Mason Fidino

Quantitative Ecologist

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Education

2013 – 2017 **Ph.D.**, *Ecology and Evolution*, University of Illinois at Chicago.
Advisors: Joel Brown, Seth Magle, and Chris Whelan

2005 – 2009 **B.S.**, *Environmental Science*, Western Washington University.
Advisor: David Wallin

Professional Experience

2017 – Present **Quantitative Ecologist**, *Urban Wildlife Institute*, Lincoln Park Zoo, Chicago, IL.

2014 – Present **Analytics Advisor**, *Urban Wildlife Information Network*.

2015 – 2017 **Ecological Analyst**, *Urban Wildlife Institute*, Lincoln Park Zoo, Chicago, IL.

2012 – 2015 **Coordinator of Wildlife Management**, *Urban Wildlife Institute*, Lincoln Park Zoo, Chicago, IL.

2011 – 2012 **Research Intern**, *Urban Wildlife Institute*, Lincoln Park Zoo, Chicago, IL.

2009 – 2010 **Environmental Technician**, *Environmental Assessment Services*, Richland, WA.

Publications

* denotes shared first authorship

In review or revision.

Fidino, M., Bender, J., Limbrick, K., Gallo, T., and Magle, S. B. (*in review*). Strolling through a century: recreating historical bird surveys to explore 100 years of change in an urban bird community.

Hursh, S. H., Bauder, J. M., **Fidino, M.**, and Drake, D. (*in review*). An urban cast of characters: Landscape use and cover influencing mammal occupancy in an american midwestern city.

MacDougall, B., Sander, H., **Fidino, M.**, Ahlers, A. A., Angstmann, J. L., Anthonysamy, W., Drake, D., Hursh, S. H., Larson, R., Lehrer, E. W., Magle, S. B., and Ryan, T. J. (*in review*). Landscape and socioeconomic factors structure mesopredator distributions in midwestern us cities.

Murray*, M. H., **Fidino*, M.**, Lehrer, E. W., Simonis, J. L., and Magle, S. B. (*in review*). An integrated model to assess visible signs of wildlife health with camera traps.

Published or in press.

Lehrer, E. W., Gallo, T., **Fidino, M.**, Kilgour, R. J., Wolff, P., and Magle, S. B. (*in*

press). Urban bat occupancy is highly influenced by noise and the location of water: considerations for nature-based urban planning. *Landscape and Urban Planning*.

Magle, S. B., Kay, C., Fake, K., **Fidino, M.**, Murray, M. H., Buckley, J., and Lehrer, E. W. (*in press*). Why do animals live in cities? *Frontiers for Young Minds*.

Fidino, M., Gallo, T., Lehrer, E. W., Murray, M. H., Kay, C., Sander, H. A., MacDougall, B., Salsbury, C. M., Ryan, T. J., Angstmann, J. L., Belaire, J. A., Dugelby, B., Schell, C., Stankowich, T., Amaya, M., Drake, D., Hursh, S. H., Ahlers, A. A., Williamson, J., Hartley, L. M., Zellmer, A. J., Simon, K., and Magle, S. B. (2020). Landscape-scale differences among cities alter common species' responses to urbanization. *Ecological Applications*.

Fidino, M., Barnas, G. R., Lehrer, E. W., Murray, M., and Magle, S. B. (2020). The influence of lure on detecting mammals with camera traps. *Wildlife Society Bulletin*.

Murray, M. H., **Fidino, M.**, Fyffe, R., Byers, K. A., Pettengill, J. B., Sondgeroth, K. S., Magle, S. B., Rios, M. J., Ortinau, N., and Santymire, R. M. (2020). City sanitation and socioeconomics predict rat zoonotic infection across diverse neighbourhoods. *Zoonoses and Public Health*.

Zellmer, A. J., Wood, E., Surasinghe, T., Putman, B. J., Pauly, G., Magle, S. B., Lewis, J., Kay, C., and **Fidino, M.** (2020). What can we learn from wildlife sightings during the covid-19 global shutdown? *Ecosphere*.

Fidino, M., Simonis, J. L., and Magle, S. B. (2019). A multi-state dynamic occupancy model to estimate local colonization-extinction rates and patterns of co-occurrence between two or more interacting species. *Methods in Ecology and Evolution*, 10(2):233–244.

Gallo*, T., **Fidino*, M.**, Lehrer, E. W., and Magle, S. B. (2019). Urbanization alters predator avoidance behaviors. *Journal of Animal Ecology*, 88(5):793–803.

