

P. SIGNE WHITE
MUIR BIOLOGY BUILDING
UNIVERSITY OF CALIFORNIA, SAN DIEGO
PHONE 270-293-3939
E-MAIL SIGWHITE1 AT GMAIL.COM
<https://pswhite.weebly.com>

 TheRealSigWhite  ResearchGate  PSigneWhite  Google Scholar  YouTube  iNaturalist

EDUCATION

Ph.D. Population Biology, Ecology, and Evolution Advisors: Drs. Levi Morran and Jacobus de Roode	2014-2019	Emory University
B.A. Anthropology	2008-2012	Indiana University
B.S. Human Biology (<i>concentration: Human Origins & Survival</i>)	2008-2012	Indiana University

ACADEMIC POSITIONS

2020 – current	Postdoctoral Research Fellow; Ecology, Behavior, and Evolution, University of California, San Diego Advisor: Dr. Sara Jackrel
2012 – 2014	Research Associate for Dr. Kristi Montooth*, Department of Biology, Indiana University *now at University of Nebraska-Lincoln
2010 – 2012	Undergraduate Research Assistant, Stone Age Institute, Bloomington, Indiana Advisors: Dr. Kathy Schick and Dr. Nicholas Toth
2010 – 2011	Archaeological Intern, William R. Adams Zooarchaeology Laboratory, Department of Anthropology, Indiana University, and field work in collaboration with the Crow Indian Tribe of Bighorn Basin, Wyoming. Advisor: Dr. Laura Scheiber
2008 & 2009	Summer Undergraduate Research Assistant, Hancock Biological Station, Murray State University, Murray, Kentucky

PUBLICATIONS

White, P.S., *Arslan, D., *Kim, D., Penley, M.J. & Morran, L.T. 2020. Host genetic drift and adaptation in the evolution and maintenance of parasite resistance. *J. Evol. Biol.* (In revision)

Gibson AK, **White PS**, Penley MJ, de Roode JC, Morran LT. 2020 An experimental test of parasite adaptation to common vs. rare host genotypes. *Biol. Lett.* **16** (7): 20200210 <https://doi.org/10.1098/rsbl.2020.0210>

White PS, *Choi A, *Pandey R, *Menezes A, Penley MJ, Gibson AK, de Roode JC, Morran LT. 2019 The evolution of virulence in heterogeneous host populations. *Biol. Lett.* **16** (1): 20190744 <https://doi.org/10.1098/rsbl.2019.0744>

White, P.S., Penley, M.J., Tierney, A.R.P., Soper, D.M., and Morran, L.T. Dauer life stage of *Caenorhabditis elegans* induces elevated levels of defense against the parasite *Serratia marcescens*. *Scientific Reports* **9**:11575 (2019). <https://doi.org/10.1038/s41598-019-47969-w>

de Amorim, Julia, Brendan O'Flaherty, Nicholas Harbin, and **P. Signe White**. 2019. "Hazardous PFAS chemicals in Georgia's drinking water." *Journal of Science Policy & Governance* 14(2).

White, P.S., Morran, L.T., and de Roode, J.C. (2017). A Quick Guide: Phoresy. *Curr. Biol.* 27, R578-R580. <http://dx.doi.org/10.1016/j.cub.2017.03.073>

Adrion JR, **White PS**, Montooth KL. 2015. The Roles of Compensatory Evolution and Constraint in Aminoacyl tRNA Synthetase Evolution. *Mol. Biol. Evol.* 33:152-161. doi:10.1093/molbev/msv206

*undergraduate contributor

PUBLISHED ABSTRACTS

Morran, L., Penley, M.J., **White, P.S.**, and A. Paulk. 2016. *Caenorhabditis elegans* resistance to the bacterial parasite *Serratia marcescens*: evidence from experimental evolution and natural populations. *Journal of Nematology* 48(4):355.

