

Kathleen LoGiudice, Ph.D.

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Education

Ph.D. Ecology and Evolution. 2000

Rutgers University, New Brunswick, New Jersey
Richard S. Ostfeld & Kathleen M. Scott, advisors
Baylisascaris procyonis and the decline of the Allegheny woodrat

Master of Science. Ecology and Evolution. 1995

Rutgers University, New Brunswick, New Jersey
Kathleen M. Scott, advisor
Control of *Baylisascaris procyonis* in raccoons through the use of anthelmintic baits.

Bachelor of Science. Biology. 1981

Boston College, Chestnut Hill, MA

Relevant Work and Teaching Experience

Union College, Schenectady, NY

Full professor	2015 – present
Associate professor	2008 – 2015
Assistant professor	2002 – 2008

Institute of Ecosystem Studies, Millbrook, NY

Visiting Scientist	2003 – 2013
Post-doctoral Fellow	2000 – 2002

Rutgers University, New Brunswick, NJ

Lecturer, General Biology (co-taught)	Summer 1999
Assistant Head TA, General Biology	1995
Teaching assistant (Laboratory instruction)	1993 - 2000

Publications (*indicates student co-author):

- LoGiudice, K.**, K. Kurchena*, K. Christopher*, and N. Scott*. 2018. Exploration of stable isotope analysis for tick host identification. *Ticks and Tick-Borne Diseases*. 9:151-154.
- Hersh, M.H., R.S. Ostfeld, D.J. McHenry, M. Tibbetts, J.L. Brunner, M.E. Killilea, **K. LoGiudice**, K.A. Schmidt, F. Keesing. 2014. Co-Infection of blacklegged ticks with *Babesia microti* and *Borrelia burgdorferi* is higher than expected and acquired from small mammal hosts. *PLOS ONE*. 9:e99348. DOI: 10.1371/journal.pone.0099348.
- Keesing, F., D. McHenry, M. Hersh, M. Tibbetts, J. Brunner, M. Killilea, **K. LoGiudice**, K. Schmidt, and R.S. Ostfeld. 2014. Prevalence of human-active and variant-1 strains of the tick-borne pathogen *Anaplasma phagocytophilum* in hosts and forests

