

## SECTION IV: VITA

### I. ACADEMIC HISTORY

**1. Name:** Alexander T. Strauss

**2. Present rank:** Assistant Professor                      **Recommended rank:** Assistant Professor

**Department:** Odum School of Ecology

**3. Allocation of effort (1.00 EFT):**                      Instruction: 0.33; Research: 0.60; Service: 0.07

**4. Tenure status:**                      On tenure track

**5. Administrative title:**                      None

**6. Graduate faculty status:**                      Active, first appointed August 2020

**7. Highest degree:**                      PhD in Ecology, Evolution and Behavior, Indiana University, 2016

**8. List of academic positions:**

8/20-present: *Assistant Professor*, Odum School of Ecology, University of Georgia

5/17-7/20: *Postdoctoral Associate*, University of Minnesota & National Socio-Environmental Synthesis Center (SESYNC)

1/18-4/17 *Postdoctoral Associate*, Indiana University

1/16-12/17 *Final Year Fellow*, Indiana University

8/15-12/15 *Teaching Assistant*, Indiana University

7/12-7/15 *NSF GRFP Fellow*, Indiana University

1/12-6/12 *Recruitment Fellow*, Indiana University

8/11-12/11 *Teaching Assistant*, Indiana University

**9. Other professional employment:**

10/08-5/11: *Undergraduate Lab Technician*, Chase Lab, Washington University in St. Louis

**10. Post-graduate awards:**

2022: Lilly Teaching Fellowship, University of Georgia

2021: Presidential Interdisciplinary Seed Grant, University of Georgia

2020: Minnesota Futures Research Grant, University of Minnesota

2019: JBS Haldane Early Career Award, British Ecological Society

2017: Thomas M. Frost Award for Excellence in Graduate Research, Ecological Society of America, Aquatic Section

2016: Floyd/Ogg/Cleland Final Year Fellowship Award, Indiana University

2015: Outstanding Paper Award, Ecological Society of America, Disease Ecology Section

2015: Floyd Plant & Fungal Biology Summer Fellowship Award, Indiana University

2014: Doctoral Dissertation Improvement Grant Award, NSF

2013: David G. Frey Memorial Fund Award

2012: Floyd Plant & Fungal Biology Summer Fellowship Award, Indiana University

2011: Graduate Research Fellowship Program (GRFP) Award, NSF

2011: Biology Department Research Recruitment Fellowship Award, Indiana University

### II. INSTRUCTION

**1. Courses taught**

Dr. Strauss has a 1.00EFT that includes 0.33 instruction, 0.60 research, and 0.07 service. He regularly teaches courses with both undergraduate and graduate student enrollment. A summary of the courses he has taught at the University of Georgia is provided below (Table 1). For classes with lectures and labs, labs are listed separately since enrollment may differ. The summary table does

not include Dr. Strauss's annual contributions to supervised undergraduate research, supervised graduate research, lab group meetings, and guest lectures.

**TABLE 1: SUMMARY OF COURSES TAUGHT AT UGA<sup>1</sup>**

Course (ECOL)	Responsibility <sup>2</sup>	Title	Term <sup>2</sup>	Enroll. <sup>2</sup>	Course Credit	Individual Credit Hours
4150/6150	50	Population Biology of Infectious Disease Lab	S 2023	24	1	12
4150/6150	50	Population Biology of Infectious Disease	S 2023	24	3	36
4150L/6150L	50	Population Biology of Infectious Disease Lab	S 2022	36	1	18
4150/6150	50	Population Biology of Infectious Disease	S 2022	36	3	54
4000/6000	50	Population and Community Ecology	F 2021	28	3	42
4310L/6310L	50	Freshwater Ecosystems Lab	F 2021	19	1	9.5
4310/6310	50	Freshwater Ecosystems	F 2021	34	3	51
4150L/6150L	50	Population Biology of Infectious Disease Lab	S 2021	42	1	21
4150/6150	50	Population Biology of Infectious Disease	S 2021	43	3	64.5
4000/6000	50	Population and Community Ecology	F 2020	27	3	40.5
8000	083	Topics in Modern Ecology	F 2020	13	3	3.25

#### GUEST LECTURES

- 2022: Disease in Aquatic Food Webs. FYOS 54924: Ecology of Infectious Diseases (J. Drake)
- 2020: Disease Ecology. Ecology 3500 (Prof. A. Injaian)

## **2. Development of new courses and teaching resources**

### COURSE RE-DESIGN

- ECOL 4000/6000: Population and Community Ecology (CONVERSION TO FLIPPED CLASSROOM; RECORDING OF LECTURE MATERIAL; DEVELOPMENT OF ACTIVE LEARNING ACTIVITIES AND SCAFFOLDED HOMEWORK ACTIVITIES TO DEVELOP CODING AND DATA ANALYSIS SKILLS)
- ECOL 4150/6150(L): Population Biology of Infectious Disease & Population Biology of Infectious Disease Lab (DEVELOPMENT OF 3-WEEK WET-LAB AND DATA ANALYSIS MODULE; DEVELOPMENT OF IN-CLASS ACTIVE LEARNING ACTIVITIES)
- ECOL 4310/6310(L): Freshwater Ecosystems & Freshwater Ecosystems Lab (DEVELOPMENT OF NEW 3-WEEK WET-LAB AND DATA ANALYSIS LEARNING MODULE; DEVELOPMENT OF NEW IN-CLASS DISCUSSION MATERIAL)

## **3. Supervision of graduate student research**

- 2021-present: (Ph.D. Ecology): Katherine Schroeder, UGA

## **4. Graduate student advisory committee membership**

<sup>1</sup> This list does not include undergraduate research credits, graduate student research credits, lab meetings, or guest lectures.

