

ANDREW M. KRAMER  
Curriculum Vitae

Address: Department of Integrative Biology  
University of South Florida  
4202 E. Fowler Ave  
SCA 110  
Tampa, FL 33620  
(813) 974-2825  
email: [amkramer@usf.edu](mailto:amkramer@usf.edu)  
website: <http://kramera3.github.io>

### EDUCATION

- Ph.D. in Fisheries and Wildlife / Ecology, Evolutionary Biology and Behavior (dual degree), 2007, Michigan State University. Advisor: Orlando Sarnelle
- Bachelor of Science, 2000, Saint Louis University, Honors degree, Biology (summa cum laude)

### ACADEMIC APPOINTMENTS

- *Assistant Professor*, Department of Integrative Biology, University of South Florida, Jan. 2018 – present.
- *Assistant Research Scientist*, Odum School of Ecology, University of Georgia, Aug. 2013 – Dec. 2017. Member of the Graduate Faculty.
- *Postdoctoral researcher*, Odum School of Ecology, University of Georgia, Sept. 2009 – April 2013. Mentor: Dr. John Drake
- *Instructor*, Department of Biology, Gainesville State College, Georgia, Summer 2009.
- *Postdoctoral researcher*, Odum School of Ecology, University of Georgia, Oct. 2007-March 2009. Mentor: Dr. John Drake

### GRANTS AND AWARDS

- *USDA-NIFA Ecology and Evolution of Infectious Disease*, “The future of SARS CoV-2 in ecological communities”, 2023-2028. **PI Kramer**. (\$2,995,370 total, \$904,097 to Kramer).
- Withdrawn (due to overlap with award above): *USDA-APHIS*, “The future of SARS CoV-2 in ecological communities”, 2023-2025. **PI Kramer**. (\$2,682,626 total, \$584,856 to Kramer).
- *Moore Foundation (via Cary Institute of Ecosystem Studies)*, “Understanding multiscale environmental predictors of zoonotic risk from satellite data”, 2022-2024. **Senior Personnel Kramer**, PI: Barbara Han, Cary Institute of Ecosystem Studies. (\$141,341 to Kramer).
- *DARPA (via Cary Institute of Ecosystem Studies)*, “Preventing emergence and spillover of bat pathogens in global hotspots”, 2021-2022. **Senior Personnel Kramer**, PI: Barbara Han, Cary Institute of Ecosystem Studies. (\$50,858 to Kramer).
- Not awarded – National Science Foundation, National Artificial Intelligence Research Institute, “AI Institute: Institute for Advancing Integrative Biology (AIBI)”, 2021-2026. **co-PI Kramer**, PI:

Sudeep Sarkar. (\$19,599,253 with \$1,959,925 to Kramer).

- Not awarded – National Aeronautics and Space Administration, A.3 Ocean Biology and Biogeochemistry, “Shifts in Coastal and Marine Biodiversity off the Southeastern USA in the Context of Short, Recurring, and Long-Term Oceanographic Change in the North Atlantic Ocean”, 2025-2027. PI F. Muller-Karger, USF College of Marine Science, **co-I Kramer**. (\$826,113 total, \$46,320 to Kramer).
- Not awarded – National Aeronautics and Space Administration, A.7 Biodiversity and Ecological Conservation, “A multi-scale approach to evaluate and fill gaps in marine biodiversity information using remote sensing for ecological conservation - a case study in the Florida Keys National Marine Sanctuary”, 2025 – 2027. PI F. Muller-Karger, USF College of Marine Science, **co-I Kramer**. (\$826,113 total, \$43,232 to Kramer).
- Not awarded – *National Science Foundation, Information Integration and Informatics*, “Collaborative Research: Data-Driven modeling of COVID-19 with continuous time Dynamic Mode Decompositions and other approaches”, 2021-2024. **co-PI: Kramer, A.**, PI: J. Rosenfeld. (\$859,145 with \$340,000 to Kramer).
- Not awarded – National Science Foundation, Macrosystems Biology and Neon-enabled Science, “Collaborative Research: MRA: The Paradox of Mosquito Macrosystems: Homogenizing communities and diverging populations in urbanizing landscapes”, 2021-2024. **co-PI: Kramer, A.**, PI: Shannon LaDeau (Cary Institute of Ecosystem Studies). (\$84,999 to Kramer).
- *National Science Foundation*, COVID-19 RAPID collaborative proposal, “Spatial dynamics of COVID-19”, 2020-2021. PI: Kramer, A., **co-PI: Drake, J.M.** (\$200,000 with \$124,654 to Kramer).
- *University of South Florida: COVID-19 Rapid Response Research Proposal*, “Contact tracing of ships and seaports in Florida”, 2020-2021. **co-PI: Kramer, A.**, PI: Mark Luther, **co-PI: Steven Meyers**. (\$20,417 with \$5593 to Kramer).
- Not awarded - *National Science Foundation, Biology Integration Institutes*, “Integrating across multi-scale processes to understand and predict zoonotic disease emergence in the Anthropocene”, 2019-2024. **co-PI: Kramer, A.**, PI: Han, B. (Cary Institute of Ecosystem Ecology) (\$12,000,000 with \$534,027 to Kramer).
- *National Science Foundation, Macrosystems Biology*, “Multi-scale dynamics of white-nose syndrome in North America”, 2015-2019. **PI: Kramer, A.**, **co-PI: Drake, J.M.** (\$291,000).
- *Edward and Phyllis Reed Endowment*, “Pheromone specificity between closely and distantly related species in the genus *Hesperodiaptomus*”. 2010. (**Kramer co-PI**, collaborative with Jeannette Yen, Georgia Institute of Technology, \$5900).
- *Valentine/Eastern Sierra Reserve Graduate Student Grant*, University of California Reserve System, 2006 (\$1500)
- *Sigma Xi Grant-in-Aid of Research*, 2006 (\$580)
- *National Science Foundation Graduate Research Fellowship*, 2001-2005 (~\$100,000)
- *Research Experience for Undergraduates Supplement* to NSF award "Recovery of ecosystem structure and function following exotic species eradication" (co-authored with PIs Orlando Sarnelle and Roland Knapp), 2002 (\$6000)
- Ecological Dissertations in the Aquatic Sciences participant (Eco-DAS VIII, formerly DIALOG) (2008)
- Michigan State University Distinguished Fellowship, 2000 and 2004

