

GEORGETOWN UNIVERSITY SCHOOL OF MEDICINE

CURRICULUM VITAE

Colin Carlson, Ph.D.

Department of Microbiology and Immunology
Center for Global Health Science and Security

1. PERSONAL INFORMATION

A. Education:

- Undergraduate: University of Connecticut; Storrs, CT, USA; 2008-2012; B.S., Ecology & Evolutionary Biology; B.A., Environmental Studies
- Graduate education: University of Connecticut; Storrs, CT, USA; 2012-2013; M.S., Ecology & Evolutionary Biology
- Graduate education: University of California, Berkeley; Berkeley, CA, USA; 2013-2017; Ph.D., Environmental Science, Policy, & Management
- Postdoctoral: Postdoctoral Fellow, National Socioenvironmental Synthesis Center (SESYNC), University of Maryland College Park, Annapolis, MD, USA, 2018
- Postdoctoral Fellow, Department of Biology, Georgetown University, Washington, D.C., USA, 2018-2020

B. Professional Experience:

- Assistant Research Professor, Center for Global Health Science and Security, Department of Microbiology and Immunology, Georgetown University, Washington, D.C., USA, 2020-
- Adjunct Faculty, Department of Science, Technology, and International Affairs, Edmund A. Walsh School of Foreign Service, Georgetown University, Washington, D.C., USA, 2020-
- Affiliate Faculty, Department of Biology, Georgetown University, Washington, D.C., USA, 2021-

2. RESEARCH AND SCHOLARLY ACTIVITIES

A. Publications:

i. Original Papers in Refereed Journals

1. Albery GF, **Carlson CJ**, Cohen LE, Eskew EA, Gibb R, Ryan SJ, Sweeny AR, Becker DJ. Urban-adapted mammal species have more known pathogens. *Nature Ecology and Evolution*. In press.
2. Muylaert, RL, Kingston T, Luo J, Vancine MH, Galli N, **Carlson CJ**, John RS, Rulli MC, Hayman DTS. Present and future distribution of bat hosts of sarbecoviruses: implications for conservation and public health. *Proceedings of the Royal Society of London B*. In press.