<sup>2</sup> **Responsibility**=Percent responsibility for course; **S**=Spring, **F**=Fall; **Enroll.**= Number of students enrolled in course

- 2022-present: (Ph.D. Ecology): Brandon Haile, University of Georgia
- 2022-present: (M.S. Forestry and Natural Resources): Kelly Holland, University of Georgia
- 2021-present: (Ph.D. Ecology): Daniel Suh, University of Georgia

### **5. Supervision of undergraduate research**

- 2023: T’Kai Adekunle: Population Biology of Infectious Diseases REU, UGA
- 2023: Isaac Wood: CURO Summer Fellowship, UGA
- 2023: Gabriel Sullivan-Brugger: Independent Research in Ecology (4960) & CURO, UGA
- 2023: Christopher Romiluyi: CURO, UGA
- 2022: Jenavier Tejada: Population Biology of Infectious Diseases REU, UGA
- 2022: Emily Landolt: Population Biology of Infectious Diseases REU, UGA
- 2022: Abigail (Mackenzie) Jordan: CURO, UGA
- 2022: Andrew Mancao: Independent Research in Ecology (4960) & CURO, UGA
- 2021: Hannah O’Grady: Population Biology of Infectious Diseases REU, UGA
- 2021: August Anderson: Independent Research in Ecology (4960) & CURO, UGA
- 2019: Carson Kephart: Cedar Creek Ecosystem Reserve REU, UMN
- 2019-2021: Hajira Wehelie: NSF REU DEB 1556649, UMN
- 2018-2020: Lucas Bowerman: NSF REU DEB 1556649, UMN
- 2018-2020: Narmada Venkateswaran: Directed Research & Honors Thesis, UMN
- 2018-2020: Efemona Famati: Directed Research, UMN
- 2018: Andrew Sieben: Independent Research, UMN
- 2016-2017: Allison Partee: Independent Research, IU
- 2016-2017: Andrew Sickbert: Independent Research, IU
- 2014: Shawn Hall: Groups Scholars STEM Initiative for Minority Students, IU
- 2014: Sean Szolek-Van Valkenburg: Groups Scholars STEM Initiative for Minority Students, IU
- 2013: Zephyr Wenrich: Groups Scholars STEM Initiative for Minority Students, IU
- 2013-2015: Johnathan Nguyen: Groups Scholars STEM Initiative for Minority Students, IU
- 2013-2014: Sarah Duple: Biomath Fellows Program, U of Illinois & IU
- 2013: Brad Lufkin: Honors Degree Individual Study, IU

### **6. Internship supervision**

- 2023: Christine Melley: Warnell Developing Pathways Internship Program, UGA

### **7. Instructional grants received**

- 2022-2024: Lilly Teaching Fellowship, UGA (\$2,000)

### **8. Recognitions and outstanding achievements in teaching and mentoring**

- 2022-2024: Lilly Teaching Fellowship, UGA

### **9. Academic advising** - NONE

### **10. Professional development**

- 2020-2022: Lilly Teaching Fellowship, UGA
- 2019: Teaching Mentorship, Dep. Biology Teaching and Learning, UMN (Mentor: Mark Decker)
- 2015: Enrolled Course: Mentored Teaching, IU (Instructor: Mimi Zolan)

## **III. SCHOLARLY ACTIVITIES & CREATIVE WORK**

### **1. Publications**

Dr. Strauss has authored a total of 28 peer-reviewed publications, including 25 journal articles, two monographs and one book chapter. Of these 28 works, 14 have been published since Dr. Strauss arrived at UGA. Notations for joint endeavors: Dr. Strauss is **bolded**. Student or

postdoctoral co-authors mentored are underlined. Authorship was typically assigned using the “first-last-author-emphasis-norm”<sup>3</sup>, in which first author is the primary contributor and last authorship denotes “senior authorship” with contributions to study design, interpretation, and writing. Manuscripts where he was the senior author or co-senior author are denoted with an \*. For multiple-author publications, his contributions are briefly described after each reference in *italics*. Award-winning publications (5x) are denoted with a †.

A. BOOKS AUTHORED OR CO-AUTHORED – NONE

B. BOOKS EDITED OR CO-EDITED – NONE

C. CHAPTERS IN BOOKS (PEER REVIEWED; INVITED)

1. \*Guindre-Parker, S, Tung, J, and **AT Strauss**. 2022. Emerging frontiers in animal behavior and parasitism: Integration across scales. In: Ezenwa VO, Altizer S, Hall RJ, editors. *Animal Behavior and Parasitism*: Oxford University Press. 16 pages. *Dr. Strauss roles: conception, data collection, discussion, writing. All authors contributed equally.*

D. MONOGRAPHS (PEER REVIEWED; NOT INVITED)

2. Borer ET, Paseka, RE, Peace, A, Asik, L, Everett, R, Frenken, T, González, AL, **Strauss, AT**, Van de Wall, D, LA White and EW Seabloom. 2022. Disease-mediated nutrient dynamics: Coupling host-pathogen interactions with ecosystem elements and energy. *Ecological Monographs* 92 (2): e1510. *Dr. Strauss roles: discussion, interpretation, writing.*
3. † **Strauss, AT**, Shocket, MS, Civitello, DJ, Hite, JL, Penczykowski, RM, Duffy, MA, Cáceres, CE, and SR Hall. 2016. Habitat, predators, and hosts regulate disease in *Daphnia* through direct and indirect pathways. *Ecological Monographs* 86: 393-411. †winner of 2017 Thomas M. Frost Award for Excellence in Graduate Research.