**PEER-REVIEWED PUBLICATIONS** \*indicates undergraduate author \*\*indicates supervised graduate student author

1. E. Muir\*\*, B. Gemmel, and **A.M. Kramer**. 2025. Captive rearing reduces the sensitivity of *Acartia tonsa* copepods to predator cues. *Journal of Experimental Marine Biology and Ecology* 584: 152091. <https://doi.org/10.1016/j.jembe.2025.152091>
2. A.M. Kramer, C.L. Faust, A.A. Castellanos, I.R. Fischhoff, A.J. Peel, P. Eby, M. Ruiz-Aravena, B. Borremans, R.K. Plowright, B.A. Han. 2025. Integrating host condition into spatiotemporal multi-scale models improves virus shedding predictions. *Ecography*. <http://doi.org/10.1002/ecog.07784>
3. T. Dallas, L. Hollian, A. Pignatelli and **A.M. Kramer**. 2024. Temporal changes in zooplankton community synchrony in ephemeral wetlands. *In review at Proceedings of the Royal Society B – Biological Sciences*.
4. A. M. Smith\*\*, C. Capinha, and **A.M. Kramer**. 2024. Incorporating environmental time series into species distribution models. *In review at Methods in Ecology and Evolution*.
  - a. Preprint available: <https://www.biorxiv.org/content/10.1101/2022.10.26.513922v2.abstract>
5. J. Gallard, **A.M. Kramer**, V.J. Harwood. 2024. Relationships of *Enterococcus* and sewage-associated HF183 in beach sand with distance from a polluted river. *In review at Water Research*.
6. Balerna, J., **A.M. Kramer**, S. Landry, M. Rains, D. Lewis. 2024. Wetland hydrological change and recovery across three decades of shifting groundwater management. *Journal of Hydrology*: 644:132052. <https://doi.org/10.1016/j.jhydrol.2024.132052>
7. E. Muir\*\*, M. Lajuenesse, and **A.M. Kramer**. 2024. The magnitude of Allee effects varies across Allee mechanisms, but not taxonomic groups. *Oikos*: e10386 <http://doi.org/10.1111/oik.10386>
8. J. Balerna, **A.M. Kramer**, S. M. Landry, M. C. Rains, and D. B. Lewis. 2023. Synergistic effects of drought and groundwater extraction on freshwater wetland inundation. *Journal of Environmental Management*, **337**: 117690.
9. T. Dallas and **A.M. Kramer**. 2022. A latitudinal signal in the relationship between species geographic range size and climatic niche area. *Ecography*, **2022**: e06349
10. J. E. Vinson, N. L. Gottdenker, L. F. Chaves, R. B. Kaul, **A. M. Kramer**, J. M. Drake, R. J. Hall. 2022. Land reversion and zoonotic spillover risk. *Royal Society Open Science*, **9**: 220582. doi:10.1098/rsos.220582
11. S. D. Meyers, **A. M. Kramer**, M. E. Luther. 2022. Florida at risk: maritime connectivity during the COVID-19 pandemic. *Florida Scientist*: **85**: 118-136.
12. B. Leroy, **A. M. Kramer**, A-C. Vaissière, F. Courchamp, C. Diagne. 2022. Analysing global economic costs of invasive alien species with the invacost R package. *Methods in Ecology and Evolution*, **13**: 1930-1937.
13. D. Renault, E. Angulo, R. N. Cuthbert, P. J. Haubrock, C. Capinha, **A. M. Kramer**, C. Diagne, F. Courchamp. 2022. The magnitude, diversity, and distribution of the economic costs of invasive terrestrial invertebrates worldwide. *Science of the Total Environment*, **835**: 155391. doi:10.1016/j.scitotenv.2022.155391
14. J. E. Fantle-Lepczyk<sup>1</sup>, P. J. Haubrock<sup>1</sup>, **A. M. Kramer**<sup>1</sup>, R. N. Cuthbert<sup>1</sup>, A. J. Turbelin, R. Crystal-Ornelas, C. Diagne, F. Courchamp. 2022. Economic costs of biological invasions in the United States. *Science of the Total Environment*, **806**: 151318. doi:10.1016/j.scitotenv.2021.151318..
  - a. <sup>1</sup>co-first author
15. T. Dallas and **A.M. Kramer**. 2022. Temporal variability in population and community dynamics. *Ecology*, **103**: e03577. doi: 10.1002/ecy.3577.

