

Lauren White

whit1951@umn.edu

laurenwhitephd.com

GitHub: <https://github.com/whit1951>

RESEARCH INTERESTS

I am broadly interested in One Health- the intersection of human, animal, and environmental health- and its implications for the spread of disease. The goal of my research is to characterize how *three different types of heterogeneity* can alter individual infectiousness in domestic animal and wildlife populations: (1) host heterogeneity: variation in host behavior and susceptibility, (2) contact heterogeneity: sociality that affects community structure within populations, and (3) spatial heterogeneity: patchiness in resource and host density across a landscape.

EDUCATION

University of Minnesota, Minneapolis-St. Paul, MN

Ph.D. Ecology, Evolution and Behavior

Sept. 2013-July 2018

GPA: 4.0

University of Virginia, Charlottesville, VA

B.S. Biomedical Engineering and B.A. Spanish

May 2012

Rodman Scholar; GPA: 3.98

University of Virginia Hispanic Studies Program, Valencia, Spain

Spanish coursework

Summer 2009

Spanish literature and culture

PROFESSIONAL APPOINTMENTS

AAAS Science and Technology Policy Fellow

USAID Office of HIV/AIDS, Systems & Program Sustainability
Division

**September 2020-
present**

Post-doctoral Research Fellow

National Socio-Environmental Synthesis Center (SESYNC)

College of Computer, Mathematical, and Natural Sciences

University of Maryland- College Park, Annapolis, MD

**August 2018-
August 2020**

GRANTS & FELLOWSHIPS

- University of Minnesota OACA Rapid Response funding for COVID-19 (co-PI)-\$10,000 **2020**
- University of Minnesota Institute on the Environment Mini Grant (co-PI)- \$3,000 **2019**
- Competitive SESYNC award to support post-doctoral research (\$143,000) **2018-present**
- Infectious Disease Evolution Across Scales (IDEAS) Research Exchange (co-PI)-\$6,000 **2018**
- University of Minnesota Informatics Institute-MnDRIVE Graduate Fellowship (\$35,042 salary and fringe + \$1,500 research and travel) **2017-2018**
- National Science Foundation Doctoral Dissertation Improvement Grant, "DISSERTATION RESEARCH: Using dynamic network models to reveal how heterogeneity in behavioral and immune competence impact disease dynamics in an emerging wildlife disease," (co- PI) \$15,620 **2017-2018**

- National Science Foundation Graduate Research Fellowship- \$138,000 **2013-2018**
- University of Minnesota Institute on the Environment Mini Grant- \$2,859 **2017**
- EEB Special Training Grant- \$2,211 **2016**
- Wally Dayton Wildlife Fellowship- \$2,500 **2014**
- EEB Summer Research Award- \$2,000 **2014**
- EEB Summer Fellowship- \$5,000 **2014**
- NOVEC Scholarship recipient- \$1,500 **2008**
- 4-H Ashby/Stowers Scholarship- \$500 **2008**

HONORS AND AWARDS

- Best Dissertation Award, University of Minnesota - Honorable Mention **2019**
- Short list for Journal of Animal Ecology Sidnie Manton Award: Review by Lauren White, James Forester and Meggan E. Craft: “Dynamic, spatial models of parasite transmission in wildlife: Their structure, applications and remaining challenges.” **2018**
- American Institute of Biological Sciences (AIBS) Emerging Public Policy Leadership Award (EPPLA) Honorable Mention **2018**
- One of the top four student abstracts- Allen D. Lemans Swine Conference (based on scientific merit and originality) **2016**
- UVA Undergraduate Research and Design Symposium Finalist **2012**
- Nominated to UVA Raven Society **2011**
- Marie M. Giuliano Award- UVA Spanish Department- \$1,000 **2011**
- UVA Intermediate Honors (top 20% of class) **2010**
- UVA Dean’s List **2008-2012**
- Robert C. Byrd Federal Scholar Recipient (merit-based scholarship)- \$1,000/year for four years **2008-2012**