E. JOURNAL ARTICLES (PEER REVIEWED; NOT INVITED)

4. Seabloom, EW, Asik, A, Everett, RA, Frenken, T, González, AL, Paseka, RE, Peace, AL, **Strauss, AT**, van de Waal, DB, White, LA, and ET Borer. 2023. Dead or alive: Integrating disease and ecosystem ecology theory. *Oikos*. *Dr. Strauss roles: design, discussion, interpretation, writing.*
5. Walsman, JC, **Strauss, AT**, Hite, JL, Shocket, MS, and SR Hall. 2022. Disease-driven trophic cascades increase the costs of resistance and can select for higher transmission rate with disease than without. *Evolutionary Ecology*. *Dr. Strauss roles: data collection, discussion, writing.*
6. Walsman, J, **Strauss, AT**, and SR Hall. 2022. Parasite-driven cascades or hydra effects: virulence and foraging depression shape parasite-host-resource interactions. *Functional Ecology* 36: 1268-1278. *Dr. Strauss roles: data collection, discussion, writing.*
7. Ebeling, A, **Strauss, AT**, Adler, P, Arnillas, C, Barrio, I, Biederman, L, Borer, E, Bugalho, M, Caldeira, M, Cadotte, M, Daleo, P, Eisenhauer, N, Eskelinen, A, Fay, P, Firn, J, Graff, P, Hagenah, N, Haider, S, Komatsu, K, McCulley, R, Mitchell, C, Moore, J, Pascual, J, Peri, P, Power, S, Prober, S, Risch, A, Roscher C, Sankaran, M, Seabloom, E, Schielzeth, H, Schutz, M, Speziale, K, Tedder, M, Virtanen, R, and DM Blumenthal. 2021. Nutrient enrichment increases herbivory and pathogen damage in grasslands. *Journal of Ecology* 110: 327-339. *Dr. Strauss roles: coding, analysis, discussion, writing. The first two authors (AE and ATS) contributed equally.*
8. Porath-Krause A, **Strauss, AT**, Henning, JA, Seabloom, EW, and ET Borer. 2021. Pitfalls and Pointers: An accessible guide to marker gene amplicon sequencing in ecological applications. *Methods in Ecology and Evolution* 13: 266-277. *Dr. Strauss roles: coding, analysis, writing.*
9. Wilfahrt, P, Asmus, AL, Seabloom, EW, Henning, JA, Adler, P, Arnillas, CA, Bakker, JD, Biederman, L, Brudvig, LA, Cadotte, M, Daleo, P, Eskelinen, A, Firn, J, Harpole, WS, Hautier, Y, Kirkman, KP, Komatsu, KJ, Laungani, R, MacDougall, A, McCulley, RL, Moore, JL, Morgan, JW, Mortensen, B,

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<sup>3</sup>Tscharntke, T., Hochberg, M. E., Rand, T. A., Resh, V. H., & Krauss, J. (2007). Author sequence and credit for contributions in multiauthored publications. *PLoS Biol*, 5(1), e18.

Hueso, RO, Ohlert, T, Power, SA, Price, J, Risch, AC, Schuetz, M, Shoemaker, L, Stevens, C, **Strauss, AT**, Tognetti, PM, Virtanen, R, and ET Borer. 2021. Temporal rarity is a better predictor of local extinction risk than spatial rarity. *Ecology* 102 (11): e03504. *Dr. Strauss roles: data collection, discussion, writing.*

10. **Strauss, AT**, Bowerman, L, Porath-Krause A, Seabloom, EW, and ET Borer. 2021. Mixed infection, risk projection, and misdirection: Resource supply determines infection risk for hosts exposed to multiple pathogens. *Ecology and Evolution* 11 (14): 9599-9609.
11. Frenken, T, Paseka, R, González, A, Asik, L, Seabloom, EW, White, L, Borer, ET, **Strauss, AT**, Peace, A, D van de Waal. 2021. Changing elemental cycles, stoichiometric mismatches, and consequences for pathogens of primary producers. *Oikos* 130 (7): 1046-1055. *Dr. Strauss roles: discussion, writing.*
12. Porath-Krause, A, Campbell, R, Shoemaker, LG, Sieben, A, **Strauss, AT**, Shaw, AK, Seabloom, EW, and ET Borer. 2021. Pliant pathogens: Estimating viral spread when confronted with new vector, host, and environmental conditions. *Ecology and Evolution* 11 (4): 1877-1887. *Dr. Strauss roles: design, analysis, discussion, writing.*
13. Borer, ET, Asik, L, Everett, R, Frenken, T, González, A, Paseka, R, Peace, A, Seabloom, EW, **Strauss, AT**, van de Waal, D, and L White. 2021. Elements of disease in a changing world: Modeling feedbacks between infectious disease and ecosystems. *Ecology Letters* 24 (1): 6-19. *Dr. Strauss roles: discussion, interpretation, writing.*
14. **Strauss, AT**, Henning, JA, Porath-Krause A, Asmus AL, Shaw, AK, Borer, ET, and EW Seabloom. 2020. Vector demography, dispersal, and the spread of disease: Experimental epidemics under elevated resource supply. *Functional Ecology* 34 (12): 2560-2570.
15. Paseka, R, White, L, van de Waal, D, **Strauss, AT**, González, A, Everett, R, Peace, A, Seabloom, EW, Frenken, T, and ET Borer. 2020. Disease-mediated ecosystem services: Pathogens, plants, and people. *Trends in Ecology and Evolution*. 35 (8): 731-743. *Dr. Strauss roles: discussion, writing.*