- of eastern North America. *American Journal of Tropical Medicine & Hygiene*. 91:302-309. DOI: 10.4269/ajtmh.13-0525.
- Keesing, F., M. Hersh, M. Tibbetts, D. McHenry, S. Duerr, J. Brunner, M. Killilea, K. **LoGiudice**, K. Schmidt, and R.S. Ostfeld. 2012. Reservoir competence of vertebrate hosts for *Anaplasma phagocytophilum*. *Emerging Infectious Diseases*. 18(12):213-216. DOI: <http://dx.doi.org/10.3201/eid1812.120919>.
- Morlando, S. *, S. J. Schmidt, **K. LoGiudice**. 2012. Reduction in Lyme disease risk as an economic benefit of habitat restoration. *Restoration Ecology*. 20(4):498–504. doi: 10.1111/j.1526-100X.2011.00796.x.
- Brunner, J.L. L. Cheney, F. Keesing, M. Killilea, **K. LoGiudice**, A. Previtali and R.S. Ostfeld. 2011. Molting Success of *Ixodes scapularis* Varies among individual blood meal hosts and species. *Journal of Medical Entomology*, 48(4):860-866. doi: 10.1603/ME10256.
- Bowne, D. R., A. L. Downing, M. F. Hoopes, **K. LoGiudice**, C. L. Thomas, L. J. Anderson, T. Gartner, D. J. Hornbach, K. Kuers, J. Machado, B. R. Pohlad, K. L. Shea. 2011. Transforming ecological science at primarily undergraduate institutions through collaborative networks. *BioScience*. 61:386-392. doi: 10.1525/bio.2011.61.5.7.
- Keesing, F.A., J. Brunner, S. Duerr, M. Killilea, **K. LoGiudice**, K. Schmidt, H. Vuong, and R.S. Ostfeld. 2009. Hosts as ecological traps for the vector of Lyme disease. *Proceedings of the Royal Society B*. 276:3911-3919. doi: 10.1098/rspb.2009.1159.
- LoGiudice, K.**, S. Duerr, M. Newhouse, K. Schmidt, Killilea, M. and R.S. Ostfeld. 2008. Impact of host community composition on Lyme disease risk. *Ecology* 89(10):2841–2849.
- Catrasvas, P. and **K. LoGiudice**. 2008. SEM photograph of the black-legged tick (*Ixodes scapularis*). *Bulletin of the Ecological Society of America* 89:396. Bulletin tick
- Brunner, J.L., **K. LoGiudice**, and R.S. Ostfeld. 2008. Estimating the importance of zoonotic reservoir hosts in pathogen transmission: prevalence and infectivity. *Journal of Medical Entomology* 45(1):139-147.
- LoGiudice, K.** 2008. Multiple causes of the Allegheny woodrat decline: A historical-ecological examination. *In: The Allegheny Woodrat: Ecology, Conservation and Management of a Declining Species*. John D. Peles and Janet Wright (Editors). Springer-Verlag Publishers.
- LoGiudice, K.** 2006. Toward a synthetic view of extinction: A history lesson from a North American rodent. *BioScience*. 56:687-693.
- Ostfeld, R.S., F. Keesing, and **K. LoGiudice**. 2006. Community ecology meets epidemiology: the case of Lyme Disease. Pages 28-40 *In* “Disease Ecology: community structure and pathogen dynamics”. S.K. Collinge and C. Ray (Editors). Oxford University Press.
- Ostfeld, R.S., and **K. LoGiudice**. 2003. Community disassembly, biodiversity loss, and the erosion of an ecosystem service. *Ecology*. 84:1421-1427.
- LoGiudice, K.**, R.S. Ostfeld, K.A. Schmidt, and F. Keesing. 2003. The ecology of infectious disease: Effects of host diversity and community composition on Lyme disease risk. *Proceedings of the National Academy of Sciences*. 100:567-571.
- LoGiudice, K.** 2003. Trophically transmitted parasites and the conservation of small populations: Raccoon roundworm and the imperiled Allegheny Woodrat. *Conservation Biology*. 17:258-266.
- Meiners, S.J., and **K. LoGiudice**. 2003. Temporal consistency in the spatial pattern of seed predation across a forest-old field edge. *Plant Ecology*. 168:45-55.

- Cottingham, K.L., Z.G. Cardon, C.M. D'Antonio, C.L. Dent, S.E.G. Findlay, W.K. Lauenroth, **K. LoGiudice**, R.S. Stelzer, and D.L. Strayer. 2003. Increasing modeling savvy: Strategies to advance quantitative modeling skills for professionals within ecology. Pages 428-436 *In: The Role of Models in Ecosystem Science*, Cary Conference IX. C.D. Canham, J.J. Cole, and W. Lauenroth (Editors), Princeton University Press. Princeton, NJ.
- LoGiudice, K.**, and R.S. Ostfeld. 2002. Interactions between mammals and trees: Predation on mammal-dispersed seeds and the effect of ambient food. *Oecologia*. 130:420-425.
- LoGiudice, K.** 2001. Latrine foraging strategies of two small mammals: Implications for the transmission of *Baylisascaris procyonis*. *American Midland Naturalist*. 146:369-378.

Media Coverage:

Regarding ongoing Allegheny woodrat monitoring in NJ:

- NJ Star Ledger video on Allegheny woodrat monitoring. State biologists fight to save an endangered rat species - Video | <http://videos.nj.com/star-ledger/2012/10/state-biologists-fight-to-save.html>

Regarding Morlando, et al., 2012:

- Albany Times Union, "Pine Bush fires cut tick threat: Union College study shows Lyme disease-carrying pests reduced. B. Nearing Staff writer. Thursday, June 16, 2011. <http://www.timesunion.com/local/article/Pine-Bush-fires-cut-tick-threat-1426306.php#ixzz285Zn1dnn>

Regarding research collaboration:

- American Museum of Natural History Video on Lyme disease research [American Museum of Natural History - Science Bulletins](#). Produced fall 2011.