TRAVEL AWARDS

- *Veterinary Sciences* Conference Travel Award- \$790 **2019**
- EEB Summer Travel Grant- \$900 **2018**
- ESA Student Section Travel Award- \$75 **2017**
- EEB Summer Travel Grant- \$1,000 **2017**
- Network Modeling for Epidemics Workshop Fee Waiver- \$500 **2016**
- EEB Summer Travel Grant- \$862 **2016**
- AEGIS Conference Travel Grant- \$500 **2016**
- COGS Conference Travel and Career Development Grant- \$707 **2015**
- EEB Summer Travel Grant- \$778 **2015**
- GAPSAs Student Travel Grant- \$200 **2015**

PUBLICATIONS (*Mentored students)

IN REVIEW

- *Mistrick, J., *Gilbertson, M., White, L.A. & Craft, M.E. “Animal networks and pathogen transmission” in *Research frontiers in animal behavior and parasitism: Social contact, heterogeneity, and pathogen transmission*.
- Malmberg, J., White, L.A., Vandewoude, S. (In revision). Predator driven spillover: Pathogen bioaccumulation in top predators. doi: 10.20944/preprints202012.0270.v1

-
- Frenken, T., Paseka, R., González, A.L., Asik, L., Seabloom E.W., **White, L.A.**, Borer, E.T., Strauss, A.T., Peace, A. Van de Waal, DB. (In revision). Can changing elemental cycles impact primary producer pathogens by inducing stoichiometric mismatches?
 - Lee, N., Christensen-Dalsgaard, J., **White, L.A.**, Schrode, K.M., and Bee, M. (In revision). Noise-control lungs help frogs solve a multi-species, cocktail party problem. <https://doi.org/10.1101/2020.06.30.171991>

PEER-REVIEWED:

- Shaw, A.K., White, L.A., Michalska-Smith, M., Borer, E.T., Craft, M.E., Seabloom, Snell-Rood, E., and Travisano, M. (*Accepted*). Lessons from movement ecology for the return to work: modeling contacts and the spread of COVID-19. *PLoS ONE*. <https://doi.org/10.1101/2020.05.27.20114728>
 - Borer, E.T., Asik, L. Everett, R.A., Frenken, T., Gonzalez, A. Paseka, R. Peace, A. Seabloom, E.W. Strauss, A.T., Van de Waal, D.B., and **White, L.A.** (2021). Elements of disease in a changing world: modelling feedbacks between infectious disease and ecosystems. *Ecology Letters*, 24: 6-19. <https://doi.org/10.1111/ele.13617>
 - Worsley-Tonks, K.E.L., Escobar, L.E., Biek, R., Castaneda-Guzman, M., Craft, M.E., Streicker, D.G., **White, L.A.**, and Fountain-Jones, N.M. (2020) Using host traits to predict reservoir host species of rabies virus. *PLoS Negl Trop Dis* 14(12): e0008940. <https://doi.org/10.1371/journal.pntd.0008940>
 - **White, L.A.**, Siva-Jothy, J., Craft, M. E., and Vale, P. (2020). Genotype and sex-based host variation in behaviour and susceptibility drives population disease dynamics. *Proc. R. Soc. B*. 287: 20201653, <http://doi.org/10.1098/rspb.2020.1653>
 - **White, L.A.**, Vandewoude, S. & Craft, M.E. (2020). A mechanistic, stigmergy model of territory formation in an asocial animal: territorial behavior can dampen or drive persistence. *PLoS Comput Biol* 16(6): e1007457. <https://doi.org/10.1371/journal.pcbi.1007457>
 - Paseka, R., **White, L.A.**, van de Waal, D., Strauss, A., González, A., Everett, R., Peace, A., Seabloom, E., Frenken T., and Borer, E. (2020). Disease-mediated ecosystem services: Pathogens, plants, and people. *Trends in Ecology & Evol* 35(8): 731-743. <https://doi.org/10.1016/j.tree.2020.04.003>
 - **White, L.A.** and Mordechai, L. (2020). Modeling the Justinianic Plague: comparing hypothesized transmission routes. *PLoS ONE* 15(4): e0231256. <https://doi.org/10.1371/journal.pone.0231256>
 - *Gilbertson, M., **White, L.A.**, and Craft, M.E. (2020). Trade-offs with telemetry-derived contact networks for infectious disease studies in wildlife. *Methods in Ecology and Evolution*. doi: 10.1111/2041-210X.13355
 - **White, L.A.**, Forester, J. D. and Craft, M. E. (2018). Understanding pathogen dynamics as a function of individual movement behavior across a heterogeneous landscape. *PNAS*. doi: 10.1073/pnas.1801383115
 - **White, L.A.**, Forester, J. D. and Craft, M. E. (2018). The role of host heterogeneity in determining epidemic outcomes: Covariation between the physiological and behavioral components of transmission. *Oikos*, 127(4), 538-552. doi: 10.1111/oik.04527
 - **White, L.A.**, Forester, J. D. and Craft, M. E. (2018). REVIEW: Mechanistic, spatial models of parasite transmission in wildlife: their structure, applications, and remaining challenges. *J. Anim. Ecol.* 87(3), 559-580. doi: 10.1111/1365-2656.12761
 - Stadler, R., **White, L.A.**, Hu, K., Helmke, B., and Guilford, W. (2017). Direct measurement of cortical force generation and polarization in a living parasite. *Mol. Bio. Cell.* 28(14), 1912-1923. doi: 10.1091/mbc.E16-07-0518
 - **White, L.A.**, Torremorell, M. and Craft, M.E. (2017). Influenza A virus in swine breeding herds: Combination of vaccination and biosecurity practices can reduce likelihood of
-