FELLOWSHIPS

- 2018 Laney Graduate School Piedmont TATTO Fellowship in Sustainability, Teaching, and Curriculum
- 2017 – 2018 Scholarly Inquiry and Research Experience (SIRE) and Summer Undergraduate Research Experience (SURE) Graduate Fellow, Emory University's College of Arts and Sciences, Undergraduate Research Programs
- 2017 Eugene Gangarosa Laboratory Research Mentoring Fellowship, Emory University's College of Arts and Sciences, Pre-College Program (Infectious Diseases Institute)

HONORS AND AWARDS

- 2019 National Science Policy Network's Journal of Science Policy & Governance Policy Memo Competition, 3rd Place Winner (Twitter announcement)
- 2016 Certified Atlanta Society of Mentors (ASoM) Trainee; sponsored by NIH's Broadening Experiences in Scientific Training (BEST) Program
- 2011 Intercultural Leadership Award, Danish Institute for Study Abroad (DIS)
- 2008 – 2009 Indiana University Founders Scholar (Semester GPA > 3.90)

FUNDING AND SCHOLARSHIPS

Travel Funding (Competitive)

- 2016 – 2019 \$3,500: Laney Graduate School Council (LGSC) and Professional Development Support Funds (PDS) for:
- Southeastern Population Ecology and Evolutionary Genetics (SEPEEG) conferences:
 - Clemson University Outdoor Lab, Clemson, South Carolina, October 2019
 - Mountain Lake Biological Station, University of Virginia, October 2018
 - Evolution meeting (SSE, ASN, SSB) in Providence, Rhode Island, June 2019
 - II Joint Congress on Evolutionary Biology (SSE, ASN, SSB, ESEB) in Montpellier, France, August 2018
 - 16th Annual Congress of the European Society for Evolutionary Biology (ESEB) in Groningen, Netherlands, August 2017
- 2016 – 2019 \$4,366: Marion Trawick Coleman Travel Funds, Department of Biology, Emory University, for:
- Evolution meeting (SSE, ASN, SSB) in Providence, Rhode Island, June 2019
 - II Joint Congress on Evolutionary Biology (SSE, ASN, SSB, ESEB) in Montpellier, France, August 2018
 - Evolutionary Biology Workshop in Guarda, Switzerland, June 2017
 - SEPEEG conference in Madison, Florida, October 2016
- 2019 \$720: The American Society of Naturalists (ASN) Travel Awards for:
- SEPEEG at Clemson University, October 2019
 - Evolution meeting (SSE, ASN, SSB) in Providence, Rhode Island, June 2019
- 2018 \$500: Society for the Study of Evolution (SSE) Travel Award for:
- II Joint Congress on Evolutionary Biology (SSE, ASN, SSB, ESEB) in Montpellier, France, August 2018

- 2017 \$900: Genetics Society of America (GSA) for:
- Workshop on Science Policy at the 16th Annual Congress of the European Society for Evolutionary Biology (ESEB) in Groningen, Netherlands
- 2015 \$350: Summer Institute in Statistical Modeling of Infectious Disease (SISMID) travel scholarship, Department of Biostatistics, University of Washington, Seattle, WA, July 6-10.
Workshops: Stochastic Epidemic Models & Introduction to R Programming

Scholarships

- 2014 – 2019 Emory University, Laney Graduate School Scholarships:
Graduate Division of Biological and Biomedical Sciences (GDBBS) Tuition Scholarship
Enrollment Scholarship
Health Insurance Scholarship
- 2011 \$1,700: Indiana University's Hutton Honors College Edward L. Hutton International Experiences Program for Study Abroad at the Danish Institute for Study Abroad (DIS), Copenhagen, Denmark
- 2011 \$750: Indiana University's Hutton Honors College Dr. Arvin T. Henderson Travel Scholarship for Study Abroad at the Danish Institute for Study Abroad (DIS), Copenhagen, Denmark
- 2010 \$2,250: Indiana University's Hutton Honors College Professional Experiences Internship Grant for an Archaeological Internship in Bighorn Basin, Wyoming
- 2009 \$500: Indiana University's Hutton Honors College Alternative Spring Break Grant for "Conservation of the giant leatherback sea turtle in Costa Rica"
- 2008 – 2012 \$20,000: Indiana University Prestige Scholarship
- 2008 – 2009 \$500: Heritage Bank Scholarship

