

I. Personal Information

Graduate Research Assistant
Rollins Urban & Structural Entomology Facility



Department of Entomology
Texas A&M University
College Station, TX 77843

Email: alex93@tamu.edu
Phone: 951-532-0000

II. Education

Doctor of Philosophy

Texas A&M University, College Station, Texas
Major: Entomology
Advisor: Dr. Edward Vargo

May 2022

Bachelor of Science

University of Washington, Seattle, Washington
Major: Environmental Science & Resource Management
Minor: Quantitative Science

March 2016

III. Research Experience

Graduate Research Assistant

August 2017 – Present

Department of Entomology, Texas A&M University

- Colony structure analyses of the odorous house ant *Tapinoma sessile* in contrasting environments.
- Next-generation sequencing to analyze the population structure of invasive termites and ants.

Undergraduate Research Assistant

August 2015 – March 2016

School of Environmental & Forest Science, University of Washington

- Dr. Patrick Tobin's laboratory
- Modeled and elucidated factors that enable invasive species to thrive in nonnative environments.

IV. Publications

*Co-first author

In Review

8. Blumenfeld AJ, Eyer P-A, Helms A, Buczkowski G, Vargo EL. Consistent signatures of urban adaptation in a native, urban invader ant *Tapinoma sessile*. *Molecular Ecology* (preprint: <https://www.biorxiv.org/content/10.1101/2021.06.21.449338v2.full>)

7. Shults PT, Hopken M, Eyer P-A, **Blumenfeld AJ**, Mateos M, Cohnstaedt LW, Vargo EL. Species delimitation and mitonuclear discordance within a species complex of biting midges. **Communications Biology**

Published

6. Eyer P-A, Moran MN, **Blumenfeld AJ**, Vargo EL. **2021** Development of a set of microsatellite markers to investigate sexually antagonistic selection in the invasive ant *Nylanderia fulva*. **Insects** 12(7), 643 (<https://doi.org/10.3390/insects12070643>)
5. Eyer P-A*, **Blumenfeld AJ***, Johnson LNL, Perdereau E, Shults P, Dupont S, Bagneres A-G, Vargo EL. **2021** Extensive human-mediated jump dispersal within and across the native and introduced ranges of the invasive termite *Reticulitermes flavipes*. **Molecular Ecology** 30(16), 3948-3964 (<https://doi.org/10.1111/mec.16022>)
4. **Blumenfeld AJ***, Eyer P-A*, Husseneder C, Mo J, Johnson LNL, Wang C, Grace JK, Chouvenc T, Wang S, Vargo EL. **2021** Bridgehead effect and multiple introductions shape the global invasion history of a termite. **Communications Biology** 4, 196. (<https://doi.org/10.1038/s42003-021-01725-x>)
3. **Blumenfeld AJ** & Vargo EL. **2020** Geography, opportunity and bridgeheads facilitate termite invasions to the United States. **Biological Invasions** 22(11), 3269-3282. (<https://doi.org/10.1007/s10530-020-02322-5>)
2. Eyer P-A*, Espinoza EM*, **Blumenfeld AJ**, Vargo EL. **2020** The underdog invader: Breeding system and colony genetic structure of the dark rover ant (*Brachymyrmex patagonicus* Mayr). **Ecology and Evolution** 10, 493-505. (<https://doi.org/10.1002/ece3.5917>)
1. Eyer P-A, **Blumenfeld AJ**, Vargo EL. **2019** Sexually antagonistic selection promotes genetic divergence between males and females in an ant. **Proceedings of the National Academy of Sciences, USA** 116(48), 24157–24163. (<https://doi.org/10.1073/pnas.1906568116>)

V. Presentations

Invited Seminars

1. Ft. Lauderdale Research and Education Center Seminar Series, University of Florida. “Fantastic bridgeheads and where to find them: A termite story” (**virtual, May 2021**) – Invited by Dr. Thomas Chouvenc

Presentations Contributed as Primary Author

7. **Blumenfeld AJ**, Eyer P-A, Johnson LNL, Perdereau E, Shults P, Dupont S, Bagneres A-G, Vargo EL. **2021** Extensive human-mediated jump dispersal within and across the native and introduced ranges of the invasive termite *Reticulitermes flavipes*. 24th Annual Texas A&M Department of Entomology Graduate Student Forum, College Station, Texas.
6. **Blumenfeld AJ**, Eyer P-A, Husseneder C, Mo J, Johnson LNL, Wang C, Grace JK, Chouvenc T, Wang S, Vargo EL. **2021** Bridgehead effect and multiple introductions shape the global invasion history of the termite *Coptotermes formosanus*. 2021 ESA Southwestern Branch Meeting, virtual.

