (*Lontra canadensis*) diet and trophic dynamics in an urban ecosystem. The Wildlife Society Annual Conference, Baltimore, Maryland, USA.

Partridge, H. C.*, **S. A. Gagné**, and C. Hammelman. May 31-June 3 2023. Sitting ducks: Landscape factors, impacts, and management strategies for black vulture conflicts near animal care facilities. Pathways 2023 Human Dimensions of Wildlife Conference and Training, Fort Collins, Colorado, USA.

Partridge, H. C.*, S. Barnett, J. Amodeo, J. Snyder, and **S. A. Gagné**. February 7 2023. Vultures in the southeastern United States ingest more plastic in landscapes with more developed land cover. The North Carolina Chapter of the Wildlife Society, Sherrills Ford, North Carolina, USA.

Wright, A.*, H. C. Partridge, and **S. A. Gagné**. December 3, 2022. Bird-window collisions on the University of North Carolina at Charlotte campus. State of North Carolina Undergraduate Research and Creativity Symposium, Wilmington, North Carolina, USA.

Barnett, S.*, H. C. Partridge, J. Amodeo, J. Snyder, and **S. A. Gagné**. October 9, 2022. Plastic ingestion in black vultures and turkey vultures along an urban-to-rural gradient in the Charlotte Metropolitan Area, NC. Geological Society of America Annual Meeting, Denver, Colorado, USA.

Partridge, H. C.*, and **S. A. Gagné**. August 2-6 2021. The effect of urbanization on roost attendance and nesting success of black vultures (*Coragyps atratus*) and turkey vultures (*Cathartes aura*) in the Charlotte Metropolitan Area. Ecological Society of America Annual Meeting (virtual).

Partridge, H. C.*, and **S. A. Gagné**. May 26 2021. The effect of urbanization on roosting and nesting site selection and nesting success of black vultures (*Coragyps atratus*) and turkey vultures (*Cathartes aura*) in the Charlotte Metropolitan Area. International Urban Wildlife Conference (virtual).

Haulk, M.*, A. F. Boucher, M. S. Baber, and **S. A. Gagné**. April 15 2021. Analyzing local habitat quality in stormwater and remnant ponds to guide anuran conservation efforts in the Charlotte Metropolitan Region. University of North Carolina at Charlotte Undergraduate Research Conference (virtual).

Partridge, H. C.*, and **S. A. Gagné**. April 12 2021. The effect of urbanization on roosting and nesting site selection and nesting success of black vultures (*Coragyps atratus*) and turkey vultures (*Cathartes aura*) in the Charlotte Metropolitan Area. North American Regional Association of the International Association for Landscape Ecology Annual Meeting (virtual).

Partridge, H. C.*, and **S. A. Gagné**. March 24-27 2021. The effect of urbanization on roosting and nesting site selection and nesting success of black vultures (*Coragyps atratus*) and turkey

vultures (*Cathartes aura*) in the Charlotte Metropolitan Area. Association of Southeastern Biologists Annual Meeting (virtual).

Haulk, M.*, and **S. A. Gagné**. November 7 2020. A comparison of anuran diversity and habitat attributes between remnant and stormwater ponds in the Charlotte Metropolitan Region. State of North Carolina Undergraduate Research and Creativity Symposium (virtual).

Peterson, J.*, and **S. A. Gagné**. November 7 2020. A Genetic Analysis of Urban River Otter Food Webs. State of North Carolina Undergraduate Research and Creativity Symposium (virtual).

Partridge, H. C.*, and **S. A. Gagné**. September 27-October 1 2020. The effect of urbanization on roosting and nesting site selection and nesting success of black vultures (*Coragyps atratus*) and turkey vultures (*Cathartes aura*) in the Charlotte Metropolitan Area. The Wildlife Society Annual Conference (virtual).

Partridge, H. C.*, and **S. A. Gagné**. August 3-6 2020. The local and landscape features associated with roost site selection and nesting success in urban black vulture (*Coragyps atratus*) and turkey vulture (*Cathartes aura*) populations. Ecological Society of America Annual Meeting (virtual).

Brinegar, C. A.*, and **S. A. Gagné**. July 27-31 2020. Does urban form influence forest breeding bird species richness at multiple scales? North American Congress for Conservation Biology (virtual).

Brinegar, C.*, and **S. A. Gagné**. August 16 2019. The implications of urban form on avian biodiversity in Mecklenburg County, North Carolina. Ecological Society of America Annual Meeting, Louisville, Kentucky, USA.

