

*RICHARD S. OSTFELD*

Cary Institute of Ecosystem Studies  
Box AB; 65 Sharon Turnpike  
Millbrook NY 12545-0129  
Telephone: (845) 677-5343 -- FAX: (845) 677-5976  
E-mail: [Rostfeld@ecostudies.org](mailto:Rostfeld@ecostudies.org)

**Education:**

Ph.D. in Zoology, University of California Berkeley, 1985  
BA in Biology, University of California Santa Cruz, 1979

**Professional Positions:**

2017-present: Distinguished Senior Scientist, Cary Institute of Ecosystem Studies  
2004- 2017: Senior Scientist, Cary Institute of Ecosystem Studies  
2001-4: Scientist, Institute of Ecosystem Studies  
1996: Visiting Scientist, Department of Integrative Biology, Univ. California,  
Berkeley  
1995-2000: Associate Scientist, Institute of Ecosystem Studies  
1995- present: Adjunct Professor and Scientist, Univ. of Connecticut  
1991- present: Associate Member of the Graduate Faculty in Ecology, Rutgers University  
1990-1995: Assistant Scientist, Institute of Ecosystem Studies

**Selected Professional Honors:**

2019: Elected Fellow, American Academy of Arts and Sciences  
2018: Henry J. Oosting Memorial Lectureship, Duke University  
2017: Global Scholar, Harvard University, Planetary Health Alliance  
2017: EnviroDay Keynote Lecturer, University of Virginia  
2016: Edwin Way Teale Lecturer, University of Connecticut  
2015: George B. Saul Lecturer, Middlebury College  
2014: Elected Fellow, American Association for the Advancement of Science  
2014: Elected Fellow, Ecological Society of America  
2012: Keynote Speaker, Climate Change and Health Symposium, Brown University  
2009: C. Hart Merriam Award from the American Society of Mammalogists

**Research Interests and Activities:**

My research interests fall into the following general topics: Ecology of infectious diseases; Linking community ecology and epidemiology; Behavioral, population, and community ecology of mammals; Animal population dynamics; Landscape epidemiology.

## Publications:

### *Published*

1. Ostfeld, R.S. and F. Keesing. 2020. Planetary health and infectious disease. Chapter in S.S. Myers and H. Frumkin, eds. Planetary Health (textbook).
2. Magnusson, M., I.R. Fischhoff, F. Ecke, B. Hornfeldt, and R.S. Ostfeld. 2020. Effect of spatial scale and latitude on diversity-disease relationships. *Ecology* e02955.
3. Fischhoff, I. R., T. Huang, S. K. Hamilton, B. A. Han, S. L. LaDeau, R. S. Ostfeld, E. J. Rosi, and C. T. Solomon. 2020. Parasite and pathogen effects on ecosystem processes: A quantitative review. *Ecosphere* 11(5):e03057. 10.1002/ecs2. 3057
4. Burtis, J., J.B. Yavitt, T. Fahey, and R.S. Ostfeld. 2019. Ticks as soil-dwelling arthropods: An intersection between disease and soil ecology. *Journal of Medical Entomology* 56:1555-1564.
5. Fischhoff, I.R., S.E. Bowden, F. Keesing, and R.S. Ostfeld. 2019. Systematic review and meta-analysis of tick-borne disease risk factors in residential yards, neighborhoods, and beyond. *BMC Infectious Diseases* 19:1-11.
6. Landesman, W.J., K. Mulder, B.F. Allan, L.A. Bashor, F. Keesing, K. LoGiudice, and R.S. Ostfeld. 2019. Potential effects of blood meal host on bacterial community composition in *Ixodes scapularis* nymphs. *Ticks and Tick-borne Diseases* 10:523-527.
7. Han, B.A. and R.S. Ostfeld. 2019. Topic modeling of major research themes in disease ecology of mammals. *Journal of Mammalogy* 100:1008-1018.
8. Mowry, S., F. Keesing, I.R. Fischhoff, and R.S. Ostfeld. 2019. Predicting larval tick burden on white-footed mice with an artificial neural network. *Ecological Informatics* 52:150-158.
9. Rohr, J.R., Barrett, C.B., Civitello, D.J., Craft, M.E., Delius, B., DeLeo, G.A., Hudson, P.J., Jouanard, N., Nguyen, K.H., Ostfeld, R.S., Remais, J.V., Riveau, G., Sokolow, S., and Tilman, G.D. 2019. Emerging infectious diseases and the links to global food production. *Nature Sustainability* 2 (6): 445-452.
10. Fischhoff, I.R., F. Keesing, J. Pendleton, D. DePietro, M. Teator, S. Duerr, S. Mowry, A. Pfister, S.L. LaDeau, and R.S. Ostfeld. 2019. Assessing effectiveness of recommended residential yard management measures against ticks. *Journal of Medical Entomology* <https://doi.org/10.1093/jme/tjz077>.
11. Fischhoff, I.R., F. Keesing, and R.S. Ostfeld. 2019. Risk factors for bites and diseases associated with blacklegged ticks: a meta-analysis. *American Journal of Epidemiology* <https://doi.org/10.1093/aje/kwz130>.
12. Dhawan, R., I.R. Fischhoff, and R.S. Ostfeld. 2018. Effects of weather variability on population dynamics of white-footed mice (*Peromyscus leucopus*) and eastern chipmunks (*Tamias striatus*). *Journal of Mammalogy* 99:1436-1443.
13. Emmering, Q.C., J.K. Kelly, R.S. Ostfeld, and K.A. Schmidt. 2018. Variation in coexisting birds to exploit spatial heterogeneity in small mammal activity. *Journal of Avian Biology* 2018: e01946 doi: 10.1111/jav.01946.

14. Keesing, F., R.S. Ostfeld, S. Okanga, S. Hockett, B.R. Bayles, R. Chaplin-Kramer, L.P. Fredericks, T. Hedlund, V. Kowal, H. Tallis, C.M. Warui, S.A. Wood, and B.F. Allan. 2018. Consequences of integrating livestock and wildlife in an African savanna. *Nature Sustainability*. 1: 566-573.
15. Ostfeld, R.S., T. Levi, F. Keesing, K. Oggenfuss, and C.D. Canham. 2018. Tick-borne disease risk in a forest food web. *Ecology* 99:1562-1573.
16. Ostfeld, R.S., D. Brisson, K. Oggenfuss, J. Devine, M.Z. Levy, and F. Keesing. 2018. Effects of a zoonotic pathogen, *Borrelia burgdorferi*, on the behavior of a key reservoir host. *Ecology and Evolution* 8:4074-4083.
17. Fischhoff, I.R., J. Burtis, F. Keesing, and R.S. Ostfeld. 2018. Tritrophic interactions between a fungal pathogen, and spider predator, and the blacklegged tick. *Ecology and Evolution* 2018: 1-11, DOI: 10.1002/ece3.4271.
18. Keesing, F., and R.S. Ostfeld. 2018. The Tick Project: testing environmental methods of preventing tick-borne diseases. *Trends in Parasitology* 34: 447-450.
19. Allan, B.F., H. Tallis, R. Chaplin-Kramer, S. Hockett, G. Kowal, J. Musengezi, S. Okanga, R.S. Ostfeld, J. Schieltz, C. Warui, S.A. Wood, and F. Keesing. 2017. Can integrating wildlife and livestock enhance the delivery of ecosystem services in central Kenya? *Frontiers in Ecology and the Environment* 15: 328-335.
20. Ostfeld, R.S. 2017. Biodiversity loss and the ecology of infectious diseases. *The Lancet Planetary Health* 1:e2-e3. [https://doi.org/10.1016/S2542-5196\(17\)30010-4](https://doi.org/10.1016/S2542-5196(17)30010-4).
21. Ostfeld, R.S. 2017. Tropical forests and child health. *The Lancet Planetary Health* e165. DOI: [http://dx.doi.org/10.1016/S2542-5196\(17\)30085-2](http://dx.doi.org/10.1016/S2542-5196(17)30085-2)
22. Fischhoff, I.R., F. Keesing, and R.S. Ostfeld 2017. The tick biocontrol agent *Metarhizium brunneum* (= *M. anisopliae*) (strain F52) does not reduce non-target arthropods. *PLOS ONE* 12: e0187675.
23. Robertson, B.A., R.S. Ostfeld, and F. Keesing 2017. Trojan females and Judas goats: Evolutionary traps as tools in wildlife management. *BioScience* 67:982-993.
24. Ostfeld, R.S. 2017. Zoonoses: infectious diseases transmissible between humans and animals, 4<sup>th</sup> edition. [Book review]. *Quarterly Review of Biology* 92:346-347.
25. Kelly, J.K., K.A. Schmidt, and R.S. Ostfeld. 2017. Co-existing ground-nesting passerines are not alike: rodents and conspecific abundance differentially affect nest survival in the ovenbird and the veery. *Wilson Bulletin* 129(1):112-121.
26. Vuong, H.B., G.S. Chiu, P.E. Smouse, D.M. Fonseca, D. Brisson, P J. Morin, and R.S. Ostfeld. 2017. Influences of host community characteristics on *Borrelia burgdorferi* infection prevalence in blacklegged ticks. *PLoS ONE* 12:e0167810. doi:10.1371/journal.pone.0167810.
27. Ostfeld, R.S. and F. Keesing. 2017. Is biodiversity bad for your health? *Ecosphere* 8(3):e01676. doi:10.1002/ecs2.1676.