16. R. N. Cuthbert, C. Diagne, E. J. Hudgins, A. Turbelin, D. A. Ahmed, C. Albert, T. W. Bodey, E. Briski, F. Essl, P. J. Haubrock, R. E. Gozlan, N. Kirichenko, M. Kourantidou, **A. M. Kramer**, F. Courchamp. 2022. Biological invasion costs reveal insufficient proactive management worldwide. *Science of the Total Environment*, 153404. doi: 10.1016/j.scitotenv.2022.153404
  - a. Featured in Science for Environmental Policy from the European Commission
17. P. J. Haubrock, C. Bernery, R. N. Cuthbert, C. Liu, M. Kourantidou, B. Leroy, A. J. Turbelin, **A. M. Kramer**, L. Verbrugge, C. Diagne, F. Courchamp, R. E. Gozlan. 2022. Knowledge gaps in economic costs of invasive alien fish worldwide. *Science of the Total Environment*, 803: 149875. doi: 10.1016/j.scitotenv.2021.149875
18. **A. M. Kramer**, A. Mercier\*, S. Maher, Y. Kumi-Ansu\*, S. Bowden, and J. M. Drake. 2021. Spatial spread of white-nose syndrome in North America, 2006-2018. *bioRxiv preprint*: <https://doi.org/10.1101/2021.01.28.428526>.
19. R. Crystal-Ornelas, E. Hudgins, R. N. Cuthbert, P. Haubrock, J. Fantle-Lepczyk, E. Angulo, **A. M. Kramer**, L. Ballesteros-Mejia, B. Leroy, B. Leung, E. López-López, C. Diagne, F. Courchamp. 2021. Economic costs of biological invasions within North America. *Neobiota*, 67: 485-510. doi: 10.3897/neobiota.67.58038
20. R. Cuthbert, Z. Pattison; N. G. Taylor, L. Verbrugge, C. Diagne, D. A. Ahmed, B. Leroy, E. Angulo; E. Briski, C. Capinha; J. A. Catford, T. Dalu, F. Essl, R. E. Gozlan, P. J. Haubrock, M. Kourantidou, **A. M. Kramer**, D. Renault, R. J. Wasserman, F. Courchamp. 2021. Global economic costs of aquatic invasive alien species. *Science of the Total Environment*, 775: 145238. doi: 10.1016/j.scitotenv.2021.145238
  - a. Featured in [Der Spiegel](#)
21. C. Capinha, A. Ceia-Hasse, **A. M. Kramer**, C. Meijer. 2021. Deep learning classification of temporal data in ecology. *Ecological Informatics* 61: 101252. doi: 10.1016/j.ecoinf.2021.101252
22. F. Neinaiva\*\*, A. Ibrahim Hashim\*\*, **A. M. Kramer**, J. S. Brown, C. L. Richards. 2021. The genomic processes of biological invasions: From invasive species to cancer metastases and back again. *Frontiers in Ecology and Evolution* 9: 501. Impact factor: 4.171. Citations: 2.
  - a. Featured in The Hub (USF publication), \*\* graduate students
23. Scott, K. M., T. L. Harmer, B. J. Gemmell, **A. M. Kramer**, M. Sutter, C. A. Kerfeld, K. S. Barber, S. Bari, J. W. Boling, C. P. Campbell, J. F. Gallard-Gongora, J. K. Jackson, A. Lobos, J. M. Mounger, P. W. Radulovic, J. M. Sanson, S. Schmid, C. Takieddine, K. F. Warlick, and R. Whittaker. 2020. Ubiquity and functional uniformity in CO<sub>2</sub> concentrating mechanisms in multiple phyla of Bacteria is suggested by a diversity and prevalence of genes encoding candidate dissolved inorganic carbon transporters. *FEMS Microbiology Letters* 367: fnaa106. doi: 10.1093/femsle/fnaa106
  - a. Editor's choice
24. **Kramer, A. M.**, C. S. Teitelbaum, A. Griffin, and J. M. Drake. 2019. Multi-scale model of regional population decline in little brown bats due to white-nose syndrome. *Ecology and Evolution*, 9:8639-8651. doi: 10.1002/ece3.5405
25. **Kramer, A.M.**, Berec, L. and J.M. Drake. 2018. Editorial: Allee effects in ecology and evolution. *Journal of Animal Ecology*, 87: 7-10. doi: 10.1111/1365-2656.12777
26. Berec, L., **A.M. Kramer**, V. Bernhauerova, J.M. Drake. 2018. Density-dependent selection on mate-searching traits and evolution of mate-finding Allee effects. *Journal of Animal Ecology*, 87:24-35. doi: 10.1111/1365-2656.12662
  - a. *Featured as an In Focus article: A Kuparinen. 2018. The mechanistic basis of demographic Allee effects: the search for mates. Journal of Animal Ecology 87:4-6.*
27. **Kramer, A.M.**, G. Annis, M.E. Wittmann, W.L. Chadderton, E.S. Rutherford, D.M. Lodge, L.