Brinegar, C.*, and **S. A. Gagné**. November 19 2018. The effects of urban form on biodiversity and ecological functioning: a literature review. Southeastern Division of the American Association of Geographers Annual Meeting, Johnson City, Tennessee, USA.

Collins, L. E.*, G. D. Paton, and **S. A. Gagné**. November 3 2017. Likeability of forest bird species to urban residents. North Carolina Geographical Society Annual Meeting, Winston-Salem, North Carolina, USA.

Paton, G. D.*, A. V. Shoffner, A. M. Wilson, and **S. A. Gagné**. April 10 2017. The traits that predict forest bird responses to urbanization intensity. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Baltimore, Maryland, USA.

Merritt, D. K. M.*, and **S. A. Gagné**. June 8 2016. Invertebrate diversity on urban green roofs in Charlotte, NC. American Ecological Engineering Society Annual Meeting, Knoxville, Tennessee, USA.

Ayon, A. G.*, and **S. A. Gagné**. April 4 2016. The effect of bird diversity on human psychological wellbeing on the neighborhoods of Charlotte Metropolitan Area. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Asheville, North Carolina, USA.

Merritt, D. K. M.*, and **S. A. Gagné**. April 4 2016. Invertebrate diversity on urban green roofs in Charlotte, NC. US Regional Association of the International Association for Landscape Ecology Annual Meeting, Asheville, North Carolina, USA.

Merritt, D. K. M.*, and **S. A. Gagné**. April 1 2016. Invertebrate diversity on urban green roofs in Charlotte, NC. Association of Southeastern Biologists Annual Meeting, Concord, North Carolina, USA.

Ayon, A. G.*, and **S. A. Gagné**. April 1 2016. The effect of bird diversity on human psychological wellbeing on the neighborhoods of Charlotte Metropolitan Area. Association of Southeastern Biologists Annual Meeting, Concord, North Carolina, USA.

Baber, M.*, and **S. A. Gagné**. July 6 2015. Urban heat island effects on anuran breeding activity in the Charlotte Metropolitan Region. International Association for Landscape Ecology World Congress, Portland, Oregon, USA.

Shoffner, A.*, and **S. A. Gagné**. July 6 2015. The relative effects of habitat amount, habitat configuration, and urbanization on forest breeding birds. International Association for Landscape Ecology World Congress, Portland, Oregon, USA.

Davis, D. E.*, and **S. A. Gagné**. March 14 2014. Exploring the effects of urbanization on biodiversity in remnant forests of the Charlotte Metropolitan Region. Southeastern Ecology and Evolution Conference, Statesboro, Georgia, USA.

Sherman, P. J.*, and **S. A. Gagné**. April 15 2013. How does city size affect the relationship between bird species richness and urbanization? US Regional Association of the International Association for Landscape Ecology Annual Meeting, Austin, Texas, USA.

Sherman, P. J.*, and **S. A. Gagné**. March 23 2013. How does city size affect the relationship between bird species richness and urbanization? University of North Carolina at Charlotte Graduate Research Symposium, Charlotte, North Carolina, USA.

Tayouga, S. J.*, and **S. A. Gagné**. March 23 2013. The socioeconomic factors that influence the adoption of green infrastructure. University of North Carolina at Charlotte Graduate Research Symposium, Charlotte, North Carolina, USA.

COURSES

- ESCI 1101 Earth Sciences - Geography, 3 credit-hours, 37-174 students
- ESCI 2210 Field Methods in the Earth and Environmental Sciences, 3 credit-hours, 10-25 students
- GEOG 2000 Biodiversity of the NC Piedmont, 3 credit-hours, 24 students
- GEOG 4215/5215 Urban Ecology, 3 credit-hours, 6-29 students
- GEOG 4600 Geography Professional Seminar, 1 credit-hour, 9-21 students
- GEOG 6226/8226 Landscape Ecology, 3 credit-hours, 4-14 students

 GRADUATE STUDENTS

Thesis/dissertation advisor:

- 2024 - present William Garcia
 Doctor of Philosophy in Geography
- Dissertation title: TBD
- 2023 - present Lindsey Wilson
 Master of Science in Earth Sciences
- Thesis title: A deep dive into North American river otter (*Lontra canadensis*) diet and trophic dynamics in an urban ecosystem
- 2023 - present Kendal Paul
 Master of Science in Earth Sciences
- Thesis title: Assessing the impacts of watershed urbanization on stream salamanders in Mecklenburg County, NC
- 2021 - 2024 Hannah Partridge
 Doctor of Philosophy in Geography
- Dissertation title: Human-raptor interactions across spatial scales
- 2021 - 2023 Michael Haulk
 Master of Science in Earth Sciences
- Capstone title: UNC Charlotte campus tree selection and placement effects on ecosystem services
- 2017 - 2023 Jennifer Bates (Recipient of the Wayland H. Cato Jr. First-Year Doctoral Fellowship)
 Doctor of Philosophy in Geography
- Dissertation title: The influence of road, road verge, and landscape characteristics on the occurrence of raptor-vehicle collisions
- 2020 - 2021 Alisonya Poole
 Master of Arts in Geography
- Capstone title: Revolution Park Tree Canopy Restoration
- 2019 - 2021 Hannah Partridge
 Master of Science in Earth Sciences
- Thesis title: The local and landscape features associated with roost site selection and nesting success in urban black vulture (*Coragyps atratus*) and turkey vulture (*Cathartes aura*) populations
- 2018 - 2020 Caroline Brinegar
 Master of Arts in Geography
- Capstone title: The ecological efficacy of compact development depends on stewardship and spatial configuration: a global meta-analysis
- 2018 - 2020 Hannah Palko

Doctor of Philosophy in Geography

- Dissertation title: Understanding the relationship between provision of cultural and biophysical ecosystem services in green and non-green cemetery management types

2014 - 2018

Gaston Abel Ayon Munguia

Doctor of Philosophy in Geography and Urban Regional Analysis

- Dissertation title: The relationship between biodiversity and human well-being in urban landscapes

2016 - 2018

Grant Paton (Recipient of the Master's Merit Award)

Master of Science in Earth Sciences

- Thesis title: The traits that predict forest bird responses to urbanization intensity

2015 - 2017

Danielle Merritt

Master of Science in Earth Sciences

- Thesis title: The role of urban green roofs as invertebrate habitat

2015 - 2016

Ari Whiteman

Doctor of Philosophy in Geography and Urban Regional Analysis

- Dissertation title: TBD

2014 - 2016

Adrienne Boucher

Master of Science in Earth Sciences

- Thesis title: Effects of the urban heat island and local habitat quality on anurans in remnant and stormwater control ponds

2014 - 2016

Alexandra Shoffner (Recipient of the Master's Merit Award)

Master of Science in Earth Sciences

- Thesis title: The relative effects of habitat amount, habitat configuration, and urbanization on forest breeding birds

2013 - 2016

Matthew Baber

Master of Arts in Geography

- Capstone title: The effects of the Charlotte Metropolitan Region's urban heat island on anuran abundance and diversity

2012 - 2014

Jennifer Bates

Master of Arts in Geography

- Capstone title: The influence of road characteristics on the likelihood of Barred Owl (*Strix varia*)-vehicle collisions in Charlotte, NC

2012 - 2014

Doreen Davis

Master of Science in Earth Sciences

- Thesis title: Spatially complex edge effects differ in forest patches surrounded by varying development intensities

2011 - 2013

Peter Sherman

Master of Arts in Geography

- Capstone title: How does city size affect the relationship between bird species richness and urbanization?

2011 - 2013

Sarah Tayouga
Master of Arts in Geography

- Capstone title: Socioecological factors that promote the adoption of green infrastructure

2011 - 2013

Stuart Wine
Master of Arts in Geography

- Capstone title: Mapping the probability of human-coyote sightings in urban areas using citizen science data: the importance of socioeconomic variables

Thesis/dissertation committee member:

2023 - present

Rachel Rowe
Doctor of Philosophy in Infrastructure and Environmental Systems

- Dissertation title: TBD

2023 - present

Sophie Barnett
Master of Science in Earth Sciences

- Thesis title: Quantifying the role of floodplains in the storage of anthropogenic litter in the Charlotte Metropolitan Area

2021 - 2024

Ian Fisher
Master of Arts in Geography

- Capstone title: GIS-based habitat suitability index model for eastern oysters in coastal NC

2021 - 2023

Rachael Rowe
Master of Science in Earth Sciences

- Thesis title: Evaluating macroinvertebrate biomonitoring and diversity using eDNA

2021 - 2023

Benjamin Blanchard
Master of Arts in Anthropology

- Thesis title: What are the barriers (socioeconomic, structural, governmental, informational) to effective collaboration, policy-making, and policy implementation in addressing the issue of tree canopy loss in Charlotte, North Carolina?