28. Manore, C.A., R.S. Ostfeld, F.B. Agosto, H. Gaff, and S.L. LaDeau. 2017. Defining the risk of Zika and chikungunya virus transmission in human population centers of the eastern United States. *PLoS Neglected Tropical Diseases* 11:e0005255. doi:10.1371/journal.pntd.0005255.
29. Levi, T., F. Keesing, R.D. Holt, M. Barfield, and R.S. Ostfeld. 2016. Quantifying dilution and amplification in a community of hosts for tick-borne pathogens. *Ecological Applications* 26:484-498.
30. Granter, S.R., R.S. Ostfeld, and D.J. Milner, Jr. 2016. Where the wild things aren't. *American Journal of Clinical Pathology* 0:1-3. doi:10.1093/ajcp/aqw197.
31. Burtis, J., P. Sullivan, T. Levi, K. Oggenfuss, T. Fahey, and R.S. Ostfeld. 2016. The impact of temperature and precipitation on blacklegged tick activity and Lyme disease incidence in endemic and emerging regions. *Parasites & Vectors* 9:606-616.
32. Levi, T., A. Massey, R.D. Holt, F. Keesing, R.S. Ostfeld, and C.A. Peres. 2016. Does biodiversity protect humans against infectious disease?: comment. *Ecology* 97:536-546.
33. Springer, Y.P., D. Hoekman, P.T.J. Johnson, P.A. Duffy, R.H. Kao, D.T. Barnett, B.F. Allan, B.R. Amman, C.M. Barker, R. Barrera, C.B. Beard, L. Beati, M. Begon, M.S. Blackmore, W.E. Bradshaw, D. Brisson, C.H. Calisher, J.E. Childs, M.A. Diuk-Wasser, R.J. Douglass, R.J. Eisen, D.H. Foley, J.E. Foley, H.D. Gaff, S.L. Gardner, H.S. Ginsberg, G.E. Glass, S.A. Hamer, M.H. Hayden, B. Hjelle, C.M. Holzapfel, S.A. Juliano, L.D. Kramer, A.J. Kuenzi, S.L. LaDeau, T.P. Livdahl, J.N. Mills, C.G. Moore, S. Morand, R.S. Nasci, N.H. Ogden, R.S. Ostfeld, R.R. Parmenter, J. Piesman, W.K. Reisen, H.M. Savage, D.E. Sonenshine, A. Swei, and M.J. Yabsley. 2016. Continental-scale surveillance of infectious agents: tick-, mosquito, and rodent-borne parasite sampling designs for NEON. *Ecosphere* 7(5):e01271.
34. Burtis, J.C., R.S. Ostfeld, J.B. Yavitt, and T.H. Fahey. 2016. The relationship between soil arthropods and the overwinter survival of *Ixodes scapularis* (Acari: Ixodidae) under manipulated snow cover. *Journal of Medical Entomology* 53:225-229.
35. Keesing, F. and R.S. Ostfeld. 2015. Is biodiversity good for your health? *Science* 349:235-236.
36. Johnson, P.T.J., R.S. Ostfeld, and F. Keesing. 2015. Frontiers in research on biodiversity and disease. *Ecology Letters* 18:1119-1133.
37. Ostfeld, R.S. and J.L. Brunner. 2015. Climate change and *Ixodes* tick-borne diseases of humans. *Philosophical Transactions of the Royal Society B* 370:20140051. doi:10.1098/rstb.2014.0051.
38. Rosenthal, S.R., R.S. Ostfeld, S.T. McGarvey, M. Lurie, and K.F. Smith. 2015. Redefining disease emergence to improve prioritization and macroecological analyses. *One Health* 1:17-23.

39. Levy, M.Z., A. Tustin, R. Castillo-Neyra, T.S. Mabud, K. Levy, C.M. Barbu, V.R. Quispe-Machaca, J. Ancca-Juarez, K. Borrini-Mayori, C. Naquira-Velarde, and R.S. Ostfeld. 2015. Bottlenecks in domestic animal populations can facilitate the emergence of *Trypanosoma cruzi*, the etiological agent of Chagas Disease. *Proceedings of the Royal Society B*: 282:20142807. <http://dx.doi.org/10.1098/rspb.2014.2807>.
40. Estrada-Peña, A., J. de la Fuente, R.S. Ostfeld, and A. Cabezas-Cruz. 2015. Interactions between tick and transmitted pathogens evolved to minimize competition through nested and coherent networks. *Nature Scientific Reports* 5:10361. doi:10.1038/srep10361.
41. Ostfeld, R.S. 2015. Interactions between mammals and pathogens: an introduction. *Journal of Mammalogy* 96:2-3.
42. Parham, P.E., J. Waldock, G.K. Christophides, D. Hemming, F. Augusto, K.J. Evans, N. Fefferman, H. Gaff, A. Gumel, S. LaDeau, S. Lenhart, R.E. Mickens, E.N. Naumova, R.S. Ostfeld, P.D. Ready, M.B. Thomas, J. Velasco-Hernandez, and E. Michael. 2015. Climate, environmental and socio-economic change: weighing up the balance in vector-borne disease transmission. *Philosophical Transactions of the Royal Society B* 370:20130551. doi:10.1098/rstb.2013.0551.
43. Levi, T., F. Keesing, K. Oggenfuss, and R.S. Ostfeld. 2015. Accelerated phenology of blacklegged ticks under climate warming. *Philosophical Transactions of the Royal Society B* 370:20130556. doi:10.1098/rstb.2013.0556.
44. Ostfeld, R.S., T. Levi, A.E. Jolles, L.B. Martin, P.R. Hosseini, and F. Keesing. 2014. Life history and demographic drivers of reservoir competence for three tick-borne zoonotic pathogens. *PLoS ONE* 9:e107387.
45. Ostfeld, R.S. 2014. "Disease Ecology." In: D. Gibson (ed.). *Oxford Bibliographies in Ecology*. New York: Oxford University Press. doi:10.1093/OBO/9780199830060-0128.
46. Granter, S.R., A. Bernstein, and R.S. Ostfeld. 2014. Of mice and men: Lyme disease and biodiversity. *Perspectives in Biology and Medicine* 57:198-207.
47. Gortázar, C., L.A. Reperant, T. Kuiken, J. de la Fuente, M. Boadella, B. Martínez, J.F. Ruiz-Fons, A. Estrada-Peña, C. Drosten, G. Medley, R.S. Ostfeld, A.T. Peterson, K.C. VerCauteren, C. Menge, M. Artois, C. Schultsz, R.D. Delahay, J. Serra-Cobo, R. Poulin, F. Keck, A.A. Aguirre, H. Henttonen, A. Dobson, S.J. Kutz, and J. Lubroth. 2014. Crossing the interspecies barrier: opening the door to zoonotic pathogens. *PLoS Pathogens* 10: e1004129.
48. Hersh, M.H., R.S. Ostfeld, D.J. McHenry, M. Tibbetts, J.L. Brunner, M.E. Killilea, K. LoGiudice, K.A. Schmidt, and 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.