*All journal articles listed below were published before ATS arrived at UGA.*

16. **Strauss, AT**, Hite, JL, Civitello, DJ, Shocket, MS, Cáceres, CE, and SR Hall. 2019. Genotypic variation in parasite avoidance behavior and other mechanistic, non-nonlinear components of transmission. *Proceedings of the Royal Society B* 286 (1915): 20192164.
17. **Strauss, AT**, Shoemaker LG, Seabloom EW, and ET Borer. 2019. Cross-scale dynamics in community and disease ecology: Relative timescales shape the community ecology of pathogens. *Ecology* 100 (11): e02836.
18. † Shoemaker, LG, Hayhurst, E, Weiss-Lehman, CP, **Strauss, AT**, Porath-Krause, A, Borer, ET, Seabloom, EW, and AK Shaw. 2019. Pathogens manipulate the preference of vectors, slowing disease spread in a multi-host system. *Ecology Letters* 22 (7): 1115-1125. *Dr. Strauss roles: data collection, discussion, writing.* †winner of 2019 Ecology Letters Early Career Researcher Award (awarded to L Shoemaker)
19. Bresciani, L, Lemos, LN, Wale, N, Lin, JY, **Strauss, AT**, Duffy, MA, and LM Rodrigues. 2018. Draft genome sequence of *Candidatus Spirobacillus cienkowskii*, a pathogen of freshwater *Daphnia* species, reconstructed from hemolymph metagenomics reads. *Microbiology Resource Announcements* 7 (22): e01175-18. *Dr. Strauss roles: collection of field samples, writing.*
20. Shocket, MS, Vergara, D, Sickbert, A, Walsman, J, **Strauss, AT**, Hite, JL, Duffy, MA, Cáceres, CE, and SR Hall. 2018 Parasite rearing and infection temperatures jointly influence disease transmission and shape seasonality of epidemics. *Ecology* 99 (9): 1975-1987. *Dr. Strauss roles: data collection, discussion, writing.*
21. † **Strauss, AT**, Bowling, AM, Duffy, MA, Cáceres, CE, and SR Hall. 2018. Linking host traits, interactions with competitors, and disease: Mechanistic foundations for disease dilution. *Functional Ecology* 32 (5): 1271-1279. †winner of 2019 JBS Haldane Early Career Award.

22. † Shocket, MS, **Strauss, AT**, Hite, JL, Šljivar, M, Civitello, DJ, Duffy, MA, Cáceres, CE, and SR Hall. 2018. Temperature drives epidemics in a zooplankton-fungus disease system: A trait driven approach points to transmission via host foraging. *The American Naturalist* 191 (4): 435-451. *Dr. Strauss roles: data collection, writing*. †winner of 2019 American Naturalist Student Paper Award (awarded to M Shocket).
23. **Strauss, AT**, Hite, JL, Shocket, MS, Cáceres, CE, Duffy, MA, and SR Hall. 2017. Rapid evolution rescues hosts from competition and disease and – despite a dilution effect – increases the density of infected hosts. 2017. *Proceedings of the Royal Society B*. 284.
24. Hite, JL, Penczykowski, RM, Shocket, MS, Griebel, K, **Strauss, AT**, Duffy, MA, Cáceres, CE, and SR Hall. 2017. Allocation, not male resistance, increases male frequency during epidemics: A case study in facultatively sexual hosts. *Ecology* 98: 2773-2783. *Dr. Strauss roles: data collection, writing*.
25. Hite, JL, Penczykowski, RM, Shocket, MS, **Strauss AT**, Orlando PA, Duffy, MA, Cáceres, CE, and SR Hall. 2016. Parasites destabilize host populations by shifting stage-structured interactions. *Ecology* 97: 439-449. *Dr. Strauss roles: data collection, writing*.
26. † **Strauss, AT**, Civitello, DJ, Cáceres, CE, and SR Hall. 2015. Success, failure, and ambiguity of the dilution effect among competitors. *Ecology Letters* 18: 916-926. †winner of 2015 ESA Disease Section Outstanding Paper Award.
27. **Strauss, AT** and KG Smith. 2013. Why does amphibian chytrid (*Batrachochytrium dendrobatidis*) not occur everywhere? An exploratory study in Missouri ponds. *PLoS ONE*.
28. **Strauss, A**, White, A, and M Boots. 2012. Invading with biological weapons: The importance of disease-mediated invasions. *Functional Ecology* 26: 1249-1261.

F. BULLETINS OR REPORTS – NONE

G. CONFERENCE ABSTRACTS - SEE “PRESENTATIONS”, BELOW.

H. BOOK REVIEWS – NONE

I. PATENTS – NONE

J. WORKS SUBMITTED BUT NOT YET ACCEPTED

- **Strauss, AT**, **Suh, DC**, Galbraith, K, Coker, SM, **Schroeder KM**, Brandon, C, Warburton, EM, Yabsley, MJ, and CA Cleveland. Mysterious Microsporidians: Springtime outbreaks of disease in *Daphnia* communities in shallow pond ecosystems. In revision.
- van de Waal, DB, White, LA, Everett, RA, Asik, A, Borer, ET, Frenken, T, González, AL, Paseka, RE, Seabloom, EW, **Strauss, AT**, and AL Peace. Reconciling contrasting effects of nitrogen on host immunity and pathogen transmission using stoichiometric models. In revision. *Dr. Strauss roles: discussion, interpretation, writing*.
- **Strauss, AT**, Hobbie, SE, Reich, PB, Seabloom, EW, and ET Borer. The dilution effect is not what you think: Disease severity increases with host biomass and nitrogen, not loss of biodiversity, in a 22-year field experiment. In review.
- Henning, JA, Borer, ET, **Strauss, AT**, Lumibao, C, May, G, Kinkel, L, and EW Seabloom. Selection, ecological drift, and dispersal shape foliar fungal endophyte community assembly receiving nutrient addition. In review. *Dr. Strauss roles: discussion, writing*.