2021 - 2023

Denise Furr
Doctor of Philosophy in Biological Sciences

- Dissertation title: Evidence of phenotypic plasticity and adaptation in two diverse groups of mollusks

2021 - 2022

Robert Gansrow
Master of Arts in Geography

- Capstone title: Differential spatio-temporal migration patterns of *A. Colubris*: Patterns within the mid-Atlantic region

- 2021 - 2022
Lauren Anderson
Master of Science in Earth Sciences
- Thesis title: Macroinvertebrates as indicators of ecosystem function and water quality in urban restored streams versus beaver ponds
- 2020 - 2022
Hannah Palko
Doctor of Philosophy in Geography
- Dissertation title: What are the social, ecological, and economic obstacles to providing green burial?
- 2019 - 2021
Jackie Hartman
Master of Science in Earth Sciences
- Thesis title: The impact of stream restoration on macroinvertebrate communities in an urban forested watershed
- 2016 - 2021
Paisley Azra-Lewis
Doctor of Philosophy in Health Psychology
- Dissertation title: Broadened horizons: nature walks and reflective thinking in the context of scarcity
- 2019 - 2020
Dipanwita Dutta
Master of Arts in Geography
- Capstone title: Detecting plant invasion in urban parks with aerial image time series and residual neural networks (deep learning)
- 2019 - 2020
Patrick Webster
Master of Science in Earth Sciences
- Thesis title: Impervious cover thresholds of the North Carolina Piedmont fish assemblage
- 2018 - 2019
Rebecca Black
Master of Science in Earth Sciences
- Thesis title: Threshold discharge for streambed mobilization ($Q_{critical}$) effects on macroinvertebrates along an urbanization gradient in Mecklenburg County, North Carolina
- 2013 - 2017
Angelique Hjarding
Doctor of Philosophy in Geography and Urban Regional Analysis
- Dissertation title: The Butterfly Highway: connecting people and nature
- 2016
Michael Desjardins
Master of Arts in Geography
- Capstone title: Modeling compactness in reserve design with backup requirements
- 2015 - 2016
Ryan Hubler

Master of Science in Earth Sciences

- Thesis title: Initiation and enhancement of local precipitating convection by the Charlotte Urban Heat Island

2014 - 2015

Sara Henderson

Master of Science in Earth Sciences

- Thesis title: Recovery of macroinvertebrate communities following flood disturbance in urban restored streams, Mecklenburg County, North Carolina

2014 - 2015

Bushra Khan

Doctor of Philosophy in Biology

- Dissertation title: Tissue specific responses of the estuarine bivalve species *Crassostrea virginica* and *Geukensia demissa* to hypoxia

2011 - 2014

Monica Dorning

Doctor of Philosophy in Geography and Urban Regional Analysis

- Dissertation title: Landscape change and human-environment interactions: implications for natural resource management in urbanizing areas

2012 - 2013

Kunwar Singh

Doctor of Philosophy in Geography and Urban Regional Analysis

- Dissertation title: Frontiers of LiDAR to analyze urban landscapes heterogeneity

2010 - 2013

Sarah Haas

Doctor of Philosophy in Geography and Urban Regional Analysis

- Dissertation title: Landscape epidemiology of sudden oak death: analysis of disease dynamics in natural forest ecosystems

2011

Alex Hohl

Master of Arts in Geography

- Capstone title: Go with the flow: hydrological connectivity influences the dispersal of an invasive forest pathogen

UNDERGRADUATE STUDENTS

- Mentor of research assistants through the UNC Charlotte Office of Undergraduate Research Scholars program (Summers 2015 (1 student), 2017 (1), 2018 (1), 2022 (2), and 2023 (1); Fall 2022 (1); Spring 2024 (2); Fall 2024 (2))
- Mentor of a NSF REU student (Summer 2024)
- Advised 19 undergraduate students on average per semester in the BA Environmental Studies, BS Earth and Environmental Sciences, BA Geography, BS Geography, BS Geology, and BS Meteorology programs (2010 - 2023)
- Honors committee member (Falls 2016, 2020, 2021, and 2023)
- Honors advisor (Spring 2021)
- Advised Mecklenburg County Division of Nature Preserves and Natural Resources intern (Summer 2018)

