



## Alyson Singleton

Ph.D. Student in Environment and Resources, admitted Autumn 2021

### Bio

---

#### BIO

Aly is a PhD student in the Emmett Interdisciplinary Program in Environment & Resources, investigating the impact of large-scale global change on infectious disease transmission and broader health dynamics. Based on the concepts of One Health and Planetary Health, she focuses on the design and evaluation of win-win solutions that can synergistically benefit human and environmental health. As we anticipate widening disease disparities under increasing climate and land-use change, her research aims to identify opportunities to prevent and mitigate these compounding harms. She approaches these topics by integrating novel computational methods, field-data collection, and epidemiologic techniques.

Prior to coming to Stanford, Aly was a Data Science Fellow at the Centers for Disease Control and Prevention where she developed analytic tools for outbreak detection and triage of multiple pathogens and supported the CDC's Novel Coronavirus (COVID-19) Response. She also worked at the People, Place & Health Collective at the Brown University School of Public Health while earning her undergraduate (BS, Applied Mathematics) and master's degrees (MA, Biostatistics).

#### HONORS AND AWARDS

- Stanford Interdisciplinary Graduate Fellowship (SIGF), Vice Provost for Graduate Education (VPGE)
- Delta Omega Honorary Society in Public Health, Epsilon Iota Chapter, Brown University School of Public Health
- Honors in Applied Mathematics, Brown University

#### EDUCATION AND CERTIFICATIONS

- MA, Brown University , Biostatistics (2020)
- BS, Brown University , Applied Mathematics (2019)

#### LINKS

- GitHub: <https://github.com/alyson-singleton>
- Google Scholar: <https://scholar.google.com/citations?user=YVUZhvUAAAAJ&hl=en>
- Twitter: [https://twitter.com/aly\\_singleton](https://twitter.com/aly_singleton)

### Publications

---

#### PUBLICATIONS

- **Highway paving dramatically increased dengue transmission in the Amazon.** *medRxiv : the preprint server for health sciences*  
Singleton, A. L., Lescano, A. G., MacDonald, A. J., Mandle, L., Sipin, T. J., Martel, K. S., Munayco, C. V., Carrera, E. D., Choque, G. A., Bautista, A. S., Luby, S. P., Mordecai, E. A.

2024

- **Mapping schistosomiasis risk landscapes and implications for disease control: A case study for low endemic areas in the Middle Paranapanema river basin, São Paulo, Brazil.** *PLoS neglected tropical diseases*  
Ferreira da Silva, V. A., Kampel, M., Silva Dos Anjos, R., Gardini Sanches Palasio, R., Escada, M. I., Tuan, R., Singleton, A., Glidden, C. K., Chamberlin, A., De Leo, G. A., Pinter Dos Santos, A., Vieira Monteiro, A. M.  
2024; 18 (11): e0012582
- **Climate and urbanization drive changes in the habitat suitability of *Schistosoma mansoni* competent snails in Brazil.** *Nature communications*  
Glidden, C. K., Singleton, A. L., Chamberlin, A., Tuan, R., Palasio, R. G., Caldeira, R. L., Monteiro, A. M., Lwiza, K. M., Liu, P., Silva, V., Athni, T. S., Sokolow, S. H., Mordecai, et al  
2024; 15 (1): 4838
- **Estimates of SARS-CoV-2 Hospitalization and Fatality Rates in the Prevaccination Period, United States.** *Emerging infectious diseases*  
Griffin, I., King, J., Lyons, B. C., Singleton, A. L., Deng, X., Bruce, B. B., Griffin, P. M.  
2024; 30 (6): 1144-1153
- **Species distribution modeling for disease ecology: A multi-scale case study for schistosomiasis host snails in Brazil.** *PLOS global public health*  
Singleton, A. L., Glidden, C. K., Chamberlin, A. J., Tuan, R., Palasio, R. G., Pinter, A., Caldeira, R. L., Mendonca, C. L., Carvalho, O. S., Monteiro, M. V., Athni, T. S., Sokolow, S. H., Mordecai, et al  
2024; 4 (8): e0002224
- **Minority-group incubators and majority-group reservoirs support the diffusion of climate change adaptations.** *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*  
Turner, M. A., Singleton, A. L., Harris, M. J., Harryman, I., Lopez, C. A., Arthur, R. F., Muraida, C., Jones, J. H.  
2023; 378 (1889): 20220401
- **Survey of incidence, lifetime prevalence, and treatment of self-reported vulvovaginal candidiasis, United States, 2020.** *BMC women's health*  
Benedict, K., Singleton, A. L., Jackson, B. R., Molinari, N. A.  
2022; 22 (1): 147
- **Network structure and rapid HIV transmission among people who inject drugs: A simulation-based analysis** *EPIDEMICS*  
Singleton, A. L., Marshall, B. D. L., Bessey, S., Harrison, M. T., Galvani, A. P., Yedinak, J. L., Jacka, B. P., Goodreau, S. M., Goedel, W. C.  
2021; 34: 100426
- **Added Benefits of Pre-Exposure Prophylaxis Use on HIV Incidence with Minimal Changes in Efficiency in the Context of High Treatment Engagement Among Men Who Have Sex with Men** *AIDS PATIENT CARE AND STDS*  
Singleton, A. L., Marshall, B. D. L., Zang, X., Nunn, A. S., Goedel, W. C.  
2020; 34 (12): 506-515
- **Potential effectiveness of long-acting injectable pre-exposure prophylaxis for HIV prevention in men who have sex with men: a modelling study** *LANCET HIV*  
Marshall, B. D. L., Goedel, W. C., King, M. R. F., Singleton, A., Durham, D. P., Chan, P. A., Townsend, J. P., Galvani, A. P.  
2018; 5 (9): E498-E505