

# Emily S. Bellis (née Weiss)

Assistant Professor of Bioinformatics  
Arkansas Biosciences Institute & Department of Computer Science  
Arkansas State University, Jonesboro, AR

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## EDUCATION

Oregon State University, Corvallis, OR, Ph.D. Integrative Biology 2017

Texas A&M University, College Station, TX, B.S. Genetics & Biochemistry 2010

## APPOINTMENTS

Arkansas State University, Jonesboro, AR:

Assistant Professor of Bioinformatics 01/2020–Present

Research Assistant Professor of Bioinformatics 10/2019–01/2020

The Pennsylvania State University, State College, PA:

NSF Nat'l Plant Genome Postdoctoral Research Fellow 01/2018–09/2019

Reed College, Portland, OR:

Postdoctoral Research Associate in Genomics 07/2017–12/2017

## RESEARCH INTERESTS

Genetic basis of genotype-phenotype-environment interactions; machine learning in the life sciences to improve food security, human well-being, and ecosystem health; evolutionary ecology and genomics of parasites and mutualists

## PUBLICATIONS

R.M. Gutaker, S.C. Groen, **E.S. Bellis**, J.Y. Choi, I.S. Pires, R.K. Bocinsky, E. Slayton, O. Wilkins, C.C. Castillo, S. Negrao, M.M. Oliveira, D.Q. Fuller, J.A. d'Alpoim Guedes, J.R. Lasky, and M.D. Purugganan. (*in press*). Genomic history and ecology of the geographic spread of rice. *Nature Plants*.

**E.S. Bellis**, E.A. Kelly, C.M. Lorts, H. Gao, V.L. Deleo, G. Rouhan, A. Budden, G.B. Bhaskara, Z. Hu, R. Muscarella, M.P. Timko, B. Nebie, S.M. Runo, N.D. Chilcoat, T.E. Juenger, G.P. Morris, C.W. dePamphilis, and J.R. Lasky (2020). Genomics of sorghum local adaptation to a parasitic plant. *PNAS* 117: 4243-4251.

L. Lopez, **E.S. Bellis**, E. Wafula, S. Hearne, L. Honaas, P. Ralph, N. Unachukwu, C.W. dePamphilis, and J.R. Lasky (2019). Transcriptomics of host-specific interactions in natural populations of the parasitic plant *Striga hermonthica*. *Weed Science* 67: 397-411.

**E.S. Bellis**, R.B. Edlund, H.K. Berrios, H.A. Lessios, and D.R. Denver (2018). Molecular signatures of host specificity linked to habitat specialization in a symbiotic sea anemone. *Ecology & Evolution* 8: 5413-5426.

**E.S. Bellis** and D. R. Denver (2017). Natural variation in responses to acute heat and cold stress in a sea anemone model system for coral bleaching. *Biological Bulletin* 233: 168-181. \*Cover article.

**E.S. Bellis**, D.K. Howe, and D.R. Denver. Genome-wide polymorphism and signatures of selection in the symbiotic sea anemone *Aiptasia*. *BMC Genomics* 17: 160.

W.S. Phillips, A.L. Coleman-Hulbert, **E.S. Weiss**, D.K. Howe, S. Ping, R.I. Wernick, S. Estes, and D.R. Denver (2015). Selfish mitochondrial DNA proliferates in small, but not large, experimental populations of *Caenorhabditis briggsae*. *Genome Biology and Evolution* 7: 2023-2037.

A. Emblem, S. Okkenhaug, **E.S. Weiss**, D.R. Denver, B.O. Karlsen, T. Moum, and S.D. Johansen (2014). Sea anemones possess dynamic mitogenome structures. *Molecular Phylogenetics and Evolution* 75: 184-193.