PROFESSIONAL DEVELOPMENT

- UNC Charlotte Biosafety training (Spring 2024)
- UNC Charlotte IACUC training (Spring 2024)
- A.L.I.C.E. Active Shooter Training (Spring 2024)
- UNC Charlotte Leadership Academy (Fall 2023 - Spring 2024)
- Association of American Geographers Leadership Workshop (Spring 2023)
- Future of Synthesis in Ecology and Environmental Science Workshop, National Center for Ecological Analysis & Synthesis (Spring 2021)
- Foundation Grant Funding Workshop, University of North Carolina at Charlotte, Charlotte, North Carolina, USA (Fall 2017)
- Successful Collaborative Projects Workshop, University of North Carolina at Charlotte, Charlotte, North Carolina, USA (Fall 2017)
- Top 40 Freshman Success Academy, University of North Carolina at Charlotte, Charlotte, North Carolina, USA (Summer & Fall 2012 & 2013)
- Workshop for Early Career College and University Faculty, Geography Faculty Development Alliance, Boulder, Colorado, USA (Summer 2012)
- Workshop on writing successful proposals to NSF CAREER, DoD YIP, DoE Early Career, and other early career grant programs, University of North Carolina at Charlotte, Charlotte, North Carolina, USA (Spring 2012)
- NSF Day, North Carolina State University, Raleigh, North Carolina, USA (Spring 2012)

SERVICE

*University of North Carolina at Charlotte (*departmental committee):*

- Advisory Committee for Project 645: Graduate Student Success Dashboard, member (Fall 2023 - Spring 2024)
- Chair of Anthropology Search Committee, member (Fall 2023 - Spring 2024)
- UNC Charlotte Tree Canopy Policy, stakeholder (Fall 2024)
- Environmental Sustainability Working Group, member (Spring 2023 - present)
- Faculty advisor, University of North Carolina at Charlotte Birding Club (Spring 2022 - present)
- Urban Analytics Search Committee*, member (Fall 2022 - Spring 2023)
- Faculty mentor, University of North Carolina at Charlotte Department of Geography and Earth Sciences, Charlotte, North Carolina, USA (Fall 2021 - Spring 2023)
- College Review Committee, member and co-Chair (Fall 2021 - Spring 2023)
- College of Liberal Arts and Sciences Race and Social Justice Committee, member (Fall 2020 - Spring 2022)
- Diversity and Inclusion Committee*, member and co-Chair (Fall 2019 - Spring 2022)
- Regional Stormwater Master Plan Working Group, member (Fall 2018 - Spring 2021)
- Tree Campus USA Committee, member (Fall 2014 - Spring 2021)
- Graduate Advisory Committee*, member (Spring 2018 - Fall 2021)
- Environmental Planner Search Committee*, co-Chair (Fall 2020 - Spring 2021)
- Departmental Review Committee*, Chair and member (Spring 2018 - Spring 2020)
- Faculty mentor, University of North Carolina at Charlotte ADVANCE Faculty Affairs and Diversity Office, Charlotte, North Carolina, USA (Fall 2017 - Spring 2019)
- University Faculty Council, alternate departmental representative (Fall 2017)
- Ecohydrology/Hydrometeorology Search Committee*, Chair (Fall 2016 - Spring 2017)
- Graduate Advisory Committee*, member (Fall 2015 - Spring 2017)
- Ecohydrology/Hydrometeorology Search Committee*, member (Fall 2015 - Spring 2016)
- Recruitment Committee*, member (Fall 2015 - Spring 2016)
- Director of the Botanical Gardens Recruitment Committee, member (Spring 2015)
- Scheduling Committee*, member (Spring 2014)
- Web, Information, and Technology Committee*, member (Fall 2013 - Spring 2014)
- Mentoring Committee*, member (Fall 2012 - Spring 2014)
- Seminar Series Committee*, member (Fall 2012 - Fall 2013)
- Sustainability Committee, member (Fall 2011 - Fall 2013)
- Task Force on the Future of the Botanical Gardens, member (Fall 2012 - Spring 2013)
- Remote Sensing Search Committee*, member (Fall 2012 - Spring 2013)

- Faculty Advisory Committee*, member (Fall 2011 - Spring 2013)
- Recruitment Committee*, member (Fall 2011 - Spring 2012)
- Bachelor of Science in Earth and Environmental Sciences Curriculum Revision Committee*, member (Spring 2011)
- Sustainability Committee*, member (Fall 2010)