endemic piglet reservoir. *Prev. Vet. Med.*, 138, 55-69. doi: 10.1016/j.prevetmed.2016.12.013

- **White, L.A.**, Forester, J.D. and Craft, M.E. (2017). Using contact networks to explore mechanisms of parasite transmission in wildlife. *Biol. Rev.*, 92, 389-409. doi:10.1111/brv.12236
- Eads, D.A., Bowser, J., Poonamallee, M., Molina, S., Neill, J., and **White, L.A.** (2016). Black-tailed prairie dogs selectively countermark rabbit urine: The scent of competition between a rodent and a lagomorph? *Ethology, Ecology & Evolution*, 28(1), 102-109. doi: 10.1080/03949370.2014.999828
- Ezenwa, V., Archie, E., Craft, M.E., Hawley, D., Martin, L., Moore, J. and **White, L.A.** (2016). Host behavior-parasite feedback: an essential link between animal behavior and disease ecology. *Proceedings B*, 283(1828), 20153078. doi: 10.1098/rspb.2015.3078.
- **White, L.A.**, Ortiz, Z., Cuervo, L.G., and Reveiz, L. (2011). Clinical trial regulation in Argentina: Overview and analysis of regulatory framework, use of existing tools, and researchers' perspectives to identify potential barriers. *Rev. Panam. Salud Publica*, 30(5), 445-452. doi: 10.1590/S1020-49892011001100007

CONFERENCE PROCEEDINGS:

- **White, L.A.**, M. Torremorell & M.E. Craft. (2016) Implications of management interventions on a model of influenza A virus persistence within swine breeding herds. *Options IX for the Control of Influenza Conference*, Abstract # P-357, Chicago, IL, USA, p. 207.
- **White, L.A.**, M. Torremorell & M.E. Craft. (2016) "A stochastic, mathematical model of influenza A virus within swine breeding herds: Implications of possible management interventions. *Proceedings of the American Association of Swine Veterinarians*, New Orleans, LA, p. 310.
- Stadler, R.V., **White, L.**, Helmke, B.P, Hu, K., and Guilford, W.H. Measuring actomyosin function in a living parasite using a laser trap." *Biophysical Journal*, 106(2):787a. Presented at the Biophysical Society 58th Annual Meeting on February 19th 2014, San Francisco, CA. doi: 10.1016/j.bpj.2013.11.4313
- **White, L.**, Walton, D.B., and Guilford, W. Multivalent systems of catch bonds exhibit ideal bond behavior. *Biophysical Journal*, 102(3):592. Presented at the Biophysical Society 56th Annual Meeting on February 28th 2012, San Diego, CA. doi: 10.1016/j.bpj.2011.11.3228