3. **Carlson CJ**, Albery GF, Merow C, Trisos CH, Zipfel CM, Eskew EA, Olival KJ, Ross N, Bansal S. Climate change increases cross-species viral transmission risk. *Nature*. 2022 Apr 28; doi: 10.1038/s41586-022-04788-w.
4. **Carlson CJ**, Colwell R, Hossain MS, Rahman MM, Robock A, Ryan SJ, Alam MS, Trisos C. Solar geoengineering could redistribute malaria risk in developing countries. *Nature Communications*. 2022 Apr 20; doi: 10.1038/s41467-022-29613-w.
5. Mull N, **Carlson CJ**, Forbes KM, Becker DJ. Virus isolation data improve host predictions for New World rodent orthohantaviruses. *Journal of Animal Ecology*. 2022 Mar 31; doi: 10.1111/1365-2656.13694.
6. Fagre AC, Cohen LE, Eskew EA, Farrell MJ, Glennon EE, Joseph MB, Frank HK, Ryan SJ, **Carlson CJ**, Albery GF. Assessing the risk of human-to-wildlife pathogen transmission for conservation and public health. *Ecology Letters*. 2022 Mar 22; doi: 10.1111/ele.14003.
7. **Carlson CJ**, Gibb RJ, Albery GF, Brierley L, Connor RP, Dallas TA, Eskew EA, Fagre AC, Farrell MJ, Frank HK, Muylaert RL, Poisot T, Rasmussen AL, Ryan SJ, Seifert SN. The Global Virome in One Network (VIRION): an atlas of vertebrate-virus associations. *mBio*. 2022 Mar 01; doi: 10.1128/mbio.02985-21.
8. Becker DJ, Albery GF, Sjodin AR, Poisot T, Bergner LM, Chen B, Cohen LE, Dallas TA, Eskew EA, Fagre AC, Farrell MJ, Guth S, Han BA, Simmons NB, Stock M, Teeling EC, **Carlson CJ**. Optimising predictive models to prioritise viral discovery in zoonotic reservoirs. *The Lancet Microbe*. 2022 Jan 10; doi: 10.1016/S2666-5247(21)00245-7.
9. Gibb R, Albery GF, Mollentze N, Eskew EA, Brierley L, Ryan SJ, Seifert SN, **Carlson CJ**. Mammal virus diversity estimates are unstable due to accelerating discovery effort. *Biology Letters*. 2022 Jan 5;18(1):20210427. doi: 10.1098/rsbl.2021.0427. PMID: 34982955.
10. Pereira LM, Aquila V, Beckage B, Beckbessinger S, Beukes L, Buck HJ, **Carlson CJ**, Geden O, Keller DP, Mach KJ, Mashigo M, Moreno-Cruz JB, Morrow DR, Visoni D, Nicholson S, Trisos C. From fAIRplay to climate wars: making climate change scenarios more dynamic, creative, and integrative. *Ecology and Society*. 2021 Nov 25;26(4):30. doi: 10.5751/ES-12856-260430.
11. **Carlson CJ**, Bevins SN, Schmid BV. Plague risk in the western United States over seven decades of environmental change. *Global Change Biology*. 2021 Nov 18;28(3):753-769. doi: 10.1111/gcb.15966. PMID: 34796590.
12. Gibb R, Albery GF, Becker DJ, Brierley L, Connor R, Dallas TA, Eskew EA, Farrell MJ, Rasmussen AL, Ryan SJ, Sweeny AR, **Carlson CJ**, Poisot T. Data proliferation, reconciliation, and synthesis in viral ecology. *BioScience*. 2021 Aug 25;71(11):1148-1156. doi: 10.1093/biosci/biab080.
13. Burgio KR, **Carlson CJ**, Bond AL, Rubega MA, Tingley MW. The two extinctions of the Carolina parakeet *Conuropsis carolinensis*. *Bird Conservation International*. 2021 Jul 21; 1-8. doi: 10.1017/S0959270921000241.
14. Lippi CA, Ryan SJ, White AL, Gaff HD, **Carlson CJ**. Trends and opportunities in tick-borne disease geography. *Journal of Medical Entomology*. 2021 May 24;58(6):2021-2029. doi: 10.1093/jme/tjab086. PMID: 34027972.
15. **Carlson CJ**, Dallas TA, Alexander LW, Phelan AL, Phillips AJ. What would it take to describe the global diversity of parasites? *Proceedings of the Royal Society B*. 2020 Nov 18;287(1939):20201841. doi: 10.1098/rspb.2020.1841. PMID: 33203333.
16. Ryan SJ, **Carlson CJ**, Tesla B, Bonds MH, Ngonghala C, Mordecai EA, Johnson LR, Murdock CC. Warming temperatures could expose more than 1.3 billion new people to Zika virus risk by 2050. *Global Change Biology*. 2020 Oct 9;27(1):84-93. doi: 10.1111/gcb.15384. PMID: 33037740.