Editor:

- Editor-in-Chief, *Current Landscape Ecology Reports*, Springer (2021 - 2024)
- Special Issue Editor, *What is Next for Urban Landscape Ecology?*, Land (2021)
- Section Editor, *Current Landscape Ecology Reports*, Springer (2014 - 2020)

Reviewer:

- Journal articles: *Acta Oecologica*, *BMC Biology*, *Biological Invasions*, *Canadian Journal of Forest Research*, *Current Zoology*, *Diversity and Distributions*, *Ecography*, *Ecological Applications*, *Écoscience*, *Environmental Management*, *Environmental Science & Policy*, *European Journal of Forest Research*, *Frontiers in Ecology and Evolution*, *Global Change Biology*, *Herpetological Conservation and Biology*, *Journal of Applied Ecology*, *Journal of Biogeography*, *Journal of Environmental Management*, *Journal of Land Use Science*, *Journal of Urban Ecology*, *Land Use Policy*, *Landscape Ecology*, *Landscape and Urban Planning*, *People and Nature*, *Proceedings of the Royal Society B: Biological Sciences*, *Northeastern Naturalist*, *Northwest Science*, *Ornis Fennica*, *PLoS ONE*, *Remote Sensing*, *Socio-Ecological Practice Research*, *Sustainability*, *Urban Ecosystems*, *Urban Forestry & Urban Greening*, *Wetlands*, *Wildlife Research*
- Proposals (number): National Science Foundation Division of Environmental Biology (1 ad-hoc review), National Science Foundation Geography and Spatial Sciences Program (2 ad-hoc reviews), National Science Foundation Dynamics of Coupled Natural and Human Systems Program (2 panel reviews), Czech Science Foundation Landscape Management, Forestry and Soil Biology, and Ecosystem Ecology Program (1 ad-hoc review), Natural Sciences and Engineering Research Council of Canada Discovery Program - Evolution & Ecology (1 ad-hoc review), Icelandic Research Fund (1 ad-hoc review)
- Textbooks (number): Oxford University Press (1), W.H. Freeman & Company (1)

Professional association memberships & service:

- Judge, Best Student Presentation, International Urban Wildlife Conference, Washington DC, USA (2023)
- Symposium organizer (with S. Magle and R. Urbanek), *Multi-city landscape ecology: towards a better understanding of urban ecological patterns and processes*, North American Regional Association of the International Association for Landscape Ecology Annual Meeting (2022)
- Session moderator, US Regional Association of the International Association for Landscape Ecology Annual Meetings (2016 & 2017)

- Judge, Best Student Presentation, International Association for Landscape Ecology World Congress, Portland, Oregon, USA (2015) and Association of Southeastern Biologists Annual Meeting, Montgomery, Alabama, USA (2017)
- Chair, Communications Committee, US Regional Association of the International Association for Landscape Ecology (2015-2016)
- Councillor-At-Large and member of the Executive Committee, US Regional Association of the International Association for Landscape Ecology (2013-2015)
- Memberships: Ecological Society of America, Society for Urban Ecology, North American Regional Association of the International Association for Landscape Ecology, The Wildlife Society, Association of American Geographers, American Geophysical Union

Other:

- Member, Mecklenburg Audubon Society Board (Summer 2024 – present)
- Member and co-Chair, City of Charlotte Tree Advisory Commission (Spring 2020 - present)
- Guest lecturer, University of North Carolina at Charlotte David R. Rabin School of Architecture, Charlotte, North Carolina, USA (Fall 2024)
- Instructor (short course), *Let your garden grow: How to recognize and welcome spontaneous arrivals that benefit wildlife*, University of North Carolina at Charlotte Botanical Gardens, Charlotte, North Carolina, USA (Summer 2024)
- Guest lecturer, Metrolina Regional Scholars Academy, Charlotte, North Carolina, USA (Spring 2022)
- Panelist, You Don't Need a STEM Degree to be a Citizen Scientist: Opportunities in Charlotte to Make a Difference (Fall 2020)
- Co-organizer (with C. Dumas, N. Kaza, and R. Urbanek), Biodiversity of Cities Symposium, UNC Chapel Hill, Chapel Hill, North Carolina, USA (Spring 2019)
- Tour guide, University of North Carolina at Charlotte Botanical Gardens (Summer 2018)
- Facilitator of nature scavenger hunt for kids, Sedgifest, Charlotte, North Carolina, USA (Spring 2018)
- Judge, GLOBE Southeast (U.S.) Regional Student Research Symposium, Charlotte, North Carolina, USA (Spring 2018)
- Teacher's aide, YWCA Youth Learning Centers, Charlotte, North Carolina, USA (2016 - 2018)
- Representative, Charlotte Reconnecting Ourselves with Nature (chapter of the North Carolina Wildlife Federation), Sedgifest, Charlotte, North Carolina, USA (Spring 2017)
- Guest lecturer, University of North Carolina at Charlotte Department of Geography and Earth Sciences, Charlotte, North Carolina, USA (Fall 2011, Spring 2012, Fall 2016, Spring 2017, Fall 2017)
- Panelist, Promoting Geoscience Research, Education, and Success Workshop (NSF-funded), Charlotte, North Carolina, USA (Fall 2015)
- Mentor, Project Scientist, Charlotte, North Carolina, USA (Summer 2013 & 2015)

