PHILIP G. HAHN

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PROFESSIONAL APPOINTMENTS

2020-present Assistant Professor, Dept. of Entomology & Nematology, University of Florida
2015-2019 Postdoctoral Research Associate, Biological Sciences, University of Montana

EDUCATION

2015	Ph.D. in Zoology	University of Wisconsin-Madison
2010	M.S. in Env. Science & Policy	University of Wisconsin-Green Bay
2007	B.S. in Biology (Ecology)	University of Wisconsin-Oshkosh

FUNDING

2022-2026 NSF DEB: RCN: The Herbivory Variability Network. PI: W. Wetzel, co-PIs: Hahn, Inouye, Underwood, Whitehead. *$555,281 ($23,082 to UF)*.

2020-2021 UF Biodiversity Institute Faculty Interdisciplinary Seed Grant: Can ecosystem engineers that are keystone species restore biodiversity in degraded communities? (PI: Marcus Lashley, co-PIs: **PG Hahn**, Emilio Bruna). *$30,000.*

2019-2023 NSF DEB 19015532: Understanding intraspecific variation in plant defense across resource gradients. (PI: J. Maron, coPI: **PG Hahn**). *$735,930 ($586,569 to UF)*.

2018-2019 MPG Ranch: Testing interactions between plant-soil feedback and competition across resource gradients. (PI's: P.G. Hahn with J.L. Maron and Y. Lekberg), *$111,036*.

2015-2018 MPG Ranch Post-doctoral fellowship: Abiotic and biotic effects on plant defense in milkweeds, *$226,016.*

2014-2015 National Science Foundation DEB 1405150: Dissertation Research: Disentangling the roles of neighboring plant density and palatability in providing associational defense against herbivores within different habitat types, *$19,565.*

PUBLICATIONS

Edited volumes and chapters

3. Calixto, E.S. and **P.G. Hahn**. 2022. Plant-herbivorous insect interactions in forest ecosystems: Overview and perspectives to mitigate losses. In: Kumar, M., Dhyani, S., Kalra, N. (eds) Forest Dynamics and Conservation. Springer, Singapore.

2. Shelef, O., **P.G. Hahn**, A. Martinez-Medina, A. Pineda, and M.V. Tejesvi. 2020. (Edited Special Issue). Below-ground interactions in ecological processes. Frontiers in Ecology and Evolution. Lausanne, Frontiers Media.
doi: 10.3389/978-2-88963-258-9

1. Shelef, O., **P.G. Hahn**, A. Pineda, T. Mysore, A. Martinez-Medina. 2019. As above so below? Progress in understanding the role of belowground interactions in ecological processes. Frontiers in Ecology and Evolution 7:318.
*Editorial for research topic on belowground interactions.

Peer-reviewed articles

32. Orrock, J.L., L.A. Brudvig, E.I. Damschen[a], W.B. Mattingly, J. Cruz, J. Veldman, P.G. Hahn, and A. Larsen-Gray. 2023. Large-scale, long-term experiments reveal effects of seed limitation, regional climate, and anthropogenic impacts on the restoration of plant communities in a biodiversity hotspot. PNAS (in press).

31. Clark, T., **P.G. Hahn**, E. Brelsford, J. Francois, N. Hayes, B. Larkin, P. Ramsey, and D. Pearson. 2022. Preventing a series of unfortunate events: using qualitative models to improve conservation. Journal of Applied Ecology 59:2322-2332.

30. Molina, R., E.S. Calixto and P.G. Hahn. Influence of abiotic and biotic stressors on the sensitivity defenses of Mimosa strigilliosa. UF Journal of Undergraduate Research. 24: https://doi.org/10.32473/ufjur.24.130816.

29. Olabiyi, D.O., P.B. Avery, E.B. Duren, P.G. Hahn, L.L. Stelinski, and L.M. Diepenbrock. 2022. Suitability of formulated entomopathenogenic fungi against hibiscus mealybug, *Nipaecoccus viridis* (Hemiptera: Pseudococcidae), deployed within screen covers intended to protect citrus from huanglongbing. Journal of Economic Entomology 115:212-223.

28. Palmer, J., **P.G. Hahn**, E Metcalf, and J.L. Maron. 2022. Seed size of co-occuring forb species predicts rates of pre-dispersal seed loss from insects. Ecosphere 13:e4032.

27. Pearson, D.E., T.J. Clark, and **P.G. Hahn**. 2022. Evaluating unintended consequences of intentional species introductions and eradications for improved conservation management. Conservation Biology 36:e13734. doi:10.1111/cobi.13734.

26. Shaw, T., S.V. Paula-Moraes, **P.G. Hahn**, and A. Specht. 2021. Seasonal flight patterns of *Chrysodeixis includens* (Lepidoptera: Noctuidae) in the Florida Panhandle and inventory of plusiine species cross-attracted to synthetic pheromone. Journal of Economic Entomology 114:2315-2325. doi.org/10.1093/jee/toab179

25. **Hahn, P.G.**, K. Keefover-Ring, L.M.N. Nguyen, and J.L. Maron. Intraspecific correlations between growth and defense vary with resource availability and differ within- and among-populations. Functional Ecology 35:2387-2396. doi: 10.1111/1365-2435.13878

24. Kuhlman, M.P., S. Burrows, D. Mummey, P. Ramsey, and **P.G. Hahn**. 2021. Bee communities vary by collection method and flowering richness: implications for understanding patterns in bee community data.
Ecological Evidence and Solutions 2:e12071.