Regarding LoGiudice, et al., 2003:

- Business Week, "A new tack on ticks. Jan 27, 2003.
- Albany Times Union, "Study links Lyme disease, rural building – Union College biologist helps to research connection between species diversity and spread of illness" January 10, 2003.
- The Daily Gazette, "Suburban wildlife linked to disease risk for humans. Union College professor's study said to show ills of large-lot zoning" January 17, 2003.
- New Scientist, March 10, 2003, Vol. 17:31.
- Science Now (web page of the American Association for the Advancement of Science), "Biodiversity thwarts disease?" January 2003.
- Reuters.com, "Lyme disease risk rises as species disappear: Study". January 2003.
- United Press International, "Fewer species mean more diseases". January 2003.
- FortWayne.com, "An ailing ecosystem may threaten human health". January 2003.
- New Jersey Star Ledger "Small pack of supporters: Endangered rat gathers some help". Article about woodrat research. November. 2001

Grants Received

NSF/RUI grant with Felicia Keesing (lead PI) at Bard College and others. Comparative Disease Biology: The Ecology of <i>Anaplasma phagocytophilum</i> Union College budget: \$94,613.	2008
LI-COR LEEF Grant. Integrating classroom, laboratory and field research in gas exchange and photosynthesis at Union College. Co-PI with Jeffrey Corbin (Lead PI.) and Steven Rice. Amount requested for equipment purchase: \$25,000.	2007
Union College Faculty Research Fund, \$2,701.	2003
National Institutes of Health (National Institutes of Allergy and Infectious Disease), R01 grant. Co-PI with R.S. Ostfeld (Lead PI), K.A. Schmidt and F.A. Keesing. Biodiversity, habitat fragmentation, and Lyme disease risk. \$1.6 million.	2003-2007
Hutcheson Memorial Forest Research Grant. \$1,000.	1997 & 1998
American Society of Mammalogists Grants-In-Aid of Research. \$1,100 each.	1996 & 1997
Sigma Delta Epsilon Hartley/SDE Fellowship, \$3,000.	1997
American Museum of Natural History, Theodore Roosevelt Memorial Fund, \$945.	1996
New Jersey Dept. of Fish, Game and Wildlife Research Supplement, approximately \$10,000.	1996
Sigma Xi, The Scientific Research Society, \$475.	1996
Leathem/Steinitz/Stauber Research Fund, Rutgers University, \$1,500.	1995 & 1996

Awards

Catravas, P. and K. LoGiudice. 2008. Semifinalist Honor for “A parasite engulfed” SEM image of <i>Ixodes scapularis</i> engulfed by entomopathogenic fungus. 2008 International Science and Engineering Visualization Challenge, sponsored by the National Science Foundation and the American Association for the Advancement of Science.	2008
Graduate School Teaching Excellence Award, Rutgers University	2000
American Society of Mammalogists A. Brazier Howell Award for best submitted manuscript	2000
B. Elizabeth Horner Award for the highest rated grant application, American Society of Mammalogists	1997 and 1996

Professional Service

National Service:

- Vice chair of the Researchers at Undergraduate Institutions Section of the Ecological Society of America (2007/9)
- Conservation of Land Mammals Committee, American Society of Mammalogists (1999-2004). Sub-committee chair-Aldo Leopold Award (2001-2003).
- Animal Care and Use Committee, American Society of Mammalogists (2000-2004)

Professional Memberships:

Ecological Society of America
 EREN Ecological Research as Education Network (Founding member and Current Board Member)

Peer Reviewer:**Journals:**

American Midland Naturalist	New Forests
American Naturalist	Oecologia
Animal Conservation	Oikos
Annals of the New York Academy of Sciences	Philosophical Transactions of the Royal Society of London B
Conservation Biology	Restoration Ecology
Ecology	Southeastern Naturalist – Guest editor
Environmental Evidence	The Journal of Mammalogy
Environmental Management	The Journal of Parasitology
Frontiers in Ecology and the Environment	Theoretical Ecology
Journal of Vector Borne Diseases	Veterinary and Medical Entomology
Journal of Wildlife Diseases	