ORAL PRESENTATIONS

- 2019
- PBEE Dissertation Defense, Emory University, Atlanta, GA, October 18 (Oral Presentation)
 - "The role of host heterogeneity in virulence evolution." **SEPEEG Conference**, Clemson University, Clemson, South Carolina, October 5 (Poster Presentation)
 - "The natural ecology of nematodes and infectious disease evolution" Laney Graduate School, **Emory Diversifying Graduate Education (EDGE) Symposium**, Emory University, Atlanta, GA, September 30 (Poster Presentation)
 - "The evolution of virulence in heterogeneous host populations." **Worm Club Meeting**, a consortium of Atlanta universities including Emory, GA Tech and Georgia State University, September 16 (Oral Presentation)
 - "The evolution of virulence within heterogeneous host populations: an experimental approach" **Evolution**, Providence, Rhode Island, June 22, section "Artificial selection/experimental evolution" (Poster Presentation)
 - "The evolution of virulence in a heterogeneous host population." (abstract pg. 38) 16th Annual **GDBBS DSAC Research Symposium**, Emory University, January 28 (Oral Presentation)
- 2018
- "*Serratia marcescens* virulence evolution in response to *Caenorhabditis elegans* susceptibility." **PBEE Seminar Series**, Emory University, October 19 (Oral Presentation)
 - "Virulence evolution of *Serratia marcescens* in populations of *Caenorhabditis elegans*." **Southeastern Population Ecology and Evolutionary Genetics (SEPEEG)**, Mountain Lake Biological Station, University of Virginia, October 5 (Oral Presentation)
 - "The evolution of virulence in a homogeneous host population" **II Joint Congress on Evolutionary Biology**, Montpellier, France, August 21, section "Parasite and symbiont niches: host specificity and beyond" (Poster Presentation)
 - "*Caenorhabditis elegans* dauer induction alters host-parasite interactions." **PBEE Seminar Series**, Emory University, April 27 (Oral Presentation)

- “*Caenorhabditis elegans* dauer induction alters host-parasite interactions” (abstract #84) 15th Annual **GDBBS DSAC Research Symposium**, Emory University, Atlanta, GA, January 23 (Poster Presentation)

2017

- “*Caenorhabditis elegans* dauer induction alters host-parasite interactions” **STEM Research and Career Symposium**, Emory University, Atlanta, GA, October 2 (Poster Presentation)
- “*Caenorhabditis elegans* dauer induction alters host-parasite interactions.” **PBEE Seminar Series**, Emory University, April 8 (Oral Presentation)
- “*Caenorhabditis elegans* dauer induction alters host-parasite interactions” (abstract #67) 14th Annual **GDBBS DSAC Research Symposium**, Emory University, Atlanta, GA, January 19 (Poster Presentation)

2016

- “*Caenorhabditis elegans* dauer induction alters host-parasite interactions” **SEPEEG Conference**; Cherry Lake 4-H Camp in Madison, Florida, October 22 (Poster Presentation)
- “Dauer induction alters host-parasite interactions in the *C. elegans* – *S. marcescens* system.” **Worm Club Meeting**, September 19 (Oral Presentation)

TEACHING

- 2021 *upcoming* Faculty Member, Citizen Science Program at Bard College, Annandale-on-Hudson, NY, January
- 2018 Emory University’s Office of Undergraduate Research, Summer Undergraduate Research Experience (SURE) Graduate Fellow for Responsible Conduct of Research (RCR) and Professional Development (PD) training, 14 undergraduate students during the summer session
- 2017 – 2018 Emory University’s Office of Undergraduate Research, Scholarly Inquiry and Research Experience (SIRE) Graduate Fellow, taught 12 undergraduate students during 2017-2018 school year
- 2015 Teaching Assistant & Guest Lecturer, BIOL 241, Evolutionary Biology, ~60 undergraduate students
- 2015 Teaching Assistant Training and Teaching Opportunity Program (TATTO), Emory University