23. L.A. Brudvig, N.E. Turley, L. Bell-Dereske, S. Breland, E.I. Damschen, S.E. Evans, J. Gibbs, **P.G. Hahn**, R. Isaacs, J.A. Ledvina, J.L. Orrock, Q.M. Sorenson, and J.D. Stuhler. 2021. Restored ecosystems bear the long-lasting legacy of their agricultural past. Proceedings of the National Academy of Sciences 118:e2020935118.

22. Maron, J.L., **P.G. Hahn**, K. Hajek, and D.E. Pearson. 2021. Trade-offs between seed size and biotic interactions contribute to coexistence of co-occurring species that vary in fecundity. Journal of Ecology 109: 626-638.

21. Mou, D.F., C.C. Lee, **P.G. Hahn,** N. Soto, A.R. Humphries, E.E. Helmick and B.W. Bahder. 2020. Effects of lethal bronzing disease, palm height, and temperature on abundance and monitoring of *Haplaxius crudus*. Insects 11: 0748. doi:10.3390/insects11110748

20. Maron, J.L., K.L. Hajek, **P.G. Hahn**, and D. Pearson. 2019. Seedling recruitment correlates with seed input across seed sizes: implications for coexistence. Ecology 100:e02848.

19. Shelef, O.*, **P.G. Hahn*,** Z. Getman-Pickering, and A. Martinez-Medina. 2019. Coming to common ground: the challenges of applying ecological theory developed aboveground to rhizosphere interactions. Frontiers in Ecology and Evolution 7:58. *Denotes equal contribution

18. **Hahn, P.G.**, A.A. Agrawal, K. Sussman†, and J.L. Maron. 2019. Population variation, environmental gradients, and the evolutionary ecology of plant defense. American Naturalist, 193: 20-34. †mentored student

17. **Hahn, P.G.**, L. Bullington, B. Larkin, K. LaFlamme, J.L. Maron and Y. Lekberg. 2018. Effects of short- and long-term variation in resource conditions on soil fungal communities and plant responses to soil biota. Frontiers in Plant Science 9:1605.

16. Maron, J.L., K. Hajek, **P.G. Hahn,** and D.E. Pearson. 2018. Rodent seed predators and a dominant grass competitor affect coexistence of co-occurring forb species that vary in seed size. Journal of Ecology 106: 1795-1805.

15. Waller, L.*, **P.G. Hahn***, J.L. Maron and Y. Lekberg. 2018. Trait responses to AM fungi are stronger and more consistent than fixed differences among populations of *Asclepias speciosa*. American Journal of Botany 105: 207-214. *Denotes equal contribution

14. **Hahn, P.G.** and J.L. Maron. 2018. Plant water stress and previous herbivore damage affect herbivore performance. Ecological Entomology 43: 47-54.

13. Miller, J.E.*, **P.G. Hahn***, E.I. Damschen and J. Brennan†. 2017. Evidence for functional dependence underlying a positive plant-consumer richness relationship. Basic and Applied Ecology 24:94-100. *Denotes equal contribution †mentored student

12. **Hahn, P.G.** and J.L. Orrock. 2016. Ontogenetic responses of four plant species to interactive effects of land-use history, canopy structure and herbivory. Journal of Ecology 104: 1518-1526.

11. **Hahn, P.G.** and J.L. Maron. 2016. A framework for predicting intraspecific variation in plant defense. Trends in Ecology and Evolution 31: 646-656.

10. **Hahn, P.G.** and J.L. Orrock. 2016. Neighbor palatability generates associational effects by altering herbivore foraging behavior. Ecology 97: 2103-2111.

9. **Hahn, P.G.** and J.L. Orrock. 2015. Spatial arrangement of canopy structure and land-use history alters the effect of herbivory on plant growth in a landscape experiment. Ecosphere 10: art193.

8. **Hahn, P.G.** and J.L. Orrock. 2015. Land-use history alters contemporary insect herbivore community composition and decouples plant-herbivore relationships. Journal of Animal Ecology 84: 745-754.

7. **Hahn, P.G.** and J.L. Orrock. 2015. Land-use legacies and present fire regimes interact to mediate herbivory by altering the neighboring plant community. Oikos 124: 497-506.

6. Brudvig, L.A., J.L. Orrock, E.I. Damschen, C.D. Collins, **P.G. Hahn**, W.B. Mattingly, J.W. Veldman, and J.L. Walker. 2014. Land-use history and contemporary management inform an ecological reference model for longleaf pine woodland understory plant communities. PLoS One 9: e86604.