PRESENTATIONS (*Mentored students)

INVITED INTERNATIONAL SEMINARS:

- **White, L.A.** *The effects of heterogeneity in pathogen transmission on disease modeling predictions.* Research Seminar at Roslin Institute, University of Edinburgh. Presented March 12, 2019.
- **White, L.A.**, Forester, J.D. and Craft, M.E. *Disease outbreak thresholds emerge from interactions between movement behavior, landscape structure, and epidemiology.* Movement Ecology of Animals, Gordon Research Seminar, Lucca (Barga), Italy, presented March 3, 2019.

INVITED PRESENTATIONS:

- **White, L.A.** *The effects of heterogeneity in pathogen transmission on disease modeling predictions.* University of Maryland, Behavior, Ecology, Evolution, and Systematics seminar series, presented September 9, 2019.
-

-
- **White, L.A.** Inferring contact behavior to predict pathogen spread in an asocial predator: Preliminary explorations and challenges. NSF EEID FELIDAE Project Retreat, Granby, CO, August 23, 2019.
 - **White, L.A.** The effects of heterogeneity in pathogen transmission on disease modeling predictions. Colorado State University, Dept. of Microbiology, Immunology & Pathology seminar series, April 18, 2019.
 - **White, L.A.**, Craft, M.E., VandeWoude, S. Integrating host movement, genomic, and spatial data to understand the effects of human-altered landscapes on pathogen spread. Fagan lab meeting, University of Maryland College Park. April 11, 2019.
 - **White, L.A.**, Craft, M.E., VandeWoude, S. Integrating host movement, genomic, and spatial data to understand the effects of human-altered landscapes on pathogen spread. NSF Program Offices, Washington, D.C. December 20, 2018.
 - **White, L.A.** Disease outbreak thresholds emerge from interactions between movement behavior, landscape structure, and epidemiology. NSF EEID FELIDAE Project Retreat, CSU Mountain Campus, Fort Collins, CO, August 25, 2018.
 - **White, L.A.** The effects of heterogeneity in pathogen transmission on disease modeling predictions. University of Edinburgh. May 22, 2018.
 - **White, L.A.**, Forester, J.D. and Craft, M.E. The effects of heterogeneity in pathogen transmission on disease modeling predictions. Georgetown University, Washington, D.C. Shweta Bansal's lab meeting, October 4, 2017.
 - **White, L.A.**, Forester, J.D. and Craft, M.E. The role of host heterogeneity in determining epidemic outcomes: Covariation between the physiological and behavioral components of pathogen transmission. Virginia Tech, Blacksburg, VA. Dana Hawley's lab meeting, October 27, 2017.

CONFERENCES:

- *Gilbertson, M., **White, L.A.** and Craft, M.E. Inferring contact behavior to predict pathogen spread: Pitfalls of telemetry-derived contact networks of wildlife. Presented at the 2019 ESA/USSEE Joint Meeting, August 11-16, 2019, Louisville, Kentucky.
 - *Gilbertson, M., **White, L.A.** and Craft, M.E. Pitfalls of telemetry-derived contact networks of wildlife. Presented at the 68th Annual International Wildlife Disease Association Conference, August 4-9, 2019, Tahoe City, California.
 - **White, L.A.**, Forester, J.D. and Craft, M.E. The role of host heterogeneity in determining epidemic outcomes: Covariation between the physiological and behavioral components of pathogen transmission. Ecological Society of America, Portland, Oregon, August 8, 2017. F1000Research 2017, **6**:1853 (slides) (doi: [10.7490/f1000research.1114983.1](https://doi.org/10.7490/f1000research.1114983.1))
 - **White, L.A.**, Forester, J.D. and Craft, M.E. Understanding pathogen dynamics as a function of individual movement behavior across a heterogeneous landscape. Ecology & Evolution of Infectious Disease Conference, Santa Barbara, California, June 25, 2017.
 - **White, L.A.**, Torremorell, M. and Craft, M.E. Implications of management interventions on a model of influenza A virus persistence within swine breeding herds. Oral talk presented at Lemna Swine Conference, Sept. 18, 2016, St. Paul, MN. *One of the top four student abstracts (based on scientific merit and originality)
 - **White, L.A.**, Torremorell, M. and Craft, M.E. Modeling influenza virus in swine farms. Oral talk presented at preconference workshop, Lemna Swine Conference, Sept. 18, 2016, St. Paul, MN.
 - **White, L.A.**, Forester, J.D. and Craft, M.E. Covariation between the behavioral and physiological components of transmission on epidemic outcomes. Oral talk presented at Animal Behavior Society 2016 Meeting, July 30-August 3, 2016, Colombia, MO.
-

-
- **White, L.A.**, Forester, J.D. and Craft, M.E. The effects of covariation between the behavioral and physiological components of transmission on epidemic outcomes. Oral talk presented at ISVEE Conference, Nov 7, 2015, Mérida, Mexico.
 - Craft M.E., **White, L.A.**, Reynolds, J.J.H. and Torremorell, M. Mathematical modeling of influenza A virus dynamics within swine farms and the effects of vaccination. ISVEE Conference, Nov 7, 2015, Mérida, Mexico.

POSTERS:

- Peace, A., Paseka, R., Asik, L. Everett, R.A., Frenken, T., Gonzalez, A., Seabloom, E.W., Strauss, A.T., Van de Waal, D.B., **White, L.A.**, and Borer, E.T. A simple model of pathogen-mediated nutrient dynamics. Society of Mathematical Biology 2020 Meeting, virtual, August 17-20, 2020.
 - **White, L.A.**, Craft, M.E. & VandeWoude, S. A mechanistic, stigmergy model of territory formation in an asocial predator: consequences for pathogen transmission. Ecology & Evolution of Infectious Disease Conference, Princeton, NJ, June 10-13, 2019.
 - *Gilbertson, M., **White, L.A.** and Craft, M.E. Pitfalls of telemetry-derived contact networks of wildlife. Ecology & Evolution of Infectious Disease Conference, Princeton, NJ, June 10-13, 2019.
 - **White, L.A.**, Craft, M.E., Vickers, W. & VandeWoude, S. Inferring contact behavior to predict pathogen spread in an asocial predator: preliminary explorations and challenges. Movement Ecology of Animals, Gordon Research Conference, Lucca (Barga), Italy, March 4-5, 2019.
 - **White, L.A.**, Hawley, D.M., Adelman, J.S. & Craft, M.E. Using dynamic network models to reveal how heterogeneity in behavioral and immune competence impact disease dynamics in an emerging wildlife disease. Poster presented at Ecology & Evolution of Infectious Disease Conference, Glasgow, Scotland, May 29-June 1, 2018.
 - **White, L.A.**, Torremorell, M. and Craft, M.E. A stochastic, mathematical model of influenza A virus within swine breeding herds: implications of possible management interventions. Poster presented at iCOMOS Conference, Minneapolis, MN, April 30, 2018.
 - **White, L.A.**, Forester, J.D. and Craft, M.E. The role of host heterogeneity in determining epidemic outcomes: Covariation between the physiological and behavioral components of pathogen transmission. Poster presented at Jacques Monod Conference, Roscoff, France, October 30- November 3, 2017.
 - **White, L.A.**, Forester, J.D. and Craft, M.E. Understanding pathogen dynamics as a function of individual movement behavior across a heterogeneous landscape. Poster presented at Animal Behavior Society Conference, Toronto, Ontario, June 14, 2017.
 - **White, L.A.**, Torremorell, M. and Craft, M.E. A stochastic, mathematical model of influenza A virus within swine breeding herds: implications of possible management interventions. Poster presented at Minnesota Supercomputing Institute Poster Exhibition, St. Paul, MN, April 25, 2017.
 - **White, L.A.**, M. Torremorell & M.E. Craft. Implications of management interventions on a model of influenza A virus persistence within swine breeding herds. Lemna Swine Conference, St. Paul, MN, Sept. 2016.
 - **White, L.A.**, M. Torremorell & M.E. Craft. Implications of management interventions on a model of influenza A virus persistence within swine breeding herds. Options IX for the Control of Influenza, Chicago, IL, Aug. 2016.
 - **White, L.A.**, Forester, J.D. and Craft, M.E. Covariation between the behavioral and physiological components of transmission affects epidemic outcomes. Poster presented at Ecology & Evolution of Infectious Disease Conference, Ithaca, NY, June 3-5, 2016.
-