49. Aliota, M.T., A.P. Dupuis II, M.P. Wilczek, R.J. Peters, R.S. Ostfeld, and L.D. Kramer. 2014. The prevalence of zoonotic tick-borne pathogens in *Ixodes scapularis* collected in the Hudson Valley, New York State. *Vector-borne and Zoonotic Diseases* 14:245-50. doi:10.1089/vbz.2013.1475.
50. Richer, L.M., D. Brisson, R. Melo, R.S. Ostfeld, N. Zeidner, and M. Gomes-Solecki. 2014. Reservoir targeted vaccine against *Borrelia burgdorferi*: A new strategy to prevent Lyme disease transmission. *Journal of Infectious Diseases* 209:1972-1980. doi:10.1093/infdis/jiu005.
51. Hersh, M.H., S.L. LaDeau, M.A. Previtali, and R.S. Ostfeld. 2014. When is a parasite not a parasite? Effects of larval tick burdens on white-footed mouse survival. *Ecology* 95:1360-1369.
52. Estrada-Peña, A., R.S. Ostfeld, A.T. Peterson, R. Poulin, and J. de la Fuente. 2014. Effects of environmental change on zoonotic disease risk: an ecological primer. *Trends in Parasitology* 30:205-214.
53. Keesing, F., D.J. McHenry, M. Hersh, M. Tibbetts, J.L. Brunner, M. Killilea, K. LoGiudice, K.A. 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 and Hygiene* 91:302-309.
54. Vuong, H.B., C.D. Canham, D. Fonseca, D. Brisson, P.J. Morin, P.E. Smouse, and R.S. Ostfeld. 2014. Occurrence and transmission efficiencies of *Borrelia burgdorferi* ospC types in avian and mammalian wildlife. *Infection, Genetics & Evolution* 27:594-600. <http://dx.doi.org/10.1016/j.meegid.2013.12.011>.
55. Luber, G., K. Knowlton, J. Balbus, H. Frumkin, M. Hayden, J. Hess, M. McGeehin, N. Sheats, L. Backer, C.B. Beard, K.L. Ebi, E. Maibach, R.S. Ostfeld, C. Wiedinmyer, E. Zielinski-Gutiérrez, and L. Ziska, 2014. Ch. 9: Human Health. *Climate Change Impacts in the United States: The Third National Climate Assessment*, J.M. Melillo, Terese (T.C.) Richmond, and G.W. Yohe, Eds., U.S. Global Change Research Program, 220-256. doi:10.7930/J0PN93H5.
56. Myers, S.S., L. Gaffikin, C.D. Golden, R.S. Ostfeld, K.H. Redford, T.H. Ricketts, W.R. Turner, and S.A. Osofsky. 2014. Reply to De Coster et al.: exploring the complexity of ecosystem-human health relationships. *Proceedings of the National Academy of Sciences* 111:E1816.
57. Jeschke, J.M., F. Keesing, and R.S. Ostfeld. 2013. The ecology of novel organisms: invasive species, GMOs, and emerging pathogens. *Ambio* 42:541-548.
58. Myers, S.S., L. Gaffikin, C.D. Golden, R.S. Ostfeld, K.H. Redford, T.H. Ricketts, W.R. Turner, and S.A. Osofsky. 2013. Human health impacts of ecosystem alteration. *Proceedings of the National Academy of Sciences*. 110:18753-18760.
59. Ostfeld, R.S. and F. Keesing. 2013. Biodiversity and human health. Pages 357-372 in *Encyclopedia of Biodiversity*, edited by S. Levin. Elsevier, New York.

60. Altizer, S., R.S. Ostfeld, P.T.J. Johnson, S. Kutz, and C.D. Harvell. 2013. Climate change and infectious diseases: from evidence to a predictive framework. *Science* 341:514-519.
61. Dupuis, A., R.J. Peters, M.A. Prusinski, R.C. Falco, R.S. Ostfeld, and L.D. Kramer. Isolation of deer tick virus (Powassan virus, lineage II) from *Ixodes scapularis* and detection of antibody in vertebrate hosts sampled in the Hudson Valley, New York State. 2013. *Parasites and Vectors* 6:185-196.
62. Brunner, J., F. Keesing, M. Killilea, K. LoGiudice, S. Duerr, and R.S. Ostfeld. 2013. An experimental test of competition among mice, chipmunks, and squirrels in deciduous forest fragments. 2013. *PLoS ONE* 8:e66798.
63. Keesing, F., B.F. Allan, T.P. Young, and R.S. Ostfeld. 2013. Effects of wildlife and cattle on tick abundance in central Kenya. *Ecological Applications* 23:1410-1418.
64. Ostfeld, R.S. 2013. A Candide response to Panglossian accusations by Randolph and Dobson: biodiversity buffers disease. *Parasitology* 140:1196-1198.
65. Ostfeld, R.S. and F. Keesing. 2013. Straw men don't get Lyme disease: response to Wood and Lafferty. *Trends in Ecology and Evolution* 28:502-503.
66. Ostfeld, R.S. and F. Keesing. 2012. Effects of host diversity on infectious disease. *Annual Review of Ecology, Evolution, and Systematics* 43:157-182.
67. Schwanz, L, A. Previtali, M. Gomes-Solecki, D. Brisson, and R.S. Ostfeld. 2012. Immunochallenge reduces risk sensitivity during foraging in white-footed mice. *Animal Behaviour* 83:155-162.
68. Keesing, F., and R.S. Ostfeld. 2012. Disease ecology. Pages 217-230 in J.C. Ingram, F. DeClerck, and C. Rumbaitis del Rio, eds. *Integrating ecology and poverty reduction: ecological dimensions*. Springer, New York.
69. Kershenbaum, A., L. Stone, R.S. Ostfeld, and L. Blaustein. 2012. Modelling transmission of vector-borne pathogens shows complex dynamics when vector feeding sites are limited. *PLoS ONE* 7:e36730.
70. Swei, A., C.J. Briggs, R.S. Lane, and R.S. Ostfeld. 2012. Impacts of an introduced forest pathogen on risk of Lyme disease in California. *Vector-borne and Zoonotic Diseases* 12:623-631.
71. Brunner, J.L., M. Killilea, and R.S. Ostfeld. 2012. Overwintering survival of nymphal *Ixodes scapularis* Say (Acari: Ixodidae) under natural conditions. *Journal of Medical Entomology* 49:981-987.
72. Hersh, M., M. Tibbetts, R.S. Ostfeld, M. Straus, and F. Keesing. 2012. Quantifying reservoir competence for *Babesia microti* of wildlife host species using real-time PCR. *Emerging Infectious Diseases* 18:1951-1957.
73. Keesing, F., M.H. Hersh, M. Tibbetts, D.J. McHenry, S. Duerr, J. Brunner, M. Killilea, K. LoGiudice, K.A. Schmidt, and R.S. Ostfeld. 2012. Reservoir competence of vertebrate hosts for *Anaplasma phagocytophilum*. *Emerging Infectious Diseases* 18:2013-2016.

74. Previtali, M.A., R.S. Ostfeld, F. Keesing, A.E. Jolles, R.Hanselmann, and L.B. Martin. 2012. Relationship between pace of life and immune responses in wild rodents. *Oikos* 121:1483-1492.
75. Schnurr, J.L., R.S. Ostfeld, and C.D. Canham. 2012. The influence of nearest seed neighbors on seed removal in deciduous forests. *Northeast Naturalist* 19:43-48.
76. Ostfeld, R.S. 2012. Ecology of Lyme disease. Chapter in K.C. Weathers, D.L. Strayer and G.E. Likens, eds. *Fundamentals of Ecosystem Science*. Academic Press. ISBN 978-0-12-088774-3.
77. Keesing, F. and R.S. Ostfeld. 2012. An ecosystem service of biodiversity – the protection of human health against infectious disease. Pages 56-66 in A.A. Aguirre, R.S. Ostfeld, and P. Daszak, eds. *New directions in conservation medicine; applied cases of ecological health*. Oxford University Press, New York, NY.
78. Aguirre, A., G. Tabor, and R.S. Ostfeld. 2012. Conservation medicine: the ontogeny of an emerging discipline. Pages 3-16 in A.A. Aguirre, R.S. Ostfeld, and P. Daszak, eds. *New directions in conservation medicine; applied cases of ecological health*. Oxford University Press, New York, NY.
79. Rodriguez, A.R., R.S. Ostfeld, F. Keesing, and J.W. Reynolds. 2012. The earthworms (*Oligochaeta*: *Lumbricidae* and *Megascolecidae*) of Dutchess County, New York, USA. *Megadrilogica* 15:141-150.
80. Kinney, P., P. Sheffield, R.S. Ostfeld, J. Carr, R. Leichenko, and P. Vancura. 2011. Public health. Pages 397-438 in C. Rosenzweig, W. Solecki, A. DeGaetano et al., eds. *Responding to climate change in New York State: the ClimAID integrated assessment for effective climate change adaptation in New York State*. *Annals of the New York Academy of Sciences*, volume 1244.
81. Schwanz, L.E., D. Brisson, M. Gomez-Solecki, and R.S. Ostfeld. 2011. Linking disease and community ecology through behavioural indicators: immunochallenge of white-footed mice and its ecological impacts. *Journal of Animal Ecology* 80:204-211.
82. Brisson, D., C. Brinkley, P.T. Humphrey, B.D. Kempes, and R.S. Ostfeld. 2011. It takes a community to raise the prevalence of a zoonotic pathogen. *Interdisciplinary Perspectives on Infectious Disease* 2011:741406 (Article ID). doi:10.1155/2011/741406.
83. Ostfeld, R.S. and C.G. Jones. 2011. The ecology of place in oak forests: progressive integration of pairwise interactions into webs. Pages 207-228 in I. Billick, and M.V. Price, *The Ecology of Place*, University of Chicago Press.
84. Calabrese, J., J. Brunner, and R.S. Ostfeld. 2011. Partitioning the aggregation of parasites on hosts into intrinsic and extrinsic components via an extended Poisson-gamma mixture model. *PLoS ONE* 6:e29215. doi:10.1371/journal.pone.0029215.
85. Foley, J.E., D. Clifford, K. Castle, P. Cryan, and R.S. Ostfeld. 2011. White Nose Syndrome: a roadmap for investigating and managing the ultra-rapid emergence of a novel, fatal infectious disease of hibernating bats. *Conservation Biology* 25:223-231.