Hopper, L. M., Egelkamp, C. L., **Fidino, M.**, and Ross, S. R. (2019). An assessment of touchscreens for testing primate food preferences and valuations. *Behavior Research Methods*, 51(2):639–650.

Magle, S. B., **Fidino, M.**, Lehrer, E. W., Gallo, T., Mulligan, M. P., Rios, M. J., Ahlers, A. A., Angstmann, J., Belaire, A., Dugelby, B., Gramza, A., Hartley, L., MacDougall, B., Ryan, T., Salsbury, C., Sander, H., Schell, C., Simon, K., and Drake, D. (2019). Advancing urban wildlife research through a multi-city collaboration. *Frontiers in Ecology and the Environment*, 17(4):232–239.

Voorhies, K. J., Nail, K. R., Szymanski, J., and **Fidino, M.** (2019). Projecting future impacts from threats and conservation on the probability of extinction for north american migratory monarch (*Danaus plexippus*) populations. *Frontiers in Ecology and Evolution*, 7:384.

Fidino, M., Herr, S. W., and Magle, S. B. (2018). Assessing online opinions of wildlife through social media. *Human Dimensions of Wildlife*, 23(5):482–490.

Gallo, T. and **Fidino, M.** (2018). Biodiversity: Making wildlife welcome in urban areas. *eLife*, 7:e41348.

Gallo, T., Lehrer, E. W., **Fidino, M.**, Kilgour, R. J., Wolff, P. J., and Magle, S. B. (2018). Need for multiscale planning for conservation of urban bats. *Conservation Biology*, 32(3):638–647.

Magle, S. B. and **Fidino, M.** (2018). Long-term declines of a highly interactive urban species. *Biodiversity and Conservation*, 27(14):3693–3706.

Murray, M. H., Fyffe, R., **Fidino, M.**, Byers, K. A., Rios, M. J., Mulligan, M. P., and Magle, S. B. (2018). Public complaints reflect rat relative abundance across diverse urban neighborhoods. *Frontiers in Ecology and Evolution*, 6:189.

Saiyed, S. T., Liubicich, R. C., **Fidino, M.**, and Ross, S. R. (2018). Stillbirth rates across three ape species in accredited american zoos. *American journal of primatology*, page e22870.

Fidino, M. and Magle, S. B. (2017). Using fourier series to estimate periodic patterns in dynamic occupancy models. *Ecosphere*, 8(9).

Fidino, M. and Magle, S. B. (2017). Trends in long-term urban bird research. In *Ecology and Conservation of Birds in Urban Environments*, pages 161–184. Springer.

Gallo, T., **Fidino, M.**, Lehrer, E. W., and Magle, S. B. (2017). Mammal diversity and metacommunity dynamics in urban green spaces: implications for urban wildlife conservation. *Ecological Applications*, 27(8):2330–2341.

Bender, J., **Fidino, M.**, Limbrick, K., and Magle, S. (2016). Assessing nest success of black-capped chickadees (poecile atricapillus) in an urban landscape using artificial cavities. *The Wilson Journal of Ornithology*, 128(2):425–429.

Fidino, M., Lehrer, E. W., and Magle, S. B. (2016). Habitat dynamics of the virginia opossum in a highly urban landscape. *The American Midland Naturalist*, 175(2):155–167.

Magle, S., Lehrer, E., and **Fidino, M.** (2016). Urban mesopredator distribution: examining the relative effects of landscape and socioeconomic factors. *Animal Conservation*, 19(2):163–175.

Selected Scientific Presentations

2019 A city's size and proportion of green space affects mammalian relative occupancy and response to urbanization: an analysis of 10 cities across the United States. The Internation Urban Wildlife Conference. Portland, Oregon.

2018 Advancing urban wildlife knowledge through a multi-city collaboration. The Wildlife Society. Cincinnati, Ohio.

— Long-term declines of a highly interactive species. Society for Conservation Biology. Toronto, Ontario.

— Long-term declines of a highly interactive species. International Association for Landscape Ecology. Chicago, Illinois.

2017 Using Fourier series to predict periodic patterns in dynamic occupancy models. Ecological Society of America. Portland, Oregon.

— Quantifying the structural and functional connectivity of habitat patches for Chicago area mesocarnivores. International Urban Wildlife Conference. San Diego, California.

2016 A Bayesian approach to incorporate patterns of co-occurrence into multi-species occupancy models. Society for Conservation Biology. Madison, Wisconsin.

2015 Mesocarnivore dynamics in a highly fragmented, yet highly permeable urban landscape. Ecological Society of America. Baltimore, Maryland.