- **White, L.A.** Torremorell, M. & Craft, M.E. A stochastic, mathematical model of influenza A virus within swine breeding herds: Implications of possible management interventions. American Association of Swine Veterinarians, New Orleans, LA, Feb. 2016.
- **White, L.A.**, Torremorell, M. and Craft, M.E. A stochastic, mathematical model of influenza A virus within swine breeding herds: implications of possible management interventions. Poster presented at Allen D. Leman Swine Conference, St. Paul, MN, September 20, 2015.
- **White, L.A.**, Forester, J.D., and Craft, M.E. Exploring the differences between observed and real contact networks: implications for pathogen transmission. Poster presented at Ecology & Evolution of Infectious Disease Conference, Athens, GA, May 26-29, 2015.
- **White, L.A.**, Forester, J.D., and Craft, M.E. Using networks to model plague dynamics in prairie dogs. Poster presented at Ecology & Evolution of Infectious Disease Conference, Colorado State University, Fort Collins, CO, June 1-4, 2014.

TEACHING EXPERIENCE

University of Maryland **Spring 2019**
Data Carpentry Certified Instructor

Virginia Tech **October 2017**
Guest Lecturer

- Developed and presented a 75-minute lecture and discussion on “Contact network models in wildlife” to a class of 20 students enrolled in "Infectious Disease Ecology" (BIOL 4564/5564)

University of Minnesota **Spring 2014**
Teaching Assistant

- Lab instructor for two sections of BIOL 3408W: Ecology (20 hrs/wk)
- Developed and presented a 50-minute lecture on the “Ecology of Infectious Diseases” to a class of 150 students

University of Minnesota **Fall 2013**
Teaching Assistant

- Lab instructor for BIOL 2002: Foundations of Biology (20 hrs/wk)

MENTORSHIP

- Marie Gilberston, Ph.D. student, Department of Population Veterinary Medicine, University of Minnesota
- Meredith Meyers, high school student, Bryam Hills High School, NY; recognized as 2020 Regeneron STS Scholar for her international science fair project: https://www.societyforscience.org/regeneron-sts/2020-scholars/?utm_source=&utm_medium=&utm_campaign=

RELATED EXPERIENCE

Flow Yoga, Leesburg, VA **March 2016-July 2018**
Yoga Instructor, RYT 200

- Teaching and guiding classes of up to twenty students three times per week
- Planned, organized, and led “Cat yoga” classes with Loudoun County Animal Shelter
- Conducting class sign-ins and retail purchases for studio clients

Leesburg Veterinary Hospital, Leesburg, VA **August 2012-May 2013**
Veterinary Assistant