- Mason, D. Beletsky, C. Riseng, J.M. Drake. 2017. Suitability of Laurentian Great Lakes for invasive species based on global species distribution models and local habitat. *Ecosphere*, 8:e01883 doi: 10.1002/ecs2/1883
28. Schatz, A.M.\*, **A.M. Kramer**, J.M. Drake. 2017. Accuracy of climate-based forecasts of pathogen spread. *Royal Society: Open Science*, 4:60975. doi: 10.1098/rsos.160975
  29. Schmidt, J.P., A.W. Park, **A.M. Kramer**, B.A. Han, L.W. Alexander and J.M. Drake. 2017. Spatiotemporal fluctuations and triggers of Ebola virus spillover. *Emerging Infectious Diseases*, 23: 415-422. doi: 10.3201/eid2303.160101
  30. Wittman, M.E., G. Annis, **A.M. Kramer**, L. Mason, C. Riseng, E. Rutherford, W.L. Chadderton, D. Beletsky, J.M. Drake and D.M. Lodge. 2017. Refining species distribution model outputs using landscape-scale habitat data: Forecasting Grass Carp and Hydrilla establishment in the Great Lakes region. *Journal of Great Lakes Research*, 43:298-307. doi: 10.1016/j.jglr.2016.09.008
  31. **Kramer, A.M.**, J.E. Ward, F.C. Dobbs, M. Pierce, and J.M. Drake. 2016. The contribution of marine aggregate-associated bacteria to the accumulation of pathogenic bacteria in oysters: an agent-based model. *Ecology and Evolution*, 6: 7397-7408. doi:10.1002/ece3.2467
  32. **Kramer, A.M.**, J.T. Pulliam, L.W. Alexander, A.W. Park, P. Rohani and J.M. Drake. 2016. Spatial spread of the West Africa Ebola epidemic. *Royal Society: Open Science*, 3 160294. doi: 10.1098/rsos.160294
  33. Han, B.A., **A.M. Kramer**, and J.M. Drake. 2016. Global patterns of zoonotic disease in mammals. *Trends in Parasitology*. 32: 565-577. doi: 10.1016/j.pt.2016.04.007
    - a. *Cover and feature article, popular press including: BBC World Service, The Washington Post, Northeast Public Radio, El País, Tech Times, The Scientist.*
  34. Lodge, D.M., P.W. Simonin, S.W. Burgiel, R.P. Keller, J.M. Bossenbroek, C.L. Jerde, **A.M. Kramer**, et al. 2016. Invasion science to inform policy and management: risk analysis and bioeconomics of invasive species. *Annual Review of Environment and Resources*, 41:453-488. doi: 10.1146/annurev-enviro-110615-085532. (*Lead section author*)
  35. Dallas, T., **A.M. Kramer**, M. Zokan, J.M. Drake. 2016. Ordination obscures the influence of environment on plankton metacommunity structure. *Limnology and Oceanography Letters*, 1: 54-61. doi: 10.1002/lol2.10028
  36. Kaul, R.B., **A.M. Kramer**, F.C. Dobbs, J.M. Drake. 2016. Experimental demonstration of an Allee effect in microbial populations. *Biology Letters*. 12: 20160070. doi: 10.1098/rsbl.2016.0070
  37. Drury, K.L.S., J.D. Suter\*, J.B. Rendall\*, **A.M. Kramer** and J.M. Drake. 2015. Immigration can destabilize tri-trophic interactions: implications for conservation of top predators. *Theoretical Ecology*. 8:285-296. doi: 10.1007/s12080-014-0249-1
  38. Drake, J.M., R.B. Kaul, L. Alexander, S. O'Regan, **A.M. Kramer**, et al. 2015. Ebola cases and health system demand in Liberia. *PLOS Biology*, Jan 13: 10.1371/journal.pbio.1002056
  39. **Kramer, A.M.** and J.M. Drake. 2014. Time to competitive exclusion. *Ecosphere*, 5:52. <http://dx.doi.org/10.1890/ES14-00054.1>
  40. Lasley-Rasher, R.S., **A.M. Kramer**, V. Burdett-Coutts, J. Yen. 2014. Assessing the in situ fertilization status of two marine copepod species, *Temora longicornis* and *Eurytemora herdmani*; how common are unfertilized eggs in nature?. *PLoS ONE* 9(11):e112920. doi: 10.1371/journal.pone.0112920
  41. **Kramer, A.M.**, M.M. Lyons, F.C. Dobbs, J.M. Drake. 2013. Bacterial colonization and extinction

- on marine aggregates: stochastic model of species presence and abundance. *Ecology and Evolution*, 3: 4300-4309. doi: 10.1002/ece3.789
42. Maher, S.P., **A.M. Kramer**, et al. 2012. Spread of white-nose syndrome on a network regulated by geography and climate. *Nature Communications* 3, 1306 doi:10.1038/ncomms2301
  43. Drake, J.M. and **A.M. Kramer**. 2012. Mechanistic analogy: how microcosms explain nature. *Theoretical Ecology* 5:433-444 doi: 10.1007/s12080-011-0134-0
  44. **Kramer, A. M.**, O. Sarnelle and J. Yen. 2011. The effect of mating behavior and temperature variation on the critical population density of a freshwater copepod. *Limnology and Oceanography* 56:707-715.
  45. Drake, J.M. and **A.M. Kramer**. 2011. Allee effects. *Nature Education Knowledge* 2(9):2.
  46. Yen, J., J. Sehn\*, K. Catton, **A. M. Kramer** and O. Sarnelle. 2011. Pheromone trail following in three dimensions by the freshwater copepod *Hesperodiaptomus shoshone*. *Journal of Plankton Research*. 33:907-916.
  47. Vercken, E., **A.M. Kramer**, P.C. Tobin, J.M. Drake. 2011. Critical patch size generated by Allee effect in gypsy moth, *Lymantria dispar* (L.). *Ecology Letters*. 14:179-186.
  48. **Kramer, A. M.** and J. M. Drake. 2010. Experimental demonstration of population extinction due to a predator-driven Allee effect. *Journal of Animal Ecology* 79: 633–639.
    - a. *Featured as an In Focus article with commentary: S.D. Gregory and F. Courchamp. 2010. Safety in numbers: extinction arising from predator-driven Allee effects. Journal of Animal Ecology* 79:511-514.
  49. Griffen, B., D. Spooner, **A. M. Kramer**, A. Santoro, A. Spivak, and N. Kelly. 2010. Moving species redundancy toward a more predictive framework. p. 30-46. In: P.F. Kemp [ed.], *Eco-DAS VIII Symposium Proceedings*. ASLO. doi:10.4319/ecodas.2010.978-0-9845591-1-4.30
  50. **Kramer, A. M.**, B. Dennis, A.M. Liebhold, and J. M. Drake. 2009. The evidence for Allee effects. *Population Ecology* 51: 341-354.
  51. **Kramer, A. M.**, O. Sarnelle and R. A. Knapp. 2008. Allee effect limits colonization success of sexually reproducing zooplankton. *Ecology* 89: 2760–2769.
  52. **Kramer, A. M.** and O. Sarnelle. 2008. Limits to genetic bottlenecks and founder events imposed by the Allee effect. *Oecologia* 157:561-569.
  53. **Kramer, A. M.** and L. Francis. 2004. Predation resistance and nematocyst scaling for *Metridium senile* and *M. farcimen*. *Biological Bulletin* 207 (2): 130-140.