86. LaDeau, S.L., G.G. Glass, N.T. Hobbs, A. Latimer, and R.S. Ostfeld. 2011. Data-model fusion to better understand emerging pathogens and improve infectious disease forecasting. *Ecological Applications* 21:1443-1460.
87. Brunner, J.L., L. Cheney, F. Keesing, M.E. 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* 48:860-866.
88. Keesing, F., P. Oberoi, R. Vaicekonyte, K. Gowen, L. Henry, S. Mount, P. Johns, and R.S. Ostfeld. 2011. Effects of garlic mustard (*Alliaria petiolata*) on entomopathogenic fungi. *Ecoscience* 18:164-168.
89. Swei, A., R.S. Ostfeld, R.S. Lane, and C.J. Briggs. 2011. Impact of the experimental removal of lizards on Lyme disease risk. *Proceedings of the Royal Society B, Biological Sciences* 278:2970-2978.
90. Swei, A., R.S. Ostfeld, R.S. Lane, and C.J. Briggs. 2011. Effects of an invasive forest pathogen on abundance of ticks and their vertebrate hosts in a California Lyme disease focus. *Oecologia* 166:91-100.
91. Schwanz, L.E., M.J. Voordouw, D. Brisson, and R.S. Ostfeld. 2011. *Borrelia burgdorferi* has minimal impact on the Lyme disease reservoir host *Peromyscus leucopus*. *Vector-borne and Zoonotic Diseases* 11:117-124.
92. Keesing, F., L. Belden, A. Dobson, C.D. Harvell, R. Holt, P. Hudson, A. Jolles, C. Mitchell, S. Myers, T. Bogich, and R.S. Ostfeld. 2010. Impacts of biodiversity on the emergence and transmission of infectious diseases. *Nature* 468:647-652.
93. Carver, S., A. Kuenzi, R. Douglass, A.M. Kilpatrick, R.S. Ostfeld, and P. Weinstein. 2010. Integration of environmental monitoring to enhance comprehension of the ecology and epidemiology of infectious diseases. *Journal of Environmental Monitoring* 12:2048-2055.
94. Blaustein, L., R.S. Ostfeld, and R.D. Holt. 2010. Foreword by the guest editors: a community ecology framework for understanding vector and vector-borne disease dynamics. *Israel Journal of Ecology and Evolution* 56:237.
95. Blaustein, L., R.S. Ostfeld, R.D. Holt. 2010. A community ecology framework for understanding vector and vector-borne disease dynamics. *Israel Journal of Ecology and Evolution* 56:251-262.
96. Allan, B.F., W.A. Ryberg, R.B. Langerhans, W.J. Landesman, N.W. Griffin, R.S. Katz, K.N. Smyth, B.J. Oberle, M.R. Schultzenhofer, D.E. Hernandez, A. de St. Maurice, L. Clark, R.G. McLean, K.R. Crooks, R.S. Ostfeld, and J.M. Chase. 2009. Ecological correlates of risk and incidence of West Nile Virus in the United States. *Oecologia* 158:699-708.
97. Ostfeld, R.S. 2009. Biodiversity loss and the rise of zoonotic pathogens. *Clinical Microbiology and Infection* 15:40-43.
98. Pongsiri, M.J., J. Roman, V.O. Ezenwa, T.L. Goldberg, H.S. Koren, S.C. Newbold, R.S. Ostfeld, S.K. Pattanayak, and D.J. Salkeld. 2009. Biodiversity loss affects global disease ecology. *BioScience* 59:945-954.

99. Ostfeld, R.S., M. Thomas, and F. Keesing. 2009. Biodiversity and ecosystem function: perspectives on disease. Pages 209-216 in S. Naeem, D. Bunker, A. Hector, M. Loreau, and C. Perrings, eds. *Biodiversity and Human Impacts*, Oxford University Press.
100. Keesing, F., 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, Biological Sciences* 276:3911-3916.
101. Ostfeld, R.S. 2009. Climate change and the distribution and intensity of infectious diseases. *Ecology* 90:903-905.
102. Suzan, G., E. Marcé, J.T. Giermakowski, J.N. Mills, G. Ceballos, R.S. Ostfeld, B. Armién, J.M. Pascale, and T.L. Yates. 2009. Experimental evidence for reduced rodent diversity causing increased hantavirus prevalence. *PLoS ONE* 4:e5461. doi:10.1371/journal.pone.0005461.
103. Schaubert, E.M., M.J. Connors, B.J. Goodwin, C.G. Jones, and R.S. Ostfeld. 2009. Quantifying a dynamic risk landscape: heterogeneous predator activity and implications for prey persistence. *Ecology* 90:240-251.
104. Carver, S., A. Bestall, A. Jardine, and R.S. Ostfeld. 2009. The influence of hosts on the ecology of arboviral transmission: potential mechanisms influencing dengue, Murray Valley encephalitis and Ross River virus in Australia. *Vector Borne and Zoonotic Diseases* 9:51-64.
105. Ostfeld, R.S. 2008. Parasites as weapons of mouse destruction. *Journal of Animal Ecology* 77:201-204.
106. Schmidt, K.A. and R.S. Ostfeld. 2008. Eavesdropping squirrels reduce their future value of food under the perceived presence of cache robbers. *American Naturalist* 171:386-393.
107. LoGiudice, K., S. Duerr, M. Newhouse, K.A. Schmidt, M. Killilea, and R.S. Ostfeld. 2008. Impact of community composition on Lyme disease risk. *Ecology* 89:2841-2849.
108. Killilea, M., A. Swei, R. Lane, C. Briggs, and R.S. Ostfeld. 2008. Spatial dynamics of Lyme disease: a review. *EcoHealth* 5:167-195.
109. Schmidt, K.A., E. Lee, R.S. Ostfeld, and K. Sieving. 2008. Eastern chipmunks increase their perception of predation risk in response to titmouse alarm calls. *Behavioral Ecology* 19:759-763.
110. Brunner, J.L. and R.S. Ostfeld. 2008. Multiple causes of variable tick burdens on small-mammal hosts. *Ecology* 89:2259-2272.
111. Ogada, D., M.E. Gadd, R.S. Ostfeld, T.P. Young, and F. Keesing. 2008. Impact of large herbivorous mammals on bird diversity and abundance in an African savanna. *Oecologia* 156:387-397.
112. Schmidt, K.A., S.A. Rush, and R.S. Ostfeld. 2008. Wood thrush nest success and post-fledging survival across a temporal pulse of small mammal abundance in an oak forest. *Journal of Animal Ecology* 77:830-837.

113. Schmidt, K.A. and R.S. Ostfeld. 2008. Numerical and behavioral effects within a pulse-driven system: consequences for direct and indirect interactions among shared prey. *Ecology* 89:635-646.
114. Molyneux, D., R.S. Ostfeld, A. Bernstein, and E. Chivian. 2008. Ecosystem disturbance, biodiversity loss, and human infectious disease. Pages 287-323 in E. Chivian and A. Bernstein, eds. *Sustaining life: how human health depends on biodiversity*. Oxford University Press, Oxford, UK.
115. Brisson, D., D.E. Dykhuizen, and R.S. Ostfeld. 2008. Conspicuous impacts of inconspicuous hosts on the human Lyme disease epidemic. *Proceedings of the Royal Society of London, B, Biological Sciences* 275:227-235.
116. Brunner, J.L., K. LoGiudice, and R.S. Ostfeld. 2008. Estimating the importance of zoonotic reservoir hosts in pathogen transmission: prevalence and infectivity, sensitivity and specificity. *Journal of Medical Entomology* 45:139-147.
117. Keesing, F., R.S. Ostfeld, and V.T. Eviner. 2008. Introduction. Pages 1-5 in Ostfeld, R.S., F. Keesing, and V. Eviner, eds. *Infectious disease ecology: effects of ecosystems on disease and of disease on ecosystems*. Princeton University Press.
118. Ostfeld, R.S. 2008. Introduction to Section III. Pages 321-323 In Ostfeld, R.S., F. Keesing, and V. Eviner, eds. *Infectious disease ecology: effects of ecosystems on disease and of disease on ecosystems*. Princeton University Press.
119. Ostfeld, R.S., F. Keesing, and V.T. Eviner. 2008. The ecology of infectious diseases: progress, challenges, and frontiers. Pages 469-482 in R.S. Ostfeld, F. Keesing, and V. Eviner, eds. *Infectious disease ecology: effects of ecosystems on disease and of disease on ecosystems*. Princeton University Press.
120. Ostfeld, R.S. 2007. Habitat fragmentation and disease ecology: the case of Lyme disease. Pages 183-187 in K.A. Vogt, J.M. Honea, D.J. Vogt, R.L. Edmonds, R. Sigurdardottir, and T. Patel-Weynand, eds. *Forests and society: sustainability and life cycles of forests in human landscapes*. CABI Publishing, CAB International, Oxfordshire, United Kingdom.
121. Ostfeld, R.S. and J.N. Mills. 2007. Social behavior, demography, and rodent-borne pathogens. Pages 478-486 in J.O. Wolff and P.W. Sherman, eds. *Rodent Societies*. University of Chicago Press.
122. Ostfeld, R.S. and F. Keesing. 2007. Pulsed resources and community responses: an exploration of factors influencing outcomes. Pages 30-42 in J. Bissonette and I. Storch, eds. *Temporal dimensions of landscape ecology: wildlife responses to variable resources*. Springer.
123. Schaubert, E.M., B. J. Goodwin, C.G. Jones, and R.S. Ostfeld. 2007. Spatial selection and inheritance: applying evolutionary concepts to population dynamics in heterogeneous space. *Ecology* 88:1112-1118.
124. Waller, L.A., B.J. Goodwin, M.L. Wilson, R.S. Ostfeld, N.B. Hayes, and S. Marshall. 2007. Spatio-temporal patterns in county-level incidence and reporting of Lyme disease in the northeastern United States, 1990-2000. *Environmental and Ecological Statistics* 14:83-100.