-
- Created estimates for clients, obtained patient histories, filled prescriptions, answered questions about prescription use with clients, recorded and entered all charges and lab work relating to a patient's appointment or hospitalization
 - Ran diagnostic lab work: blood tests, ear cytologies, fecal floats and smears
 - Prepared surgery packs and maintained dental and surgery areas and equipment for daily operations
 - Helped with patient handling, restraint, and care; drew blood for diagnostics, administered SQ fluids, helped with placement of catheters and intubation

USGS and Colorado State University

June-August 2012

Field Technician

-
- Set and maintained small animal traps in prairie dog colonies for sylvatic plague study
 - Handled, restrained, measured, and tagged prairie dogs
 - Made behavioral observations on grooming and foraging habits in prairie dogs

Molecular Biomechanics Laboratory, University of Virginia

**Fall 2010-
Spring 2012**

Undergraduate Research Assistant

Advisor: Dr. William Guilford

-
- Senior thesis and Capstone project (Fall 2011-Spring 2012): "The mechanobiology of *Toxoplasma gondii*"- exploring how the motility of this parasite relates to its virulence
 - Culturing HFF cells, maintaining *T. gondii in vitro*
 - Use of laser trap system to quantify behavior of actin and myosin motor units in live parasites
 - Independent research (Spring & Summer 2011):
 - Pursued an independent computational project on the catch-slip bond behavior of E-selectins and their receptors in the phenomenon of leukocyte rolling and adhesion
 - Developed a Monte Carlo computational model and closed-form Markov Chain solutions to predict mean bond lifetime of catch-slip bonds using experimentally determined values for rate constants, molecule elasticity, and surface geometries

Pan American Health Organization, Buenos Aires, Argentina

May-August, 2010

Intern

-
- Investigated clinical trial registration practices in the province of Buenos Aires, conducted research on currently registered trials and existing legislation
 - Designed and administered a survey instrument, interviewed 30+ investigators and sponsors in Spanish
 - Compiled results and presented findings at Washington D.C. headquarters

Blue Ridge Veterinary Associates, Purcellville, VA

July-August, 2009

Veterinary Technician Assistant

-
- Monitored post-surgery patients, sterilized surgery pack, and ran basic in-house diagnostic tests
 - Admitted patients into hospital and filled prescriptions
 - Helped with large animal farm calls

SKILLS

-
- **Language:** Spanish fluency, basic French
 - **Laboratory:** motility assays, gel electrophoresis, cell culture, PCR
 - **Computer:** proficient in MATLAB, Mathematica, Java, R, Microsoft Office, and WordPress, Git/GitHub

PROFESSIONAL MEMBERSHIPS

-
- AAAS (2017-present)
-

-
- British Ecological Society (2017-present)
 - Ecological Society of America (2017-present)
 - Animal Behavior Society (2016-present)
 - Tau Beta Pi Engineering Honor Society (2012-present)
 - University of Virginia Raven Society (2011-present)
-

SCIENCE WRITING & COMMUNICATION

- “An Introduction to Disease Modeling: Understanding COVID-19 Means Understanding Disease Modeling” SESYNC May 2020 Newsletter: <https://youtu.be/TdFmy-MeJ4s>
 - “New call to examine old narratives: Infectious disease modeling study casts doubt on the Justinianic Plague’s impact” Press release, May 1, 2020: <https://bit.ly/35WpSEw>
 - “Connected to COVID-19: Network science reveals critical caveat in gathering size recommendations” UMN Profiles, Spring 2020: <https://profiles-vetmed.umn.edu/article/perspectives-connected-covid-19>
 - “SESYNC’s Public Health Immersion Workshop: Interdisciplinary Themes of Resilience and Social Determinants of Health” SESYNC February 2020 Newsletter: <https://bit.ly/2UjMomL>
 - “ ‘We All Have Bad First Drafts’: Lessons from a Professional Science Writer”: SESYNC January 2020 Newsletter: <https://bit.ly/37Ny1Lg>
 - “Three Lessons I Learned from Attending the 2019 Science Writers Conference as a Scientist” SESYNC December 2019 Newsletter: <https://bit.ly/34OfXPq>
 - “Modern Insights into Plagues of Old” SESYNC November 2019 Newsletter: <https://bit.ly/2Mh4xgv>
 - Summary of the 2018 Ecology Evolution & Infectious Diseases Conferences for *Journal of Animal Ecology* blog on June 19, 2018: <https://bit.ly/2Ublbj0>
 - “The intersection of wildlife disease, conservation, and human health” for *Journal of Animal Ecology* blog on May 18, 2018: <https://bit.ly/2CO84hC>
 - “Spatial disease models: picking a ‘useful’ model for pressing ecological questions” for *Journal of Animal Ecology* blog on November 1, 2017: <https://bit.ly/2FIQ74O>
 - “Painted turtles” for the Loudoun County Wildlife Conservancy’s *Habitat Herald*, Spring 2017: <https://bit.ly/2UdN5PW>
-