K. OTHER KINDS OF SUBMISSIONS OR ACTIVITIES – NONE

L. CREATIVE CONTRIBUTIONS OTHER THAN FORMAL PUBLICATIONS

- Paseka, RE and AT Strauss. 2020. Cedar Creek Education and Community Engagement Newsletter: “The fungus among us: Research on infectious disease in grassland plants.”
- Strauss, AT. 2019. Functional Ecologists Blog (functionalecologists.com): “Disease, diversity, and dilution.”

## **2. Grants and fellowships received**

Dr. Strauss has been awarded a total of \$1,358,000 in research grants and fellowships, including \$186,500 awarded directly to the Strauss Lab since he arrived at UGA. The total amount awarded is listed for each grant or fellowship. For collaborative grants, the amount awarded to Dr. Strauss is listed separately. If funds were not awarded directly to Dr. Strauss, his contributions are briefly described in *italics*.

- 2023: UGA Developing Pathways Warnell Internship. Lead PI: R Abney. Co-PI: AT Strauss. Total awarded: \$15,239. *Dr. Strauss role: Developed questions, writing, co-supervising the intern.*
- 2022 (awarded 8/22; funds not yet available as of 12/29): Carter Center: Enhancing Guinea worm eradication efforts by understanding the ecology of copepods and their dynamic responses to predators and Abate treatment. Lead PI: DJ Civitello (Emory U). Co-PI: AT Strauss. Total awarded: \$798,309. Awarded to Dr. Strauss: \$137,538.
- 2021: UGA Presidential Interdisciplinary Seed Grant: Bloom and Doom: Is increasing risk of harmful algal blooms an inevitable consequence of global change? Assessing risk and exploring strategies in Georgia from biological and social perspectives. Lead PI: C Struthers. Co-PIs: AT Strauss, K Capps, P Hazelton, and M Ritchie. Total awarded: \$142,245. Awarded to Dr. Strauss: \$49,000.
- 2020: UMN Minnesota Futures Research Grant (427224). The emergence of chronic wasting disease in Minnesota: Transmission across a landscape of plants, soils, water, and deer. PI: EW Seabloom (UMN). *Dr. Strauss roles: led the proposal, assembled the team, wrote the first draft, created all figures, and managed revisions and the submission. Dr. Strauss is not listed as lead PI due to institutional policy. The budget would have supported Dr. Strauss as a postdoc at UMN but was reallocated when he accepted his position at UGA.* Total awarded: \$249,000.
- 2019: REU supplement for NSF DEB 1556649. Lead PI: EW Seabloom. Co-PI: ET Borer. *Dr. Strauss roles: developed questions, wrote the first draft and revised.* Total awarded: \$6,500.
- 2018: REU supplement for NSF DEB 1556649. Lead PI: EW Seabloom. Co-PI: ET Borer. *Dr. Strauss roles: developed questions, wrote the first draft and revised.* Total awarded: \$6,500.
- 2016: Floyd/Ogg/Cleland Final Year Fellowship, Indiana University. Total awarded: \$10,000
- 2015: Floyd Plant & Fungal Biology Summer Fellowship, Indiana U. Total awarded: \$1,100
- 2014: NSF DEB Doctoral Dissertation Improvement Grant (1406846). Dissertation Research: Eco-Evolutionary Dynamics of the Dilution Effect. Lead PI: SR Hall. Co-PI: AT Strauss. *Dr. Strauss roles: developed questions, wrote the first draft and revised.* Total awarded: \$20,000.
- 2013: David G. Frey Memorial Fund Award, Indiana University. Total awarded: \$2,000
- 2012: Floyd Plant & Fungal Biology Summer Fellowship, Indiana U. Total awarded: \$1,300
- 2011: Biology Department Research Recruitment Fellowship, IU. Total awarded: \$12,000
- 2011: NSF Graduate Research Fellowship (GRFP). Total awarded: \$94,000.

## **3. Recognitions and outstanding achievements**

- 2022: Lilly Teaching Fellowship Award, University of Georgia
- 2019: JBS Haldane Early Career Award, British Ecological Society
- 2017: Thomas M. Frost Award for Excellence in Graduate Research, Ecological Society of America, Aquatic Section
- 2015: Outstanding Paper Award, Ecological Society of America, Disease Ecology Section
- 2014: Doctoral Dissertation Improvement Grant Award, NSF
- 2010: Doctoral Dissertation Enhancement Program Awardee, NSF

## **4. Supervision of student research**

**TABLE 2: SUMMARY OF SUPERVISION OF STUDENT RESEARCH AT UGA**

Year	# Undergraduate research projects advised	# MS research projects advised	# PhD research projects advised	# Theses & dissertations supervised
2023	5 (Romiluyi, Sullivan-Brugger, Adekunle, Wood, Melley)	none	1 (Schroeder)	1 (Schroeder, PhD)
2022	4 (Adams, Mancao, Tejada, Landolt)	none	2 (Schroeder, Suh)	1 (Schroeder, PhD)
2021	2 (Anderson, O'Grady)	none	1 (Schroeder)	1 (Schroeder, PhD)

GRANTS AND OTHER ACCOLADES AWARDED TO GRADUATE MENTEES

- 2023: J. Oni: Presidential Award, UGA Graduate School
- 2023: K. Schroeder: Honorable Mention, NSF Graduate Research Fellowship Program
- 2022: K. Schroeder: Odum Graduate Student Research Small Grant

GRANTS AND OTHER ACCOLADES AWARDED TO UNDERGRADUATE MENTEES

- 2022: J. Tejada: Travel Award, SACNAS National Diversity in STEM Conference
- 2019: L. Bowerman: Best Poster Award, UMN Undergraduate Research Symposium

**5. Convention papers/Proceedings** – SEE “PRESENTATIONS”, BELOW. ABSTRACTS FOR TALKS DELIVERED AT THE ECOLOGICAL SOCIETY OF AMERICA ARE PUBLISHED ONLINE AND ARE AVAILABLE UPON REQUEST.