17. Yoder JB, Gomez G, **Carlson CJ**. Zygomorphic flowers have fewer potential pollinator species. *Biology Letters*. 2020 Sep 2;16(9):20200307. doi: 10.1098/rsbl.2020.0307. PMID: 32871089.
18. **Carlson CJ**, Hokpins S, Bell K, Doña J, Godfrey SS, Lafferty KD, Kwak M, Milotic M, Moir M, Speer KA, Strona G, Torchin M, Wood CL. A global parasite conservation plan. *Biological Conservation*. 2020 Aug 1;250:108596. doi: 10.1016/j.biocon.2020.108596.
19. **Carlson CJ**, Phillips AJ. Is the New England medicinal leech (*Macrobodella sestertii*) extinct? *Biological Conservation*. 2020 Mar 18;243:108495. doi: 10.1016/j.biocon.2020.108495.
20. **Carlson CJ**. embarcadero: Species distribution modelling with Bayesian additive regression trees in R. *Methods in Ecology and Evolution*. 2020 Mar 14;11(7):850-858. doi: 10.1111/2041-210X.13389.
21. Dallas TA, **Carlson CJ**, Poisot T. Testing predictability of disease outbreaks with a simple model of pathogen biogeography. *Royal Society Open Science*. 2019 Nov 13;6(11):190883. doi: 10.1098/rsos.190883. PMID: 31827836.
22. **Carlson CJ**, Kracalik IA, Ross N, Alexander K, Hugh-Jones ME, Fegan M, Elkin B, Epp T, Shury T, Bagirova M, Getz WM, Blackburn JK. The global distribution of *Bacillus anthracis* and associated anthrax risk to humans, livestock, and wildlife. *Nature Microbiology*. 2019 Aug;4(8):1337-1343. doi: 10.1038/s41564-019-0435-4. PMID: 31086311
23. **Carlson CJ**, Zipfel CM, Garnier R, Bansal S. Global estimates of mammalian viral diversity accounting for host sharing. *Nature Ecology and Evolution*. 2019 Jul;3(7):1070-1075. doi: 10.1038/s41559-019-0910-6. PMID: 311828s13.
24. Ryan SJ, **Carlson CJ**, Mordecai EA, Johnson LR. Global expansion and redistribution of *Aedes*-borne virus transmission risk with climate change. *PLoS Neglected Tropical Diseases*. 2019 Mar 28;13(3):e0007213. doi: 10.1371/journal.pntd.0007213. PMID: 30921321. PMCID: PMC6438455.
25. **Carlson CJ**, Bond AL, Burgio KR. Reevaluating sighting models and moving beyond them to test and contextualize the extinction of the thylacine. *Conservation Biology*. 2018 Oct;32(5):1198-1199. doi: 10.1111/cobi.13187. PMID: 30067881.
26. Bartlett L, **Carlson CJ**, Boots MR. The potential risk to honeybees of Zika vector control in the United States. *Journal of Apicultural Research*. 2018 Oct 26;57(5):709-719. doi: 10.1080/00218839.2018.1494914
27. Dallas TA, Aguire AA, Budischak S, **Carlson CJ**, Ezenwa V, Han B, Huang S, Stephens PR. Gauging support for macroecological patterns in helminth parasites. *Global Ecology & Biogeography*. 2018 Oct 11;27(12):1437-1447. doi: 10.1111/geb.12819.
28. Bond AL, **Carlson CJ**, Burgio KR. Local extinctions of insular avifauna on the most remote inhabited island in the world. *Journal of Ornithology*. 2018 August 13;160(1):49-60. doi: 10.1007/s10336-018-1590-8.
29. Dougherty ER, de Valpine P, **Carlson CJ**, Blackburn JK, Getz WM. Commentary to: a cross-validation-based approach for delimiting reliable home range estimates. *Movement Ecology*. 2018 Jul 12;6:10. doi: 10.1186/s40462-018-0128-2. PMID: 30009032; PMCID: PMC6042211.
30. Ryan SJ, Lippi CA, **Carlson CJ**, Stewart-Ibarra AM, Borbor-Cordova MJ, Romero M, Cox SA, Mahon R, Trotman A, Rollock L, Gittens-St Hilaire M, King D, Daniel S. Zika virus outbreak, Barbados, 2015-2016. *American Journal of Tropical Medicine & Hygiene*. 2018 Jun;98(6):1857-1859. doi: 10.4269/ajtmh.17-0978. PMID: 29637883. PMCID: PMC6086174.
31. Burgio KR, **Carlson CJ**, Bond AL. Georeferenced sighting and specimen occurrence data of the extinct Carolina Parakeet (*Conuropsis carolinensis*) from 1564 – 1944. *Biodiversity Data Journal*. 2018 Jun 19;1(6):e25280. doi: 10.3897/BDJ.6.e25280. PMID: 29955216. PMCID: PMC6019437.