SCIENCE OUTREACH

- Skype-a-Scientist, January 24th 2020-4th grade class in New Jersey
 - Letters to a Pre-Scientist with a 7th grader in Santa Ana, CA- Fall 2019
 - Skype-a-Scientist, November 26th 2019- 5th grade class, Kansas City, MO
 - Visited with State Senator Sarah Elfret to discuss funding for basic science research during American Institute of Biological Sciences Congressional Visits Day. Fall 2019
 - TEDMED Research Scholar 2019 (https://blog.tedmed.com/2020_researchscholars/)
 - Skype-a-Scientist, May 24, 2019- thirty 4th & 5th grade girls in New York, NY
 - Letters to a Pre-Scientist with a 7th grader in Santa Ana, CA- Spring 2019
 - Skype-a-Scientist, Sept. 24, 2018- thirty 4th & 5th grade girls at Bethlehem Elementary School, Taylorsville, NC
 - Market Science (marketsci.org), May 5th 2018, Midtown Farmers Market, MN. Discussed and demonstrated parasites with ~200 members of the general public (61 kids + 156 adults, with 85 long visits).
 - Animal Behavior Society Outreach Fair, June 12th 2017, Toronto, Ontario, Canada. Discussed disease transmission and modeling using the Vax game with ~100 K-12 children.
 - Animal Behavior Society Outreach Fair, July 30th 2016, Colombia, MO. Educated families and K-12 children in telemetry and radio tracking methods for wildlife monitoring.
-

-
- Visited with Representative Barbara Comstock’s staff to discuss funding for basic science research during American Institute of Biological Sciences Congressional Visits Day. Fall 2016 & 2017.
-

PRESS COVERAGE

- The Wildlife Disease Society (July 8, 2020). “Territorial behavior may help animals flatten disease curve”: <https://bit.ly/3gJbdkh>
 - Discover Magazine (June 18, 2020). “These 4 Pandemics Changed the Course of Human History”: <https://bit.ly/2ZenzuY>
 - YNet (June 4, 2020). “Did plague destroy half of the Byzantine empire?” [Hebrew]: <https://bit.ly/3iL5BYt>
 - IFLScience (May 4, 2020). “One Of The Worst Pandemics In History Perhaps Wasn't As Severe As Thought”: <https://bit.ly/2Ds6zc7>
 - Sputnik News (May 3, 2020). “Not So Deadly After All? New Study Challenges Impact of Infamous Justinianic Plague Pandemic”: <https://sptnkne.ws/CpUu>
 - Phys.org (May 2, 2020). “New call to examine old narratives: Infectious disease modeling study casts doubt on the Justinianic Plague's impact”: <https://bit.ly/2AIUVZk>
 - Minnesota Supercomputing Institute (March 15, 2019). “Research spotlight: Modeling how diseases spread”: <https://bit.ly/2VexPyG>
 - University of Minnesota. (June 26, 2018). “Research brief: Habitat fragmentation can promote disease outbreaks”: <https://bit.ly/2Vke6ZC>
-