5. **Hahn, P.G.** and J.L. Orrock. 2014. Effects of temperature on seed viability of six Ozark glade herb species and eastern redcedar (*Juniperus virginiana*). American Midland Naturalist 171: 147-152.

4. McGlynn, A.H., **P.G. Hahn**, and M.P. Hagan. 2013. The effect of cognitive treatment program for male and female juvenile offenders. International Journal of Offender Therapy and Comparative Criminology 57:1107-1119.

3. Dornbush, M.E. and **P.G. Hahn**. 2013. Consumer and establishment limitation contribute more than competitive interactions in sustaining dominance of the exotic herb garlic mustard in a Wisconsin, USA forest. Biological Invasions 15: 2691-2705.

2. **Hahn, P.G.** and M.E. Dornbush. 2012. Exotic consumers interact with exotic plants to mediate native plant survival in a Midwestern forest herb layer. Biological Invasions 14: 449-460.

1. **Hahn, P.G.**, M.L. Draney, and M.E. Dornbush. 2011. Exotic slugs pose a previously unrecognized threat to the herbaceous layer in a Midwestern woodland. Restoration Ecology 19: 786-794.

INVITED SEMINARS

2020	University of Florida, Wildlife Ecology and Conservation
2016-2019	MPG Ranch Annual Symposium, Missoula, MT
2019	University of Florida, Dept. Entomology and Nematology
2015, 18	University of Montana, OBE Noon Seminar Series
2018	University of Louisiana Lafayette, Biology Seminar Series
2017	Marquette University, Biological Sciences Seminar
2015	University of Wisconsin-Madison, Biology Colloquium
2015	University of Georgia, Savannah River Ecology Lab Seminar Series
2014	Michigan Society of Foresters, U.P. Chapter: Spring Conference

CONFERENCE PRESENTATIONS

2021	Entomological Society of America Annual Meeting (oral, November 2021)
2020	Entomological Society of America Annual Meeting (oral, November 2020)
2020	Ecological Society of America Annual Meeting (oral presentation, August 2020)
2014-2019	Entomological Society of America Annual Meeting (3 oral presentations)
2010-2018	Ecological Society of America Annual Meeting (7 oral presentations, 1 poster)
2017	Gordon Research Conference, Plant-Herbivore Interactions (1 poster)
2012-2014	Wisconsin Ecology Annual Spring Symposium (1 oral presentation, 2 posters)

PEDAGOGICAL TRAINING

At UF

2021	CALS Teacher's College (10 week course)
2020	Best Advocacy Movement (BAM!) (4 workshop course)
2020	First Year Faculty Training (6 week course)

Prior to UF

2019	Faculty Inquiry Project, Univ. Montana, (1 semester course)
2017	Scientific Teaching, Univ. Montana, (2 day workshop lead by Diane Ebert-May)
2015	The College Classroom, DELTA Program, UW-Madison, (1 semester course)
2013	Entering Mentoring, DELTA Program, UW-Madison, (1 semester course)
2011	Scientific Teaching, DELTA Program, UW-Madison, (1 semester course)

TEACHING

Courses at UF

ALS6502C Linear Models in Agirculture and Natural Resources (Spring 2023, 3 credit)
ENY6203 Insect Ecology and Insect Ecology Lab (Fall semesters, 2020-present, 4 credit)
ENY6934 Insect Community Ecology with Examples in R (Spring 2022, 1 credit)
ENY6934 Experiments in Ecology and Agriculture (Spring semesters, 2021-2022, 3 credits)
ENY6934 Experiments in Ecology and Agriculture (Spring 2020, 1 credit)

SERVICE

2017-2020	Guest Associate Editor, Frontiers in Ecology & Evolution and Frontiers in Plant Sciences, Research Topic: "As above so below? Belowground interactions and ecological processes." Edited 5 manuscripts. 19 total manuscripts published.
2009-present	Ad-hoc reviewer: (35 peer-reviews) *e.g.*, *American Naturalist, Annals of Botany, Biology Letters, Biological Invasions, Ecological Entomology, Ecology, Journal of Animal Ecology, Journal of Ecology, Oecologia, Oikos.*
2018	Judge for Montana Science Fair
2017	Judge for Buell & Braun Student Presentations, ESA 2017
2017	Proposal reviewer for Univ. Montana Collaboration Challenge Research Grant
2011-2013	Co-Chair, Graduate Student Committee, Wisconsin Ecology, UW-Madison
2010-2014	Organizing Committee, Zoology Graduate Student Seminar, UW-Madison
2010	Graduate student representative, Faculty Search Committee, UW-Green Bay

OUTREACH

2022	"Plant-Insect Warfare", Self-guided educational tour, Mequon Nature Preserve
2022	Florida State Fair, Entomology Booth
2018-19	Natural history of milkweeds, Learning module for high school interns, MPG Ranch
2017	Public lecture on monarch and milkweeds, Montana Native Plant Society and Five Valleys Audubon Society Annual Meeting
2016-2017	Planning committee, Monarchs in Missoula with National Wildlife Federation
2014-2015	Outreach coordinator for public science events, Zoology Graduate Student Organization, UW-Madison Dept of Zoology