125. Giery, S.T., and R.S. Ostfeld. 2007. The role of lizards in the ecology of Lyme disease in two endemic zones of the northeastern United States. *Journal of Parasitology* 93:511-517.
126. Ostfeld, R.S., F. Keesing, and K. LoGiudice. 2006. Community ecology meets epidemiology: the case of Lyme disease. Pages 28-40 in S. Collinge and C. Ray, eds. *Disease ecology: community structure and pathogen dynamics*. Oxford University Press.
127. Horobik, V., F. Keesing, and R.S. Ostfeld. 2006. Abundance and *Borrelia burgdorferi*-infection prevalence of nymphal *Ixodes scapularis* ticks along forest-field edges. *EcoHealth* 3:262-268.
128. Keesing, F., R.D. Holt, and R.S. Ostfeld. 2006. Effects of species diversity on disease risk. *Ecology Letters* 9:485-498.
129. Schmidt, K.A., R.S. Ostfeld, and K.N. Smyth. 2006. Spatial heterogeneity in predator activity, nest survivorship, and nest-site selection in two forest thrushes. *Oecologia* 148:22-29.
130. Ostfeld, R.S., C.D. Canham, K. Oggenfuss, R.J. Winchcombe, and F. Keesing. 2006. Climate, deer, rodents, and acorns as determinants of variation in Lyme-disease risk. *PLoS Biology* 4:e145. <https://doi.org/10.1371/journal.pbio.0040145>.
131. Dobson, A., I. Cattadori, R. Holt, R.S. Ostfeld, F. Keesing, K. Krichbaum, J. Rohr, S.E. Perkins, and P.J. Hudson. 2006. Sacred cows and sympathetic squirrels: the importance of biological diversity to human health. *PLoS Medicine* 3:e231. <https://doi.org/10.1371/journal.pmed.0030231>
132. Ostfeld, R.S., A. Price, V. Hornbostel, M. Benjamin, and F. Keesing. 2006. Controlling ticks and tick-borne zoonoses with biological and chemical agents. *BioScience* 56:383-394.
133. Ostfeld, R.S., G. Glass, and F. Keesing. 2005. Spatial epidemiology: an emerging (or re-emerging) discipline. *Trends in Ecology and Evolution* 20:323-331.
134. Connors, M.J., E.M. Schaubert, A. Forbes, C.G. Jones, B.J. Goodwin, and R.S. Ostfeld. 2005. Using track plates to quantify predation risk at small spatial scales. *Journal of Mammalogy* 86:991-996.
135. Goodwin, B.J., C.G. Jones, E.M. Schaubert, and R.S. Ostfeld. 2005. Limited dispersal and heterogeneous predation risk synergistically enhance persistence of rare prey (Special Feature article). *Ecology* 86:3139-3148.
136. Kremen, C. and R.S. Ostfeld. 2005. A call to ecologists: measuring, analyzing, and managing ecosystem services. *Frontiers in Ecology and the Environment* 10:540-548. (Subject of follow-up article, Pathways to Scientific Teaching by C. Richmond et al., 2005, *Frontiers in Ecology and the Environment* 10:557-558).
137. Schmidt, K.A., L. Nelis, N. Briggs, and R.S. Ostfeld. 2005. Invasive shrubs and songbird nesting success: effects of climatic variability and predator abundance. *Ecological Applications* 15:258-265.

138. Schauber, E.M., R.S. Ostfeld, and A. Evans. 2005. What is the best predictor of annual Lyme disease incidence: weather, mice, or acorns? *Ecological Applications* 15:575-586.
139. Hornbostel, V., R.S. Ostfeld, M. Benjamin. 2005. Effectiveness of *Metarhizium anisopliae* (Deuteromycetes) against *Ixodes scapularis* (Acari: Ixodidae) engorging on *Peromyscus leucopus*. *Journal of Vector Ecology* 30:91-101.
140. Hornbostel, V., E. Zhioua, M. Benjamin, H. Ginsberg, and R.S. Ostfeld. 2005. Pathogenicity of *Metarhizium anisopliae* (Deuteromycetes) and permethrin to *Ixodes scapularis* (Acari: Ixodidae) nymphs. *Experimental and Applied Acarology* 35:301-316.
141. Burns, C.E., B.J. Goodwin, and R.S. Ostfeld. 2005. A prescription for longer life? Bot fly parasitism of the white-footed mouse. *Ecology* 86:753-761.
142. Ostfeld, R.S. and R.D. Holt. 2004. Are predators good for your health? Evaluating evidence for top-down regulation of zoonotic disease reservoirs. *Frontiers in Ecology and the Environment* 2:13-20.
143. Ostfeld, R.S. and F. Keesing. 2004. Oh the locusts sang, then they dropped dead. *Science* 306:1488-1489 [invited Perspective on Report by L. Yang].
144. Ostfeld, R.S., P. Roy, W. Haumaier, L. Canter, F. Keesing, and E.D. Rowton. 2004. Sand fly (*Lutzomyia vexator*) (Diptera: Psychodidae) populations in upstate New York: abundance, microhabitat, and phenology. *Journal of Medical Entomology* 41:774-778.
145. Hornbostel, V., R.S. Ostfeld, E. Zhioua, and M. Benjamin. 2004. Sublethal effects of *Metarhizium anisopliae* (Deuteromycetes) on engorged larval, nymphal, and adult *Ixodes scapularis* (Acari: Ixodidae). *Journal of Medical Entomology* 41:922-929.
146. Schauber, E.M., R.S. Ostfeld, and C.G. Jones. 2004. Type 3 functional response by mice to gypsy moth pupae: is it stabilizing? *Oikos* 107:592-602.
147. Schnurr, J.L., C.D. Canham, R.S. Ostfeld, and R.S. Inouye. 2004. Neighborhood analyses of small mammal dynamics: Implications for seed predation and seedling establishment. *Ecology* 85:741-755.
148. Goheen, J.R., F. Keesing, B.F. Allan, D. Misurelli-Ogada, and R.S. Ostfeld. 2004. Net effects of large mammals on Acacia seedling survival in an African savanna. *Ecology* 85:1555-1561
149. Ostfeld, R.S. and K. LoGiudice. 2003. Community disassembly, biodiversity loss, and the erosion of an ecosystem service. *Ecology* 84:1421-1427.
150. Schmidt, K.A. and R.S. Ostfeld. 2003. Mice in space: space use predicts interactions between mice and songbirds. *Ecology* 84:3276-3283.
151. Wasserberg, G., Z. Abramsky, B. Kotler, R.S. Ostfeld, I. Yaron, and A. Warburg. 2003. Anthropogenic disturbances enhance occurrence of cutaneous leishmaniasis in Israel deserts: patterns and mechanisms. *Ecological Applications* 13:868-881.