32. **Carlson CJ**, Bond AL, Burgio KR. Estimating the extinction date of the thylacine with mixed certainty data. *Conservation Biology*. 2018 Apr;32(2):477-483. doi: 10.1111/cobi.13037. PMID: 29067718.
33. **Carlson CJ**, Dougherty ER, Boots M, Getz W, Ryan SJ. Consensus and conflict among ecological forecasts of Zika virus outbreaks in the United States. *Scientific Reports*. 2018 Mar 21;8(1):4921. doi: 10.1038/s41598-018-22989-0. PMID: 29563545. PMCID: PMC5862882.
34. Dougherty ER, **Carlson CJ**, Blackburn JK, Getz WM. Correction to: A cross-validation-based approach for delimiting reliable home range estimates. *Movement Ecology*. 2017 Dec 5;5:26. doi: 10.1186/s40462-017-0116-y. PMID: 29225886; PMCID: PMC5715635.
35. Ryan SJ, **Carlson CJ**, Stewart-Ibarra AM, Borbor-Cordova MJ, Romero MM, Cox SA, Mahon R, Trotman A, St Ville S, Ahmed S. Outbreak of Zika virus infections, Dominica, 2016. *Emerging Infectious Diseases*. 2017 Nov;23(11):1926-1927. doi: 10.3201/eid2311.171140. PMID: 29048289; PMCID: PMC5652428.
36. **Carlson CJ**, Burgio KR, Dougherty ER, Phillips AJ, Bueno VM, Clements CF, Castaldo G, Dallas TA, Cizauskas CA, Cumming GS, Doña J, Harris NC, Jovani R, Mironov S, Muellerklein OC, Proctor HC, Getz WM. Parasite biodiversity faces extinction and redistribution in a changing climate. *Science Advances*. 2017 Sep 6;3(9):e1602422. doi: 10.1126/sciadv.1602422. PMID: 28913417; PMCID: PMC5587099.
37. Dougherty ER, **Carlson CJ**, Blackburn JK, Getz WM. A cross-validation-based approach for delimiting reliable home range estimates. *Movement Ecology*. 2017 Sep 6;5:19. doi: 10.1186/s40462-017-0110-4. PMID: 28904797; PMCID: PMC5586009.
38. Getz WM, **Carlson CJ**, Dougherty ER, Porco TC, Salter R. An agent-based model of school closing in under-vaccinated communities during measles outbreaks. *Simulation*. 2017 July 31;95(5):385-393.
39. Burgio KR, **Carlson CJ**, Tingley MW. Lazarus ecology: Recovering the distribution and migratory patterns of the extinct Carolina parakeet. *Ecology and Evolution*. 2017 Jun 12;7(14):5467-5475. doi: 10.1002/ece3.3135. PMID: 28770082; PMCID: PMC5528215.
40. Cizauskas CA, **Carlson CJ**, Burgio KR, Clements CF, Dougherty ER, Harris NC, Phillips AJ. Parasite vulnerability to climate change: an evidence-based functional trait approach. *Royal Society Open Science*. 2017 Jan 11;4(1):160535. doi: 10.1098/rsos.160535. PMID: 28280551; PMCID: PMC5319317.
41. Getz WM, Muellerklein OC, Salter R, **Carlson CJ**, Lyons AJ, Seidel DP. A web app for population viability and harvesting analyses. *Natural Resource Modeling*. 2016 Nov 29;30(2):e12120. DOI:10.1111/nrm.12120.
42. **Carlson CJ**, Dougherty ER, Getz W. An ecological assessment of the pandemic threat of Zika virus. *PLoS Neglected Tropical Diseases*. 2016 Aug 26;10(8):e0004968. doi: 10.1371/journal.pntd.0004968. PMID: 27564232; PMCID: PMC5001720.
43. Getz WM, Gonzalez JP, Salter R, Bangura J, **Carlson C**, Coomber M, Dougherty E, Kargbo D, Wolfe ND, Wauquier N. Tactics and strategies for managing Ebola outbreaks and the salience of immunization. *Computational and Mathematical Methods in Medicine*. 2015;2015:736507. doi: 10.1155/2015/736507. PMID: 25755674; PMCID: PMC4338386.
44. Landberg T, **Carlson CJ**, Abernathy K, Luginbuhl C, Gemme P, Mergins C. *Natural History Notes: Chelydra serpentina serpentina* L. (Eastern Snapping Turtle). Survival after injury. *Herpetological Review*. 2009 Dec;4(1): 70-71.