MENTORING

- Abby Stephens, undergraduate at the College of Charleston, Bio Mentors
- Jagruthi Maroju, undergraduate at Worcester Polytechnic Institute, Undergraduate Day mentee, Evolution 2019
- Raythe Owens, undergraduate at Emory University, biology & chemistry majors (2016-2020), Morran Lab
 - currently a PhD student at the University of Colorado Boulder in Physical Chemistry
- Arthur Menezes, undergraduate at Emory University, biology & global health majors (2016-2020), Morran Lab,
 - currently a PhD student at Princeton University in the Department of Ecology & Evolutionary Biology
- Prathyusha Kandala, undergraduate at Emory University, biology major (2017-2021), Morran Lab
- Rishika Pandey, undergraduate at the University of Georgia, genetics major (2017-2021), volunteer in Morran Lab
- Jacob Kasel, undergraduate at Emory University, comparative lit & Portuguese majors (2015-2018), SIRE Peer Mentor
 - currently a Michel David-Weill Scholar in France
- Jessica Cifuentes, undergraduate at Emory University, materials engineering major (2016-2020), SIRE Peer Mentor
- Giang Ha, undergraduate at Emory University, biology & music majors (2013-2017), Morran Lab
 - currently a medical student at Mercer School of Medicine, Macon, Georgia
- Angela Choi, undergraduate at Emory University, biology major (2015-2019), Morran Lab
 - currently a medical student at Stony Brook University
- Cate Dougherty, high school student in Emory’s Pre-College Infectious Diseases Institute (2017)
 - currently a nursing student at the University of Miami

OUTREACH

Advocacy

- 2019 Met with Sen. David Perdue (R-GA)’s staffers as part of American Society for Biochemistry and Molecular Biology (ASBMB)’s Advocacy Training Program (ATP), September 3
- 2019 Capitol Conservation Day, volunteer with the Georgia Water Coalition and the Chattahoochee Riverkeeper to

discuss water contamination issues with our state representatives, Georgia State Capitol, February 20

Atlanta Science Festival

- 2019 Sci-Cycle volunteer, Atlanta Streets Alive and the Science Festival Alliance (SFA), Atlanta, GA, September 29
- 2018 Fernbank Natural History Museum, BioBlitz volunteer leader, Atlanta, GA, March 17
- Atlanta Science Festival Expo
- 2018 Association for Women in Science & Science.Art.Wonder (S.A.W) exhibit booth volunteer
- 2016 Morran Lab booth volunteer, Atlanta, GA, March 27

K-12 Outreach

- 2018 Senior Division Judge, 70th Georgia Science and Engineering Fair (GSEF), University of Georgia, Athens, GA, March 23
- 2018 Family Science Night, volunteer, Morningside Elementary School, Atlanta, GA, February 13
- 2017 National SeaPerch Challenge Obstacle Course Judge and Volunteer, Georgia Institute of Technology, Atlanta, GA, May 20
- 2013 K-12 Science Fair Volunteer, Ivy Tech Community College, Bloomington, Indiana
- 2010 Archaeology outreach for elementary school students at Pretty Eagle Catholic School, Crow Indian Reservation, Montana

Undergraduate Outreach

- 2019 Learning about Laney, volunteer for the Emory Diversifying Graduate Education (EDGE) Preview Visitation [a symposium for URM undergraduate recruits to learn more about academics & diversity at Emory, formerly the Emory STEM Symposium], September 30
- 2017 Fall Undergraduate Research Symposium, volunteer, Emory College of Arts & Sciences, Emory University
- 2017 Emory STEM Symposium, PBEE recruitment volunteer and presenter, Emory University
- 2015, 2017 Summer Undergraduate Research Experience (SURE) Poster Session, GDBBS Judge, Emory University

Other Volunteering

GDBBS Involved in Volunteerism at Emory (GIVE) Service

- 2019 Summer Atlanta Community Food Bank, Whitehall/I Sip Earth Gardens, Atlanta, GA: removed kudzu & planted
- 2019 Summer Save the Hooch, Atlanta, GA: removed trash from South Fork Peachtree Creek
- 2019 Spring Sweep the Hooch, Roswell, GA: cleaned up pollution in the Chattahoochee River
- 2018 Spring Trees Atlanta, Doraville, GA: planted trees in Honeysuckle Park
- 2017 Spring Fernbank Science Center, Atlanta, GA: maintenance of public science displays
- 2017 Fall LaVista Park, Atlanta, GA: habitat restoration
- 2009 – 2011 Midwest Pages to Prisoners Project, Bloomington, Indiana