**6. Presentations**

Dr. Strauss has delivered 16 scholarly presentations at regional and national conferences, symposia, and academic institutions, including 5 invited oral presentations since arriving at UGA. Student advisees at UGA have delivered an additional 11 presentations (talks or posters). Notations: \* indicates talk or poster presented by student advisee, with students' names underlined. All other presentations listed below were presented by Dr. Strauss. Talks presented by other collaborators (with Dr. Strauss as co-author) are not listed but are available upon request.

A. INVITED SEMINARS AT ACADEMIC INSTITUTIONS, CONFERENCES, AND SYMPOSIA

- 2022: Ecosystem and community drivers of disease: Tales of aphid vectored viruses and mysterious microsporidians. Center for the Ecology of Infectious Diseases, University of Georgia
- 2022: Effects of nutrients on disease across scales: Coinfection, movement, and demography of vectors. Asa Gray Biology Seminar Series, Utica College
- 2021: Effects of nutrients on disease across scales: Coinfection, movement, and demography of vectors. Department of Plant Biology, University of Georgia
- 2021: Effects of nutrients on disease across scales: Coinfection, movement, and demography of vectors. Department of Ecology, Evolution, and Organismal Biology, Kennesaw State University
- 2021: Effects of host resources on disease across scales: Coinfection, movement, and demography of vectors. VectorBITE Symposium.
- 2020: Disease ecology and global change. Odum School of Ecology, University of Georgia

B. CONTRIBUTED TALKS AT CONFERENCES

- 2022: The HABs and HABS notes: Variation in timing and severity of harmful algal blooms. Climate and Water Research Slam, River Basin Center, UGA, Athens, GA.
- \*2022: Presenter: D Suh. Temperature and resource conditions jointly influence the infection of *Daphnia dentifera* by the fungal parasite *Metschnikowia bicuspidata*. Ecological Society of America Annual Meeting, Montréal, Québec, Canada.
- \*2022: presenter: K Schroeder. Implications of temperature variation and resource availability during diel vertical migration on disease transmission in a zooplankton - fungal parasite system. 28th Graduate Student Symposium, Odum School of Ecology, UGA, Athens, GA.



- 2018: Unpacking the black box of disease models. Ecological Society of America Annual Meeting, New Orleans, Louisiana, USA.
- 2016: Host traits and modular species interactions predict dynamical disease outcomes. Ecological Society of America Annual Meeting, Fort Lauderdale, Florida, USA.
- 2015: Habitat, hosts, and fungus in the field: Synthesizing hypotheses from the community ecology of disease. Ecological Society of America Annual Meeting, Baltimore, Maryland, USA.
- 2015: Habitat, hosts, and fungus in the field: Synthesizing hypotheses from the community ecology of disease. Midwest Ecology and Evolution Conference, Bloomington, Indiana, USA.
- 2014: The dilution effect among competing, evolving hosts. Ecological Society of America Annual Meeting, Sacramento, California, USA.
- 2013: Outcomes of the dilution effect when hosts compete. Ecological Society of America Annual Meeting, Minneapolis, Minnesota, USA.

### C. POSTER PRESENTATIONS

- \*2023: presenter: C Romiluyi. Foraging rate across resources and temperature gradient in *Daphnia dentifera*. UGA CURO Symposium, Athens, GA, USA.
- \*2023: presenter: G Sullivan-Brugger. Spring (Out)Break: Investigating spring epidemics in *Daphnia spp.* (host) and microsporidia (parasite) in ponds located in Whitehall forest. UGA CURO Symposium, Athens, GA, USA.
- \*2022: presenter: J Tejada. Effects of temperature fluctuation on disease transmission in multi-host communities. Society for Advancement of Chicanos/Hispanics & Native Americans in Science (SACNAS) National Diversity in STEM Conference, San Juan, Puerto Rico.
- \*2022: presenter: J Tejada. Effects of temperature fluctuation on disease transmission in multi-host communities. UGA REU Symposium, Athens, GA, USA.
- \*2022: presenter: E Landolt. Approximating abundance of *Daphnia dentifera* using environmental DNA (eDNA) samples. UGA REU Symposium, Athens, GA, USA.
- \*2022: presenter: A Mancao. Relative climate change effects on interspecific competition of *Daphnia vs. Ceriodaphnia*. UGA CURO Symposium, Athens, GA, USA.
- \*2022: presenter: AM Jordan. Disease transmission influenced by temperature and host competency. UGA CURO Symposium, Athens, GA, USA.
- \*2021: presenter: H O'Grady. Infection and spore yield of a *Daphnia* microsporidian. UGA REU Symposium, Athens, GA, USA.
- \*2021: presenter: A Anderson. The ecology of fescue endophytes: One approach to understanding epichloe infection. UGA CURO Symposium, Athens, GA, USA.
- 2015: Community drivers of disease. Ecology and Evolution of Infectious Disease Annual Meeting, Athens, Georgia, USA (hosted by UGA).
- 2013: Trait dependent outcomes of the dilution effect. Ecology and Evolution of Infectious Disease Annual Meeting, State College, Pennsylvania, USA (hosted by Penn State).
- 2012: Invertebrate community structure helps explain the distribution of amphibian chytrid in Eastern Missouri. Ecological Society of America Ecological Society of America Annual Meeting, Portland, Oregon, USA