ii. Reviews or Editorials in Refereed Journals

45. Albery GF, Becker DJ, Brierley L, Brook CE, Christofferson R, Cohen LE, Dallas TA, Eskew EA, Fagre AC, Farrell MJ, Glennon E, Guth SE, Joseph MB, Mollentze N, Neely B, Poisot T, Rasmussen AL, Ryan SJ, Sjodin AR, Seifert SN, Sorrell S, **Carlson CJ**. The science of the host-virus network. *Nature Microbiology*. 2021 Nov 24;6:1483-1492. doi: 10.1038/s41564-021-00999-5. PMID: 34819645.
46. Sweeny AR, Albery GF, Becker DJ, Eskew EA, Carlson CJ. Synzootics. *Journal of Animal Ecology*. 2021 Sep 21;90(12):2744-2754. doi: 10.1111/1365-2656.13595. PMID: 34546566.
47. **Carlson CJ**, Farrell MJ, Grange Z, Han B, Mollentze N, Phelan AL, Albery GF, Bett B, Brett-Major D, Cohen LE, Dallas TA, Eskew EA, Fagre AC, Forbes K, Gibb RJ, Halabi S, Hammer C, Katz R, Kindrachuk J, Muylaert R, Nutter F, Ogola J, Olival KJ, Rourke M, Ryan S, Ross N, Seifert S, Sironen T, Standley CJ, Taylor K, Venter M, Webala P. The future of zoonotic risk prediction. *Philosophical Transactions B*. 2021 Sep 20;376(1837):20200358. doi: <https://doi.org/10.1098/rstb.2020.0358>. PMID: 34538140.
48. **Carlson CJ**, Codeço CT, Brauer M, Evengård B, Cai W, de la Fuente J, Rautio A. Climate and health: an evolving relationship. *Med*. 2021 Apr 9;2(4):344-347. doi: 10.1016/j.medj.2021.03.007.
49. **Carlson CJ**, Albery GF, Phelan AL. Preparing international cooperation on pandemic prevention for the Anthropocene. *BMJ Global Health*. 2021 Mar;6(3):e004254. doi: 10.1136/bmjgh-2020-004254. PMID: 33727277.
50. Forbes KM, Anzala O, **Carlson CJ**, Kelvin AA, Kuppalli K, Leroy EM, Maganga GM, Masika MM, Mombo IM, Mwaengo DM, Niama RF, Nziza J, Ogola J, Pickering BS, Rasmussen AL, Sironen T, Vapalahti O, Webala PW, Kindruchak J. Towards a coordinated strategy for intercepting human disease emergence in Africa. *The Lancet Microbe*. 2021 Feb 1;2(2):e51-52. doi: 10.1016/S2666-5247(20)30220-2.
51. **Carlson CJ**, Phelan AL. A choice between two futures for pandemic discovery. *The Lancet Planetary Health*. 2020 Dec 1;4(12):e45-46. doi: 10.1016/S2542-5196(20)30245-X. PMID: 33278368.
52. Contina A, Yanco SW, Pierce AK, DePrenger-Levin M, Wunder MB, Neophytou AM, Lostroh CP, Telford RJ, Benito BM, Chipperfield J, O'Hara RB, **Carlson CJ**. Comment on "A global-scale ecological niche model to predict SARS-CoV-2 coronavirus infection rate", author Coro. *Ecological Modelling*. 2020 Sep 21;436:109288. doi: 10.1016/j.ecolmodel.2020.109288. PMID: 32982015.
53. **Carlson CJ**, Gomez ACR, Bansal S, Ryan SJ. Misconceptions about weather and seasonality must not misguide COVID-19 response. *Nature Communications*. 2020 Aug 27;11:4312. doi: 10.1038/s41467-020-18150-z. PMID: 32855406.
54. **Carlson CJ**, Chipperfield JD, Benito BM, Telford RJ, O'Hara RB. Don't gamble the COVID-19 response on ecological hypotheses. 2020 Jul 29;4:1155. doi: 10.1038/s41559-020-1279-2. PMID: 32728188.
55. Becker DJ, Seifert SN, **Carlson CJ**. Beyond infection: integrating competence into reservoir host prediction. *Trends in Ecology and Evolution*. 2020 Sep 10;35(12):1062-1065. doi: 10.1016/j.tree.2020.08.014. PMID: 32921517.
56. Eskew EA, **Carlson CJ**. Overselling wildlife trade bans will not bolster conservation or pandemic preparedness. 2020 Jun 1;4(6):e215-216. doi: 10.1016/S2542-5196(20)30123-6. PMID: 32497492.
57. Phillips CA, Caldas A, Cleetus R, Dahl KA, Declet-Barreto J, Licker R, Merner LD, Ortiz-Partida JP, Phelan AL, Spanger-Siegfried E, Talati S, Trisos CH, **Carlson CJ**. Compound climate risks in the COVID-19 pandemic. *Nature Climate Change*. 2020 May 15;10:586-588. doi: 10.1038/s41558-020-0804-2.
58. **Carlson CJ**, Chipperfield JD, Benito BM, Telford RJ, O'Hara RB. Species distribution models are inappropriate for COVID-19. *Nature Ecology and Evolution*. 2020 May 6;4:770-771. doi: 10.1038/s41559-020-1212-8. PMID: 32377007.