## **OTHER PUBLICATIONS**

- Drake, J.M., L. Berec, and **A. M. Kramer**. 2019. Allee effects. In: Fath, B.D. (editor in chief) *Encyclopedia of Ecology*, 2<sup>nd</sup> edition, vol.3, pp.6–13. Oxford: Elsevier. doi: 10.1016/B978-0-12-409548-9.10587-1.

## **SOFTWARE AND DATA PRODUCTS**

- B. Leroy, **A. M. Kramer**, A-C. Vaissière, C. Diagne. 2020. invacost: Analyze Biological Invasion Costs with the ‘InvaCost’ Database. R-package: CRAN. <https://cran.r-project.org/web/packages/invacost/index.html>
- **A.M. Kramer** and A. Mercier\*. 2022. \_simplifyNet: SimplifyNet\_. R package version 0.0.1. CRAN. <https://cran.r-project.org/web/packages/simplifyNet/index.html>

**COURSES TAUGHT**

- **Instructor**, PCB 6456C Biometry, University of South Florida. Lecture and lab. (Spring 2025, 9 students).
- **Instructor**, BSC 2011 Biological Diversity, University of South Florida. Lecture. (Fall 2024, 244 students).
- **Instructor**, PCB 6456C Biometry, University of South Florida. Lecture and lab. (Spring 2024, 12 students).
- **Instructor**, BSC 2011 Biological Diversity, University of South Florida. Lecture. (Fall 2023, 247 students).
- **Instructor**, PCB 6456C Biometry, University of South Florida. Lecture and lab. (Spring 2023, 16 students).
- **Instructor**, BSC 2011 Biological Diversity, University of South Florida. Lecture. (Fall 2022, 254 students).
- **Instructor**, PCB 6456C Biometry, University of South Florida. Lecture and lab. (Spring 2022, 5 students).
- **Instructor**, BSC 2011 Biological Diversity, University of South Florida. Lecture. (Fall 2021, 422 students).
- **Instructor**, PCB 6456C Biometry, University of South Florida. Lecture and lab. (Spring 2021, 10 students).
- **Instructor**, BSC 6932 Mathematical Modeling, University of South Florida. (Fall 2020, 11 students).
- **Instructor**, PCB 6456C Biometry, University of South Florida. Lecture and lab. (Spring 2020, 12 students).
- **Instructor**, BSC 2011 Biological Diversity, University of South Florida. Lecture. (Fall 2019, 250 students).
- **Instructor**, PCB 6456C Biometry, University of South Florida. Lecture and lab. (Spring 2019).
- **Instructor**, BSC 2011 Biological Diversity, University of South Florida. Lecture. (Fall 2018, 160 students).
- **Co-Instructor**, FANR 3200 Ecology of Natural Resources, University of Georgia. Lecture and field-based lab. (Spring 2017: 53 students).
- **Instructor**, ECOL 1000 Ecological Basis of Environmental Issues, University of Georgia (Fall 2016: 15 students).
- **Co-Instructor**, ECOL 4500 Evolutionary Ecology, University of Georgia (Spring 2015: 13 students).
- **Instructor**, BIOL 1101 Biology: the Human Experience, Gainesville State College, Gainesville, GA. (Summer 2009: 2 sections of lecture and laboratory, 20 students each).
- **Co-Instructor**, ECOL 4000/6000 Population and Community Ecology, University of Georgia (Fall 2008: 20 students).
- **Instructor**, ECOL 3500 Ecology, University of Georgia (Summer 2008: 28 students).

**MENTORING****Graduate students at the University of South Florida**

- Travis Flock, Masters in Integrative Biology: Spring 2018 – Summer 2019. A Synthesis of Trait-Mediated Interactions and Indirect Effects within Predator-Prey Dynamics.
- Lindsey Mixer, Masters in Integrative Biology: Fall 2019 – Fall 2021.
- Grace Henderson, Masters in Integrative Biology: Fall 2019 – Spring 2022. Using Fine-scale Aquatic Habitat Data to Construct Dreissenid SDMs in the Laurentian Great Lakes.
- Eva Muir, PhD in Integrative Biology: Fal 2019 – Spring 2024. Exploring the swimming behavior of a hydromechanical copepod in the context of positive density dependence.
- Fargam Neinaiaie, PhD in Integrative Biology: Spring 2018 – current. Predator-prey dynamics of cancer and immune system.
- Austin Smith, PhD in Integrative Biology: Fal 2019 – current. Time-series deep learning approaches for species distribution models.
- Shea Volkel, PhD in Integrative Biology: Fal 2019 – current. Potential synergistics interationcs of invasive lionfish and invasive regal demoiselle in the Gulf of Mexico. Recipient of USF Presidential Graduate Fellowship.
- Suman Neupane: Fall 2024 – current.

**Postdoctoral Associates at the University of South Florida**

- Dr. Rajendra Panda, July 2023 – Dec 2023. Understanding multiscale environmental predictors of zoonotic risk from satellite data.
- Dr. Lauren Ash, Feb 2024 – current. Understanding multiscale environmental predictors of *Aedes aegypti* abundance.
- Dr. Mayank Gangwar. June 2024 – current. Dynamical models for multi-host zoonotic pathogens.