## IV. PUBLIC SERVICE

### 1. Extension – NONE

### 2. International programs

#### INVITED PARTICIPATION IN INTERNATIONAL WORKING GROUPS

- 2018-2022: Microbial disease dynamics, ecosystem processes, and human eutrophication of the environment, National Socio-Environmental Synthesis Center
- 2017-2021: Nutrient Network Annual Meetings and Workshops, University of Minnesota

### **3. Local community services and relations since coming to UGA**

- 2023: Can you catch a water flea? Tailgating outreach booth at UGA football games (in collaboration with STEMZone). G-Day 2023.
- 2022: Freshwater Food Webs. Show-and-tell after school module for local children (in collaboration with EcoReach). Athens-Clarke County Library.
- 2022: All about *Daphnia*. Interactive freshwater science education booth (in collaboration with EcoReach). Athens Water Festival, Athens-Clarke County.

### **4. Service to governmental and nongovernmental agencies since coming to UGA** – NONE

## **V. PROFESSIONAL SERVICE**

### **1. Service to professional societies, organizations, or agencies**

- 2022-present: REU program organizer. Population Biology of Infectious Disease Site REU, University of Georgia
- 2021: Session moderator. Virtual Symposium: Research Frontiers in Animal Behavior and Parasitism, Center for Ecology of Infectious Disease, University of Georgia
- 2017-2019: Judge for 'best paper' awards. Ecological Society of America, Disease Ecology Section
- 2015: Conference organizer. Midwest Ecology & Evolution Conference, Indiana University

### **2. Editorships or editorial board memberships for journals** – NONE

### **3. Ad hoc manuscript reviews**

*Journal of Applied Ecology* (3), *Ecology Letters* (6), *Ecology* (8), *EcoHealth* (1), *The American Naturalist* (2), *Nature Ecology & Evolution* (1), *Journal of Animal Ecology* (6), *Oecologia* (6), *Biological Invasions* (3), *Methods in Ecology and Evolution* (2), *Functional Ecology* (1), *Nature Communications* (2), *Proceedings of the Royal Society B* (1), *Journal of Ecology* (1), *Limnology and Oceanography* (3), Book Chapters (1)

Total by year: 2023 (3); 2022 (8); 2021 (7); 2020 (7); 2019 (10); 2018 (9); 2017 (2); 2016 (1)

All reviews listed in Dr. Strauss's Publons profile: <https://publons.com/author/1267621>

### **4. Grant review panel member** – NONE

### **5. Ad hoc grant reviews** – NONE

### **6. External evaluator of promotion/tenure dossier** – NONE

### **7. Service on departmental, college, or university committees**

- 2021-present: Seminar Committee, Odum School of Ecology
- 2021: Search Committee, Environmental Policy & Ecology, Odum School of Ecology
- 2021: University Council Representative (substitute fall 2021)
- 2020: Search Committee, Environmental Policy & Ecology, Odum School of Ecology

### **8. Special administrative assignments** – NONE

### **9. Service to student groups and organizations**

- 2022: Development and implementation of new hands-on learning modules in collaboration with EcoReach (organized by graduate students), Odum School of Ecology
- 2021-present: Judge, Graduate Student Symposium, Odum School of Ecology

### **10. Service to support units such as libraries, computing services, and health services** – NONE

## **ACCOMPLISHMENTS IN RESEARCH, TEACHING, AND ADMINISTRATION**

### **1. ACHIEVEMENTS IN TEACHING**

Dr. Strauss makes strong annual contributions to the instruction of both graduate and undergraduate courses at UGA. Since arriving at UGA in 2020, Dr. Strauss has taught seven lecture-based courses, including four with associated lab sections (four unique courses offered multiple years; two with labs). He has received strong course evaluation scores for all courses taught (grand mean 4.61/5; n=45 student respondents). Three of these unique courses are foundational to the undergraduate curriculum in the Odum School of Ecology. Ecology B.S. majors must enroll in either Population and Community Ecology (ECOL-4000; taught by Dr. Strauss in 2020 and 2021; mean evaluation score 4.62/5; n=21) or Population Biology of Infectious Disease (ECOL-4150; taught by Dr. Strauss in 2021, 2022, and 2023; mean evaluation score 4.76/5; n=16). Ecology B.S. majors must additionally enroll in either Freshwater Ecosystems (ECOL-4310; taught by Dr. Strauss in 2021; mean evaluation score 4.64/5; n=9) or an alternative course focused on terrestrial ecosystems. Dr. Strauss has developed new innovative content for all three of these core Ecology that he teaches, including discussions and active learning activities during lectures, homework assignment designed to scaffold quantitative skills, and multi-week experiment and analysis modules for labs. Dr. Strauss is also adding a lab section to Population and Community Ecology, beginning in 2024. This new lab will bolster the Ecology undergraduate curriculum by providing students with opportunities to learn hands-on skills and appropriate statistical analyses. Dr. Strauss contributes to graduate level instruction through a quantitative 'model module' in an introductory course for all first-semester PhD students (ECOL-8000), and through the enrollment of MS and PhD students in the three abovementioned foundational ecology courses that he teaches (4000/6000, 4150/6150, and 4310/6310). Because of these achievements and his dedication to ongoing excellence in teaching, Dr. Strauss was selected for UGA's Lilly Teaching Fellows program in 2022.