59. Graeden E, **Carlson CJ**, Katz R. Answering the right questions for policymakers on COVID-19. *The Lancet Global Health*. 2020 Apr 20;8(6):e768-769. doi: 10.1016/S2214-109X(20)30191-1. PMID: 32325018.
60. **Carlson CJ**. From PREDICT to prevention, one pandemic later. *The Lancet Microbe*. 2020 Mar 31;1(1):e6-7. doi: 10.1016/S2666-5247(20)30002-1. PMID: 32835320.
61. **Carlson CJ**, Mendenhall E. Preparing for emerging infections means expecting new syndemics. *The Lancet*. 2019 Jul 27;394(10195):297. doi: 10.1016/S0140-6736(19)31237-1. PMID: 31354135.
62. **Carlson CJ**, Getz WM, Kausrud KL, Cizauskas CA, Blackburn JK, Carrillo FAB, Colwell R, Easterday WR, Ganz HH, Kamath PL, Økstad OA, Turner WC, Kolstø AB, Stenseth NC. Spores and soil from six sides: interdisciplinarity and the environmental biology of anthrax (*Bacillus anthracis*). *Biological Reviews*. 2018 Nov;93(4):1813-1831. doi: 10.1111/brv.12420. PMID: 29732670
63. **Carlson CJ**, Trisos CH. Climate engineering needs a clean bill of health. *Nature Climate Change* 2018 Sept 8;8:843-845. doi:10.1038/s41558-018-0294-7.
64. Bell K, **Carlson CJ**, Phillips AJ. Parasite collections: an overlooked resource for integrative research and conservation. *Trends in Parasitology*. 2018 May 11;34(8):637-639. doi: 10.1016/j.pt.2018.04.004
65. Dougherty ER, Seidel DP, **Carlson CJ**, Spiegel O, Getz WM. Going through the motions: incorporating movement analyses into disease research. *Ecology Letters*. 2018 Apr;21(4):588-604. doi: 10.1111/ele.12917. PMID: 29446237.
66. Getz WM, Marshall CR, **Carlson CJ**, Giuggioli L, Ryan SJ, Romañach SS, Boettiger C, Chamberlain SD, Larsen L, D'Odorico P, O'Sullivan D. Making ecological models adequate. *Ecology Letters* 2018 Feb;21(2):153-166. doi: 10.1111/ele.12893. PMID: 29280332.
67. Seidel DP, Dougherty ER, **Carlson CJ**, Getz WM. Ecological metrics and methods for GPS movement data. *International Journal of Geographic Information Science*. 2018;32(11):2272-2293. doi: 10.1080/13658816.2018.1498097. PMID: 30631244. PMCID: PMC6322554.
68. Dougherty ER, **Carlson CJ**, Bueno VM, Burgio KR, Cizauskas CA, Clements CF, Seidel DP, Harris NC. Paradigms for parasite conservation. *Conservation Biology*. 2016 Aug;30(4):724-33. doi: 10.1111/cobi.12634. PMID: 26400623.
69. **CJ Carlson**, CA Cizauskas, KR Burgio, CF Clements, NC Harris. The more parasites, the better? *Science*. 342(6162):1041.

iii. Books or Chapters in Books (indicate if refereed)

70. **Carlson CJ**, Burgio KR, Dallas TA, Getz WM. The mathematics of extinction across scales: from populations to the biosphere. In: *The Mathematics of Planet Earth: Quantitative Approaches to Issues of Current Interest*. (Eds.: HG Kaper and FS Roberts) Springer, 2nd ed. (2019) (refereed)
71. Alexander KA, **Carlson CJ**, Lewis B, Getz WM, Marathe M, Eubank S, Blackburn JK. The ecology of pathogen spillover and disease emergence at the human-wildlife-environment interface. In: *Advances in Environmental Microbiology: The Connections Between Ecology and Infectious Disease*. (Ed.: CJ Hurst) Springer, 1st ed. (2017) (refereed)