**Undergraduate research at the University of South Florida**

- Gabrielle Johnson: Summer 2024. Visiting research from Swarthmore College. Species richness of SARS-CoV-2 susceptible mammals.
- Mariah Greer-Short: Spring 2023 – Fall 2023. Community dynamics of freshwater zooplankton in Tampa lakes and ponds.
- Olivia Tuckey: Fall 2021 – Spring 2023. Mate finding in copepods.
- Alexander Mercier: Fall 2018 – Spring 2022. Mathematical models in disease ecology
- Shivam Shukla: Spring 2021 – Summer 2022. Population dynamics of freshwater zooplankton.
- Manuela Martinez: Fall 2019. Population dynamics of freshwater zooplankton.
- Raquel Gonzalez: Fall 2019. Spatial dynamics of invasive species.
- Wei Chen, Spring 2019. Land-use effects on Tampa area zooplankton communities.
- Taylor Mattson, Fall 2020-Spring 2021.
- Evan Worden, Fall 2021 – Spring 2022.

**PRESENTATIONS AND WORKSHOPS****Invited:**

- University of Florida, Department of Wildlife Ecology and Conservation seminar series. November 4, 2024.



- Joint Aquatic Sciences meeting, Invited panel: Understanding and Predicting Distribution and Impacts of Aquatic Invasive Species, May 2022.
- Florida International University, Department of Biology seminar series. April 2022.
- Saint Louis University, Department of Biology seminar series. April 2022.
- University of South Florida, Environment and Water Resources Engineering Seminar Series. April 12, 2019. Title: Estimating environmental and biotic niches of aquatic organisms.
- Washington State University, School of the Environment, March 2017. Title: Forecasting invasion and explaining extinction in aquatic systems.
- Auburn University, Department of Biological Sciences, March 2017. Title: Forecasting ecological change: invasive species and emerging diseases.
- University of South Florida, Department of Integrative Biology, January 2017. Title: Forecasting ecological change: invasive species and emerging diseases.
- Summer Academy, Exploring Environmental Science: Hands on program on aquatic ecology for 11-14 year old students. State Botanical Garden of Georgia June 6, 2016.
- Organizer, Oral Session for the 100<sup>th</sup> meeting of the Ecological Society of America in Baltimore, MD. Allee effects: theory and applications. Co-organized with Ludek Berec and John Drake.
- Cary Institute of Ecosystem Studies, Millbrook, New York. November 2014. Title: Can we forecast invasive species distributions?
- Leibniz Institute for Freshwater Ecology and Inland Fisheries (IGB), Berlin, Germany. April 2014. Title: Finding mates, surviving predators and staying competitive: zooplankton in microcosm and whole-lake experiments
- Kennesaw State University, Ecology and Evolution seminar series, September 2013. Title: Finding mates, surviving predators and staying competitive: zooplankton in microcosm and whole-lake experiments
- Leadership without Limits! Presentation on species interactions and species conservation in aquatic systems. Program is for high school students that are children of migrant farm workers, will be developing community projects on water issues. June 2013.
- Computational Ecology and Epidemiology Study Group, University of Georgia, tutorial on using R to produce high quality figures and graphics. February 2012
- Mammoth Lakes Academy (high school), research and career seminar, August 2011
- University of South Carolina, Biological Sciences seminar, March 2011. Title: Finding mates and surviving predators: Allee effects in small populations
- Ohio State University, School of Environment and Natural Resources, February 2011. Title: Finding mates and surviving predators: Allee effects in small populations
- Oceans and Human Health, Gordon Research Seminar, June 2010. Title: Islands of aquatic pathogens: modeling pathogen species accumulation on marine aggregates
- Eco-DAS symposium, University of Hawaii-Manoa, October 2008. Title: Are Allee effects important to community resiliency and species recovery?
- Auburn University, Fisheries and Allied Aquaculture seminar, September 2008. Title: Dynamics of low density populations: Allee effects and recovery from local extinction
- Michigan State University, Fisheries and Wildlife Graduate Student Organization seminar April