### **2. ACHIEVEMENTS IN GRADUATE AND UNDERGRADUATE MENTORING**

Dr. Strauss makes strong annual contributions to the training of graduate students and the supervision of undergraduate research. Dr. Strauss currently serves as a major advisor for one PhD student (K. Schroder). He also serves on the committees of one MS student and two other PhD students, one of whom is conducting some of their dissertation research in the Strauss lab (D. Suh). Graduate students advised by Dr. Strauss have been awarded funding for research (Odum Small Grant to K. Schroeder) and presented their research at local and national conferences (talks presented by K. Schroeder at the Odum Graduate Student Symposium in 2022 and by D. Suh at the Ecological Society of America in 2022). Dr. Strauss is growing his lab and continues to attract highly-ranked prospective students from around the world. J. Oni was awarded a UGA Presidential Award and will begin his PhD in the Strauss lab in fall 2023.

Dr. Strauss has supervised research by eight undergraduate students since arriving at UGA. He has advised students through the Population Biology of Infectious Diseases Site REU Program (three students), UGA CURO Program (five students), and Independent Research in Ecology (ECOL-4960; three students). All of these students present their research at local symposia (UGA CURO Symposium or REU Symposium). Dr. Strauss focuses on providing research opportunities for students from historically underrepresented groups (three of eight students). One of these students (J. Tejada) was awarded a travel grant and presented her research at SACNAS National Diversity in STEM Conference in 2022. Because of his commitment to undergraduate research and DEI initiatives, Dr. Strauss assumed a leadership role for the NSF-funded Population of Infectious Disease Site REU Program at UGA in 2022.

### **3. ACHIEVEMENTS IN RESEARCH**

Dr. Strauss is a disease and community ecologist. His research seeks to understand the ways that community structure and environmental gradients shape the transmission of infectious disease, and reciprocally, how parasites and pathogens affect community dynamics and ecosystem

processes. He works mostly in aquatic ecosystems (focusing on zooplankton as hosts, along with their parasites, pathogens, and predators) but also studies analogous processes in terrestrial ecosystems (focusing on grasses as hosts, along with their pathogens, symbionts, and consumers). He asks basic questions in community and disease ecology (e.g., How do competition and predation shape disease transmission? How do losses of biodiversity and climate change shape infectious disease dynamics?) as well as more applied questions with implications for human health (e.g., Can zooplankton grazers mitigate harmful algal blooms? How does predation of zooplankton hosts by fish affect transmission of Guinea worm parasites into people?). Dr. Strauss approaches these questions through the combination of field studies, experiments at organismal and mesocosm scales, and mathematical modeling. He has received funding from the National Science Foundation, the Carter Center, Indiana University, the University of Minnesota, and the University of Georgia. He has been an invited participant in two international working groups. Since arriving at UGA, he has been invited to deliver four seminars at academic institutions and one talk at an international symposium (VectorBITE 2021).

Dr. Strauss has authored a total of 28 peer-reviewed publications. He has an H-index of 14 and an i10 index of 16 on Google Scholar and has been cited 626 times (accessed March 2, 2023). He is the first author on ten of these publications and senior author on one, with 14 of the 28 works published since Dr. Strauss arrived at UGA in 2020. Dr. Strauss publishes regularly in the flagship journals of his field, including *Ecology* (5x), *Ecology Letters* (3x), *Functional Ecology* (4x), *Ecological Monographs* (2x), *Journal of Ecology* (1x), *The American Naturalist* (1x), *Trends in Ecology and Evolution* (1x), and *Proceedings of the Royal Society B* (2x). Five of these articles have won awards, including three articles led by Dr. Strauss as first author. These awards include the JBS Haldane Early Career Award from the British Ecological Society (Strauss *et al.* 2018 *Functional Ecology*), the Thomas M. Frost Award for Excellence in Graduate Research from the Ecological Society of America Aquatic Section (Strauss *et al.* 2016 *Ecological Monographs*), and the Outstanding Paper Award from the Ecological Society of America Disease Ecology Section (Strauss *et al.* 2015 *Ecology Letters*).

Current research in the Strauss lab is focused on three themes: 1) the community ecology of infectious disease; 2) effects of temperature on disease dynamics; and 3) roles of parasites and pathogens in ecosystems. Dr. Strauss has built substantial facilities at the University of Georgia to enable research along these three themes, despite challenges and delays stemming from the COVID-19 pandemic. Research infrastructure established by Dr. Strauss at UGA includes creation of an IACUC-approved thermostatically-controlled indoor aquatic mesocosm facility, discovery of a novel multi-host, multi-parasite study system based on field surveys of local ponds and reservoirs, and establishment of a local site for a globally-distributed experiment in grasslands (DRAGNet). To support his research at UGA, Dr. Strauss has acquired funding from the Carter Center (one proposal funded; \$137,538 awarded to Dr. Strauss) and UGA (one proposal funded; \$49,000 awarded to Dr. Strauss). Dr. Strauss also continues to seek funding from the NSF (one proposal declined; one in review; one in preparation), DOE (one proposal declined), and UGA (two other proposals declined).

#### **4. ACHIEVEMENTS IN SERVICE TO SOCIETY, THE UNIVERSITY, AND THE PROFESSION**

Dr. Strauss is an engaged member of the Odum School of Ecology, the University of Georgia, and the Athens-Clarke community. In collaboration with EcoReach, he has developed two science education outreach activities and implemented them at the Athens Water Festival and Athens-Clarke Public Library. He has also served on four departmental or university level committees, and continues to champion issues of diversity and inclusion through his roles as an instructor, research mentor, supervisor, and committee member. He has assumed a substantial leadership role to ensure the continued success of the NSF-funded Population Biology of Infectious Disease site REU program, based out of the Odum School of Ecology. Finally, he has served the broader scientific community as a conference organizer, symposium session moderator, judge for 'best paper' awards, and as a reviewer for 45 manuscripts submitted to premier ecological journals.