iv. Other Publications

72. United Nations Intergovernmental Panel on Climate Change (IPCC). Sixth Assessment Report. Chapter 9: Africa. (2022)

73. United Nations Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). Thematic Assessment on Land Degradation and Restoration. Chapter 5: Land degradation and restoration associated with changes in ecosystem services and functions and human well-being and good quality of life. (2017)
74. **Carlson CJ**. Review: *Zika: The Emerging Epidemic* (Donald G. McNeil Jr., 2016). Quarterly Review in Biology. 2018;93:286-287.
75. Getz WM, Baas K, **Carlson CJ**, Dougherty ER, Muellerklein OC. Lessons from community-based conservation for rethinking elections. Political Insights. 8(1): 33-37.
76. (Preprint) **Carlson CJ**, Bannon E, Mendenhall E, Newfield T, Bansal S. Rapid range shifts in African *Anopheles* mosquitoes over the last century. First posted 2019 Jun 19. doi: 10.1101/673913.
77. (Preprint) Dallas TA, Ryan SJ, Bellekom B, Fagre AC, Christofferson R, **Carlson CJ**. Predicting the tripartite network of mosquito-borne disease. First posted 2021 Nov 17. doi: 10.32942/osf.io/xzmp8.
78. (Preprint) Dallas TA, **Carlson CJ**, Stephens PR, Ryan SJ, Onstad D. insectDisease: programmatic access to the Ecological Database of the World's Insect Pathogens. First posted 2021 Oct 31. doi: 10.32942/osf.io/yd3x5.
79. (Preprint) Glennon EE, Jephcott FL, Oti A, **Carlson CJ**, Bustos Carillo FA, Hranac CR, Parker E, Wood JLN, Restif O. Syndromic detectability of haemorrhagic fever outbreaks. First posted 2020 Mar 31. doi: 10.1101/2020.03.28.20019463.
80. (Preprint) Pegg C, Schulz B, Neely B, Albery GF, **Carlson CJ**. Glycosylation and the global virome. First posted 2022 Apr 08. doi: 10.26434/chemrxiv-2022-w8j7x.
81. (Preprint) Poisot T, Gibb, RJ, Ryan SJ, **Carlson CJ**. NCBITaxonomy.jl – rapid biological names finding and reconciliation. First posted 2021 Oct 21. doi: 10.32942/osf.io/uvbfj.
82. (Preprint) Poisot T, Ouellet M-A, Mollentze N, Farrell MJ, Becker DJ, Albery GF, Gibb RJ, Seifert SN, **Carlson CJ**. Network embedding unveils the hidden interactions in the mammalian virome. First posted 2021 May 31. doi: arXiv:2105.14973.

B. Invited Lectures:

Invited lecture, Colby College, Waterville, ME, February 28, 2020.
 Invited lecture, University of North Carolina, Asheville, NC, October 3, 2019.
 Invited talk, University of Colorado Boulder (NASEM Workshop: Developing a Research Agenda and Research Governance Approaches for Climate Intervention Strategies that Reflect Sunlight to Cool Earth), Boulder, CO, August 7, 2019.
 Invited lecture, Georgetown University Syndemics Workshop, Washington, DC, December 10, 2018.
 Invited talk, George Mason University (MPE 2013+ Workshop on Global Change and Vector-borne Diseases: Mapping Emerging Infectious Diseases), Fairfax, VA, August 14, 2018.
 Invited lecture, EcoHealth Alliance, New York, NY, June 28, 2018.
 Invited lecture, Ross University School of Veterinary Medicine, Saint Kitts and Nevis, June 18, 2018
 Invited lecture, Virginia Tech, Blacksburg, VA, April 18, 2018.
 Invited talk, University of California Berkeley (MPE 2013+ Workshop on Appropriate Complexity Modeling of the Impacts of Global Change on Ecosystems), Berkeley, CA, March 27, 2016.
 Invited seminar, University of California Berkeley, Berkeley, CA, October 7, 2016.

C. Editorships, Editorial Boards, and Reviewing Activities

Editorial service:

Biological Conservation, guest editor for “SI: Parasite Conservation in a Changing World”, 2018-present

Referee service:

Books: Rosenblum, Erica Bree. *Global Change Biology*. (Chapters 1-3, 5-8.) Oxford University Press.
Journals: *Acta Tropica*, *Animal Conservation*, *Biodiversity Informatics*, *Biological Conservation*, *Climate Research*, *Conservation Biology*, *EcoHealth*, *Environmental Science & Technology Letters*, *Epidemics*, *Global Ecology & Conservation*, *Journal of Applied Ecology*, *Parasites & Vectors*, *Parasitology*, *PLoS Medicine*, *PLoS Neglected Tropical Diseases*, *Proceedings of the National Academy of Sciences*

3. TEACHING, MENTORING, AND ADVISING

A. Teaching Activities

i. Undergraduate Courses

Name and Course Number: Evolutionary Biology, EEB 2245 (University of Connecticut)
Role: Teaching Assistant
Number of Direct Contact Hours: 36 (semester long course, one lab section 3 hours per week)
Year(s) Taught: 2012
Number of Students: 50
Overall Evaluation Score: N/A