2006

**Contributed:** (presenting author, \* indicates undergraduate student, # indicates graduate student)

- M. Gangwar and **A.M. Kramer**. A multi-host SIR model for community transmission of SARS-CoV-2 among animal species. Conference of Research Workers on Animal Diseases. Talk, January 2025.
- G. Johnson\*, A. Castellanos, B. Han, **A.M. Kramer**. Using spatial models to understand potential overlap of wildlife susceptible to SARS-CoV-2. Conference of Research Workers on Animal Diseases. Poster, January 2025.
- **A.M. Kramer**, P. Das, M. Letko, A. Castellanos, and B. Han. The future of SARS-CoV-2 in ecological communities – project outline. Conference of Research Workers in Animal Diseases, January 2024.
- E.J. Muir#, B.J. Gemmell, A.M. Kramer. Captive rearing reduces the sensitivity of *Acartia tonsa* copepods to predator cues, but not the magnitude of predator escape responses. British Ecological Society Aquatic Group conference, September 2023.
- **A.M. Kramer**, C. Faust, Adrian A. Castellanos, B. Han. Multi-scale model of Hendra virus. Ecological Society of America Meeting, Portland, Oregon. August 2023.
- S. Volkel and A.M. Kramer. Invasive regal demoiselle risk of spread and co-occurrence with lionfish. Ecological Society of America Meeting, Portland, Oregon. August 2023.
- A.M. Smith#, C. Capinha, A.M. Kramer. Assessing deep learning protocols for optimizing time series-based species distribution models. Ecological Society of America Meeting, Portland, Oregon. Poster. August 2023.
- E. Muir#, M. Lajeunesse, A.M. Kramer. Allee effect strength varies across Allee mechanisms but not taxonomic groups. Ecological Society of America Meeting, Portland, Oregon. Poster. August 2023.
- **A.M. Kramer**, R. Cuthbert, Z. Pattison; N.G. Taylor, et al. Global Economic Costs of Aquatic Invasive Species. Joint Aquatic Sciences Meeting, Grand Rapids, Michigan, May 2022.
- G. Henderson#, G. Annis, L. Chadderton, A.M. Kramer. Using Fine-scale Aquatic Habitat Data to Construct Dreissenid SDMs in the Laurentian Great Lakes. Joint Aquatic Sciences Meeting, Grand Rapids, Michigan, May 2022.
- F. Neinavaie#, A.M. Kramer. Does mutation rate of cancer cells change as the stage of the disease advances?. American Association for Cancer Research, Evolutionary Dynamics in Carcinogenesis, Tampa FL. Poster, March 2022
- B. Han, A. Castellanos, I. Fischhoff, and A.M. Kramer. Dec 2021. Linking biological scales to predict zoonotic infection risk in changing environments. American Geophysical Union.
- **A.M. Kramer**, Steven Meyers, and Mark Luther. Estimating risk for epidemic spread via maritime shipping networks in the context of SARS-CoV-2. 8th International Epidemics conference 2021, virtual. Poster.
- A.M. Smith#, C. Capinha, and A.M. Kramer. Predicting species distributions with environmental time-series data and deep-learning. Ecological Society of America, August 2021, virtual.
- **A.M. Kramer**, T. Flock#, M. Lajeunesse. Consumptive effects are stronger but more variable than non-consumptive effects in predator–prey systems. Ecological Society of America, August 2021, virtual.
- **A.M. Kramer**, T. Dallas, M. Evans, R. Kaul, R. Richards, J.M. Drake. Environmental and biotic interactions have differential effects on species presence and abundance in a diverse zooplankton community. Ecological Society of America, August 2020, virtual.
- A. Mercier\*, S. Basu, A.M. Kramer. Weather Influences the Spatial Transmission of White-Nose

Syndrome in Little Brown Bats. National Conference on Undergraduate Research. March 2020, Bozeman MT.

- **A.M. Kramer** and J.M. Drake. Visualization for communication throughout data-intensive research projects. Ecological Society of America, Aug 2018, New Orleans.
- **A.M. Kramer**, C. Teitelbaum, A. Griffin and J.M. Drake. Linking within- and between-cave scales to understand population dynamics of bats infected by white-nose syndrome. (poster). Ecological Society of America, Aug 2017, Portland.
- J.M. Drake, J.P. Schmidt, A.W. Park, A.M. Kramer, B. Han and L. Alexander. Early warning systems for spillover of zoonotic pathogens. Ecological Society of America, Aug 2017, Portland.
- J.M. Drake, J.P. Schmidt, A.W. Park, A.M. Kramer, B. Han and L. Alexander. Dynamic risk mapping of zoonotic spillover. Epidemics, Dec 2017, Sitges, Spain.
- **A.M. Kramer**, M.E. Wittman, G. Annis, L. Mason, C. Riseng, E. Rutherford, W.L. Chadderton, D. Beletsky, J.M. Drake and D.M. Lodge. Predicting habitat suitability for invasive species in the Great Lakes: Combining species distribution models and high resolution aquatic variables. (poster). Ecological Society of America, Aug 2015, Baltimore.
- Drake, J.M., A.M. Kramer, L. Alexander, J.T. Pulliam, & A.W. Park. Spatial spread of the West Africa Ebola epidemic at two scales. Society for Mathematical Biology Annual Meeting, July 2, 2015. (Invited presentation).
- Maher, S.P., A.M. Kramer, J.T. Pulliam, K.E. Langwig, A.M. Kilpatrick, W.F. Frick and J.M. Drake. Visiting an old friend: using recent data to revise expectations of white-nose syndrome spread. American Society of Mammologists, June 2015, Jacksonville.
- **Kramer, A.M.**, D. Patel\*, J.M. Drake. Predicting future spread during an outbreak using species distribution models. Ecological Society of America, Aug 2014, Sacramento.
- Kaul, R.B., A.M. Kramer, F.C. Dobbs, J.M. Drake. Allee effects: scaling down to the microbial level. Ecological Society of America, Aug 2014, Sacramento.
- **Kramer, A.M.**, G. Annis, M. E. Wittmann, W. L. Chadderton, E. Rutherford, L. Mason, J. M. Drake. Predicting potential distribution of invasive species using range bagging: golden mussel and killer shrimp in the Great Lakes. Joint Aquatic Sciences Meeting, May 2014, Portland, OR.
- **Kramer, A.M.**, F. Dobbs, M. Maille Lyons, J.M. Drake. Tiny islands: Colonization and extinction of microbial species on marine aggregates. Ecological Society of America, Aug. 2013, Minneapolis.
- **Kramer, A.M.**, J. E. Ward, M. Pierce, F. Dobbs, J.M. Drake. Understanding the contribution of marine aggregate-associated bacteria to pathogen load in oysters using an agent-based model. Association for the Sciences of Limnology and Oceanography, Feb. 2013, New Orleans.
- **Kramer, A.M.**, J. E. Ward, M. Pierce, F. Dobbs, J.M. Drake. The contribution of marine aggregate-associated bacteria to pathogen load in oysters: an agent-based model. NSF Ecology and Evolution of Infectious Disease PI meeting, 2013, Athens GA (poster)
- **Kramer, A.M.**, J.T. Pulliam, S.P. Maher, and J.M. Drake. Simplifying networks: spread of White-nose syndrome in North America. Ecological Society of America 2012, Portland, OR.
- Maher, S.P., A.M. Kramer, et al. Non-diffusive spread of White-nose Syndrome regulated by spatial heterogeneity and climate. American Society of Mammologists June 2012, Reno, NV.
- Kaul, R.B., A.M. Kramer, F.C. Dobbs, J.M. Drake. Allee effects in experimental microbial systems. American Society for Microbiology 2012, San Francisco, CA. (poster).