WORKSHOPS

Science Communication

- 2020 iBiology: Sharing Your Research [earned course completion certificate]
- 2019 Alan Alda Center for Communicating Science® workshop, Office of Postdoctoral Education, Emory University, September 18
- 2018 ComSciCon - Atlanta, Georgia Institute of Technology, March 1-2

Mentoring

- 2016-2018 Atlanta Society of Mentors (ASoM), sponsored by NIH's Broadening Experiences in Scientific Training (BEST) Program for Georgia Tech & Emory University
- Maximizing Mentorship Graduate Workshop Series, Emory University
- 6 workshops: October 2016-November 2016
- Birkman Assessment Workshop, Emory University
- Book Club Series, "Next Gen PhD" and "Crucial Conversations", 2017, Emory University
- Conflict Management Workshop Series, Emory University

Scientific Writing

- 2017 Evolutionary Biology Workshop in Guarda, Switzerland, June 2017

2016-2017 Emory University's Laney Graduate School
Intensive Grant Writing Workshop, 2017
Beginning Grant Writing Workshop, 2016
Graduate Writing Support Services Workshop: "Identifying and Deploying a Narrative Thread"

Statistics/Bioinformatics

2020 Command Line Bioinformatics for Beginners, ECR², American Society of Naturalists, July 27-28
2020 Quantitative Biosciences Workshop: Epidemics, Georgia Institute of Technology, May 18
2015 Summer Institute in Statistical Modeling of Infectious Disease (SISMID), Department of Biostatistics, University of Washington, Seattle, WA, July 6-10
Workshops completed: "Introduction to R" and "Stochastic Epidemic Models."

Other

2020 Evolution Community Resources for Early Career Researchers (ECR²),

- Strategies for Responding to Harassment and Bullying: Improving Workplace Climate, July 24
- Public Policy Panel, July 21

2019 Chattahoochee Riverkeeper's Water Warriors Summit, Georgia Aquarium, Atlanta, GA, October 13-14
2019 Active Bystander Skills Training (ABS), Office of Respect, Emory University, August 7
2019 Public Policy Workshop, Evolution Conference, Providence, RI, June 23

COMMITTEES

2018 – 2019 Graduate Student Representative, Farmer's Market Committee, Emory University
2017 – 2019 Graduate Student Representative (of 2), PBEE Executive Board, Emory University
2017 – 2019 President, PBEE Seminar Committee, Emory University
2016 – 2017 Secretary, PBEE Seminar Committee, Emory University
2016 – 2017 Graduate Student Representative, Emory Biology Undergraduate Research Program (BURS)
*recruited Dr. Hopi Hoekstra (Harvard U) for the annual Rhodes Lectureship

MEMBERSHIPS TO EMORY UNIVERSITY GROUPS

2018 – 2019 Emory Science Advocacy Network (EScAN)
2017 – 2019 GDBBS Involved in Volunteerism at Emory (GIVE) Member
2016 – 2019 Association of Women in Science at Emory (AWIS) Member

MEMBERSHIPS TO PROFESSIONAL SOCIETIES

2018 – current AAAS Student Member
2017 – current American Society of Naturalists (ASN)
2017 – current European Society for Evolutionary Biology (ESEB)
2016 – current Society for the Study of Evolution (SSE)
2016 – current Association of Women in Science (AWIS), Georgia Chapter
2016 – 2017 Atlanta Society of Mentors (ASoM): NIH's Broadening Experiences in Scientific Training (BEST) Program
2015 – 2017 AAAS/Science Program for Excellence in Science

REVIEWER

2018 Ecology [<https://doi.org/10.1002/ecy.2671>]
2019 Journal of Animal Ecology
2020 Biological Reviews