Name and Course Number: Foundations of Biology, BIOL 1102 (University of Connecticut)
Role: Teaching Assistant
Number of Direct Contact Hours: 72 (2 lab sections each 3 hours per week)
Year(s) Taught: 2013
Number of Students: 30
Overall Evaluation Score: N/A

Name and Course Number: Modeling and Management of Natural Resources, ESPM 104 (UC Berkeley)
Role: Graduate Student Instructor
Number of Direct Contact Hours: 78 (1.5 hour lecture, two 2-hour sections, 2 office hours)
Year(s) Taught: 2014, 2015, 2017
Number of Students: 50
Overall Evaluation Score: N/A

Name and Course Number: Quant. Aspects of Global Environmental Problems, ER 102 (UC Berkeley)
Role: Graduate Student Instructor
Number of Direct Contact Hours: 54 (1.5 hour lecture, two 2-hour sections, 2 office hours)
Year(s) Taught: 2015
Number of Students: 50
Overall Evaluation Score: N/A

Name and Course Number: Syndemics, STIA 438 (Georgetown)
Role: Instructor
Number of Direct Contact Hours: 36 (3 hour class once a week)
Year(s) Taught: 2018
Number of Students: 7
Overall Evaluation Score: N/A

Name and Course Number: Ecology of Infectious Diseases, BIOL 438 (Georgetown)
Role: Instructor of Record
Number of Direct Contact Hours: 24 (two 2-hour lectures a week & 2 office hours, month-long class)
Year(s) Taught: 2019

Number of Students: 8
Overall Evaluation Score: 5/5

Name and Course Number: COVID-19: Theory and Action in an Emerging Pandemic (Georgetown)
Role: Team Instructor
Number of Direct Contact Hours: 4 (one-week module)
Year(s) Taught: 2020
Number of Students: N/A
Overall Evaluation Score: N/A

Name and Course Number: Methods in Health Geography, STIA 398 (Georgetown)
Role: Instructor of Record
Number of Direct Contact Hours: 60 (two 1.5-hour lectures & 2 office hours)
Year(s) Taught: 2020
Number of Students: 20
Overall Evaluation Score: 4.46/5 (median 5/5)

Average number of Undergraduate students involved in your research program: 1-2 per semester

ii. Graduate Courses

Name and Course Number: Principles of Natural Resource Management, DEVP 227 (UC Berkeley)
Role: Graduate Student Instructor
Number of Direct Contact Hours: 60 (two 1.5-hour lectures & 2 office hours)
Year(s) Taught: 2016, 2017
Number of Students: 25
Overall Evaluation Score: N/A

Name and Course Number: Quantitative Methods in Infectious Disease Research, GLID 525 (Georgetown)
Role: Instructor of Record
Number of Direct Contact Hours: 30 (2.5 hour class once a week)
Year(s) Taught: 2022
Number of Students: 6
Overall Evaluation Score: N/A

B. Mentoring:

Kayla Nike
M.S. student
2021-present
Outcomes: manuscript in preparation for *Conservation Biology*

Binqi Chen
Undergraduate
2021-present
Outcomes: manuscript in *The Lancet Microbe*, additional manuscript in preparation for *Journal of Medical Entomology*

Velen Wu
Undergraduate

2021-present

Outcomes: manuscript in preparation for *Journal of Medical Entomology*

Catherine Schluth

Undergraduate

2018-2019

Outcomes: RISE program undergraduate honors thesis, manuscript in preparation for *PLoS Neglected Tropical Diseases*

4. HONORS AND AWARDS

Schmidt Futures International Strategy Forum Fellowship, 2021

UC Berkeley Philomathia Graduate Fellowship in Environmental Sciences, 2017

Forbes' 30 Under 30 (Science), 2016

UC Berkeley George and Violet Homem Graduate Award, 2016

Pacific Standard's 30 Under 30, 2016

UConn Outstanding Ecology & Evolutionary Biology Senior Award, 2012

Harry S. Truman Scholarship, 2011

Pearson Prize National Fellowship, 2011

University of Connecticut University Scholar, 2011

Morris K. Udall and Stewart L. Udall Scholarship, 2010

Environmental Defense Fund Faces of Climate Action, 2009