- **Kramer, A.M.** and J.M. Drake. Population variance and extinction of two competitors consuming a common resource. Ecological Society of America 2011, Austin TX.
- Theresa Stratmann\*, Tierney O'Sullivan\*, Amara Channell\*, Andrew Kramer, Marcus Zokan, Andrea Silletti and John Drake. Two paths to extinction: effect of deteriorating environments on extinction time and distribution. Ecological Society of America 2011, Austin TX. (poster)
- **Kramer, A.M.** and J.M. Drake. Mechanistic model of bacterial persistence on marine aggregates. NSF Ecology and Evolution of Infectious Disease PI meeting, 2011, Madison WI (poster)
- **Kramer, A.M.**, E. Vercken, P. Tobin, J.M. Drake. Allee effects induce critical area for establishment in gypsy moth invasion. Ecological Society of America 2010, Pittsburgh, PA.
- M. Maille Lyons and A. M. Kramer. Microscopic islands: Modeling the theory of island biogeography for aquatic pathogens colonizing marine aggregates. NSF Ecology and Evolution of Infectious Disease PI meeting, 2010, Atlantic City NJ (poster)
- **Kramer, A.M.** and J.M. Drake. Allee effect due to predator functional response: effects on population growth rate and extinction in an experimental zooplankton system. Ecological Society of America 2008, Milwaukee, WI. (poster)
- **Kramer, A.M.** and O. Sarnelle. The Allee effect limits the loss of genetic variability during population bottlenecks. Ecological Society of America 2007, San Jose, CA.
- **Kramer, A.M.** and O. Sarnelle. Allee effect on population growth rate in sexually reproducing zooplankton. American Society of Limnology and Oceanography 2007 Aquatic Sciences meeting, Santa Fe, NM
- **Kramer, A.M.**, Sarnelle, O, and Knapp, R.A. Allee effect limits re-establishment of an alpine copepod: multi-lake stocking experiment. American Society of Limnology and Oceanography 2005 Summer meeting, Santiago de Compostela, Spain

#### **Workshops:**

- Conservation Paleobiology Network Annual Symposium: Pre-Impact Baselines Working Group. University of Florida, Gainesville. International group working on combining species distribution models with paleoecology data in order to establish baselines for conservation. February 2023.
- Invacost Workshop. University Paris-Saclay. International group working on economic costs of invasive species. (Invited). November 2019.
- Great Lakes Mississippi Rivers Interbasin Study – Brandon Road: expert elicitation on effect of management scenarios on invasive scud – *Apocorophium lacustre*. (Invited expert). December 2015.
- Marine Biosecurity Workshop: Research frontiers from integrative marine biosecurity analyses. Environment Institute, University of Adelaide, Australia. (Invited presenter).
- NIMBioS Investigative Workshop: Individual-based Ecology of Microbes. National Institute for Mathematical and Biological Synthesis, University of Tennessee, June 2011. (Presenter).

#### **PROFESSIONAL SERVICE**

- **Subject Matter Editor:** Ecosphere. (September 2016-present).
- **Journal special issues:** Journal of Animal Ecology, Editing a Special Feature on Allee effects, 2017
- **Journal reviews:**

- General Ecology: Ecology (5), Ecology Letters (11), Trends in Ecology and Evolution, Oikos (6), Proceedings of the Royal Society B (3), American Naturalist (2), Ecological Applications (2), Evolution, Journal of Animal Ecology (7), Limnology and Oceanography, Nature Communications (4), Biology Letters, Ecosphere (3), Oecologia, Ecology and Evolution (3), Journal of Applied Ecology (3), Global Change Biology
- Theory/Modeling: Methods in Ecology and Evolution, Bulletin of Mathematical Biology, Ecological Modelling (3), PLoS Computational Biology (4)
- Specialty journals: PLoS ONE (5), Royal Society Open Science (2), Scientific Reports, Genetics (2), Journal of Environmental Management, Conservation Biology, PLoS Neglected Tropical Diseases (2), Biological Invasions (3), Diversity and Distributions, Ecography (2), Marine Ecology Progress Series (2), Behavioral Ecology, Ecological Entomology, Behaviour, Behavioral Ecology and Sociobiology, Restoration Ecology, Population Ecology (5), Environments, Systems and Decisions, American Midland Naturalist, Transactions American Fisheries Society, Journal of Mammology, Freshwater Biology (2). Freshwater Science, Journal of Great Lakes Research (2), Hydrobiologia, Marine and Freshwater Research.
- **Proposal reviews:** NSF panel participant (2025), NSF Population and Community Ecology (6), NSF Biological Oceanography (2), NSF Geography and Spatial Science (1), NSF SBIR/STTR program (1). Oregon Sea Grant, Academia Sinica Grand Challenges (2).
- **Contributing expert:** Great Lakes and Mississippi River Interbasin Study – Brandon Road: expert elicitation on effect of management scenarios on invasive scud – *Apocorophium lacustre*. December 2015.
- **Curriculum reviews:** SEPUP/Science Education for Public Understanding Program, Lawrence Hall of Science, UC Berkeley
- **Presentation judge,** Odum School of Ecology Graduate Student Symposium, 2010, 2011, 2013-2017. Georgia Science and Engineering Fair: 2015, 2016.
- **Professional Societies:** Ecological Society of America (since 2003), American Society of Limnology and Oceanography (since 2003), Sigma Xi (since 2021). Secretary of USF chapter of Sigma Xi 2023-2025.