152. Townsend, A.K., R.S. Ostfeld, and K.B. Geher. 2003. The effects of bird feeders on Lyme disease prevalence and density of *Ixodes scapularis* (Acari: Ixodidae) in a residential area of Dutchess County, New York. *Journal of Medical Entomology* 40:540-546.
153. 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.
154. Shaw, M.T., F. Keesing, R. McGrail, and R.S. Ostfeld. 2003. Factors influencing the distribution of larval blacklegged ticks on rodent hosts. *American Journal of Tropical Medicine and Hygiene* 68:447-452.
155. Allan, B.F., F. Keesing, and R.S. Ostfeld. 2003. Effects of habitat fragmentation on Lyme disease risk. *Conservation Biology* 17:267-272.
156. Schmidt, K.A. and R.S. Ostfeld. 2003. Songbird populations in fluctuating environments: nest predator responses to pulsed resources. *Ecology* 84:406-415.
157. Ostfeld, R.S. 2002. Ecological webs involving acorns and mice: basic research and its management implications. Pages 196-214 in W.J. McShea and W.M. Healy, eds. *The ecology and management of oaks for wildlife*. Johns Hopkins University Press.
158. Harvell, C.D., C.E. Mitchell, J.R. Ward, S. Altizer, A. Dobson, R.S. Ostfeld, and M.D. Samuel. 2002. Climate warming and disease risks for terrestrial and marine biota. *Science* 296:2158-2162. Ostfeld, R.S., F. Keesing, E.M. Schaubert, and K.A. Schmidt. 2002. The ecological context of infectious disease: diversity, habitat fragmentation, and Lyme disease risk in North America. Pages 207-219 in A. Aguirre, R.S. Ostfeld, C.A. House, G. Tabor, and M. Pearl, eds. *Conservation medicine: ecological health in practice*. Oxford University Press, New York.
159. Ostfeld, R.S., M. Pearl, and G. Meffe. 2002. Conservation medicine: the birth of another crisis discipline. Pages 17-26 in A. Aguirre, R.S. Ostfeld, C.A. House, G. Tabor, and M. Pearl, eds. *Conservation medicine: ecological health in practice*. Oxford University Press, New York.
160. Shaw, M.T., F. Keesing, and R.S. Ostfeld. 2002. Herbivory on *Acacia* seedlings in an east African savanna. *Oikos* 98:385-392.
161. Benjamin, M.A., E. Zhioua, and R.S. Ostfeld. 2002. Laboratory and field evaluation of the entomopathogenic fungus *Metarhizium anisopliae* (Deuteromycetes) for controlling questing adult *Ixodes scapularis* (Acari: Ixodidae). *Journal of Medical Entomology* 39:723-728.
162. Schaubert, E.M. and R.S. Ostfeld. 2002. Modeling the effects of reservoir competence decay and demographic turnover in Lyme-disease ecology. *Ecological Applications* 12:1142-1162.
163. Schnurr, J.L., R.S. Ostfeld, and C.D. Canham. 2002. Direct and indirect effects of masting on rodent populations and tree seed survival. *Oikos* 96:402-410.

164. 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.
165. Pusenius, J. and R.S. Ostfeld. 2002. Mammalian predator scent, vegetation, and tree seedling predation by meadow voles. *Ecography* 25:481-487.
166. Schmidt, K.A., J.R. Goheen, R. Naumann, R.S. Ostfeld, E.M. Schaubert, and A.R. Berkowitz. 2001. Experimental removal of strong and weak predators: mice and chipmunks preying on songbird nests. *Ecology* 82:2927-2936.
167. Manson, R.H., R.S. Ostfeld, and C.D. Canham. 2001. Long-term effects of rodent herbivores on tree invasion dynamics along forest-field edges. *Ecology* 82:3320-3329.
168. Ostfeld, R.S., E.M. Schaubert, C.D. Canham, F. Keesing, C.G. Jones, and J.O. Wolff. 2001. Effects of acorn production and mouse abundance on abundance and *Borrelia burgdorferi*-infection prevalence of nymphal *Ixodes scapularis*. *Vector-Borne and Zoonotic Diseases* 1:55-64.
169. Goodwin, B.J., R.S. Ostfeld, and E.M. Schaubert. 2001. Spatiotemporal variation in a Lyme disease host and vector: black-legged ticks on white-footed mice. *Vector-Borne and Zoonotic Diseases* 1:129-138.
170. Tabor, G.M., R.S. Ostfeld, M. Poss, A.P. Dobson, and A.A. Aguirre. 2001. Conservation biology and the health sciences: research priorities of conservation medicine. Pages 155-174 in M.E. Soule and G.H. Orians, eds., *Conservation biology: research priorities for the next decade*. Island Press, Washington, DC.
171. Schmidt, K.A. and R.S. Ostfeld. 2001. Biodiversity and the dilution effect in disease ecology. *Ecology* 82:609-619.
172. Winchcombe, R.J. and R.S. Ostfeld. 2001. Bowhunter observations versus spotlighting as an index to deer abundance. *Northeast Wildlife* 56:39-48.
173. Winchcombe, R.J. and R.S. Ostfeld. 2001. Indexing deer numbers with spotlighting: a long-term study of a managed deer population. *Northeast Wildlife* 56:31-38.
174. Giardina, A.R., K.A. Schmidt, E.M. Schaubert, and R.S. Ostfeld. 2000. Modeling the role of rodents and songbirds in the ecology of Lyme disease. *Canadian Journal of Zoology* 78:2184-2197.
175. Ostfeld, R.S. and F. Keesing. 2000. The role of biodiversity in the ecology of vector-borne zoonotic diseases. *Canadian Journal of Zoology* 78:2061-2078.
176. Pusenius, J. and R.S. Ostfeld. 2000. Effects of stoat's presence and auditory cues indicating its presence on tree seedling predation by meadow voles. *Oikos* 91:123-130.
177. Pusenius, J., R.S. Ostfeld, and F. Keesing. 2000. Patch selection and tree seedling predation by resident vs. immigrant meadow voles. *Ecology* 81:2951-2956.
178. Ostfeld, R.S. and F. Keesing. 2000. Pulsed resources and community dynamics of consumers in terrestrial ecosystems. *Trends in Ecology and Evolution* 15:232-237.

179. Ostfeld, R.S. and F. Keesing. 2000. Biodiversity and disease risk: the case of Lyme disease. *Conservation Biology* 14:722-728.
180. Connors, L.M., E. Kiviat, P.M. Groffman, and R.S. Ostfeld. 2000. Muskrat (*Ondatra zibethicus*) disturbance to vegetation and potential net nitrogen mineralization and denitrification rates in a fresh-tidal marsh. *American Midland Naturalist* 148:53-63.
181. Ostfeld, R.S. and D.N. Lewis. 1999. Experimental studies of interactions between wild turkeys and blacklegged ticks. *Journal of Vector Ecology* 24:182-186.
182. Keesing, F. and R. S. Ostfeld. 1999. Linking dispersal and population dynamics of small mammals to community dynamics in a patchy landscape: a prospectus for research. *Siberian Journal of Ecology* 1:15-22 [in Russian].
183. Schmidt, K.A, R.S. Ostfeld, and E.M. Schaubert. 1999. Infestation of *Peromyscus leucopus* and *Tamias striatus* by the blacklegged tick, *Ixodes scapularis* (Acari: Ixodidae), in relation to the abundance of hosts and parasites. *Journal of Medical Entomology* 36:749-757.
184. Manson, R.H., R.S. Ostfeld, and C.D. Canham. 1999. Responses of a small mammal community to heterogeneity along forest-oldfield edges. *Landscape Ecology* 14:355-367.
185. Ostfeld, R.S. 1999. Disease. Pages 121-123 in McGraw-Hill Yearbook of Science & Technology 2000. McGraw-Hill, New York.
186. Ostfeld, R.S., R.H. Manson, and C.D. Canham. 1999. Interactions between meadow voles and white-footed mice at forest-oldfield edges: competition and net effects on tree invasion of oldfields. Pages 229-247 in G.W. Barrett and J.D. Peles, eds. *Landscape ecology of small mammals*. Springer-Verlag, NY.
187. Kirkland, G.L., Jr. and R.S. Ostfeld. 1999. Factors influencing variation among states in the number of federally listed and candidate mammals in the United States. *Journal of Mammalogy* 80:711-719.
188. Jones, C.G., R.S. Ostfeld, M.P. Richard, E.M. Schaubert, and J.O. Wolff. 1998. Mast seeding and Lyme disease. *Trends in Ecology and Evolution*. 13:506.
189. Ostfeld, R.S. 1998. The importance of interactions in the population ecology of the vole *Clethrionomys rufocanus*. *Researches on Population Ecology* 40:131-133.
190. Ostfeld, R.S., F. Keesing, C.G. Jones, C.D. Canham, and G.M. Lovett. 1998. Integrative ecology and the dynamics of species in oak forests. *Integrative Biology* 1:178-186.
191. Schaubert, E.M., S. Gertz, W. Maple, and R.S. Ostfeld. 1998. Coinfection of black-legged ticks (Acari: Ixodidae) in Dutchess County, New York, with the agents of Lyme disease and human granulocytic ehrlichiosis. *Journal of Medical Entomology* 35:901-903.
192. Manson, R.H., R.S. Ostfeld, and C.D. Canham. 1998. Effects of tree seed and seedling density on predation rates by small mammals in oldfields. *EcoScience* 5:183-190.