5. **Blumenfeld AJ & Vargo EL. 2020** Opportunities for termite invasions: Introductions of non-native termites to the US based on port of entry data. 74th Texas A&M University Urban Pest Management Conference and Workshop, Bryan, Texas.
4. **Blumenfeld AJ, Eyer P-A & Vargo EL. 2019** Colony structure of the odorous house ant (*Tapinoma sessile*), a native urban invader. 2019 ESA Southwestern Branch Meeting, Tulsa, Oklahoma.
3. **Blumenfeld AJ & Vargo EL. 2018** Opportunities for termite invasions: Introductions of exotic termites to the USA based on port-of-entry data. 2018 ESA, ESC, and ESBC Joint Annual Meeting, Vancouver, Canada.
2. **Blumenfeld AJ & Vargo EL. 2018** Termite invasion patterns: Introductions of exotic termites to the US and Texas based on port-of-entry data. 7th Texas Invasive Plant & Pest Conference, Austin, Texas.
1. **Blumenfeld AJ & Tobin P. 2016** Drivers of impact: Modelling the drivers of invasion in North American non-native insects. University of Washington School of Environmental & Forest Science Departmental Seminar, Seattle, Washington.

Co-author of Presentation

1. Eyer P-A, **Blumenfeld AJ & Vargo EL. 2019** Sexually antagonistic selection maintains genetic diversity in an invasive ant. 4th Annual Southeast Texas Evolutionary Genetics and Genomics Conference, College Station, TX.

VI. Awards/Grants/Scholarships

ESA Southwestern Branch Meeting, Student Presentation Award, 1st place PhD Student **(2021) – \$200**
 Pest Management Foundation, Student Scholarship **(2021) – \$2,000**
 Texas A&M Department of Entomology, Dr. Roger E. Gold Endowed Graduate Scholarship **(2019) – \$2,000**
 Pi Chi Omega, Dr. Austin Frishman Scholarship **(2019) – \$2,000**
 Texas A&M OGAPS, Graduate Student Presentation Travel Grant **(2019) – \$500**
 OHP Inc. Grant-in-aid of research **(2018) – Honorable mention (2nd Place)**
 Texas Invasive Plant & Pest Conference, Student Presentation Award, 1st Place **(2018) – \$100**
 Texas Invasive Plant & Pest Council, Student Travel Grant **(2018) – \$375**
 Texas A&M College of Agriculture & Life Sciences, Excellence Fellowship **(2017) – \$13,860**
 University of Washington, Scan | Design Foundation Fellowship **(2014) – \$10,000**

VII. Service

1) Manuscript reviewer: Peer-reviewed journals (<https://publons.com/researcher/3744387/alexander-blumenfeld/>)

Journal of Economic Entomology (2), Diversity and Distributions (1), NeoBiota (1)

2) Outreach/workshops:

Pest Ant Identification and Management Workshop

Texas A&M University Urban Pest Management Conference and Workshop **(2020)**

- Aided pest management professionals in identifying key characteristics of common urban pest ants.

Texas Science & Engineering Fair judge

Texas A&M University **(2019 – 2020)**

- Animal Science senior category judge (9th – 12th grades).

Exploiting the Dynamism of R Software to Help Entomologists Adapt to a Changing World: Crossing the Border from R Admirer to R User

2018 ESA, ESC, and ESBC Joint Annual Meeting **(2018)**

- Assisted in teaching attendees the fundamentals of analyzing data with R.

Project Pipeline tutor

University of Washington **(2014 – 2015)**

- Travelled to elementary and high schools within Seattle to tutor English, science and math.

Dream Project mentor

University of Washington **(2013 – 2014)**

- Travelled to a high school in Seattle to assist students on the college application process, focusing specifically on underrepresented students.

VIII. Professional Affiliations

Entomological Society of America

International Union for the Study of Social Insects, North American Section