## RESEARCH GRANTS

### NATIONAL

US-AID PEER Program Grant “Deploying *Striga* Smart Sorghum: The last mile” (\$75,000; role: US-government supported partner) 2019

Coral Reef Alliance Coral Adaptation Challenge Grant (\$18,000; role: PI) 2016

### REGIONAL

Arkansas INBRE Core Facility Voucher Award (\$5,000; role: PI) 2020

## FELLOWSHIPS & AWARDS

### NATIONAL

Ecological Society of America NEON Early Career Scholar (\$1,500) 2020

NSF Postdoctoral Research Fellowship in Biology (\$207,000) 2017

Society for Integrative & Comparative Biology Libbie H. Hyman Memorial Scholarship (\$1,500; declined) 2013

NSF Graduate Research Fellowship (\$121,000) 2011

National Merit Scholarship (\$2,500) 2006

### INSTITUTIONAL

Oregon State University Paul & Mary Roberts Fellowship for the Study of Evolution (\$2,500) 2017

University of Washington Summer Institute Scholarship (\$900) 2016

Smithsonian Tropical Research Institute Short Term Fellowship (\$3,000) 2014  
 Oregon State University Provost's Distinguished Fellowship (\$30,000) 2011  
 Texas A&M University President's Endowed Scholarship, National Merit  
 Recognition Award, Director's Excellence Award, and Non-Resident Tuition  
 Waiver (\$75,000) 2006

## INVITED TALKS

University of Memphis Earth Sciences Colloquium Series, Memphis, TN, April 17 (*cancelled due to COVID-19*) 2020  
 University of Arkansas Fort Smith STEM Seminar, Fort Smith, AR, Feb. 14 2020  
 The Pennsylvania State University Ecology Seminar, State College, PA, Sep. 13 2019  
 NSF Plant Genome Research Program Awardee Meeting, Washington D.C., Sep. 4-6 2019  
 Society of Herbarium Curators Annual Meeting, Tucson, AZ, Aug. 1 2019  
 University of Arkansas for Medical Sciences Career Day, Little Rock, AR, Oct. 18 2019  
 Workshop on Genomics Tools for *Striga* management, Nairobi, Kenya, June 22-30 2018  
 Reed College Biology Department Seminar Series, Oct. 27 2017  
 Coral Reef Alliance Adaptation Challenge Workshop, San Francisco, CA, April 17-18 2017

## COURSES TAUGHT

### ARKANSAS STATE UNIVERSITY

CS6823: Special Topics: Introduction to Statistical Learning (cross-listed w/ MBS6251)  
 Summer 2020

### OREGON STATE UNIVERSITY

Z362: Invertebrate Biology Lab (Instructor) Spring 2017  
 MCB525: Techniques in Molecular and Cellular Biology (Instructor) Fall 2016  
 BI213: Principles of Biology (Curriculum Development Assistant) Winter 2016  
 BI311: Genetics (Teaching Assistant) Spring 2014  
 BI212: Principles of Biology Lab (Teaching Assistant) Winter 2014  
 BI211: Principles of Biology Lab (Teaching Assistant) Fall 2013

## STUDENT MENTORING

### ARKANSAS STATE UNIVERSITY

S. Rutledge, Undergraduate Research Mentor 2020–Present  
 J. Stubblefield, Graduate Committee Member 2019–Present

### THE PENNSYLVANIA STATE UNIVERSITY

T. Xia, Undergraduate Research Mentor 2019  
 C. Yim, Undergraduate Research Mentor 2018–2019

## OREGON STATE UNIVERSITY

E. Kramer, Undergraduate Research Mentor	2016–2017
R. Edlund, Undergraduate Research Mentor	2014–2016
A. Vercruyssen, Undergraduate Research Mentor	2013–2014
B. VerWey, Undergraduate Research Mentor	2013
J. Seng, Undergraduate Research Mentor	2011–2014

## PROFESSIONAL SERVICE (since 2018)

### NATIONAL

Panel Reviewer for the National Science Foundation (2020)

Manuscript Reviewer for the *American Society of Agricultural and Biological Engineers* (2020), *Agronomy* (2020), *The Plant Journal* (2019, 2020), and *Marine Biology* (2019).

Guest Editor for *Molecular Ecology Resources* special issue (to be published September 2020)

### REGIONAL

Team coach for Arkansas AI-Campus 2020, a hands-on training program to provide skills in machine learning to students and professionals in AR.

Member of the Scientific Program Committee for Arkansas Bioinformatic Consortium 2020 Meeting: Artificial Intelligence in Arkansas.

Invited speaker for ~1hr session on Individual Development Plans for Graduate Student Professional Development workshop at the annual faculty and student Center for Advanced Surface Engineering (CASE) Retreat in Petit Jean, AR (Jan. 10). Event attended by ~30 graduate students from five Arkansas institutions.

### INSTITUTIONAL

Co-organizer of the [A-State R User Group](#) (2020 – Present)