2014 Habitat dynamics of the Virginia opossum (*Didelphis virginiana*) in a highly urban landscape. The Wildlife Society. Pittsburg, Pennsylvania.

Selected Invited Presentations

2020 **Lecture:** Urban wildlife research in Chicago and beyond. Loyola University. Chicago, Illinois.

2019 **Plenary:** Harnessing UWIN data to reshape the future of cities. The Urban Wildlife Information Network summit. Chicago, Illinois.

— **Lecture:** A city's size and proportion of green space affects mammalian relative occupancy and response to urbanization. Texas Tech University. Lubbock, Texas.

— **Seminar series:** Camera trapping across North America. The Fort Dearborn Audubon Society. Chicago, Illinois.

2018 **Lecture:** Advancing urban wildlife knowledge through a multi-city collaboration. International workshop on biodiversity and the urban-rural interface. Linde, Germany.

— **Seminar series:** Urban wildlife through space and time. Seminar series at Butler University. Indianapolis, Indiana.

2016 **Seminar series:** A historical analysis of bird species diversity in Lincoln Park, Chicago during spring migration. The Fort Dearborn Audubon Society. Chicago, Illinois.

Grants and Awards

2020 – 2022 **NSF** – Impacts of Urban Rats and Rodent Control on Public Health and Urban Wildlife Conservation (Senior Personnel, Award #1923882, $680,466).

2018 – 2020 **Grainger Foundation** – Urban Wildlife Information Network expansion (Co-PI, $250,000).

2014 – 2020 **Abra Prentice Wilkins Foundation** – Urban Wildlife Institute Expansion (Co-PI, $1,500,000).

2014 **The American Bluebird Society** – Assessing the nest success of urban cavity nesting birds (Co-PI, $600).

Teaching Experience

2020 **Mammal ID lab:** Presented on Illinois mammal identification tips for an undergraduate course at Loyola University.

2019 **Occupancy modeling and data management:** Gave a short course on the basic assumptions of occupancy modeling and camera trapping data management to 40 researchers at the Urban Wildlife Information Network summit held at the Lincoln Park Zoo.

2018 **Occupancy modeling in R:** Taught R programming and occupancy modeling to students and faculty at Butler University in Indianapolis, Indiana.

2017 **Software Carpentry course on R programming:** Assisted with course held at University of Illinois at Chicago.

2016 – Present **R programming and occupancy modeling:** Developed a two-day workshop to teach students, faculty and new partners to the Urban Wildlife Information Network the basics of R programming and how to model detection/non-detection data collected via camera trapping.

2016 **Workshop on generalized linear models, power analysis, and simulations in R:** Developed workshop to teach Lincoln Park Zoo staff on basics of generalized linear models and how to simulate data in R.

2014 **A review of bird count methods and analyses:** A workshop I developed and presented to the Chicago Audubon Society

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Reviewer

Journal count: 18

Biological Conservation, Canadian Journal of Zoology, Ecography, Ecology and Evolution, Ecological Applications, Ecology Letters, Environmental Conservation, Environmental Management, Human Dimensions of Wildlife, Journal of Fish and Wildlife Management, Journal of Mammalogy, Journal of Ornithology, Landscape and Urban Planning, PLOS One, Proceedings of the Royal Society B, Urban Ecosystems, The Wildlife Society Bulletin, Zoo Biology

Committee member

2020 – Present **External Ph.D. committee member** for Katie Fowler at University of Illinois at Chicago.
Thesis topic: Stress responses in captive and wild mammal populations.

2020 – Present **External Ph.D. committee member** for Rachel Larson at University of Iowa.
Thesis topic: Trophic interactions in urban environments.

2018 – Present **External Ph.D. committee member** for Anna Kase at University of South Dakota.
Thesis topic: False map turtle (*Graptemys pseudogeographica*) abundance and habitat utilization in the Missouri River, South Dakota.

Service and Outreach

Accessibility working group member at the Lincoln Park Zoo, which is tasked to make programs at the zoo more accessible for people with disabilities.

Environmental Justice working group member for the Urban Wildlife Information Network.

Moderator on Chicago Wildlife Watch, which is a citizen science project for people to help classify the camera trap images we collect throughout Chicago.

Research committee member at the Lincoln Park Zoo, which is tasked to evaluate research proposals from external and internal researchers who wish to conduct research on zoo grounds, with zoo data, or with zoo resources.

Technology working group member for the Urban Wildlife Information Network.

Academic Organizations

2015 – Present Ecological Society of America

2017 – Present Society for Conservation Biology

2014 – Present The Wildlife Society