Grants Reviewed:

Outside reviewer for numerous National Science Foundation grant proposals
 Environmental Protection Agency Environmental Education Grants
 Association for Women in Science Educational Foundation
 Huyck Preserve Research Grants

Other Reviews:

NYS State Wildlife Action Plan Taxonomic Expert to assess Species of Greatest
 Conservation Need
 Panelist: New Jersey Mammal Status Review
 Panelist: National Science Foundation Evolutionary Ecology (2010)

Masters Committee:

Cory Drummond: The Ecological Impacts of Habitat Fragmentation on Black-Legged
 Ticks (*Ixodes scapularis*) and Lyme Disease. 2004. University at Albany.

Ph.D. Committee. In progress.

Aaron C. Gooley. Wildlife Research Lab. Southern Illinois University Carbondale, IL.

Recent Refereed Abstracts and Presentations (*Student Presenters and Coauthors):

K. LoGiudice, K. Kurchena*, K. Christopher*. 2016. Feasibility of stable isotope
 analysis to identify host species identity of black-legged ticks. Annual Meeting of
 the Ecological Society of America, August 12, 20, 2016.
 K. Christopher* and K. LoGiudice. 2016. Impact of Predators on the Survival of
 Engorged *Ixodes scapularis* (Black-Legged Ticks). Northeast Natural History
 Conference. Springfield, MA, April 20, 2016.

- K. Kurchena* and K. LoGiudice. 2016. Identification of Host Species via Isotopic Signature In Black-legged Ticks. Northeast Natural History Conference. Springfield, MA, April 20, 2016.
- Lindquist, E.S., Kuers, K, Dosch, J.J., Shea, K.L. Anderson, L.J. LoGiudice, K. “EREN's Permanent Forest Plot Project: Utilizing a network of faculty and undergraduates to investigate forest dynamics and long-term data management best practices”. Paper presentation. Organized Oral Session 51-5, Annual meetings of the Ecological Society of America. Sacramento, CA.
- C. Cook*, D. Rice* and K. LoGiudice. 2014. Effects of soil pH on Blacklegged tick survival and development. Northeast Natural History Conference. Springfield, MA. April 4, 2014.
- K.E. Ahern* and K. LoGiudice. 2013. “The Effects of Soil pH and Composition on Blacklegged Tick Molting Success” FASEB J. 27:714.2 (Experimental Biology meeting).
- Hillenbrand, E. *, R. Davis*, and K. LoGiudice. 2012. Patterns of Intestinal Parasite Prevalence in Urban and Rural Chipmunk Populations. Poster presented to the Northeast Natural History Conference. Syracuse, NY. April 16, 2012.
- LoGiudice, K., S. Ostrow*, M. Campano, N. Hoberman*, K. O’Connor*. Possible interactions between intestinal parasites and tick feeding success in sciurids. Annual meetings of the Mid-Atlantic Section of the Ecological Society of America. Montclair, NJ. April 9-10, 2011.
- LoGiudice, K., S.J. Schmidt and S. Morlando*. Albany Pine Bush Habitat Restoration Reduces the Risk of Lyme Disease: A Cost-Benefit Analysis with a Novel Benefit. Invited Conference Paper: Northeast Natural History Conference. Albany, NY April 6-9, 2011.
- Smith, Z.C.*, Eastman, R.*, Kehlbeck, J.D., LoGiudice, K. 2010. Bioassay guided fractionation of anthelmintic compounds from *Paulownia tomentosa*. Abstracts of Papers of the American Chemical Society. 239: 868-CHED.
- Morlando*, S., S.J. Schmidt, and K. LoGiudice. A habitat restoration that pays for itself via reduction in tick-borne disease risk. Abstract COS 21-4 presented at the 95th Annual Meeting of the Ecological Society of America. Pittsburgh, PA. August 6, 2010.