- Judge, University of North Carolina at Charlotte Undergraduate Research Conference, Charlotte, North Carolina, USA (Spring 2014)
- Mentor, University of North Carolina at Charlotte Research Experience for 11th and 12th Grade Student Internship Program, Charlotte, North Carolina, USA (Summer 2012)
- Judge, University of North Carolina at Charlotte Graduate Research Symposium, Charlotte, North Carolina, USA (Spring 2012)
- Guest lecturer, Davidson College Biology Department, Davidson, North Carolina, USA (Spring 2012)
- Guest lecturer, University of North Carolina at Charlotte Department of Biological Sciences, Charlotte, North Carolina, USA (Fall 2011)
- Mentor, Girls Inc., Madison, Wisconsin, USA (2009-2010)
- Regional coordinator and volunteer, Bird Studies Canada Marsh Monitoring Program, Ottawa, Ontario, Canada (2002 & 2006-2008)
- Member, Annual Meeting of the Canadian Amphibian and Reptile Conservation Network Local Organizing Committee, Ottawa, Ontario, Canada (2004-2005)
- Chair, Ontario Ecology and Ethology Colloquium Program and Scheduling Committee, Ottawa, Ontario, Canada (2004-2005)
- Member, Friends of the Leitrim Wetlands, Ottawa, Ontario, Canada (2001-2003)
- Director and volunteer coordinator, Greenspace Alliance of Canada's Capital, Ottawa, Ontario, Canada (2002)
- Intern, Sierra Club of Canada, Ottawa, Ontario, Canada (2002)
- Volunteer, Bird Studies Canada Spring Migration Monitoring Program, Ottawa, Ontario, Canada (2002)

SELECTED MEDIA

- College of Humanities & Earth and Social Sciences: From landslides to food deserts: How collaborative research propels communities and may help NC rebuild after Helene (October 17, 2024) <https://chess.charlotte.edu/2024/10/17/from-landslides-to-food-deserts-how-collaborative-research-propels-communities-and-may-help-nc-rebuild-after-helene/>
- The Wildlife Society: Wildlife vocalizations: Sara Gagné (October 11, 2023) <https://wildlife.org/wildlife-vocalizations-sara-gagne/>
- Nature Revisited podcast, Episode 103: Sara Gagné – Nature at your door (September 4, 2023) <https://www.youtube.com/watch?v=CtIEUfNXQwQ>
- Backyard Ecology podcast: Exploring urban ecology: Understanding and appreciating nature where we live (August 10, 2023) <https://www.backyardecology.net/exploring-urban-ecology/>
- BirdWatching: Most plastic eaten by city vultures comes straight from food outlets (April 13, 2023) <https://www.birdwatchingdaily.com/news/science/most-plastic-eaten-by-city-vultures-comes-straight-from-food-outlets/>
- ZME Science News: Urban vultures are feasting on plastic waste from local restaurants and stores (April 12, 2023) <https://www.zmescience.com/ecology/urban-vultures-are-feasting-on-plastic-waste-from-local-restaurants-and-stores/>
- Frontiers Science News: Most plastic eaten by city vultures comes straight from food outlets (April 12, 2023) <https://blog.frontiersin.org/2023/04/12/frontiers-ecology-evolution-urban-vultures-in-us-easting-plastic/#:~:text=Researchers%20have%20shown%20that%20black,up%20of%20other%20undigested%20foods.>
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