193. Ostfeld, R.S., C.G. Jones, M.P. Richard, E.M. Schaubert, and J.O. Wolff. 1998. Tick population trends and forest type. *Science* 281:350-351.
194. Jones, C.G., R.S. Ostfeld, E.M. Schaubert, M. Richard, and J.O. Wolff. 1998. Chain reactions linking acorns to gypsy moth outbreaks and Lyme-disease risk. *Science* 279:1023-1026.
195. Van Buskirk, J. and R.S. Ostfeld. 1998. Habitat heterogeneity, dispersal, and local risk of exposure to Lyme disease. *Ecological Applications* 8:365-378.
196. Pugh, S.R. and R.S. Ostfeld. 1998. Effects of prior population density on space use by meadow voles, *Microtus pennsylvanicus*. *Journal of Mammalogy* 79:551-557.
197. Ostfeld, R.S. 1997. The ecology of Lyme-disease risk. *American Scientist* 85:338-346.
198. Ostfeld, R.S., R.H. Manson, and C.D. Canham. 1997. Effects of rodents on survival of tree seeds and seedlings invading old fields. *Ecology* 78:1531-1542.
199. Turchin, P. and R.S. Ostfeld. 1997. Effects of density and season on the population rate of change in the meadow vole. *Oikos* 78:355-361.
200. Pickett, S.T.A., M. Shachak, R.S. Ostfeld, and G.E. Likens. 1997. Toward a comprehensive conservation theory. Pages 384-399 in S.T.A. Pickett, R.S. Ostfeld, M. Shachak, and G.E. Likens, eds. *The ecological basis of conservation: heterogeneity, ecosystems, and biodiversity*. Chapman & Hall, New York.
201. Ostfeld, R.S., S.T.A. Pickett, M. Shachak, and G.E. Likens. 1997. Defining the scientific issues. Pages 3-10 in S.T.A. Pickett, R.S. Ostfeld, M. Shachak, and G.E. Likens, eds. *The ecological basis of conservation: heterogeneity, ecosystems, and biodiversity*. Chapman & Hall, New York.
202. Ostfeld, R.S. and R.H. Manson. 1996. Long-distance homing in meadow voles, *Microtus pennsylvanicus*. *Journal of Mammalogy* 77:870-873.
203. Ostfeld, R.S., C.G. Jones, and J.O. Wolff. 1996. Of mice and mast: ecological connections in eastern deciduous forests. *BioScience* 46:323-330.
204. Ostfeld, R.S., K.R. Hazler, and O.M. Cepeda. 1996. Spatial and temporal dynamics of ticks (*Ixodes scapularis*) in a rural landscape. *Journal of Medical Entomology* 33:90-95.
205. Ostfeld, R.S., M.C. Miller, and K.R. Hazler. 1996. Causes and consequences of tick (*Ixodes scapularis*) burdens on white-footed mice (*Peromyscus leucopus*). *Journal of Mammalogy* 77:266-273.
206. Hazler, K.R. and R.S. Ostfeld. 1995. Larval density and feeding success of *Ixodes scapularis* on two species of *Peromyscus*. *Journal of Parasitology* 81:870-875.
207. Van Buskirk, J. and R.S. Ostfeld. 1995. Controlling Lyme disease by modifying density and species composition of tick hosts. *Ecological Applications* 5:1133-1140.
208. Gage, K.L., R.S. Ostfeld, and J.G. Olson. 1995. Nonviral vector-borne zoonoses associated with mammals in the United States. *Journal of Mammalogy* 76:695-715.

209. Ostfeld, R. S. and C. D. Canham. 1995. Density dependent processes in meadow voles: an experimental approach. *Ecology* 76:521-532.
210. Canham, C.D., J.D. Hill, A.R. Berkowitz, and R.S. Ostfeld. 1995. Ecological perspectives on tree invasion in rights-of-way: quantifying variation among communities in resistance to tree invasion. Pages 81-86 in Proceedings of the Fifth International Symposium on Environmental Concerns in Rights-of-way management, Montreal, Canada.
211. Ostfeld, R.S. and C.D. Canham. 1995. Ecological perspectives on tree invasion in rights-of-way: effects of herbivory by mammals. Pages 159-161 in Proceedings of the Fifth International Symposium on Environmental Concerns in Rights-of-way management, Montreal, Canada.
212. Ostfeld, R.S., O.M. Cepeda, K. Hazler, and M.C. Miller. 1995. The ecology of Lyme disease: habitat associations of deer ticks (*Ixodes scapularis*) in a rural landscape. *Ecological Applications* 5:353-361.
213. Pickett, S.T.A. and R.S. Ostfeld. 1995. The shifting paradigm in ecology. Pages 261-278 in R.L. Knight and S.F. Bates, eds. A new century for natural resource management. Island Press, Washington, D.C.
214. Ostfeld, R.S. 1994. The fence effect reconsidered. *Oikos* 70:340-348.
215. Ostfeld, R.S. 1994. Conservation status of South American otters: a preliminary report. In J.A. Estes, ed. U.S. Fish and Wildlife Service Biological Report.
216. Ostfeld, R.S., N. Lewin, J. Schnurr, C.D. Canham, and S.T.A. Pickett. 1994. The roles of small rodents in creating patchy environments. *Polish Ecological Studies* 20:265-276.
217. Pickett, S.T.A., and R.S. Ostfeld. 1994. The shifting paradigm in ecology. *Ecology and Environment* 3:151-159. [Hebrew translation of chapter from Knight and Bates, editors.]
218. Ostfeld, R.S., C.D. Canham, and S.R. Pugh. 1993. Intrinsic, density-dependent regulation of vole populations. *Nature* 366:259-261.
219. Ostfeld, R.S. and C.D. Canham. 1993. Effects of meadow vole population density on tree seedling survival in oldfields. *Ecology* 74:1792-1801.
220. Pugh, S.R., R.S. Ostfeld, R.H. Tamarin. 1993. Reproductive asynchrony and its potential role in the mating system of meadow voles. *Acta Theriologica* 38:263-271.
221. Ostfeld, R.S., M.C. Miller, and J. Schnurr. 1993. Ear tagging increases tick (*Ixodes dammini*) infestation rates of white-footed mice (*Peromyscus leucopus*). *Journal of Mammalogy* 74:651-655.
222. Ostfeld, R.S. 1993. Do changes in female relatedness determine demographic patterns in microtine rodents? *Oikos* 65:531-534.
223. Ostfeld, R.S. and E.J. Heske. 1993. Sexual dimorphism and mating systems in voles. *Journal of Mammalogy* 74:230-233.

224. Ostfeld, R.S. 1992. Small-mammal herbivores in a patchy environment: individual strategies and population responses. Pages 43-74 in M.D. Hunter, T. Ohgushi, and P.W. Price, eds., *Resource Distribution and Animal-Plant Interactions*. Academic Press, New York.
225. Ostfeld R.S. 1992. Do changes in female relatedness determine demographic patterns in microtine rodents? *Oikos* 65:531-534.
226. Ostfeld, R.S. 1992. Effects of habitat patchiness on population dynamics: a modeling approach. Pages 851-863 in D. McCullough and R. Barrett, eds., *Wildlife 2001: Populations*. Elsevier Scientific Publishers.
227. Ostfeld, R.S. 1991. The ecology of territoriality in bank voles: a reply. *Trends in Ecology and Evolution* 6:301.
228. Lidicker, W.Z. and R.S. Ostfeld. 1991. Extra-large body size in California voles: causes and fitness consequences. *Oikos* 61:108-121.
229. Ostfeld, R.S. 1991. Measuring diving success of otters. *Oikos* 60:258-260.
230. Ostfeld, R.S. and L.L. Klosterman. 1990. Microtine social systems, adaptation, and the comparative method. Pages 35-44 in R.H. Tamarin, R.S. Ostfeld, S.R. Pugh, and G. Bujalska, eds., *Social Systems and Population Cycles in Voles*. Birkhauser-Verlag, Basel, Switzerland.
231. Heske, E.J. and R.S. Ostfeld. 1990. Sexual dimorphism in size, relative size of testes, and mating systems of North American voles. *Journal of Mammalogy* 71:510-519.
232. Ostfeld, R.S. 1990. The ecology of territoriality in small mammals. *Trends in Ecology and Evolution* 5:411-415.
233. Ostfeld, R.S., L. Ebensperger, L. Klosterman and J.C. Castilla. 1989. Foraging, activity budget, and social behavior of the South American marine otter *Lutra felina* (Molina 1782). *National Geographic Research* 5:422-438.
234. Heske, E.J., R.S. Ostfeld, and W.Z. Lidicker. 1988. Does social behavior drive microtine cycles? An evaluation of competing models as they pertain to California voles. *Canadian Journal of Zoology* 66:1153-1159.
235. Ostfeld, R.S., S.R. Pugh, J.O. Seamon, and R.H. Tamarin. 1988. Space use and reproductive success in a population of meadow voles. *Journal of Animal Ecology* 57:385-394.
236. Ostfeld, R.S. 1988. Fluctuations and constancy in populations of small rodents. *American Naturalist* 131:445-452.
237. Ostfeld, R.S. 1987. On the distinction between female defense and resource defense polygyny. *Oikos* 48:238-240.
238. Ostfeld, R.S. and R.H. Tamarin. 1986. The role of seasonality in vole cycles. *Canadian Journal of Zoology* 64:2871-2872.
239. Ostfeld, R.S. and L.L. Klosterman. 1986. Demographic substructure in a California vole population inhabiting a patchy environment. *Journal of Mammalogy* 67:693-702.

240. Ostfeld, R.S. 1986. Territoriality and mating system of California voles. *Journal of Animal Ecology* 55:691-706.
241. Ostfeld, R.S., W.Z. Lidicker, and E.J. Heske. 1985. The relationship between habitat heterogeneity, space use, and demography in a population of California voles. *Oikos* 45:433-442.
242. Ostfeld, R.S. 1985. Experimental analysis of aggression and spacing behavior in California voles. *Canadian Journal of Zoology* 63:2277-2282.
243. Ostfeld, R.S. 1985. Limiting resources and territoriality in microtine rodents. *American Naturalist* 126:1-15.
244. Heske, E.J., R.S. Ostfeld, and W.Z. Lidicker. 1984. Competitive interactions between *Microtus californicus* and *Reithrodontomys megalotis* during two peaks of *Microtus* abundance. *Journal of Mammalogy* 65:271-280.
245. Jaksic, F.M. and R.S. Ostfeld. 1983. Numerical and behavioral estimates of predation upon rabbits in Mediterranean-type shrublands: a paradoxical case. *Revista Chilena de Historia Natural* 56:39-49.
246. Everett, R.A., R.S. Ostfeld, and W.J. Davis. 1982. The behavioral hierarchy of the garden snail *Helix aspersa*. *Zeitschrift fur Tierpsychologie* 59:109-126.
247. Ostfeld, R.S. 1982. Foraging strategies and prey switching in the California sea otter. *Oecologia (Berlin)* 53:170-178.

#### *Popular articles*

1. Ostfeld, R.S. and F. Keesing. 2011. In movies, in labs, a horror story. *Albany Times Union*, November 6, 2011.
2. Ostfeld R.S. 2011. EcoFocus: Has warming spread Lyme? *Poughkeepsie Journal*, August 14, 2011.
3. Ostfeld, R.S. 2011. Climate change and Lyme disease: It's complicated. *ClimateHealthConnect*. The Center for Public Health and Climate Change. August 2, 2011.
4. Ostfeld, R.S. and C.D. Canham. 2010. EcoFocus: Acorn glut signals Lyme risk. *Poughkeepsie Journal*, 7 November 2010.
5. Ostfeld, R.S. 2010. EcoFocus: Biodiversity and human health: Why more species mean fewer cases of Lyme disease. *Poughkeepsie Journal*, 28 February 2010.
6. Ostfeld, R.S.. 2008. "Ecofocus: economic downturn could hurt your health" *Poughkeepsie Journal*, November 23, 2008
7. Ostfeld, R.S. 2008. "Ecofocus: tough times for polar bears" *Poughkeepsie Journal* December 21, 2008.
8. Ostfeld, R.S. and F. Keesing. 2008. One acorn at a time: understanding the spread of infectious diseases. *Odyssey Magazine*. February issue, pages 19-21. [Odyssey is "the science magazine for young adventurers, ages 10-16.]
9. Ostfeld, R.S. 2002. Little loggers make a big difference. *Natural History* 111: 64-71.
10. Ostfeld, R.S. and C.G. Jones. 1999. Peril in the understory. *Audubon* 101:74-82.

*Books and monographs*

1. Ostfeld, R.S. and A.G. Power, eds. 2020. The year in ecology and conservation biology. *Annals of the New York Academy of Sciences*. Wiley-Blackwell, NY.
2. Ostfeld, R.S. and A.G. Power, eds. 2018. Ostfeld, R.S. and A.G. Power, eds. 2017. The year in ecology and conservation biology. *Annals of the New York Academy of Sciences*. Wiley-Blackwell, NY.
3. Ostfeld, R.S. and A.G. Power, eds. 2017. The year in ecology and conservation biology. *Annals of the New York Academy of Sciences*. Wiley-Blackwell, NY.
4. Ostfeld, R.S. and A.G. Power, eds. 2016. The year in ecology and conservation biology. *Annals of the New York Academy of Sciences*. Wiley-Blackwell, NY.
5. Ostfeld, R.S. and A.G. Power, eds. 2015. The year in ecology and conservation biology. *Annals of the New York Academy of Sciences*. Wiley-Blackwell, NY.
6. Ostfeld, R.S. and A.G. Power, eds. 2014. The year in ecology and conservation biology. *Annals of the New York Academy of Sciences*. Volume 1322. Wiley-Blackwell, NY.
7. Ostfeld, R.S. and W.H. Schlesinger, eds. 2013. The year in ecology and conservation biology 2013. *Annals of the New York Academy of Sciences*, volume 1286. Wiley Blackwell, NY.
8. Ostfeld, R.S., A.L. Angert, and S.L. LaDeau. 2013. Climate change and species interactions: ways forward. *Annals of the New York Academy of Sciences*, volume 1297: 1-147.
9. Ostfeld, R.S. 2011. Lyme disease: the ecology of a complex system. Oxford University Press, New York.
10. Aguirre, A.A., R.S. Ostfeld, and P. Daszak. 2012. *New Directions in Conservation Medicine: Applied cases of ecological health*. Oxford University Press.
11. Ostfeld, R.S. and W.H. Schlesinger, eds. 2012. The year in ecology and conservation biology 2012. *Annals of the New York Academy of Sciences*, volume 1249.
12. Ostfeld, R.S. and W.H. Schlesinger, eds. 2011. The year in ecology and conservation biology 2011. *Annals of the New York Academy of Sciences*, volume 1223.
13. Ostfeld, R.S. and W.H. Schlesinger, eds. 2010. The year in ecology and conservation biology 2010. *Annals of the New York Academy of Sciences*, volume 1195.
14. Ostfeld, R.S. and W.H. Schlesinger, eds. 2009. The year in ecology and conservation biology 2009. *Annals of the New York Academy of Sciences*, volume 1162.
15. Ostfeld, R.S., F. Keesing, and V. Eviner, eds. 2008. *Infectious disease ecology: effects of ecosystems on disease and of disease on ecosystems*. Princeton University Press.
16. Ostfeld, R.S. and W.H. Schlesinger, eds. 2008. The year in ecology and conservation biology 2008. *Annals of the New York Academy of Sciences*, volume 1134.
17. Aguirre, A., R.S. Ostfeld, C.A. House, G. Tabor, and M. Pearl, eds. 2002. *Conservation medicine: ecological health in practice*. Oxford University Press; New York.

18. Pickett, S.T.A., R.S. Ostfeld, M. Shachak, and G.E. Likens. 1997. The ecological basis of conservation: heterogeneity, ecosystems, and biodiversity. Chapman & Hall, New York, xxi + 466 pp.
19. Tamarin, R.H., R.S. Ostfeld, S.R. Pugh, and G. Bujalska, eds. 1990. Social Systems and Population Cycles in Voles. Birkhauser-Verlag, Basel, Switzerland.

*Book reviews*

1. Ostfeld, R.S. 2010. Parasitology is dead. Long live Parasitology! Review of three books: (1) Ecology and Evolution of Parasitism. Thomas, F., J.-F. Guegan, and F. Renaud, eds. 2009. Oxford University Press, Oxford, UK 224 pp. \$70 (paperback). ISBN 978-0-19-953533-0. (2) Ticks. Biology, Disease and Control. Bowman, A. S. and P. A. Nuttall, editors. 2008. Cambridge University Press, Cambridge, United Kingdom. 506 pp. \$141.99 (hardcover). ISBN 978-0-521-86761-0. (3) Primate Parasite Ecology. The Dynamics and Study of Host-Parasite Relationships. Cambridge University Press, Cambridge, U.K. 531 pp. \$131.99 (hardcover). ISBN 978-0-521-87246-1. Conservation Biology 24:1690-1693.
2. Keesing, F. and R.S. Ostfeld. 2009. Human Infectious Diseases through the Lens of Social Ecology. Review of: The social ecology of infectious diseases, K. H. Mayer and H.F. Pizer, (editors), 2008, London, UK: Academic Press (Elsevier Science & Technology Books), 488 pp. EcoHealth 5:528-530.
3. Ostfeld, R.S. 2003. Adaptive dynamics of infectious diseases: in pursuit of virulence management, edited by Dieckmann, U., J.A.J. Metz, M.W. Sabelis, and K. Sigmund. Cambridge University Press, Cambridge, UK, 2002. EcoScience 10:542-543.
4. Ostfeld, R.S. 1997. The biology of disease vectors, by B. J. Beaty and W. C. Marquardt. University Press of Colorado, Niwot (Colorado). Quarterly Review of Biology 72:114-115.
5. Ostfeld, R.S. 1996. Ecological dynamics of tick-borne zoonoses, by D. Sonenshine and T.N. Mather. Oxford University Press, London, 1993. Ecology 77:328-329.
6. Ostfeld, R.S. 1994. Animal dispersal: small mammals as a model, by N.C. Stenseth and W.Z. Lidicker, Jr. Chapman & Hall, London, 1992. Journal of Mammalogy 74:553-556.
7. Ostfeld, R.S. 1986. Evolutionary ecology of marsupials, by A.K. Lee and A. Cockburn, Cambridge University Press, 1985. Journal of Mammalogy 67:433-435.